OKLAHOMA WATER RESOURCES BOARD MEETING INFORMATION

The Oklahoma Water Resources Board meets monthly in accordance with the date, time, and location shown on the final posted agenda. A draft Board meeting agenda and packet materials are scheduled to be prepared approximately 10 calendar days prior to the Board's meeting. A final agenda is scheduled to be posted at least 24 hours prior to the meeting. The standard sections of the agenda are numbered in a series; additional or special items will appear on the agenda subsequently. Standard sections include the following:

- 01000 = Call to Order
- 02000 = Financial Assistance Division
- 03000 = Summary Disposition Agenda
- 04000 = Items of Interest
- 05000 = Special Consideration Items

This meeting packet contains expanded information (summary documents, proposed orders, etc.) associated with individual agenda items. Each section of the packet contains a cover sheet noting the appropriate corresponding agenda item/number. (For example, to locate agenda item 2.D., concerning a grant or loan, review the packet for the section labeled, "2. Financial Assistance Division," which will begin on page 02000. Item D. is placed in alphabetical order in the section and is labeled accordingly.) The documents and information provided within the meeting packet are draft until approved by the Board. Please contact OWRB staff for the final, official documents as approved by the Board.

If you require assistance in locating an item or accompanying documents, please contact OWRB staff at (405) 530-8800.

1.B.

June 17, 2025, Regular Meeting Draft Official Minutes
For consideration at the July 15, 2025 Board Meeting

CALL TO ORDER

The Regular Meeting of the Oklahoma Water Resources Board was called to order by Chairman Tom Gorman, on June 17, 2025, at 9:30 a.m. at the Oklahoma Water Resources Board located at 3800 N. Classen Blvd. Oklahoma City, Oklahoma 73118. The meeting was conducted pursuant to the Oklahoma Open Meeting Law with due and proper notice provided pursuant to Sections 303 and 311 thereof. The agenda was posted on June 13, at 3:00 p.m., at the Oklahoma Water Resources Board's offices at 3800 N. Classen Boulevard, Oklahoma City, Oklahoma.

A. Roll Call. Madam Chair Castillo welcomed everyone to the meeting and asked for the roll call of members.

Board Members Present
Ron Justice
Suzanne Landess
Jarred Campbell
Tom Gorman
Bandy Silk
Bob Latham
Darren Cook
Heather McCall

Board Members Absent
Robert Stallings, Jr.

Staff Members Present
Julie Cunningham, Executive Director
Sara Gibson, General Counsel
Tamara Lilly, Executive Administrator
Lori Johnson, Chief, Financial Assistance Division
Bill Cauthron, Chief, Water Quality Programs Division
Chris Neel, Chief, Planning and Management Division
Jay Foote, Chief, Administrative Services Division

Others Attending
Richard Parker, Jr.
Charles Parker
Richard Parker
Dean Couch
Anne Bueger
Trace Justiss
Randy McDaniel
Ron Peterson
Leslie Lewis
Bodie Bachelor

B. Discussion, Amendments and Vote to Approve Official Minutes of May 20, 2025, Regular meeting. Chairman Gorman inquired if all members reviewed the minutes of the May 20, 2025, meeting and if no questions, or changes, requested a motion to approve. No comments or amendments; Mr. Latham motioned to approve, and Mr. Campbell seconded the motion. Chairman Gorman called for the vote.

AYE: Latham, Justice, Landess, Cook, Campbell, Gorman
NAY: None
ABSTAIN: Silk, McCall
ABSENT: Stallings

C. Executive Director's Report:

Director Cunningham began her report by announcing this is the 5th wettest June on record according to Mesonet. This is also the first time since July 2019 that the drought monitor showed all counties of Oklahoma as drought free!

Director Cunningham introduced our two new board members. They are Heather McCall from Edmond, and she is representing Industry water use and Region 5. Bandy Silk is from Sayre, and he is representing Irrigation and Region 3.

Sine die was on May 29th, and the budget remained flat. We view this as positive as we didn't lose any funding. We did however receive year two of a funding request from the legislature to capitalize on our Hazard Mitigation Financial Assistance program. We have promulgated rules for this program, and we are ready to begin rolling it out.

OWRB has approved $63 million along with Emergency Drought Commission in emergency drought funds for irrigators for farm pond clean out and installing water wells. The need is out there, and we are glad to be a part of this program.

Director Cunningham made note of a couple of other bills were passed of note; one was a request to reappropriate ARPA funds from the completed 577 program to provide water and sewer utilities for the commerce park and remaining funds were reallocated to Tinker Airforce base to replace a water line. Another bill we have was SB 1151which allows $4.2 million for additional infrastructure projects from the Progressing Rural Economic Prosperity Fund (PREP.)

Director Cunningham reported Interim studies are kicking off at the Capitol and we have been asked to participate in a few of those.

Director Cunnigham gave an update on the potential move to the Jim Thorpe building next year. Discussed the benefits of changing buildings and introduced Carie Carmen, Director of real estate, with OMES.

D. Financial Update

Mr. Jay Foote, Chief Administrative Services Division, presents the budget report for the period ending May 2025. Mr. Foote reports the agency has spent 68 % of its appropriated budget leaving 32 %; spent 57% of its revolving budget, leaving 43%; has spent 33% of its federal budget, leaving 67%. Overall, the total budget remains is 53% with 57% of the year remaining.

2. FINANCIAL ASSISTANCE DIVISION

A. Presentation on OWRB's Financial Assistance Program.

a copy of this presentation is available by request

B. Resolution Authorizing the Issuance of Oklahoma Water Resources Board Revolving Fund Revenue Bonds - Clean Water Program, (2019 Master Trust), in the Aggregate Principal Amount Not to Exceed $200,000,000.00; Approving and Authorizing Execution of a Bond Indenture Providing for the Issuance of the Bonds; Providing for the Sale and Delivery of the Bonds and Authorizing a Certificate of Determination; Waiving Competitive Bidding on the Bonds and Authorizing the Sale Thereof by Negotiation Pursuant to the Terms of a Contract of Purchase Pertaining Thereto; Approving a Preliminary Official Statement with Respect to the Bonds; Authorizing Execution of Such Other and Further Instruments, Certificates, and Documents as May Be Required for the Issuance of the Bonds; Directing Payment of Costs of Issuance and Containing Other Provisions Relating to the Issuance of the Bonds. Recommended for Approval

This is a resolution authorizing a new series of Clean Water State Revolving Fund Bonds.
Our current CWSRF Fund balances and anticipated draws reflect that we will need an influx of bond proceeds by August. We will work on the bond issue with Anne Burger-Entrekin with Hilltop Securities, our Financial Advisor, the underwriting team that the Board approved in May of last year (Raymond James as Senior Manager, BOK and Stifel as Co-Managers), McCall, Parkhurst, and Horton as Bond Counsel, Gilmore and Bell as Disclosure Counsel and BancFirst as Trustee. The Resolution authorizes a Clean Water State Revolving Fund Bond issuance not to exceed $200 Million, authorizes the issuance on a negotiated basis, approves a Preliminary Official Statement, directs payment of the cost of issuance and authorizes other documents necessary to close the issue.

Chairman Gorman inquired if there were any questions, need for discussion or a motion to approve. Mr. Latham motioned to approve, and Mr. Justice seconded the motion. Chairman Gorman called for the vote.

AYE: Latham, Justice, Landess, Cook, Campbell, McCall, Silk Gorman
NAY: None
ABSTAIN: None
ABSENT: Stallings

C. Resolution Authorizing the Issuance of Oklahoma Water Resources Board State Loan Program Revenue Bonds in an Aggregate Principal Amount not to Exceed $250,000,000; at a Net Interest Cost not to Exceed Fifteen Percent (15.0%); Providing for the Issuance of Said Bonds in One or More Series; Approving and Authorizing Execution of a Series 2025B Supplemental Bond Resolution and, if Deemed Advisable, an Additional Supplemental Bond Resolution for Each Additional Series; Waiving Competitive Bidding on the Bonds and Authorizing the Sale Thereof by Negotiation and at a Discount Pursuant to the Terms of a Contract of Purchase Pertaining Thereto; Approving a Preliminary Official Statement with Respect to Said Bonds; Authorizing the Chairman or Vice Chairman to Deem Preliminary Official Statements for Additional Series of Bonds Final; Directing Deposit of Proceeds Derived from the Issuance of the Bonds in the State Treasury and Requesting the State Treasurer to Remit Such Proceeds to the Bond Trustee; Ratifying and Approving the Form of Promissory Note, Loan Agreement, and Note Purchase Agreement to be Executed by Borrowers in the State Loan Program; Authorizing Execution of Such Other and Further Instruments, Certificates and Documents as may be Required for the Issuance of the Bonds; Directing Payment of Costs of Issuance and Containing Other Provisions Relating to the Issuance of the Bonds. Recommended for Approval.

This is a resolution requesting authorization for the issuance of up to $250 Million in FAP State Loan Program Revenue Bonds. The reason for the request is that the last Board authorization in June 2024 for FAP bond issuances for up to $250 Million expires on June 22nd. Under the June 2024 authorization we closed the Bond Issues for FAP Series 2024C in the amount of $112,785,000 and the FAP Series 2025A in the amount of $29,570,000. These series combined funded loans for Rogers County RSD #1, Cherokee Development Authority, Okemah Utilities Authority, Broken Arrow Municipal Authority, Jenks Public Works Authority, Edmond Public Works Authority, Piedmont Municipal Authority, and Sapulpa Municipal Authority.
We have received requests for additional FAP loans in an amount of approximately $58 Million.
The resolution before you authorizes another $250 Million in bond issuance capacity for the FAP state loan program in on or more series, provides for the approval of a Preliminary Official Statement, authorizes the chairman or vice chairman to deem Preliminary Official Statements for additional series of bonds final, authorizes the sale of the bonds to be on a negotiated basis, directs the bond proceeds to be deposited in the state treasury and then remitted to BancFirst as your trustee, ratifies the form of promissory note, loan agreement, and note purchase agreement. In addition, the Resolution authorizes execution of other documents required for the issuance of the bonds and directs payment of the costs of issuance.

Chairman Gorman inquired if there were any questions, need for discussion or a motion to approve. Mr. Justice motioned to approve, and Mr. Campbell seconded the motion. Chairman Gorman called for the vote.

AYE: Latham, Justice, Landess, Cook, Campbell, McCall, Silk Gorman
NAY: None
ABSTAIN: None
ABSENT: Stallings

D. Consideration of and Possible Action on Proposed Resolution Authorizing Certain Individuals To Sign and Act on Behalf of the Board Regarding the Board's Financial Assistance Programs, Including all Loan and Grant Programs and Issues of Indebtedness, and Authorizing Members to Act as Assistant Secretary. Recommended for Approval.

This is a resolution that authorizes board members and certain staff to sign and act on behalf of the board regarding the Board's financial assistance programs. The board passed a similar resolution in December of last year. The resolution also names each board member, except the Chairman, Vice Chairman in the event of the absence or incapacity of the Chairman, and the Secretary, as assistant secretaries in the absence of the secretary. The resolution allows BancFirst, our trustee bank, to have signatures on file for verification of each board member, the executive director, the chief and assistant chief of the financial assistance division as approved signatories.The only changes from the current resolution is the addition of Ms. McCall and Mr. Silk and the removal of Mrs. Castillo and Mr. Muller.

Chairman Gorman inquired if there were any questions, need for discussion or a motion to approve. Ms. Landess motioned to approve, and Mr. Justice seconded the motion. Chairman Gorman called for the vote.

AYE: Latham, Justice, Landess, Cook, Campbell, McCall, Silk Gorman
NAY: None
ABSTAIN: None
ABSENT: Stallings

3. SUMMARY DISPOSITION AGENDA ITEMS

Any item listed under this Summary Disposition Agenda may, at the request of any member of the Board, the Board's staff, or any other person attending this meeting, be transferred to the Special Consideration Agenda. Under the Special Consideration Agenda, separate discussion and vote or other action may be taken on any items already listed under that agenda or items transferred to that agenda from this Summary Disposition Agenda.

A. Requests to Transfer Items from Summary Disposition Agenda to the Special Consideration Agenda and Action on Whether to Transfer Such Items.

B. Discussion, Questions, and Responses Pertaining to Any Items Remaining on Summary Disposition Agenda and Possible Action on Items Listed Below.

C. <u>Consideration of and Possible Action on Financial Assistance Division Items:</u>

1. Emergency Grant Applications:
   None.

2. Rural Economic Action Plan (REAP) Grant Applications:

Item No.	Application No.	Entity Name	County	Amount Recommended
COEDD a.	FAP-25-0030-R	Town of Sasakwa	Seminole	$ 135,382.00
OEDA b.	FAP-25-0022-R	Rural Water, Sewer and Solid Waste Management District No. 3	Dewey	$ 110,000.00
SWODA c.	FAP-25-0051-R	The Thomas Public Works Authority	Custer	$ 102,095.00
SWODA d.	FAP-25-0059-R	Town of Foss	Washita	$ 149,909.28

3. CWSRF Principal Forgiveness Loan Applications:

None.

4. DWSRF Principal Forgiveness Loan Applications:

None.

5. Sewer Overflow and Stormwater Reuse Municipal Grants ("OSG")

None.

6. American Rescue Plan Act (ARPA) Grant Applications:

None

D. Consideration of and Possible Action on the Contracts and Agreements:

1. Interagency Agreement with the Office of Attorney General, State of Oklahoma to renew a ½ time contract for Legal Services for Hearing Officer.

2. Joint Funding Agreement with US Department of Interior, US Geological Survey, for the OK/TX Water Science- Center and OWRB streamflow data collection.

3. Interagency Agreement with the Grand River Dam Authority for Work Plan for GRDA Dissolved Oxygen Monitoring Project.

4. Data Sharing Agreement with Oklahoma Medical Marijuana Authority to allow confidential OMMA data to be transmitted between OMMA and OWRB.

5. Agreement with OMES, State of Oklahoma and IN-SITU, INC., for purchase of a Water Level Recorder.

6. Memorandum Agreement with Resilience Solutions Consulting, LLC for in person workshop "Emergency Action Planning for Dams".

7. Interagency Agreement with FEMA and the State of Oklahoma Department of Emergency Management for Hazard Mitigation Grant Program.

8. Interagency Agreement with Oklahoma Office of Management & Enterprise Services for Real Estate and Leasing Service to lease office space at 3800 N. Classen Blvd. Oklahoma City, OK 73118.

9. Interagency Agreement with Oklahoma Office of Management Enterprise Services for design and other terms for future lease of the Jim Thorpe Building.

10. Memorandum Agreement with Oklahoma Department of Environmental Quality, Amendment of Contract for Lab Analysis.

11. Interagency Agreement with the Office of Attorney General, State of Oklahoma to renew an hourly contract for Legal Services for Hearing Officer.

E. Consideration of and Possible Action on Applications for Temporary Permits to Use Groundwater:
1. Nancy B. Anderson Revocable Trust, Kay County, 2022-515
2. Bert Zachary Blumer and Kimberly Dawn Blumer, Kay County, 2022-516
3. Nao Yang, Craig County, 2023-633
4. Kris Black, Roger Mills County, 2024-514
5. WJW Ranch, LLC, Kingfisher County, 2024-530
6. Qiwei Chen, Craig County, 2024-653
7. The Ricky Goodall Revocable Trust, Washita County, 2025-502
8. Calvin Ray Koehn and Debra Joy Koehn, Blaine County, 2025-503

F. Consideration of and Possible Action on Applications to Amend Temporary Permits to Use Groundwater:
1. Matthew and Autumn Steinert, Major County, 2000-580
2. Matthew and Autumn Steinert, Major County, 2009-544
3. West Davis Rural Water Corporation, Garvin and Carter Counties, 2012-695
4. Leon Watson Langford and Melissa Lynn Langford, Major County, 2016-578C
5. Kyle J. Hohmann and Nancy D. Hohmann Co-Trustees of the Hohmann Family Trust, Kay County, 2018-547
6. Benjamin Heath and Sarah Rebecca Schantz, Blaine County, 2020-507

G. Consideration of and Possible Action on Applications for Regular Permits to Use Groundwater:
1. Lee Northcutt Land Holdings, LLC, Oklahoma County, 2023-544
2. Yanshu Wang, Lincoln County, 2023-574
3. Tony Dorrell and Brenda Dorrell, Beckham County, 2024-544
4. Chase Huebner and Josie Huebner, Beaver County, 2024-569
5. Yangbo Ou and Fengbing Chen, Cleveland County, 2024-573
6. John and Terri Hooper, Cotton County, 2024-633
7. McIntyre Land and Cattle, LLC, Beckham County, 2025-501
8. Angie's Garden, LLC, Logan County, 2025-515

H. Consideration of and Possible Action on Applications to Amend Regular Permits to Use Groundwater:
1. Alan R. Flick, Roger Mills County, 1981-735
2. Max and Sally Huling, Beaver County, 1998-543
3. Bandy C. and Amy B. Silk, Beckham County, 1998-550
4. Contex Land and Cattle & Salvador and Martha Gonzalez, Cimarron County, 2008-575

I. Consideration of and Possible Action on Applications to Amend Prior Right to Use Groundwater:
None

J. Consideration of and Possible Action on Applications to for Term/Seasonal Permits to Use Stream Water:
1. Central Oklahoma Master Conservancy District, Cleveland County, 2022-013

K. Consideration of and Possible Action on Applications for Regular Permits to Use Stream Water:
None

L. Consideration of and Possible Action on Applications to Amend Regular Permits to Use Stream Water:
None

M. Consideration of and Possible Action on Well Driller and Pump Installer Licensing:

1. New Licenses, Accompanying Operator Certificates and Activities:
None

2. New Operators, Licensee Name Change, and/or Activities for Existing Licenses:

A. Licensee: Braden Neill	DPC-0998
1. Operator: Neill well services, LLC	OP- 2331
Activities: Groundwater wells	
B. Licensee: Talon LPE	DPC-0619
1. Operator: Jason Shubert	OP- 2608
Activities: Groundwater wells, monitoring wells and pump installation	
C. Licensee: Red River Water Wells	DPC-1064
1. Operator: Eric Igo	OP- 2561
Activities: Pump installation	
D. Licensee: M&W Drilling LLC	DPC-1062
1. Operator: Dayne Tanner	OP- 2609
Activities: Monitoring wells	

N. Consideration of and Possible Action on Dam and Reservoir Construction:
1. Pines Homeowners Association, Oklahoma County, OK11007
2. Gayle Hajny, Dewey County, OK30675

O. Consideration of and Possible Action on Permit Applications for Proposed Development on State Owned or Operated Property within Floodplain Areas:
NONE

P. Consideration of and Possible Action on Applications for Accreditation of Floodplain Administrators:
1. Greg Casey, Pittsburg County, #FPA-784
2. Rose Johnson, City of Stilwell, #FPA-44

Q. Consideration of and Possible Action on Cancellation of Groundwater Permits:
1. Monty and Nancy Kahle, Kay County, 2001-518A

R. Consideration of and Possible Action on a Proposed Default Order:
1. Lo-Buck Farms, LLC, Texas County, 2024-620
2. Deer Lake Dam, Logan County, OK11112
3. Stan Raetz Dam, Caddo County, OK30390
4. West Brogden Dam and East Brogden Dam, Caddo County, OK30671 and OK30672
5. Rural Water Wells, DPC-0944
6. K&S Water Well Service, DPC-1099

S. Consideration of and Possible Action on a Proposed Consent Order:
1. Parker Dam, Logan County, OK30674

Chairman Gorman inquired if there were any questions, need for discussion or a motion to approve. Mr. Latham motioned to approve, and Mr. Justice seconded the motion. Chairman Gorman called for the vote.

*Mr. Silk requested item 3-H-#3 be pulled for a separate vote by the board. Noted by Chairman Gorman and removed from Summary Disposition. *

AYE: Latham, Justice, Landess, Cook, Campbell, McCall, Silk Gorman
NAY: None
ABSTAIN: None
ABSENT: Stallings

* Item 3-H-#3 has been pulled out as a separate item for a separate vote by the Board. *

Consideration of and Possible Action on Applications to Amend Regular Permits to Use Groundwater:

3. Bandy C. and Amy B. Silk, Beckham County, 1998-550

Chairman Gorman inquired if there were any questions, need for discussion or a motion to approve. Mr. Cook motioned to approve, and Mr. Campbell seconded the motion. Chairman Gorman called for the vote.

AYE: Latham, Justice, Landess, Cook, Campbell, McCall, Gorman
NAY: None
ABSTAIN: Silk
ABSENT: Stallings

04000 4. QUESTIONS AND DISCUSSION ABOUT AGENCY MATTERS AND OTHER ITEMS OF INTEREST

A. No Special Consideration items.

B. Consideration of and Possible Action on Items Transferred from Summary Disposition, if any.

05000 5. SPECIAL CONSIDERATION **Chairman Tom Gorman**

A. No Special Consideration items.

B. Consideration of and Possible Action on Items Transferred from Summary Disposition, if any.

06000 6. ELECTION OF OFFICERS **Chairman Tom Gorman**

Mr. Justice made a motion to elect Tom Gorman as Chair, Bob Latham as Vice-Chair and Ms. Landess remain as Secretary of the Board. Mr. Cook seconded the motion of elections of members.

Chairman Gorman inquired if there were any questions, need for discussion.

AYE: Latham, Justice, Landess, Cook, Campbell, McCall, Silk Gorman
NAY: None
ABSTAIN: None
ABSENT: Stallings

07000 7. NEW BUSINESS **Chairman Tom Gorman**

Under the Open Meeting Act, this agenda item is authorized only for matters not known about or which could not have been reasonably foreseen prior to the time of posting the agenda or any revised agenda.

Possible cancellation of August 2025 meeting notice

08000 8. ADJOURNMENT **Chairman Tom Gorman**

The next regular meeting of the Oklahoma Water Resources Board will be held on Tuesday, July 15, 2025, at 9:30 am. In the offices of the OWRB, 3800 N. Classen Boulevard, Oklahoma City, OK 73118.

OKLAHOMA WATER RESOURCES BOARD

Thomas Gorman, Chairman

Heather McCall

Bandy Silk

Darren Cook

Ron Justice

Bob. Latham

Robert L. Stallings, Jr.

Jarred Campbell

ATTEST:

Suzanne Landess, Secretary (SEAL)

1. D. FINANCIAL UPDATE

1. D.1. Monthly Budget Report

Due to issues within our reporting system, the Financial Report is not available currently. A physical copy will be provided to Board Members at the meeting.

2. FINANCIAL ASSISTANCE DIVISION

July 15, 2025

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Chelsea Economic Development Authority, Rogers County

Loan Application No.: FAP-25-0008-L
State Loan Program Revenue Bond Loan ("FAP Loan")

Amount Requested: $1,140,000.00

Interest Rate: The FAP Loan shall bear interest at a fixed rate.

Payment Term: Principal and interest payments shall be made on a semi-annual basis. The term of the FAP Loan shall be no longer than thirty-one (31) years.

Security Position: The loan shall be secured with a lien on the revenues of the applicant's water, sewer, and sanitation systems, a 3 cent sales tax and may include a mortgage on the applicant's water and sewer systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) construct a water storage tank and refinance a Communities Unlimited note originally incurred for water and wastewater system improvements, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary; and (iii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$1,098,894.50	Refinance	$772,969.00
		Project	228,627.47
		Bond Counsel	40,000.00
		Financial Advisor	40,000.00
		Local Counsel	10,000.00
		OWRB Costs of Issuance	6,548.03
		Trustee Bank	750.00
Total	$1,098,894.50	**Total**	$1,098,894.50

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION	)
NO. FAP-25-0008-L IN THE NAME OF	)
CHELSEA ECONOMIC DEVELOPMENT AUTHORITY	)
ROGERS COUNTY, OKLAHOMA	)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Chelsea Economic Development Authority (the "Applicant") has made its Application for Funding No. FAP-25-0008-L (the "Loan Application") to the Board for a loan from the proceeds of the Board's State Loan Program Revenue Bonds issued pursuant to the 2016 General Bond Resolution dated as of November 1, 2016, as supplemented and amended (the "Bond Resolution"), and authorized by Title 82 Oklahoma Statutes 2021, Sections 1085.31 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan to provide for acquisition, development, and utilization of storage and control facilities for water and sewage systems for the use and benefit of the public and for the conservation and distribution of water for beneficial purposes in or from reservoirs or other storage facilities and/or refinancing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. FAP-25-0008-L in the name of Chelsea Economic Development Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) construct a water storage tank and refinance a Communities Unlimited note originally incurred for water and wastewater system improvements, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary and (iii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made out of proceeds of the Board's State Loan Program Revenue Bonds to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $1,140,000.00. The Applicant shall pay interest on the loan at a fixed or variable rate to be established periodically by the Board. Principal and interest payments shall be made on a semi-annual basis or as otherwise provided for under the Bond Resolution. The term of the loan shall be no longer than thirty-one (31) years.

2. The loan shall be secured with a lien on the revenues of the Applicant's water, sewer, and sanitation systems, a 3 cent sales tax and may include a mortgage on the Applicant's water and sewer systems and other real property.

3. The funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from proceeds of the Board's State Loan Program Revenue Bonds in accordance with the requirements of the Bond Resolution.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, and Bond Resolution requirements. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: The Anadarko Public Works Authority, Caddo County

Loan Application No.: ORF-23-0051-DW
Drinking Water SRF Loan ("DWSRF Loan")

Funding Requested: $1,454,850.00

Loan Interest Rate: The DWSRF Loan shall bear a fixed interest rate to be determined prior to loan closing plus an administrative fee of 0.5% per annum, all on the outstanding principal balance of the loan.

Loan Payment Term: Interest, administrative fee, and principal payments shall be made on a semi-annual basis. The applicant shall commence principal repayment no later than one (1) year following Project completion and the maturity of the loan shall be no later than thirty (30) years following the date the Project is completed.

Loan Security Position: The DWSRF loan shall be secured with a lien on the revenues of the applicant's water, sewer, sanitation, and electric systems and may include a mortgage on the applicant's water, sewer, and electric systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) construct an elevated storage tank, all related appurtenances (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$1,454,850.00	Project	$1,961,850.00
OWRB ARPA Grant	600,000.00	Bond Counsel	42,500.00
		Financial Advisor	42,500.00
		Local Counsel	7,500.00
		Trustee Bank	500.00
Total	$2,054,850.00	**Total**	$2,054,850.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION	)
NO. ORF-23-0051-DW IN THE NAME OF	)
THE ANADARKO PUBLIC WORKS AUTHORITY	)
CADDO COUNTY, OKLAHOMA	)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, The Anadarko Public Works Authority (the "Applicant") has made its Application for Funding No. ORF-23-0051-DW (the "Loan Application") to the Board and to the Oklahoma Department of Environmental Quality (the "DEQ") for a loan from the Drinking Water Treatment Revolving Loan Account (the "DWSRF"), pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.71 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for drinking water system improvements, to further compliance with State and Federal standards and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the DEQ has certified the Loan Application with regards to compliance with applicable technical program requirements and forwarded it to the Board with a recommendation that the Loan Application be considered and approved for a DWSRF Loan; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-23-0051-DW in the name of The Anadarko Public Works Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) construct an elevated storage tank, all related appurtenances (the "Project"), and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $1,454,850.00. The Applicant shall pay interest on the loan at a fixed rate to be determined prior to closing plus an administrative fee at the rate of 0.5% per annum, all on the outstanding balance of disbursed loan proceeds. Interest, administrative fee, and any principal payments shall be made on a semi-annual basis. The Applicant shall commence principal repayment no later than one (1) year

following Project completion, and the maturity of the loan shall be no later than thirty (30) years following the date the Project is completed.

2. The loan shall be secured with a lien on the revenues of the Applicant's water, sewer, sanitation, and electric systems and may include a mortgage on the Applicant's water, sewer, and electric systems and other real property.

3. Upon the Applicant's acceptance of the DEQ's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other DWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the DWSRF in accordance with the DWSRF program regulations as approved by the United States Environmental Protection Agency.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, DWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the DWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025 in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Roland Utility Authority, Sequoyah County

Loan Application No.: ORF-25-0007-DW
Drinking Water SRF Loan ("DWSRF Loan")

Funding Requested: $2,276,000.00

Loan Interest Rate: The DWSRF Loan shall bear a fixed interest rate to be determined prior to loan closing plus an administrative fee of 0.5% per annum, all on the outstanding principal balance of the loan.

Loan Payment Term: Interest, administrative fee, and principal payments shall be made on a semi-annual basis. The applicant shall commence principal repayment no later than one (1) year following Project completion and the maturity of the loan shall be no later than thirty (30) years following the date the Project is completed.

Loan Security Position: The DWSRF loan shall be secured with a lien on the revenues of the applicant's water, sewer, and sanitation systems, a 2 cent sales tax and may include a mortgage on the applicant's water and sewer systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) construct a new 500,000-gallon elevated clearwell and rehabilitate an existing 1,000,000-gallon elevated clearwell, all related appurtenances (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$2,276,000.00	Project	$2,663,500.00
Cherokee Nation Grant	500,000.00	Bond Counsel	45,000.00
		Financial Advisor	45,000.00
		Local Counsel	22,000.00
		Trustee Bank	500.00
Total	$2,776,000.00	**Total**	$2,776,000.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION	)
NO. ORF-25-0007-DW IN THE NAME OF	)
ROLAND UTILITY AUTHORITY	)
SEQUOYAH COUNTY, OKLAHOMA	)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Roland Utility Authority (the "Applicant") has made its Application for Funding No. ORF-25-0007-DW (the "Loan Application") to the Board and to the Oklahoma Department of Environmental Quality (the "DEQ") for a loan from the Drinking Water Treatment Revolving Loan Account (the "DWSRF"), pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.71 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for drinking water system improvements, to further compliance with State and Federal standards and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the DEQ has certified the Loan Application with regards to compliance with applicable technical program requirements and forwarded it to the Board with a recommendation that the Loan Application be considered and approved for a DWSRF Loan; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-25-0007-DW in the name of Roland Utility Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) construct a new 500,000-gallon elevated clearwell and rehabilitate an existing 1,000,000-gallon elevated clearwell, all related appurtenances (the "Project"), and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $2,276,000.00. The Applicant shall pay interest on the loan at a fixed rate to be determined prior to closing plus an administrative fee at the rate of 0.5% per annum, all on the outstanding balance of disbursed loan proceeds. Interest, administrative fee, and any principal payments shall be made on a semi-annual basis. The Applicant shall commence principal repayment no later than one (1) year

following Project completion, and the maturity of the loan shall be no later than thirty (30) years following the date the Project is completed.

2. The loan shall be secured with a lien on the revenues of the Applicant's water, sewer, and sanitation systems, a 2 cent sales tax and may include a mortgage on the Applicant's water and sewer systems and other real property.

3. Upon the Applicant's acceptance of the DEQ's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other DWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the DWSRF in accordance with the DWSRF program regulations as approved by the United States Environmental Protection Agency.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, DWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the DWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025 in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Rural Sewer District No. 1, Rogers County, Oklahoma

Loan Application No.: FAP-25-0003-L
State Loan Program Revenue Bond Loan ("FAP Loan")

Amount Requested: $2,340,000.00

Interest Rate: The FAP Loan shall bear interest at a fixed rate.

Payment Term: Principal and interest payments shall be made on a semi-annual basis. The term of the FAP Loan shall be no longer than thirty-one (31) years.

Security Position: The loan shall be secured with a lien on the revenues of the applicant's sewer system and may include a mortgage on the applicant's sewer system and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) provide additional funds needed to rehabilitate the existing wastewater treatment plant lagoons, construct three new lagoons, a concrete basin, and a new discharge lift station for which a loan was approved on September 17, 2024, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary; and (iii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$2,250,026.95	Project	$2,000,784.54
		Debt Service Reserve Fund	151,340.00
		Bond Counsel	36,250.40
		Financial Advisor	36,250.40
		OWRB Costs of Issuance	13,401.48
		Local Counsel	11,250.13
		Trustee Bank	750.00
Total	$2,250,026.95	**Total**	$2,250,026.95

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION	)
NO. FAP-25-0003-L IN THE NAME OF	)
RURAL SEWER DISTRICT NO. 1	)
ROGERS COUNTY, OKLAHOMA	)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Rural Sewer District No. 1, Rogers County, Oklahoma (the "Applicant") has made its Application for Funding No. FAP-25-0003-L (the "Loan Application") to the Board for a loan from the proceeds of the Board's State Loan Program Revenue Bonds issued pursuant to the 2016 General Bond Resolution dated as of November 1, 2016, as supplemented and amended (the "Bond Resolution"), and authorized by Title 82 Oklahoma Statutes 2021, Sections 1085.31 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan to provide for acquisition, development, and utilization of storage and control facilities for water and sewage systems for the use and benefit of the public and for the conservation and distribution of water for beneficial purposes in or from reservoirs or other storage facilities and/or refinancing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. FAP-25-0003-L in the name of Rural Sewer District No. 1, Rogers County, Oklahoma be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) provide additional funds needed to rehabilitate the existing wastewater treatment plant lagoons, construct three new lagoons, a concrete basin, and a new discharge lift station for which a loan was approved on September 17, 2024, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary and (iii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made out of proceeds of the Board's State Loan Program Revenue Bonds to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $2,340,000.00. The Applicant shall pay interest on the loan at a fixed or variable rate to be established periodically by the Board. Principal and interest

payments shall be made on a semi-annual basis or as otherwise provided for under the Bond Resolution. The term of the loan shall be no longer than thirty-one (31) years.

2. The loan shall be secured with a lien on the revenues of the Applicant's sewer system and may include a mortgage on the Applicant's sewer systems and other real property.

3. The funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from proceeds of the Board's State Loan Program Revenue Bonds in accordance with the requirements of the Bond Resolution.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, and Bond Resolution requirements. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

_____

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: The Noble Utilities Authority, Cleveland County

Loan Application No.: FAP-25-0007-L
State Loan Program Revenue Bond Loan ("FAP Loan")

Amount Requested: $2,995,000.00

Interest Rate: The FAP Loan shall bear interest at a fixed rate.

Payment Term: Principal and interest payments shall be made on a semi-annual basis. The term of the FAP Loan shall be no longer than twenty-one (21) years.

Security Position: The loan shall be secured with a lien on the revenues of the applicant's water and sewer systems, a 2 cent sales tax and may include a mortgage on the applicant's water and sewer systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) replace approximately 3,900 linear feet of sewer lines under highway US-77 and the BNSF railroad tracks, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary; and (iii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$2,866,928.00	Project	$2,729,291.80
		Bond Counsel	52,671.24
		Local Counsel	37,628.43
		Financial Advisor	29,850.00
		OWRB Cost of Issuance	16,736.53
		Trustee Bank	750.00
Total	$2,866,928.00	**Total**	$2,866,928.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION	)
NO. FAP-25-0007-L IN THE NAME OF	)
THE NOBLE UTILITIES AUTHORITY	)
CLEVELAND COUNTY, OKLAHOMA	)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, The Noble Utilities Authority (the "Applicant") has made its Application for Funding No. FAP-25-0007-L (the "Loan Application") to the Board for a loan from the proceeds of the Board's State Loan Program Revenue Bonds issued pursuant to the 2016 General Bond Resolution dated as of November 1, 2016, as supplemented and amended (the "Bond Resolution"), and authorized by Title 82 Oklahoma Statutes 2021, Sections 1085.31 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan to provide for acquisition, development, and utilization of storage and control facilities for water and sewage systems for the use and benefit of the public and for the conservation and distribution of water for beneficial purposes in or from reservoirs or other storage facilities and/or refinancing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. FAP-25-0007-L in the name of The Noble Utilities Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) replace approximately 3,900 linear feet of sewer lines under highway US-77 and the BNSF railroad tracks, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary and (iii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made out of proceeds of the Board's State Loan Program Revenue Bonds to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $2,995,000.00. The Applicant shall pay interest on the loan at a fixed or variable rate to be established periodically by the Board. Principal and interest payments shall be made on a semi-annual basis or as otherwise provided for under the Bond Resolution. The term of the loan shall be no longer than twenty-one (21) years.

2. The loan shall be secured with a lien on the revenues of the Applicant's water and sewer systems, a 2 cent sales tax and may include a mortgage on the Applicant's water and sewer systems and other real property.

3. The funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from proceeds of the Board's State Loan Program Revenue Bonds in accordance with the requirements of the Bond Resolution.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, and Bond Resolution requirements. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: The Elk City Public Works Authority, Beckham County

Loan Application No.: ORF-25-0015-DW
Drinking Water SRF Loan ("DWSRF Loan")

Funding Requested: $3,494.544.13

Loan Interest Rate: The DWSRF Loan shall bear a fixed interest rate to be determined prior to loan closing plus an administrative fee of 0.5% per annum, all on the outstanding principal balance of the loan.

Loan Payment Term: Interest, administrative fee, and principal payments shall be made on a semi-annual basis. The applicant shall commence principal repayment no later than one (1) year following Project completion and the maturity of the loan shall be no later than thirty (30) years following the date the Project is completed.

Loan Security Position: The DWSRF loan shall be secured with a lien on the revenues of the applicant's water, sewer, and sanitation systems and may include a mortgage on the applicant's water and sewer systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) replace water lines throughout the system, all related appurtenances (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$3,494,544.13	Project	$3,434,044.13
		Bond Counsel	30,000.00
		Financial Advisor	30,000.00
		Trustee Bank	500.00
Total	$3,494,544.13	**Total**	$3,494,544.13

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION)
NO. ORF-25-0015-DW IN THE NAME OF)
THE ELK CITY PUBLIC WORKS AUTHORITY)
BECKHAM COUNTY, OKLAHOMA)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, The Elk City Public Works Authority (the "Applicant") has made its Application for Funding No. ORF-25-0015-DW (the "Loan Application") to the Board and to the Oklahoma Department of Environmental Quality (the "DEQ") for a loan from the Drinking Water Treatment Revolving Loan Account (the "DWSRF"), pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.71 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for drinking water system improvements, to further compliance with State and Federal standards and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the DEQ has certified the Loan Application with regards to compliance with applicable technical program requirements and forwarded it to the Board with a recommendation that the Loan Application be considered and approved for a DWSRF Loan; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-25-0015-DW in the name of The Elk City Public Works Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) replace water lines throughout the system, all related appurtenances (the "Project"), and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $3,494,544.13. The Applicant shall pay interest on the loan at a fixed rate to be determined prior to closing plus an administrative fee at the rate of 0.5% per annum, all on the outstanding balance of disbursed loan proceeds. Interest, administrative fee, and any principal payments shall be made on a semi-annual basis. The Applicant shall commence principal repayment no later than one (1) year

following Project completion, and the maturity of the loan shall be no later than thirty (30) years following the date the Project is completed.

2. The loan shall be secured with a lien on the revenues of the Applicant's water, sewer, and sanitation systems and may include a mortgage on the Applicant's water and sewer systems and other real property.

3. Upon the Applicant's acceptance of the DEQ's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other DWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the DWSRF in accordance with the DWSRF program regulations as approved by the United States Environmental Protection Agency.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, DWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the DWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025 in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

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Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:



_____

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: The Elgin Public Works Authority, Comanche County

Loan Application No.: FAP-25-0009-L
State Loan Program Revenue Bond Loan ("FAP Loan")

Amount Requested: $4,900,000.00

Interest Rate: The FAP Loan shall bear interest at a fixed rate.

Payment Term: Principal and interest payments shall be made on a semi-annual basis. The term of the FAP Loan shall be no longer than thirty-one (31) years.

Security Position: The loan shall be secured with a lien on the revenues of the applicant's water and sewer systems, 2 cents sales tax, 2 cents use tax and may include a mortgage on the applicant's water and sewer systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) refinance their Series 2024A Note which was originally incurred for water system improvements, make wastewater treatment plant improvements, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary; and (iii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$4,745,818.85	Project	$3,835,167.70
Local Funds	416,739.75	Refinance	1,085,739.75
		Bond Counsel	85,551.83
		Financial Advisor	85,551.83
		Local Counsel	41,525.91
		OWRB Costs of Issuance	28,271.58
		Trustee Bank	750.00
Total	$5,162,558.60	**Total**	$5,162,558.60

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION	)
NO. FAP-25-0009-L IN THE NAME OF	)
THE ELGIN PUBLIC WORKS AUTHORITY	)
COMANCHE COUNTY, OKLAHOMA	)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, The Elgin Public Works Authority (the "Applicant") has made its Application for Funding No. FAP-25-0009-L (the "Loan Application") to the Board for a loan from the proceeds of the Board's State Loan Program Revenue Bonds issued pursuant to the 2016 General Bond Resolution dated as of November 1, 2016, as supplemented and amended (the "Bond Resolution"), and authorized by Title 82 Oklahoma Statutes 2021, Sections 1085.31 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan to provide for acquisition, development, and utilization of storage and control facilities for water and sewage systems for the use and benefit of the public and for the conservation and distribution of water for beneficial purposes in or from reservoirs or other storage facilities and/or refinancing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. FAP-25-0009-L in the name of The Elgin Public Works Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) refinance their Series 2024A Note which was originally incurred for water system improvements, make wastewater treatment plant improvements, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary and (iii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made out of proceeds of the Board's State Loan Program Revenue Bonds to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $4,900,000.00. The Applicant shall pay interest on the loan at a fixed or variable rate to be established periodically by the Board. Principal and interest payments shall be made on a semi-annual basis or as otherwise provided for under the Bond Resolution. The term of the loan shall be no longer than thirty-one (31) years.

2. The loan shall be secured with a lien on the revenues of the Applicant's water and sewer systems, 2 cents sales tax, 2 cents use tax and may include a mortgage on the Applicant's water and sewer systems and other real property.

3. The funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from proceeds of the Board's State Loan Program Revenue Bonds in accordance with the requirements of the Bond Resolution.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, and Bond Resolution requirements. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Bixby Public Works Authority, Tulsa County

Loan Application No.: FAP-25-0004-L
State Loan Program Revenue Bond Loan ("FAP Loan")

Amount Requested: $9,850,000.00

Interest Rate: The FAP Loan shall bear interest at a fixed rate.

Payment Term: Principal and interest payments shall be made on a semi-annual basis. The term of the FAP Loan shall be no longer than sixteen (16) years.

Security Position: The loan shall be secured with a lien on the revenues of the applicant's water and sewer systems, a 0.30 cent sales tax and may include a mortgage on the applicant's water and sewer systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) make water and wastewater system improvements including replacing and installing water and sewer lines, rehabilitation of a lift station and construction of a new lift station, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary; and (iii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$9,449,586.55	Project	$9,153,805.06
		Bond Counsel	96,995.87
		Financial Advisor	96,995.87
		OWRB Costs of Issuance	53,791.82
		Local Counsel	47,247.93
		Trustee Bank	750.00
Total	$9,449,586.55	**Total**	$9,449,586.55

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION	)
NO. FAP-25-0004-L IN THE NAME OF	)
BIXBY PUBLIC WORKS AUTHORITY	)
TULSA COUNTY, OKLAHOMA	)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Bixby Public Works Authority (the "Applicant") has made its Application for Funding No. FAP-25-0004-L (the "Loan Application") to the Board for a loan from the proceeds of the Board's State Loan Program Revenue Bonds issued pursuant to the 2016 General Bond Resolution dated as of November 1, 2016, as supplemented and amended (the "Bond Resolution"), and authorized by Title 82 Oklahoma Statutes 2021, Sections 1085.31 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan to provide for acquisition, development, and utilization of storage and control facilities for water and sewage systems for the use and benefit of the public and for the conservation and distribution of water for beneficial purposes in or from reservoirs or other storage facilities and/or refinancing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. FAP-25-0004-L in the name of Bixby Public Works Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) make water and wastewater system improvements including replacing and installing water and sewer lines, rehabilitation of a lift station and construction of a new lift station, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary and (iii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made out of proceeds of the Board's State Loan Program Revenue Bonds to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $9,850,000.00. The Applicant shall pay interest on the loan at a fixed or variable rate to be established periodically by the Board. Principal and interest payments shall be made on a semi-annual basis or as otherwise provided for under the Bond Resolution. The term of the loan shall be no longer than sixteen (16) years.

2. The loan shall be secured with a lien on the revenues of the Applicant's water and sewer systems, a 0.30 cent sales tax and may include a mortgage on the Applicant's water and sewer systems and other real property.

3. The funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from proceeds of the Board's State Loan Program Revenue Bonds in accordance with the requirements of the Bond Resolution.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, and Bond Resolution requirements. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Okmulgee Municipal Authority, Okmulgee County

Loan Application No.: FAP-25-0006-L
State Loan Program Revenue Bond Loan ("FAP Loan")

Amount Requested: $10,760,000.00

Interest Rate: The FAP Loan shall bear interest at a fixed rate.

Payment Term: Principal and interest payments shall be made on a semi-annual basis. The term of the FAP Loan shall be no longer than thirty-one (31) years.

Security Position: The loan shall be secured with a lien on the revenues of the applicant's water, sewer, and sanitation systems, a 2 cents sales tax and may include a mortgage on the applicant's water and sewer systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) replace water lines throughout the system, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary; and (iii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$10,301,948.50	Project	$10,002,751.73
		Bond Counsel	105,519.49
		Financial Advisor	105,519.49
		OWRB Costs of Issuance	61,652.92
		Local Counsel	25,754.87
		Trustee Bank	750.00
Total	$10,301,948.50	**Total**	$10,301,948.50

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION)
NO. FAP-25-0006-L IN THE NAME OF)
OKMULGEE MUNICIPAL AUTHORITY)
OKMULGEE COUNTY, OKLAHOMA)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Okmulgee Municipal Authority (the "Applicant") has made its Application for Funding No. FAP-25-0006-L (the "Loan Application") to the Board for a loan from the proceeds of the Board's State Loan Program Revenue Bonds issued pursuant to the 2016 General Bond Resolution dated as of November 1, 2016, as supplemented and amended (the "Bond Resolution"), and authorized by Title 82 Oklahoma Statutes 2021, Sections 1085.31 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan to provide for acquisition, development, and utilization of storage and control facilities for water and sewage systems for the use and benefit of the public and for the conservation and distribution of water for beneficial purposes in or from reservoirs or other storage facilities and/or refinancing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. FAP-25-0006-L in the name of Okmulgee Municipal Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) replace water lines throughout the system, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary and (iii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made out of proceeds of the Board's State Loan Program Revenue Bonds to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $10,760,000.00. The Applicant shall pay interest on the loan at a fixed or variable rate to be established periodically by the Board. Principal and interest payments shall be made on a semi-annual basis or as otherwise provided for under the Bond Resolution. The term of the loan shall be no longer than thirty-one (31) years.

2. The loan shall be secured with a lien on the revenues of the Applicant's water, sewer, and sanitation systems, a 2 cents sales tax and may include a mortgage on the Applicant's water and sewer systems and other real property.

3. The funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from proceeds of the Board's State Loan Program Revenue Bonds in accordance with the requirements of the Bond Resolution.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, and Bond Resolution requirements. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Broken Arrow Municipal Authority, Tulsa County

Loan Application No.: FAP-25-0005-L
State Loan Program Revenue Bond Loan ("FAP Loan")

Amount Requested: $26,400,000.00

Interest Rate: The FAP Loan shall bear interest at a fixed rate.

Payment Term: Principal and interest payments shall be made on a semi-annual basis. The term of the FAP Loan shall be no longer than thirty-one (31) years.

Security Position: The loan shall be secured with a lien on the revenues of the applicant's water, sewer, and sanitation systems, a 1 cent sales tax and may include a mortgage on the applicant's water and sewer systems and other real property.

Purpose: The applicant will utilize the loan proceeds to: (i) plan, design, and construct multiple water and wastewater projects throughout their systems, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary; and (iii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$25,326,267.75	Project	$24,994,012.80
		OWRB Costs of Issuance	150,873.61
		Bond Counsel	90,315.67
		Financial Advisor	90,315.67
		Trustee Bank	750.00
Total	$25,326,267.75	**Total**	$25,326,267.75

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION)
NO. FAP-25-0005-L IN THE NAME OF)
BROKEN ARROW MUNICIPAL AUTHORITY)
TULSA COUNTY, OKLAHOMA)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Broken Arrow Municipal Authority (the "Applicant") has made its Application for Funding No. FAP-25-0005-L (the "Loan Application") to the Board for a loan from the proceeds of the Board's State Loan Program Revenue Bonds issued pursuant to the 2016 General Bond Resolution dated as of November 1, 2016, as supplemented and amended (the "Bond Resolution"), and authorized by Title 82 Oklahoma Statutes 2021, Sections 1085.31 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan to provide for acquisition, development, and utilization of storage and control facilities for water and sewage systems for the use and benefit of the public and for the conservation and distribution of water for beneficial purposes in or from reservoirs or other storage facilities and/or refinancing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Loan Application and related information, and finds that the Loan Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. FAP-25-0005-L in the name of Broken Arrow Municipal Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The loan proceeds, along with other funds of the Applicant, if any, will be used to (i) plan, design, and construct multiple water and wastewater projects throughout their systems, all related appurtenances (the "Project"), (ii) satisfy the Local Reserve Requirement, if necessary and (iii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. A loan shall be made out of proceeds of the Board's State Loan Program Revenue Bonds to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $26,400,000.00. The Applicant shall pay interest on the loan at a fixed or variable rate to be established periodically by the Board. Principal and interest payments shall be made on a semi-annual basis or as otherwise provided for under the Bond Resolution. The term of the loan shall be no longer than thirty-one (31) years.

2. The loan shall be secured with a lien on the revenues of the Applicant's water, sewer, and sanitation systems, a 1 cent sales tax and may include a mortgage on the Applicant's water and sewer systems and other real property.

3. The funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from proceeds of the Board's State Loan Program Revenue Bonds in accordance with the requirements of the Bond Resolution.

4. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, and Bond Resolution requirements. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

5. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other loan documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

6. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

3.C. SUMMARY DISPOSITION AGENDA ITEMS

FINANCIAL ASSISTANCE DIVISION

July 15, 2025

EMERGENCY GRANT APPLICATION
RECOMMENDED FOR APPROVAL

APPLICANT: Martha Utilities Trust **DATE RECEIVED:** 05/21/2025
COUNTY: Jackson **APPLICATION NUMBER:** FAP-25-0006-G

Amount Requested: $45,729.56 **Amount Recommended:** $45,729.56

PROJECT DESCRIPTION: Martha Utilities Trust operates a wastewater system that recently experienced failure due to transformer issues, resulting in the destruction of two lift station pumps. The proposed project is to restore full system functionality by replacing or repairing critical components, including the pumps, piping, elbows, guide rails, flow and pinch valves, control panel, and all other appurtenances required to complete the project. The estimated cost of the project is $53,799.49 which will be funded by the OWRB Emergency Grant of $45,729.56 and local funds of $8,069.93.

Priority Ranking			**Priority Points**
Emergency Ranking 2 (Maximum: 50 points)			40
WATER AND SEWER RATE STRUCTURE (Maximum: 13 points)			
Water rate per 5,000 gal/month: $ 69.00 Sewer rate per 5,000 gal/month: 25.00 Total $ 94.00 10 points		(_) Flat rate -3 (_) Decreasing Block -2 (_) Uniform 0 (X) Increasing Block +2 (_) Sales tax (W/S) +1	12
INDEBTEDNESS PER CUSTOMER (Maximum: 10 points) Total Indebtedness: $ 0.00 Monthly Debt Payment: $ 0.00 Number of Customers: 88 Monthly Payment Per Customer: $ 0.00			0
LOCAL PARTICIPATION (Maximum 10 points) From Reserves: $ $8,069.93 Contribution from Loan: $ 0.00 % of Project Local Funded: 15%			1
MEDIAN HOUSEHOLD INCOME $ 38,333.00		(Maximum: 10 points)	4
ABILITY TO FINANCE PROJECT (Maximum: 12 points) FP = ($45,729.56) / (88) (0.0710) / (12) = $ 3.07			7
AMOUNT OF GRANT REQUESTED (Maximum: 10 points) AR = $45,729.56			5
REQUEST NUMBER 1			0
BENEFIT OF PROJECT TO OTHER SYSTEMS **No**			0
		TOTAL PRIORITY POINTS	69

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF GRANT APPLICATION	)
NO. FAP-25-0006-G IN THE NAME OF THE	)
MARTHA UTILITIES TRUST,	)
JACKSON COUNTY, OKLAHOMA.	)

PROPOSED
ORDER APPROVING GRANT APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board on the 15th day of July 2025. The Board finds that since the application for this grant has received a priority ranking of 69 points under Chapter 50 of the Board's Rules and that since sufficient funds are available in the Emergency Grant Account of the Water Resources Fund, the grant application for an amount not to exceed $45,729.56 should be approved to be advanced for the following purpose and subject to the following conditions:

Purpose: The project shall consist of restoring full system functionality by replacing or repairing critical components at the lift station, including the pumps, piping, elbows, guide rails, flow and pinch valves, control panel as well as other related construction and necessary appurtenances, as more fully described in the engineering report included in applicant's grant application.

Conditions:

1. The amount of the grant will be based on 85% of the actual total eligible cost of the project. The amount of the grant shall not exceed $45,729.56.

2. Grant funds shall be deposited in a separate account with a federally insured financial institution.

3. Applicants who have raised water and/or sewer rates resulting in an advancement in position of priority for assistance shall not modify those rates after receipt of the grant without the prior written consent of the Board, unless such modification would not result in a change in position of priority.

4. The applicant shall fully document disbursement of grant funds as required by the Board. Further, applicant shall maintain proper books, records, and supporting documentation, and make the same available for inspection by the Board. Disbursement of grant funds without supporting documentation shall be considered unauthorized expenditure of grant funds.

5. The applicant shall return any unexpended grant funds to the Board within thirty (30) days of completion of the project or within thirty (30) days from the applicant's receipt of all invoices, whichever is later.

6. The applicant shall return or otherwise pay to the Board, any grant funds expended for unauthorized or unallowable purposes. Authorized purposes are those which are necessary for the completion of the project described in the grant application, which application is incorporated by reference herein, or which are necessary for the project as approved, if the project is different from that described in the application. Any funds returned by the applicant under this paragraph shall bear interest at the maximum rate allowed by law. The applicant shall direct to the Board any and all questions regarding whether an expenditure is authorized.

7. Furthermore, prior to and during the construction period, Martha Utilities Trust is required to comply with the requirements of all applicable federal and state statutory provisions and all Oklahoma Water Resources Board rules, regulations and grant policies.

SO ORDERED this 15th day of July 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

_____
Lori Johnson, Chief
Financial Assistance Division

EMERGENCY GRANT APPLICATION
RECOMMENDED FOR APPROVAL

APPLICANT: Rural Water District No. 1, Stephens County, Oklahoma
COUNTY: Stephens
DATE RECEIVED: 05/19/2025
APPLICATION NUMBER: FAP-25-0005-G

Amount Requested: $84,991.87 **Amount Recommended:** $84,991.87

PROJECT DESCRIPTION: Rural Water District No. 1, Stephens County, Oklahoma (District) operates a water supply system that is supported by a pump station during periods of high-water usage that transports water purchased from the City of Marlow. The District experienced heavy storms in February 2025, which severely damaged the pump. The proposed project is to construct a new booster pump station to replace the damaged pump, and all appurtenances required to complete the project. The estimated cost of the project is $99,990.43 which will be funded by the OWRB Emergency Grant of $84,991.87 and a local match of $14,998.56.

Priority Ranking			Priority Points
Emergency Ranking 1 (Maximum: 50 points)			50
WATER AND SEWER RATE STRUCTURE (Maximum: 13 points)			
Water rate per 5,000 gal/month: $ 61.50 Sewer rate per 5,000 gal/month: $ 12.00 Total $ 73.50 10 points		(_) Flat rate -3 (_) Decreasing Block -2 (_) Uniform 0 (X) Increasing Block +2 (_) Sales tax (W/S) +1	12
INDEBTEDNESS PER CUSTOMER (Maximum: 10 points) Total Indebtedness: $ 0.00 Monthly Debt Payment: $ 0.00 Number of Customers: 554 Monthly Payment Per Customer: $ 0.00			0
LOCAL PARTICIPATION (Maximum 10 points) From Reserves: $ 14,998.56 Contribution from Loan: $ 0.00 % of Project Local Funded: 15%			1
MEDIAN HOUSEHOLD INCOME $ 51,156.00		(Maximum: 10 points)	1
ABILITY TO FINANCE PROJECT (Maximum: 12 points) FP = ($84,991.87) / (554) × (0.0710) / (12) = $ 0.91			1
AMOUNT OF GRANT REQUESTED (Maximum: 10 points) AR = $84,991.87			(2)
REQUEST NUMBER			0
BENEFIT OF PROJECT TO OTHER SYSTEMS	**No**		0
		TOTAL PRIORITY POINTS	63

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF GRANT APPLICATION	)
NO. FAP-25-0005-G IN THE NAME OF THE	)
RURAL WATER DISTRICT NO. 1, STEPHENS COUNTY,	)
OKLAHOMA.	)

PROPOSED
ORDER APPROVING GRANT APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board on the 15th day of July 2025. The Board finds that since the application for this grant has received a priority ranking of 63 points under Chapter 50 of the Board's Rules and that since sufficient funds are available in the Emergency Grant Account of the Water Resources Fund, the grant application for an amount not to exceed $84,991.87 should be approved to be advanced for the following purpose and subject to the following conditions:

Purpose: The project shall consist of constructing a new booster pump station to replace the damaged pump as well as other related construction and necessary appurtenances, as more fully described in the engineering report included in applicant's grant application.

Conditions:

1. The amount of the grant will be based on 85% of the actual total eligible cost of the project. The amount of the grant shall not exceed $84,991.87.

2. Grant funds shall be deposited in a separate account with a federally insured financial institution.

3. Applicants who have raised water and/or sewer rates resulting in an advancement in position of priority for assistance shall not modify those rates after receipt of the grant without the prior written consent of the Board, unless such modification would not result in a change in position of priority.

4. The applicant shall fully document disbursement of grant funds as required by the Board. Further, applicant shall maintain proper books, records, and supporting documentation, and make the same available for inspection by the Board. Disbursement of grant funds without supporting documentation shall be considered unauthorized expenditure of grant funds.

5. The applicant shall return any unexpended grant funds to the Board within thirty (30) days of completion of the project or within thirty (30) days from the applicant's receipt of all invoices, whichever is later.

6. The applicant shall return or otherwise pay to the Board, any grant funds expended for unauthorized or unallowable purposes. Authorized purposes are those which are necessary for the completion of the project described in the grant application, which application is incorporated by reference herein, or which are necessary for the project as approved, if the project is different from that described in the application. Any funds returned by the applicant under this paragraph shall bear interest at the maximum rate allowed by law. The applicant shall direct to the Board any and all questions regarding whether an expenditure is authorized.

7. Furthermore, prior to and during the construction period, Rural Water District No. 1, Stephens County, Oklahoma is required to comply with the requirements of all applicable federal and state statutory provisions and all Oklahoma Water Resources Board rules, regulations and grant policies.

SO ORDERED this 15th day of July 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess , Secretary

(SEAL)

Reviewed By:

Lori Johnson

_____
Lori Johnson, Chief
Financial Assistance Division

REAP GRANT APPLICATION
RECOMMENDED FOR APPROVAL

APPLICANT: Fort Cobb Public Works Authority **DATE RECEIVED:** 07/11/2024
COUNTY: Caddo **APPLICATION NUMBER:** FAP-25-0002-R

Amount Requested: $143,456.63 **Amount Recommended:** $143,456.63

PROJECT DESCRIPTION: Fort Cobb Public Works Authority operates a water distribution system. The system experiences a loss of revenue due to inaccurate readings from the current water meters. The proposed project is to install approximately 256 new AMI meters, and all appurtenances required to complete the project. The estimated cost of the project is $143,456.63, which will be funded by the OWRB REAP Grant of $143,456.63.

Priority Ranking			Priority Points
Population 518 (Maximum: 55 points)			55
WATER AND SEWER RATE STRUCTURE (Maximum: 13 points)			
Water rate per 5,000 gal/month: $ 20.96 Sewer rate per 5,000 gal/month: 11.95 Total $ 32.91 ___3_____ points		(_) Flat rate -3 (X) Decreasing Block -2 (_) Uniform 0 (_) Increasing Block +2 (_) Sales tax (W/S) +1	1
INDEBTEDNESS PER CUSTOMER (Maximum: 10 points) Total Indebtedness: $ 0.00 Monthly Debt Payment: $ 0.00 Number of Customers: 390 Monthly Payment Per Customer: $ 0.00			0
MEDIAN HOUSEHOLD INCOME $ 52,700.00		(Maximum: 10 points)	0
ABILITY TO FINANCE PROJECT (Maximum: 12 points) FP = ($143,456.63) / (390) × (0.0710) / (12) = $ 2.18			6
AMOUNT OF GRANT REQUESTED (Maximum: 5 points) AR = $143,456.63			(5)
REQUEST NUMBER 0			0
ENFORCMENT ORDER No		(Maximum: 5 points)	0
BENEFIT OF PROJECT TO OTHER SYSTEMS No			0
FISCAL SUSTAINABILITY			3
		TOTAL PRIORITY POINTS	60

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF REAP GRANT APPLICATION	)
NO. FAP-25-0002-R IN THE NAME OF THE	)
FORT COBB PUBLIC WORKS AUTHORITY,	)
CADDO COUNTY, OKLAHOMA.	)

PROPOSED
ORDER APPROVING REAP GRANT APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board on the 15th day of July 2025. The Board finds that since the application for this grant has received a priority ranking of 60 points under Chapter 50 of the Board's Rules and that since sufficient funds are available in the REAP Grant Account of the Water Resources Fund, the grant application for an amount not to exceed $143,456.63 should be approved to be advanced for the following purpose and subject to the following conditions:

Conditions:

1. The amount of the REAP grant shall not exceed $143,456.63.

2. REAP Grant funds shall be deposited in a separate account with a federally insured financial institution.

3. Applicants who have raised water and/or sewer rates resulting in an advancement in position of priority for assistance shall not modify those rates after receipt of the REAP grant without the prior written consent of the Board, unless such modification would not result in a change in position of priority.

4. The applicant shall fully document disbursement of REAP grant funds as required by the Board or its staff. Further, applicant shall maintain proper books, records, and supporting documentation, and make the same available for inspection by the Board or its staff. Disbursement of grant funds without supporting documentation shall be considered and deemed unauthorized expenditure of grant funds.

5. The applicant shall return any unexpended REAP grant funds to the Board within thirty (30) days of completion of the project or within thirty (30) days from the applicant's receipt of all invoices, whichever is later.

6. The project shall be to install approximately 256 new AMI meters as well as other related construction and necessary appurtenances, as more fully described in the engineering report included in applicant's grant application. Applicant is authorized to expend the REAP grant funds only for purposes of completing such project. The applicant shall return or otherwise pay to the Board, any REAP grant funds expended for unauthorized or unallowable purposes. Any funds due to be returned by the applicant under this paragraph shall additionally bear interest at the maximum rate allowed by law until repaid in full. Whenever there is any doubt as to whether an expenditure is authorized, the applicant shall consult with Board staff and obtain staff's answer before making the expenditure.

7. Furthermore, prior to and during the construction period, Fort Cobb Public Works Authority is required to comply with the requirements of all applicable federal and state statutory provisions and all Oklahoma Water Resources Board rules, regulations and grant policies.

SO ORDERED this 15th day of July 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

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Lori Johnson, Chief
Financial Assistance Division

REAP GRANT APPLICATION
RECOMMENDED FOR APPROVAL

APPLICANT: The Porter Public Works Authority **DATE RECEIVED:** 09/03/2024
COUNTY: Wagoner **APPLICATION NUMBER:** FAP-25-0083-R

Amount Requested: $149,950.00 **Amount Recommended:** $149,950.00

PROJECT DESCRIPTION: The Porter Public Works Authority (Authority) operates a sanitary sewer collection system and a wastewater treatment facility. In 2022 a Consent Order (Consent Order 21-251) was issued to the Town of Porter for failure to meet discharge limits. As part of the process to satisfy discharge limits, the proposed project is to install a power-backup generator and automatic transfer switch plus all appurtenances required to complete the project. The estimated cost of the project is $149,950.00 which will be funded by the OWRB REAP grant in the amount of $149,950.00.

Priority Ranking			**Priority Points**
Population 561 (Maximum: 55 points)			55
WATER AND SEWER RATE STRUCTURE (Maximum: 13 points)			
Water rate per 5,000 gal/month: $ 63.50 Sewer rate per 5,000 gal/month: 14.00 Total $ 77.50 ____10____ points		(_) Flat rate -3 (_) Decreasing Block -2 (_) Uniform 0 (X) Increasing Block +2 (_) Sales tax (W/S) +1	12
INDEBTEDNESS PER CUSTOMER (Maximum: 10 points) Total Indebtedness: $ 479,332.04 Monthly Debt Payment: $ 1,923.50 Number of Customers: 750 Monthly Payment Per Customer: $ 2.56			0
MEDIAN HOUSEHOLD INCOME $ 37,639.00		(Maximum: 10 points)	4
ABILITY TO FINANCE PROJECT (Maximum: 12 points) FP = ($149,950.00) (0.0710) / (750) (12) = $ 1.18			2
AMOUNT OF GRANT REQUESTED (Maximum: 5 points) AR = $149,950.00			(5)
REQUEST NUMBER 1			(5)
ENFORCMENT ORDER Yes		(Maximum: 5 points)	5
BENEFIT OF PROJECT TO OTHER SYSTEMS No			0
FISCAL SUSTAINABILITY			3
		TOTAL PRIORITY POINTS	71

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF REAP GRANT APPLICATION	)
NO. FAP-25-0083-R IN THE NAME OF	)
THE PORTER PUBLIC WORKS AUTHORITY,	)
WAGONER COUNTY, OKLAHOMA.	)

PROPOSED
ORDER APPROVING REAP GRANT APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board on the 15th day of July 2025. The Board finds that since the application for this grant has received a priority ranking of 71 points under Chapter 50 of the Board's Rules and that since sufficient funds are available in the REAP Grant Account of the Water Resources Fund, the grant application for an amount not to exceed $149,950.00 should be approved to be advanced for the following purpose and subject to the following conditions:

Conditions:

1. The amount of the REAP grant shall not exceed $149,950.00.

2. REAP Grant funds shall be deposited in a separate account with a federally insured financial institution.

3. Applicants who have raised water and/or sewer rates resulting in an advancement in position of priority for assistance shall not modify those rates after receipt of the REAP grant without the prior written consent of the Board, unless such modification would not result in a change in position of priority.

4. The applicant shall fully document disbursement of REAP grant funds as required by the Board or its staff. Further, applicant shall maintain proper books, records, and supporting documentation, and make the same available for inspection by the Board or its staff. Disbursement of grant funds without supporting documentation shall be considered and deemed unauthorized expenditure of grant funds.

5. The applicant shall return any unexpended REAP grant funds to the Board within thirty (30) days of completion of the project or within thirty (30) days from the applicant's receipt of all invoices, whichever is later.

6. The project shall be to install a power-backup generator and automatic transfer switch as well as other related construction and necessary appurtenances, as more fully described in the engineering report included in applicant's grant application. Applicant is authorized to expend the REAP grant funds only for purposes of completing such project. The applicant shall return or otherwise pay to the Board, any REAP grant funds expended for unauthorized or unallowable purposes. Any funds due to be returned by the applicant under this paragraph shall additionally bear interest at the maximum rate allowed by law until repaid in full. Whenever there is any doubt as to whether an expenditure is authorized, the applicant shall consult with Board staff and obtain staff's answer before making the expenditure.

7. Furthermore, prior to and during the construction period, The Porter Public Works Authority is required to comply with the requirements of all applicable federal and state statutory provisions and all Oklahoma Water Resources Board rules, regulations and grant policies.

SO ORDERED this 15th day of July 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

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Lori Johnson, Chief
Financial Assistance Division

REAP GRANT APPLICATION
RECOMMENDED FOR APPROVAL

APPLICANT: Rural Water District No. 17 LeFlore County, Oklahoma **DATE RECEIVED:** 07/26/2024
COUNTY: LeFlore **APPLICATION NUMBER:** FAP-25-0004-R

Amount Requested: $41,000.00 **Amount Recommended:** $41,000.00

PROJECT DESCRIPTION: Rural Water District No. 17 LeFlore County, Oklahoma operates a water system. The District is experiencing water loss due to a faulty electrical panel, which is disrupting normal system operations. The proposed project is to replace the electrical control panel with Variable Frequency Drives and upgrade wiring to alternate running of two pumps with surge protection, plus all appurtenances required to complete the project. The estimated cost of the project is $41,000.00 which will be funded by the OWRB REAP grant in the amount of $41,000.00.

Priority Ranking			**Priority Points**
Taps 170 (Maximum: 55 points)			55
WATER AND SEWER RATE STRUCTURE (Maximum: 13 points)			
Water rate per 5,000 gal/month: $ 146.00 Sewer rate per 5,000 gal/month: 0.00 Total $ 146.00 10 points		(_) Flat rate -3 (_) Decreasing Block -2 (_) Uniform 0 (X) Increasing Block +2 (_) Sales tax (W/S) +1	12
INDEBTEDNESS PER CUSTOMER (Maximum: 10 points) Total Indebtedness: $ 25,000.00 Monthly Debt Payment: $ 49.33 Number of Customers: 170 Monthly Payment Per Customer: $ 0.29			0
MEDIAN HOUSEHOLD INCOME $ 41,900.00		(Maximum: 10 points)	3
ABILITY TO FINANCE PROJECT (Maximum: 12 points) FP = ($41,000.00) (0.0710) / (170) (12) = $ 1.43			3
AMOUNT OF GRANT REQUESTED (Maximum: 5 points) AR = $41,000.00			3
REQUEST NUMBER 0			0
ENFORCMENT ORDER No		(Maximum: 5 points)	0
BENEFIT OF PROJECT TO OTHER SYSTEMS No			0
FISCAL SUSTAINABILITY			10
		TOTAL PRIORITY POINTS	86

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF REAP GRANT APPLICATION	)
NO. FAP-25-0004-R IN THE NAME OF THE	)
RURAL WATER DISTRICT NO. 17 LEFLORE COUNTY,	)
OKLAHOMA.	)

PROPOSED
ORDER APPROVING REAP GRANT APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board on the 15th day of July 2025. The Board finds that since the application for this grant has received a priority ranking of 86 points under Chapter 50 of the Board's Rules and that since sufficient funds are available in the REAP Grant Account of the Water Resources Fund, the grant application for an amount not to exceed $41,000.00 should be approved to be advanced for the following purpose and subject to the following conditions:

Conditions:

1. The amount of the REAP grant shall not exceed $41,000.00.

2. REAP Grant funds shall be deposited in a separate account with a federally insured financial institution.

3. Applicants who have raised water and/or sewer rates resulting in an advancement in position of priority for assistance shall not modify those rates after receipt of the REAP grant without the prior written consent of the Board, unless such modification would not result in a change in position of priority.

4. The applicant shall fully document disbursement of REAP grant funds as required by the Board or its staff. Further, applicant shall maintain proper books, records, and supporting documentation, and make the same available for inspection by the Board or its staff. Disbursement of grant funds without supporting documentation shall be considered and deemed unauthorized expenditure of grant funds.

5. The applicant shall return any unexpended REAP grant funds to the Board within thirty (30) days of completion of the project or within thirty (30) days from the applicant's receipt of all invoices, whichever is later.

6. The project shall be to replace the electrical control panel with Variable Frequency Drives and upgrade wiring to alternate running of two pumps with surge protection as well as other related construction and necessary appurtenances, as more fully described in the engineering report included in applicant's grant application. Applicant is authorized to expend the REAP grant funds only for purposes of completing such project. The applicant shall return or otherwise pay to the Board, any REAP grant funds expended for unauthorized or unallowable purposes. Any funds due to be returned by the applicant under this paragraph shall additionally bear interest at the maximum rate allowed by law until repaid in full. Whenever there is any doubt as to whether an expenditure is authorized, the applicant shall consult with Board staff and obtain staff's answer before making the expenditure.

7. Furthermore, prior to and during the construction period, Rural Water District No. 17 LeFlore County, Oklahoma is required to comply with the requirements of all applicable federal and state statutory provisions and all Oklahoma Water Resources Board rules, regulations and grant policies.

SO ORDERED this 15th day of July 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

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Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

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Lori Johnson, Chief
Financial Assistance Division

REAP GRANT APPLICATION
RECOMMENDED FOR APPROVAL

APPLICANT: The Covington Utilities Authority **DATE RECEIVED:** 08/19/2024
COUNTY: Garfield **APPLICATION NUMBER:** FAP-25-0018-R

Amount Requested: $134,607.00 **Amount Recommended:** $134,607.00

PROJECT DESCRIPTION: The Covington Utilities Authority (Authority) operates a sanitary sewer collection system. The Authority is experiencing overflow issues due to aged and deteriorated clay tile pipe sewer lines. The proposed project is to replace approximately 300 linear feet of existing 10-inch sewer main and one manhole plus all appurtenances required to complete the project. The estimated cost of the project is $134,607.00 which will be funded by the OWRB REAP grant in the amount of $134,607.00.

Priority Ranking			**Priority Points**
Population 472 (Maximum: 55 points)			55
WATER AND SEWER RATE STRUCTURE (Maximum: 13 points)			
Water rate per 5,000 gal/month: $ 68.99 Sewer rate per 5,000 gal/month: 16.50 Total $ 85.49 ____10____ points		(_) Flat rate -3 (X) Decreasing Block -2 (_) Uniform 0 (_) Increasing Block +2 (_) Sales tax (W/S) +1	8
INDEBTEDNESS PER CUSTOMER (Maximum: 10 points) Total Indebtedness: $ 0.00 Monthly Debt Payment: $ 0.00 Number of Customers: 266 Monthly Payment Per Customer: $ 0.00			0
MEDIAN HOUSEHOLD INCOME $ 47,222.00		(Maximum: 10 points)	2
ABILITY TO FINANCE PROJECT (Maximum: 12 points) FP = ($134,607.00) / (266) × (0.0710) / (12) = $ 2.99			7
AMOUNT OF GRANT REQUESTED (Maximum: 5 points) AR = $134,607.00			(4)
REQUEST NUMBER 0			0
ENFORCMENT ORDER No		(Maximum: 5 points)	0
BENEFIT OF PROJECT TO OTHER SYSTEMS No			0
FISCAL SUSTAINABILITY			10
		TOTAL PRIORITY POINTS	78

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF REAP GRANT APPLICATION	)
NO. FAP-25-0018-R IN THE NAME OF	)
THE COVINGTON UTILITIES AUTHORITY,	)
GARFIELD COUNTY, OKLAHOMA.	)

PROPOSED
ORDER APPROVING REAP GRANT APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board on the 15th day of July 2025. The Board finds that since the application for this grant has received a priority ranking of 78 points under Chapter 50 of the Board's Rules and that since sufficient funds are available in the REAP Grant Account of the Water Resources Fund, the grant application for an amount not to exceed $134,607.00 should be approved to be advanced for the following purpose and subject to the following conditions:

Conditions:

1. The amount of the REAP grant shall not exceed $134,607.00.

2. REAP Grant funds shall be deposited in a separate account with a federally insured financial institution.

3. Applicants who have raised water and/or sewer rates resulting in an advancement in position of priority for assistance shall not modify those rates after receipt of the REAP grant without the prior written consent of the Board, unless such modification would not result in a change in position of priority.

4. The applicant shall fully document disbursement of REAP grant funds as required by the Board or its staff. Further, applicant shall maintain proper books, records, and supporting documentation, and make the same available for inspection by the Board or its staff. Disbursement of grant funds without supporting documentation shall be considered and deemed unauthorized expenditure of grant funds.

5. The applicant shall return any unexpended REAP grant funds to the Board within thirty (30) days of completion of the project or within thirty (30) days from the applicant's receipt of all invoices, whichever is later.

6. The project shall be to replace approximately 300 linear feet of existing 10-inch sewer main and one manhole as well as other related construction and necessary appurtenances, as more fully described in the engineering report included in applicant's grant application. Applicant is authorized to expend the REAP grant funds only for purposes of completing such project. The applicant shall return or otherwise pay to the Board, any REAP grant funds expended for unauthorized or unallowable purposes. Any funds due to be returned by the applicant under this paragraph shall additionally bear interest at the maximum rate allowed by law until repaid in full. Whenever there is any doubt as to whether an expenditure is authorized, the applicant shall consult with Board staff and obtain staff's answer before making the expenditure.

7. Furthermore, prior to and during the construction period, The Covington Utilities Authority is required to comply with the requirements of all applicable federal and state statutory provisions and all Oklahoma Water Resources Board rules, regulations and grant policies.

SO ORDERED this 15th day of July 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

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Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

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Lori Johnson, Chief
Financial Assistance Division

REAP GRANT APPLICATION
RECOMMENDED FOR APPROVAL

APPLICANT: Francis Public Works Authority **DATE RECEIVED:** 08/31/2024
COUNTY: Pontotoc **APPLICATION NUMBER:** FAP-25-0072-R

Amount Requested: $80,000.00 **Amount Recommended:** $80,000.00

PROJECT DESCRIPTION: Francis Public Works Authority operates a water treatment plant that is in need of rehabilitation to maintain proper functionality and ensure continued delivery of safe, reliable water service. The proposed project is to install at the water treatment plant a generator, propane tank, pH analyzer, and all appurtenances required to complete the project. The estimated cost of the project is $80,000.00 which will be funded by the OWRB REAP Grant of $80,000.00.

Priority Ranking			Priority Points
Population 315 (Maximum: 55 points)			55
WATER AND SEWER RATE STRUCTURE (Maximum: 13 points)			
Water rate per 5,000 gal/month: $ 65.50 Sewer rate per 5,000 gal/month: 25.00 Total $ 90.50 _____10___ points		(_) Flat rate -3 (_) Decreasing Block -2 (_) Uniform 0 (X) Increasing Block +2 (_) Sales tax (W/S) +1	12
INDEBTEDNESS PER CUSTOMER (Maximum: 10 points) Total Indebtedness: $ 178,192.00 Monthly Debt Payment: $ 2,270.83 Number of Customers: 193 Monthly Payment Per Customer: $ 11.77			5
MEDIAN HOUSEHOLD INCOME $ 47,292.00		(Maximum: 10 points)	2
ABILITY TO FINANCE PROJECT (Maximum: 12 points) FP = ($80,000.00) (0.0710) / (193) (12) = $ 2.45			6
AMOUNT OF GRANT REQUESTED (Maximum: 5 points) AR = $80,000.00			1
REQUEST NUMBER 0			0
ENFORCMENT ORDER No		(Maximum: 5 points)	0
BENEFIT OF PROJECT TO OTHER SYSTEMS No			0
FISCAL SUSTAINABILITY			10
		TOTAL PRIORITY POINTS	91

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF REAP GRANT APPLICATION	)
NO. FAP-25-0072-R IN THE NAME OF THE	)
FRANCIS PUBLIC WORKS AUTHORITY,	)
PONTOTOC COUNTY, OKLAHOMA.	)

PROPOSED
ORDER APPROVING REAP GRANT APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board on the 15th day of July 2025. The Board finds that since the application for this grant has received a priority ranking of 91 points under Chapter 50 of the Board's Rules and that since sufficient funds are available in the REAP Grant Account of the Water Resources Fund, the grant application for an amount not to exceed $80,000.00 should be approved to be advanced for the following purpose and subject to the following conditions:

Conditions:

1. The amount of the REAP grant shall not exceed $80,000.00.

2. REAP Grant funds shall be deposited in a separate account with a federally insured financial institution.

3. Applicants who have raised water and/or sewer rates resulting in an advancement in position of priority for assistance shall not modify those rates after receipt of the REAP grant without the prior written consent of the Board, unless such modification would not result in a change in position of priority.

4. The applicant shall fully document disbursement of REAP grant funds as required by the Board or its staff. Further, applicant shall maintain proper books, records, and supporting documentation, and make the same available for inspection by the Board or its staff. Disbursement of grant funds without supporting documentation shall be considered and deemed unauthorized expenditure of grant funds.

5. The applicant shall return any unexpended REAP grant funds to the Board within thirty (30) days of completion of the project or within thirty (30) days from the applicant's receipt of all invoices, whichever is later.

6. The project shall be to install at the water treatment plant a generator, propane tank, pH analyzer as well as other related construction and necessary appurtenances, as more fully described in the engineering report included in applicant's grant application. Applicant is authorized to expend the REAP grant funds only for purposes of completing such project. The applicant shall return or otherwise pay to the Board, any REAP grant funds expended for unauthorized or unallowable purposes. Any funds due to be returned by the applicant under this paragraph shall additionally bear interest at the maximum rate allowed by law until repaid in full. Whenever there is any doubt as to whether an expenditure is authorized, the applicant shall consult with Board staff and obtain staff's answer before making the expenditure.

7. Furthermore, prior to and during the construction period, Francis Public Works Authority is required to comply with the requirements of all applicable federal and state statutory provisions and all Oklahoma Water Resources Board rules, regulations and grant policies.

SO ORDERED this 15th day of July 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

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Thomas A. Gorman, Chairman

ATTEST:

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Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

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Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: The Carnegie Public Works Authority, Caddo County

Loan Application No.: ORF-25-0036-CW
Clean Water SRF Loan ("CWSRF Loan")

Amount Requested: $1,000,000.00

Payment Term: The applicant shall be required to comply with all CWSRF loan provisions. If all CWSRF loan provisions are met to the satisfaction of the OWRB, then the funding shall be forgiven in total without fees for administration or interest.

Purpose: The applicant will utilize the loan proceeds to: (i) paint the existing clarifiers, construct a bar screen facility, a lift station with associated pumps and controls, and a chemical feed building, all related appurtenances (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$1,000,000.00	Project	$1,035,000.00
ASCOG	45,000.00	Bond Counsel	10,000.00
Total	1,045,000.00	**Total**	$1,045,000.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION	)
NO. ORF-25-0036-CW IN THE NAME OF	)
THE CARNEGIE PUBLIC WORKS AUTHORITY	)
CADDO COUNTY, OKLAHOMA	)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, The Carnegie Public Works Authority (the "Applicant") has made its Application for Funding No. ORF-25-0036-CW (the "Application") to the Board for a loan from the Clean Water State Revolving Fund (the "CWSRF") program, pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.51 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for wastewater system improvements and/or water quality protection efforts to further compliance with State and Federal standards, and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Application and related information, and finds that the Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-25-0036-CW in the name of The Carnegie Public Works Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The proceeds, along with other funds of the Applicant, if any, will be used to (i) paint the existing clarifiers, construct a bar screen facility, a lift station with associated pumps and controls, and a chemical feed building, all related appurtenances (the "Project") and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. Funding shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $1,000,000.00.

2. Upon the Applicant's acceptance of the Board's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other CWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the CWSRF in accordance with the CWSRF program regulations as approved by the United States Environmental Protection Agency.

3. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, CWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the CWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay all or a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

4. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other funding documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

5. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered on this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

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Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: The Locust Grove Public Works Authority, Mayes County

Loan Application No.: ORF-24-0033-CW
Clean Water SRF Loan ("CWSRF Loan")

Amount Requested: $1,500,000.00

Payment Term: The applicant shall be required to comply with all CWSRF loan provisions. If all CWSRF loan provisions are met to the satisfaction of the OWRB, then the funding shall be forgiven in total without fees for administration or interest.

Purpose: The applicant will utilize the loan proceeds to: (i) complete a sanitary sewer evaluation study to identify and correct excessive inflow and infiltration in the sewer collection system (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$1,500,000.00	Project	$1,405,000.00
		Bond Counsel	45,000.00
		Financial Advisor	45,000.00
		Local Counsel	5,000.00
Total	$1,500,000.00	**Total**	$1,500,000.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION)
NO. ORF-24-0033-CW IN THE NAME OF)
THE LOCUST GROVE PUBLIC WORKS AUTHORITY)
MAYES COUNTY, OKLAHOMA)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, The Locust Grove Public Works Authority (the "Applicant") has made its Application for Funding No. ORF-24-0033-CW (the "Application") to the Board for a loan from the Clean Water State Revolving Fund (the "CWSRF") program, pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.51 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for wastewater system improvements and/or water quality protection efforts to further compliance with State and Federal standards, and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Application and related information, and finds that the Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-24-0033-CW in the name of The Locust Grove Public Works Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The proceeds, along with other funds of the Applicant, if any, will be used to (i) complete a sanitary sewer evaluation study to identify and correct excessive infiltration and inflow in the sewer collection system (the "Project") and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. Funding shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $1,500,000.00.

2. Upon the Applicant's acceptance of the Board's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other CWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the CWSRF in accordance with the CWSRF program regulations as approved by the United States Environmental Protection Agency.

3. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, CWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the CWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay all or a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

4. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other funding documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

5. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered on this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

_____

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Roff Public Works Authority, Pontotoc County

Loan Application No.: ORF-26-0037-CW
Clean Water SRF Loan ("CWSRF Loan")

Amount Requested: $1,500,000.00

Payment Term: The applicant shall be required to comply with all CWSRF loan provisions. If all CWSRF loan provisions are met to the satisfaction of the OWRB, then the funding shall be forgiven in total without fees for administration or interest.

Purpose: The applicant will utilize the loan proceeds to: (i) replace and rehabilitate the main sewer line and multiple manholes, all related appurtenances (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$1,500,000.00	Project	$1,407,500.00
		Bond Counsel	45,000.00
		Financial Advisor	45,000.00
		Local Counsel	2,500.00
Total	$1,500,000.00	**Total**	$1,500,000.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION)
NO. ORF-26-0037-CW IN THE NAME OF)
ROFF PUBLIC WORKS AUTHORITY)
PONTOTOC COUNTY, OKLAHOMA)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Roff Public Works Authority (the "Applicant") has made its Application for Funding No. ORF-26-0037-CW (the "Application") to the Board for a loan from the Clean Water State Revolving Fund (the "CWSRF") program, pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.51 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for wastewater system improvements and/or water quality protection efforts to further compliance with State and Federal standards, and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Application and related information, and finds that the Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-26-0037-CW in the name of Roff Public Works Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The proceeds, along with other funds of the Applicant, if any, will be used to (i) replace and rehabilitate the main sewer line and multiple manholes, all related appurtenances (the "Project") and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. Funding shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $1,500,000.00.

2. Upon the Applicant's acceptance of the Board's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other CWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the CWSRF in accordance with the CWSRF program regulations as approved by the United States Environmental Protection Agency.

3. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, CWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the CWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay all or a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

4. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other funding documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

5. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered on this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

_____

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: The Sperry Utility Services Authority, Tulsa County

Loan Application No.: ORF-25-0025-CW
Clean Water SRF Loan ("CWSRF Loan")

Amount Requested: $1,500,000.00

Payment Term: The applicant shall be required to comply with all CWSRF loan provisions. If all CWSRF loan provisions are met to the satisfaction of the OWRB, then the funding shall be forgiven in total without fees for administration or interest.

Purpose: The applicant will utilize the loan proceeds to: (i) make wastewater collection and treatment systems improvements, all related appurtenances (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$1,500,000.00	Project	$1,450,000.00
		Bond Counsel	45,000.00
		Local Counsel	5,000.00
Total	$1,500,000.00	**Total**	$1,500,000.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION)
NO. ORF-25-0025-CW IN THE NAME OF)
THE SPERRY UTILITY SERVICES AUTHORITY)
TULSA COUNTY, OKLAHOMA)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, The Sperry Utility Services Authority (the "Applicant") has made its Application for Funding No. ORF-25-0025-CW (the "Application") to the Board for a loan from the Clean Water State Revolving Fund (the "CWSRF") program, pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.51 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for wastewater system improvements and/or water quality protection efforts to further compliance with State and Federal standards, and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Application and related information, and finds that the Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-25-0025-CW in the name of The Sperry Utility Services Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The proceeds, along with other funds of the Applicant, if any, will be used to (i) make wastewater collection and treatment systems improvements, all related appurtenances (the "Project") and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. Funding shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $1,500,000.00.

2. Upon the Applicant's acceptance of the Board's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other CWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the CWSRF in accordance with the CWSRF program regulations as approved by the United States Environmental Protection Agency.

3. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, CWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the CWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay all or a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

4. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other funding documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

5. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered on this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Tishomingo Municipal Authority, Johnston County

Loan Application No.: ORF-26-0031-CW
Clean Water SRF Loan ("CWSRF Loan")

Amount Requested: $1,500,000.00

Payment Term: The applicant shall be required to comply with all CWSRF loan provisions. If all CWSRF loan provisions are met to the satisfaction of the OWRB, then the funding shall be forgiven in total without fees for administration or interest.

Purpose: The applicant will utilize the loan proceeds to: (i) construct a new wastewater treatment plant, all related appurtenances (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$1,500,000.00	Project	$14,353,981.00
IHS	4,674,000.00	Bond Counsel	45,000.00
OWRB ARPA	4,112,490.50		
Chickasaw Nation ARPA	4,112,490.50		
Total	$14,398,981.00	**Total**	$14,398,981.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION)
NO. ORF-26-0031-CW IN THE NAME OF)
TISHOMINGO MUNICIPAL AUTHORITY)
JOHNSTON COUNTY, OKLAHOMA)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Tishomingo Municipal Authority (the "Applicant") has made its Application for Funding No. ORF-26-0031-CW (the "Application") to the Board for a loan from the Clean Water State Revolving Fund (the "CWSRF") program, pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.51 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for wastewater system improvements and/or water quality protection efforts to further compliance with State and Federal standards, and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Application and related information, and finds that the Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-26-0031-CW in the name of Tishomingo Municipal Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The proceeds, along with other funds of the Applicant, if any, will be used to (i) construct a new wastewater treatment plant, all related appurtenances (the "Project") and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. Funding shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $1,500,000.00.

2. Upon the Applicant's acceptance of the Board's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other CWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the CWSRF in accordance with the CWSRF program regulations as approved by the United States Environmental Protection Agency.

3. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, CWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the CWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay all or a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

4. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other funding documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

5. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered on this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

LOAN APPLICATION
RECOMMENDED FOR APPROVAL

Applicant: Wewoka Public Works Authority, Seminole County

Loan Application No.: ORF-23-0072-CW
Clean Water SRF Loan ("CWSRF Loan")

Amount Requested: $1,500,000.00

Payment Term: The applicant shall be required to comply with all CWSRF loan provisions. If all CWSRF loan provisions are met to the satisfaction of the OWRB, then the funding shall be forgiven in total without fees for administration or interest.

Purpose: The applicant will utilize the loan proceeds to: (i) complete planning and design for wastewater system improvements (the "Project"), and (ii) pay related costs of issuance.

Sources of Funds (Est.)		**Uses of Funds (Est.)**	
Loan Proceeds	$1,500,000.00	Project	$1,405,000.00
		Bond Counsel	45,000.00
		Financial Advisor	45,000.00
		Local Counsel	5,000.00
Total	$1,500,000.00	**Total**	$1,500,000.00

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF LOAN APPLICATION)
NO. ORF-23-0072-CW IN THE NAME OF)
WEWOKA PUBLIC WORKS AUTHORITY)
SEMINOLE COUNTY, OKLAHOMA)

PROPOSED
ORDER APPROVING LOAN APPLICATION

This matter came on for consideration before the Oklahoma Water Resources Board (the "Board") on the 15th day of July, 2025.

WHEREAS, Wewoka Public Works Authority (the "Applicant") has made its Application for Funding No. ORF-23-0072-CW (the "Application") to the Board for a loan from the Clean Water State Revolving Fund (the "CWSRF") program, pursuant to Title 82 Oklahoma Statutes 2021, Sections 1085.51 *et seq*, as amended; and

WHEREAS, the Applicant intends to use the loan for wastewater system improvements and/or water quality protection efforts to further compliance with State and Federal standards, and/or to refinance existing indebtedness originally incurred for such purposes; and

WHEREAS, the Board has completed its review of the Application and related information, and finds that the Application should be approved according to the terms and conditions set forth below.

NOW, THEREFORE, LET IT BE RESOLVED AND ORDERED BY THE OKLAHOMA WATER RESOURCES BOARD:

Application for Funding No. ORF-23-0072-CW in the name of Wewoka Public Works Authority be and the same is hereby approved. Subject to and contingent upon the Board's receipt of sufficient funds, a loan shall be made to the Applicant for the following purpose and subject to the following terms and conditions:

Purpose

The proceeds, along with other funds of the Applicant, if any, will be used to (i) complete planning and design for wastewater system improvements (the "Project") and (ii) pay related costs of issuance, all as more specifically set forth in the Application.

Terms and Conditions

1. Funding shall be made to the Applicant to provide funds for the Project described in the Loan Application in an aggregate principal amount not to exceed $1,500,000.00.

2. Upon the Applicant's acceptance of the Board's Letter of Binding Commitment, the funds shall be reserved for the Applicant for a period of one (1) year from the date of this Order. In the event the loan is not closed on or before such date, the Board reserves the right to (i) approve, at the Applicant's request, a reasonable extension of time to close the loan, or (ii) de-obligate all or a portion of the loan funds in order to be used by the Board to make other CWSRF loans, as the Board determines shall permit the best use of the funds. Funds shall be provided to the Applicant from the CWSRF in accordance with the CWSRF program regulations as approved by the United States Environmental Protection Agency.

3. The Board's Staff is authorized to determine what additional conditions or requirements shall be necessary in order to assure the soundness of the loan and compliance with applicable financial, legal, CWSRF, and Bond Resolution requirements. In accordance with applicable authority and the United States Environmental Protection Agency ("EPA") guidelines for the implementation of the CWSRF Capitalization Grant, the loan conditions may include principal forgiveness to be used to pay all or a portion of the costs of the Project as described in the Application or for other purposes authorized by applicable authority and EPA guidelines. The Board's Staff is further authorized to approve future modifications or additions to the project purposes and uses of funds approved herein, provided such modifications or additions will not materially and adversely affect the loan.

4. The loan shall be subject in all respects to the provisions of the Applicant's promissory note(s), loan agreement(s), and other funding documents which shall be executed by proper officials of the Applicant and a Board Member at or prior to loan closing as appropriate.

5. Additional loans may be made at such times, for such projects of the Applicant, at such repayment periods and interest rates, and upon such other terms and conditions as may be agreed to and approved by the Board and the Applicant.

So ordered on this 15th day of July, 2025, in regular and open meeting of the Oklahoma Water Resources Board.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

Reviewed By:

Lori Johnson

Lori Johnson, Chief
Financial Assistance Division

3. SUMMARY DISPOSITION AGENDA ITEMS

D. Contracts and Agreements Recommended for Approval

July 15, 2025

AGENDA ITEM 3D(1)

Professional Services Agreement

WITH:	Emergency Management and Enterprise Services, State of Oklahoma
PURPOSE:	Contract for Legal Services for the upcoming fiscal year for Issuer's Counsel for the OWRB
AMOUNT:	Not to exceed $50,000.00
TERM:	July 1, 2025 through the fiscal year ending June 30, 2026.

June 16, 2025

Sara Gibson
3800 N. Classen Blvd.
Oklahoma City, OK 73118
Sara.Gibson@owrb.ok.gov

Re: Request for Legal Representation by Private Attorney

Dear Ms. Gibson:

This is your documentation that the Office of the Attorney General has approved your 20i-3 contract request. The number associated with this request is **A-26 006.**

Law Firm: Centennial Law Group
Attorney Name(s): Jacob Batchelor
Contract Amount: $50,000
Contract Start Date: 07/01/26

Scope of Representation: The agreement is for Jacob Batchelor of Centennial Law Group to act as Issuer's Counsel for OWRB for any bond issues associated with the Financial Assistance Division infrastructure financing programs.

If you have any questions, please do not hesitate to contact me or my assistant, Leesa Myers at 522-2946.

Sincerely,

Kindanne C. Jones

Kindanne C. Jones
Deputy Attorney General
Litigation Unit

Enclosure

PROFESSIONAL SERVICES CONTRACT

This contract is made and entered into this _____ day of _____, 2025, by and between the Oklahoma Water Resources Board, hereinafter referred to as "Board" and the Centennial Law Group, attorneys licensed in the State of Oklahoma, hereinafter referred to as "Centennial".

Now, therefore, in consideration of the covenants and agreements hereinafter set forth, the parties hereto mutually agree as follows:

1. Centennial will provide professional legal services as an independent contractor as set forth in the attached “Scope of Duties”, and as requested by the Board or by the Chief of the Board’s Financial Assistance Division in relation to the Board’s financial assistance programs.

2. Board will pay Centennial $350.00 per billable hour and reimburse Centennial for documented expenses approved by authorized Board Staff in an amount not to exceed $50,000.00. Centennial will submit an invoice statement to the Board summarizing the work performed. Fees shall be due within 21 days of submission of an approvable invoice. The travel portion of expenses must be consistent with the State Travel Reimbursement Act, 74 O.S. §500.1 et seq.

3. Centennial agrees to make time records and expense records accessible to the Board and State Auditor and Inspector whenever the Board or State Auditor and Inspector desires to inspect such records.

4. This Contract shall become effective when all necessary signatures and approvals are obtained, and this Contract shall be in full force and effect until the earlier of i) one year from the effective date or ii) the date upon which the maximum billable hours set forth in (2) above is performed. Board and Centennial agree that this Contract may be terminated at any time by either party upon 30 days written notice. In the event of early termination initiated by the Board, Centennial will be due an equitable amount of the hourly fee for the billable hours under the Scope of Duties completed. Board and Centennial also agree that this Contract may be renewed by written agreement.

6. Books, records, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form, of Centennial relevant to this Agreement shall be subject to examination by the OWRB, the State Auditor and Inspector, and the State Purchasing Director of the State of Oklahoma. Centennial shall maintain accurate records and documentation of all expenditures of time and resources in fulfilling its obligations under this Agreement and shall retain the same for three (3) years following completion and/or termination of the Agreement. Access to such records and documentation shall be made available during reasonable business hours to any proper representative of the OWRB and State of Oklahoma for inspection, copying and audit purposes. If an audit, litigation, or other action involving such records is started before the end of the three-year period, the records are required to be maintained for three years from the date that all issues arising out of the action are resolved or until the end of the three-year retention period, whichever is later.

APPROVED:

OKLAHOMA WATER RESOURCES BOARD

Jennifer Castillo, Chairman Date

Suzanne Landess, Secretary Date

Centennial Law Group

Jacob A. Bachelor Date
Oklahoma Bar Association #19744

SCOPE OF DUTIES

1. Serve as Issuer's Counsel to the Board with regard to the Board's SRF bond issue(s), including document review, Board approval coordination, facilitate Council of Bond Oversight approval by preparing and submitting required forms and attending scheduled meetings, bond purchase contract execution logistics, interfacing with Attorney General and State Treasurer staff, closing coordination;
2. Provide training for incoming staff attorney(s) and other Board staff related to the bond issue process, municipal bond market industry environment, SRF bond structure models, and tax-exempt debt financing generally;
3. Consult with Board staff regarding private activity and private use, arbitrage rebate, Uniform Commercial Code issues, and other special projects as they arise;
4. Assist Board staff in drafting, editing, revising and commenting on form documents;
5. Prepare and deliver training sessions for Board Staff on the subject matter topics, as requested;
6. Attend in-person meetings and participate in telephone, conference calls, or video conferences with Board Staff regarding the subject matter topics, as needed;
7. Advise the Board on related legal issues as they arise in connection with the subject matter topics;
8. Assist Board Staff during the construction expenditures phase of loan projects by answering questions and troubleshooting problems, as needed; and
9. Other Duties as assigned by Board Staff

AGENDA ITEM 3D(2)

INTERAGENCY AGREEMENT

WITH:	State of Oklahoma contract with IN_SITU, INC.
PURPOSE:	Provide a contract for the purchase of VuLink Data Logger & Telemetry System
AMOUNT:	Not to exceed $118,709.44???
TERM:	July 1, 2025 through the fiscal year ending June 30, 2026.????

State of Oklahoma

Office of Management and Enterprise Services

STATE OF OKLAHOMA CONTRACT WITH IN-SITU INC.

This State of Oklahoma Contract ("Contract") is entered into between the State of Oklahoma by and through the Oklahoma Water Resources Board ("State") and In-Situ Inc. ("Supplier") and is effective as of the effective date set forth on a properly issued purchase order or, if no effective date is listed, the date of last signature to this Contract. The initial term of the Contract shall be for one (1) year with two (2) one-year options to renew.

Purpose

The State is awarding this Contract to Supplier for the purchase of VuLink Data Logger & Telemetry Systems for Oklahoma Water Resources Board, as is more particularly described in certain Contract Documents. This Contract memorializes the agreement of the parties with respect to terms of the Contract that is being awarded to Supplier.

Now, therefore, in consideration of the foregoing and the mutual promises set forth herein, the receipt and sufficiency of which are hereby acknowledged the parties agree as follows:

1. The parties agree that Supplier has not yet begun performance of work under this Contract. Issuance of a purchase order is required prior to payment to a Supplier.

2. The following Contract Documents are attached hereto and incorporated herein:

   2.1. Solicitation #EV00000673 with Exhibits, Attachment A;
   2.2. General Terms, Attachment B;
   2.3. Agency Terms, Attachment C;
   2.4. Information Technology terms, Attachment D;
   2.5. Federal Funding Terms, Attachment G; and
   2.6. Pricing, Attachment E-1

3. The parties additionally agree:

   3.1. Except for information deemed confidential by the State pursuant to applicable law, rule, regulation or policy, the parties agree Contract terms and information are not confidential and are disclosable without further approval of or notice to Supplier.

   3.2. All representations made by Supplier in response to the Solicitation regarding specifications and requirements are incorporated herein by reference into this Contract.

   3.3. To the extent any term or condition in any Contract Document, including via a hyperlink or uniform resource locator, conflicts with an applicable Oklahoma and/or United States law or regulation, such term or condition is void and unenforceable. By executing any Contract Document which contains a conflicting term or condition, the State or Customer makes no

representation or warranty regarding the enforceability of such term or condition and the State or Customer does not waive the applicable Oklahoma and/or United States law or regulation which conflicts with the term or condition.

4. Payment obligations rest solely with the Oklahoma Water Resources Board

Please send invoices and billing inquiries to:
3800 N Classen Blvd, Ste 100
Oklahoma City, Oklahoma 73118
United States

E-mail: AccountsPayable@owrb.ok.gov

5. Any reference to a Contract Document refers to such Contract Document as it may have been amended. If and to the extent any provision is in multiple documents and addresses the same or substantially the same subject matter but does not create an actual conflict, the more recent provision is deemed to supersede earlier versions.

6. The undersigned Agency hereby attests that any required terms and conditions based on a Federal Award applicable to this Contract are included herein.

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SIGNATURES

The undersigned represent and warrant that they are authorized, as representatives of the party on whose behalf they are signing, to sign this Contract and to bind their respective party thereto.

STATE OF OKLAHOMA by and through the OKLAHOMA WATER RESOURCES BOARD	**IN-SITU INC.**
By:	By:
Name:	Name:
Title:	Title:
Date:	Date:

The Chief Information Officer is signing solely to approve the Contract pursuant to 62 O.S., § 34.11.1 concerning procurement of Information Technology and/or Telecommunications.

By:

Name:

Title:

Date:

Attachment A

Solicitation No. EV00000673

This Solicitation is a Contract Document and is a request for proposal in connection with the Contract awarded by the Office of Management and Enterprise Services as more particularly described below. Any defined term used herein but not defined herein shall have the meaning ascribed in the General Terms or other Contract document.

I. PURPOSE

The Office of Management and Enterprise Services (OMES), Central Purchasing Division, is seeking responses on behalf of Oklahoma Water Resources Board from potential Suppliers to provide a contract for the purchase of VuLink Data Logger & Telemetry System. A Contract resulting from this Solicitation may be designated for use as a Statewide Contract.[1]

The Contract is awarded on behalf of Oklahoma Water Resources Board for VuLink Data Logger & Telemetry System. All state agencies and state affiliates may avail themselves of this contract.

1. Contract Term and Renewal Options:

1.1. The initial Contract term, which begins on the effective date of the Contract, is one year and there are (2) two-year options to renew the Contract.

- 2025
- 2026
- 2027

2. Solicitation Criterion:

2.1. The Bid will be evaluated using lowest and best value criterion, based on the following:

i. Price
ii. Ability to supply products
iii. Product Acceptability

2.2 Scope and Description:

i. The Bid Response must reflect for each requirement on Exhibit 1 & Exhibit 2 whether the requirement is met by an out-of-the-box solution or whether the requirement necessitates customization to the Bidder's proposed solution.

ii. The Bid Response shall show the ability of the Bidder to meet or exceed the following mandatory specifications: See Exhibit 1 & 2 - Pricing and Attachment C - Agency Terms

[1] 74 O.S. 85.5(G)(3)

iii. Pricing shall be proposed using Exhibit 2 titled Telemetry Bid Sheet 2025- Pricing.

iv. Pricing shall be proposed as a single total firm, fixed cost and include all information concerning fees, other costs, and any other information relevant to the total cost.

v. Value-added products and/or services within scope of the Acquisition may be included in the Bid.

3.2 **Executive Summary and Company Information: Executive Summary and Company Information -** Not Required

3.3 **All Technical responses are on Exhibit 1 –** Telemetry Equipment Bid

3.4 **The response to pricing shall be proposed using Exhibit 2 –** Telemetry Bid Sheet 2025 Price Template.

3.5 Value-added products and/or services within scope of the Acquisition are to be included in Exhibit 1

3.6 **Business References are to be on Exhibit 03: Bidder Reference Worksheet –** Not Required

3.7 **Third-party vendor information is included on Exhibit 04: Third Party Supplier Information -** Not Required

II. STATE OF OKLAHOMA NON-NEGOTIABLE GENERAL TERMS

In addition to other terms contained in an applicable Contract document, Supplier and State agree to the following General Terms:

1 Scope and Contract Renewal

1.1 Supplier may not add products or services to its offerings under the Contract without the State's prior written approval. Such request may require a competitive bid of the additional products or services. If the need arises for goods or services outside the scope of the Contract, Supplier shall contact the State.

1.2 At no time during the performance of the Contract shall the Supplier have the authority to obligate any Customer for payment for any products or services (a) when a corresponding encumbering document is not signed or (b) over and above an awarded Contract amount. Likewise, Supplier is not

entitled to compensation for a product or service provided by or on behalf of Supplier that is neither requested nor accepted as satisfactory.

1.3 If applicable, prior to any Contract renewal, the State shall subjectively consider the value of the Contract to the State, the Supplier's performance under the Contract, and shall review certain other factors, including but not limited to the: a) terms and conditions of Contract documents to determine validity with current State and other applicable statutes and rules; b) current pricing and discounts offered by Supplier; and c) current products, services and support offered by Supplier. If the State determines changes to the Contract are required as a condition precedent to renewal, the State and Supplier will cooperate in good faith to evidence such required changes in an Amendment. Further, any request for a price increase in connection with a renewal or otherwise will be conditioned on the Supplier providing appropriate documentation supporting the request.

1.4 Upon mutual agreement, the Parties may extend the Contract for ninety (90) days beyond a final renewal term. The Parties may to the extent allowable by law, choose to exercise subsequent ninety (90) day extensions.

1.5 Supplier understands that supplier registration expires annually and, pursuant to OAC 260:115-3-3, Supplier shall maintain its supplier registration with the State as a precondition to a renewal of the Contract.

2 Contract Effectiveness

2.1 Unless specifically agreed in writing otherwise, the Contract is effective upon the date last signed by the parties. Supplier shall not commence work, commit funds, incur costs, or in any way act to obligate the State until a proper purchase order has been issued.

2.2 Any Contract document shall be legibly written in ink or typed. All Contract transactions, and any Contract document related thereto, may be conducted by electronic means pursuant to the Oklahoma Uniform Electronic Transactions Act.

3 Modification of Contract Terms and Contract documents

3.1 The Contract may only be modified, amended, or expanded by an Amendment. Any change to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or

materials made unilaterally by the Supplier, is a material breach of the Contract. Unless otherwise specified by applicable law or rules, such changes, including without limitation, any unauthorized written Contract modification, shall be void and without effect and the Supplier shall not be entitled to any claim under the Contract based on those changes. No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in the Contract.

3.2 Any additional terms on an ordering document provided by Supplier are of no effect and are void unless mutually executed. OMES bears no liability for performance, payment or failure thereof by the Supplier or by a Customer other than OMES in connection with an Acquisition.

3.3 Except for information deemed confidential by the State pursuant to applicable law, rule, regulation, or policy, the parties agree Contract terms are not confidential and are disclosable without further approval of or notice to Supplier.

3.4 Unless mutually agreed to in writing by the State of Oklahoma by and through the Office of Management and Enterprise Services, no Contract document or other terms and conditions or clauses, including via a hyperlink or uniform resource locator, shall supersede or conflict with the terms of this Contract or expand the State's or Customer's liability or reduce the rights of Customer or the State.

3.5 To the extent any term or condition in any Contract document, including via a hyperlink or uniform resource locator, conflicts with an applicable Oklahoma and/or United States law or regulation, such term or condition is void and unenforceable. By executing any Contract document which contains a conflicting term or condition, the State or Customer makes no representation or warranty regarding the enforceability of such term or condition and the State or Customer does not waive the applicable Oklahoma and/or United States law or regulation which conflicts with the term or condition.

4 Pricing

4.1 Pursuant to 68 O.S. §§ 1352, 1356, and 1404, State agencies are exempt from the assessment of State sales, use, and excise taxes. Further, State agencies and political subdivisions of the State are exempt from Federal Excise Taxes pursuant to Title 26 of the United States Code. Any taxes of any nature whatsoever payable by the Supplier shall not be reimbursed.

4.2 Pursuant to 74 O.S. §85.40, all travel expenses of Supplier must be included in the total Acquisition price.

4.3 The price of a product offered under the Contract shall include and Supplier shall prepay all shipping, packaging, delivery and handling fees. All product deliveries will be free on-board Customer's Destination. No additional fees shall be charged by Supplier for standard shipping and handling. If Customer requests expedited or special delivery, Customer may be responsible for any charges for expedited or special delivery

4.4 Any product to be delivered pursuant to the Contract shall be subject to final inspection and acceptance by the Customer at Destination. The Customer assumes no responsibility for a product until accepted by the Customer. Title and risk of loss or damage to a product shall be the responsibility of the Supplier until accepted. The Supplier shall be responsible for filing, processing, and collecting any and all damage claims accruing prior to acceptance

4.5 Pursuant to OAC 260:115-9-1, payment for an Acquisition does not constitute final acceptance of the Acquisition. If subsequent inspection affirms that the Acquisition does not meet or exceed the specifications of the order or that the Acquisition has a latent defect, the Supplier shall be notified as soon as is reasonably practicable. The Supplier shall retrieve and replace the Acquisition at Supplier's expense or, if unable to replace, shall issue a refund to Customer. Refund under this section shall not be an exclusive remedy.

5 Invoices and Payments

5.1 Supplier shall be paid upon submission of a proper invoice(s) at the prices stipulated in the Contract in accordance with 74 O.S. §85.44B which requires that payment be made only after products have been provided and accepted or services rendered and accepted This section shall not prohibit the payment of membership dues or payment for subscriptions to magazines, periodicals or books or for payment to vendors providing subscription services under 74 O.S. 85.44B.
The following terms additionally apply:

A. An invoice shall contain the purchase order number, description of products or services provided and the dates of such provision.

B. Failure to provide a timely and proper invoice may result in delay of processing the invoice for payment. Proper invoice is defined at OAC 260:10-1-2.

C. Payment of all fees under the Contract shall be due NET 30 days but shall not be deemed late until 45 days. Payment and interest on late payments are governed by 62 O.S. §34.72. Such interest is the sole and exclusive remedy for late payments by a State agency and no other late fees are authorized to be assessed pursuant to Oklahoma law.

D. The date from which an applicable early payment discount time is calculated shall be from the receipt date of a proper invoice. There is no obligation, however, to utilize an early payment discount.

E. If an overpayment or underpayment has been made to Supplier any subsequent payments to Supplier under the Contract may be adjusted to correct the account. A written explanation of the adjustment will be issued to Supplier.

F. If the Supplier accepts payment by Purchase Card they shall do so according to Oklahoma law.

6 Oklahoma Open Records Act

Supplier acknowledges that all State agencies and certain other Customers are subject to the Oklahoma Open Records Act set forth at 51 O.S. §24A-1 et seq. Supplier also acknowledges that compliance with the Oklahoma Open Records Act and all opinions of the Oklahoma Attorney General concerning the Act is required. Customer may be provided access to Supplier Confidential Information. State agencies are subject to the Oklahoma Open Records Act and Supplier acknowledges information marked confidential information will be disclosed to the extent permitted under the Open Records Act and in accordance with this section. Nothing herein is intended to waive the State Purchasing Director's authority under OAC 260:115-3-9 in connection with Bid information requested to be held confidential by a Bidder. Notwithstanding the foregoing, Supplier Confidential Information shall not include information that: (i) is or becomes generally known or available by public disclosure, commercial use or otherwise and is not in contravention of this Contract; (ii) is known and has been reduced to tangible form by the receiving party before the time of disclosure for the first time under this Contract and without other obligations of confidentiality; (iii) is independently

developed without the use of any of Supplier Confidential Information; (iv) is lawfully obtained from a third party (without any confidentiality obligation) who has the right to make such disclosure or (v) pricing provided to the State. In addition, the obligations in this section shall not apply to the extent that the applicable law or regulation requires disclosure of Supplier Confidential Information, provided that the Customer provides reasonable written notice, pursuant to Contract notice provisions, to the Supplier so that the Supplier may promptly seek a protective order or other appropriate remedy.

7 Conflict of Interest

In addition to any requirement of law or of a professional code of ethics or conduct, the Supplier, its employees are required to disclose any outside activity or interest that conflicts or may conflict with the best interest of the State. Prompt disclosure is required under this section if the activity or interest is related, directly or indirectly, to any person or entity currently under contract with or seeking to do business with the State, its employees or any other third-party individual or entity awarded a contract with the State. Further, as long as the Supplier has an obligation under the Contract, any plan, preparation or engagement in any such activity or interest shall not occur without prior written approval of the State. Any conflict of interest shall, at the sole discretion of the State, be grounds for partial or whole termination of the Contract.

8 State Shall Not Indemnify

The State of Oklahoma cannot lawfully agree to indemnify a private contractor. The credit of the State shall not be given, pledged, or loaned to any individual, company, corporation, or association, municipality, or political subdivision of the State pursuant to Oklahoma Constitution article 10, Section 15, OAC 260:115-7-32(k)(3)(A) and Attorney General Opinion 2012-18.

9 Indemnification Coordination of Defense

9.1 In connection with indemnification obligations under the Contract, when a State agency is a named defendant in any filed or threatened lawsuit, the defense of the State agency shall be coordinated by the Attorney General of Oklahoma, or the Attorney General may authorize the Supplier to control the defense and any related settlement negotiations; provided, however, Supplier shall not agree to any settlement of claims against the State without obtaining advance written concurrence from the Attorney General. If the Attorney General does not authorize sole control of the defense and settlement negotiations to Supplier, Supplier shall have authorization to

equally participate in any proceeding related to the indemnity obligation under the Contract and shall remain responsible to indemnify the applicable Indemnified Parties.

10 Termination for Funding Insufficiency

10.1 Notwithstanding anything to the contrary in any Contract document, the State may terminate the Contract in whole or in part if funds sufficient to pay obligations under the Contract are not appropriated or received from an intended third-party funding source. In the event of such insufficiency, Supplier will be provided at least fifteen (15) calendar days' written notice of termination. Any partial termination of the Contract under this section shall not be construed as a waiver of, and shall not affect, the rights and obligations of any party regarding portions of the Contract that are not terminated. The determination by the State of insufficient funding shall be accepted by, and shall be final and binding on, the Supplier.

10.2 Upon receipt of notice of a termination, Supplier shall immediately comply with the notice terms and take all necessary steps to minimize the incurrence of costs allocable to the work affected by the notice. If a purchase order or other payment mechanism has been issued and a product or service has been accepted as satisfactory prior to the effective date of termination, the termination does not relieve an obligation to pay for the product or service but there shall not be any liability for further payments ordinarily due under the Contract or for any damages or other amounts caused by or associated with such termination. Any amount paid to Supplier in the form of prepaid fees that are unused when the Contractor certain obligations are terminated shall be refunded.

10.3 The State's exercise of its right to terminate the Contract under this section shall not be considered a default or breach under the Contract or relieve the Supplier of any liability for claims arising under the Contract.

11 Suspension of Supplier

11.1 Supplier may be subject to Suspension without advance notice and may additionally be suspended from activities under the Contract if Supplier fails to comply with confidentiality, privacy, security, environmental or safety requirements applicable to Supplier's performance or obligations under the Contract.

11.2 Upon receipt of a notice pursuant to this section, Supplier shall immediately comply with the notice terms and take all necessary steps to minimize the

incurrence of costs allocable to the work affected by the notice. If a purchase order or other payment mechanism has been issued and a product or service has been accepted as satisfactory prior to receipt of notice by Supplier, the Suspension does not relieve an obligation to pay for the product or service but there shall not be any liability for further payments ordinarily due under the Contract during a period of Suspension or suspended activity or for any damages or other amounts caused by or associated with such Suspension or suspended activity. A right exercised under this section shall not be an exclusive remedy but shall be in addition to any other rights and remedies provided for by law. Any amount paid to Supplier in the form of prepaid fees attributable to a period of Suspension or suspended activity shall be refunded.

11.3 Such Suspension may be removed, or suspended activity may resume, at the earlier of such time as a formal notice is issued that authorizes the resumption of performance under the Contract or at such time as a purchase order or other appropriate encumbrance document is issued. This subsection is not intended to operate as an affirmative statement that such resumption will occur.

12 Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The certification made by Supplier with respect to Debarment, Suspension, certain indictments, convictions, civil judgments and terminated public contracts is a material representation of fact upon which reliance was placed when entering into the Contract. A determination that Supplier knowingly rendered an erroneous certification, in

addition to other available remedies, may result in whole or partial termination of the Contract for Supplier's default. Additionally, Supplier shall promptly provide written notice to the State Purchasing Director if the certification becomes erroneous due to changed circumstances.

13 Certification Regarding State Employees Prohibition From Fulfilling Services

Pursuant to 74 O.S. § 85.42, the Supplier certifies that no person involved in any manner in development of the Contract employed by the State shall be employed to fulfill any services provided under the Contract.

14 Notices

All notices, approvals or requests allowed or required by the terms of any Contract shall be in writing, reference the Contract with specificity and deemed delivered upon receipt or upon refusal of the intended party to accept receipt of the notice. Notice information may be updated in writing to the other party as necessary.
In addition to other notice requirements in the Contract and the designated Supplier contact provided in a successful Bid, notices shall be sent to the State at the email address set forth below.

Notwithstanding any other provision of the Contract, confidentiality, breach and termination-related notices shall be delivered to the address below in addition to e-mail.

If sent to the State:
State Purchasing Director
2401 North Lincoln Blvd., Second Floor
Oklahoma City, Oklahoma 73105

With a copy, which shall not constitute notice, to:
Purchasing Division Deputy General Counsel
2401 North Lincoln Blvd., Second Floor
Oklahoma City, Oklahoma 73105

15 Miscellaneous

15.1 Choice of Law and Venue

Any claim, dispute, or litigation relating to the Contract documents, in the singular or in the aggregate, shall be governed by the laws of the State of Oklahoma without regard to application of choice of law principles. Pursuant to 74 O.S. §85.7(F), where Federal awards are involved, applicable federal laws, rules and regulations shall govern to the extent necessary to insure ensure compliance with the terms of the Federal award. Venue for any action, claim, dispute, or litigation relating in any way to the Contract documents, shall be in Oklahoma County, Oklahoma. The State expressly declines any terms that minimize its rights under Oklahoma Law, including but not limited to, Statutes of Limitations.

15.2 Employment Relationship

The Contract does not create an employment relationship. Individuals providing products or performing services pursuant to the Contract are not

employees of the State or Customer and, accordingly are not eligible for any rights or benefits whatsoever accruing to such employees.

15.3 Failure to Enforce

Failure by the State or a Customer at any time to enforce a provision of, or exercise a right under, the Contract shall not be construed as a waiver of any such provision. Such failure to enforce or exercise shall not affect the validity of any Contract document, or any part thereof, or the right of the State or a Customer to enforce any provision of, or exercise any right under, the Contract at any time in accordance with its terms. Likewise, a waiver of a breach of any provision of a Contract document shall not affect or waive a subsequent breach of the same provision or a breach of any other provision in the Contract.

15.4 Invalid Term or Condition

To the extent any term or condition in the Contract conflicts with a compulsory applicable State or United States law or regulation, such Contract term or condition is void and unenforceable. By executing any Contract document which contains a conflicting term or condition, no representation or warranty is made regarding the enforceability of such term or condition. Likewise, any applicable State or federal law or regulation which conflicts with the Contract or any non-conflicting applicable State or federal law or regulation is not waived.

15.5 Severability

If any provision of a Contract document, or the application of any term or condition to any party or circumstances, is held invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable and the application of such provision to other parties or circumstances shall remain valid and in full force and effect. If a court finds that any provision of this contract is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

15.6 Section Headings

The headings used in any Contract document are for convenience only and do not constitute terms of the Contract.

15.7 Sovereign Immunity

Notwithstanding any provision in the Contract, the Contract is entered into subject to the State's Constitution, statutes, common law, regulations, and the doctrine of sovereign immunity, none of which are waived by the State nor any other right or defense available to the State; provided, however, that the parties hereby agree that the doctrine of sovereign immunity does not apply to actions grounded in contract and therefore does not prohibit Supplier from pursuing claims arising under the Contract against the State and Customers.

15.8 Survival

As applicable, performance under all license, subscription, service agreements, statements of work, transition plans and other similar Contract documents entered into between the parties under the terms of the Contract shall survive Contract expiration. Additionally, rights and obligations under the Contract which by their nature should survive including, without limitation, certain payment obligations invoiced prior to expiration or termination; confidentiality obligations; security incident and data breach obligations and indemnification obligations, remain in effect after expiration or termination of the Contract.

15.9 Gratuities

The Contract may be immediately terminated, in whole or in part, by written notice if it is determined that the Supplier, its authorized employee, agent, or another representative acting within the scope of their authority violated any federal, State or local law, rule or ordinance by offering or giving a gratuity to any State employee directly involved in the Contract. In addition, Suspension or Debarment of the Supplier may result from such a violation.

15.10 Import/Export Controls

Neither party will use, distribute, transfer or transmit any equipment, services, software or technical information provided under the Contract (even if incorporated into other products) except in compliance with all applicable import and export laws, conventions and regulations.

EXHIBIT 1
REQUIREMENTS

SOLICITATION #: EV00000673

GENERAL REQUIREMENTS

The Oklahoma Water Resources Board's WATER-Groundwater section maintains a statewide network of recorder wells utilizing In-Situ Level Troll 400, Level Troll 500, and Aqua Troll 200 Data Loggers. These wells are widely distributed across the state of Oklahoma. We are converting existing non-telemetered continuous data sites to cellular telemetry and expanding the network by converting other discrete water level sites to telemetry sites. During FY25, 65 sites will require telemetry equipment. Up to an additional 60 units may be purchased in FY26-27 as needed and required by projects and as funds allow. There are precise requirements for the section to achieve this goal. Currently, the network employs In-Situ VuLink telemetry systems for the remainder of its sites. Any new equipment must be fully interchangeable to allow for maintenance and replacement in existing installations. Equipment must also be easily adaptable to fit within existing data flows with minimal coding or infrastructure changes. The following is a list of those requirements.

EQUIPMENT

- A telemetry system with data logging capabilities compatible with the existing network without replacing the existing pressure transducers or cables.
- Provide for converting 65 continuous and discrete water level sites to cellular telemetry in FY25 with up to an additional 60 units in FY26-28.
- Easily deployed in most wells without the use of additional proprietary hardware.
- Must fit within two-inch monitoring wells and be no longer than 20 inches or over 2.5 lbs.
- The whole telemetry system must be contained inside the well, excluding the discrete antenna.
- Batteries must be readily available Li-MnO2 alkaline D batteries, with the option to utilize Li-MnO2 as needed.
- Batteries must be easily replaceable in the field.
- No need for the use of desiccant.
- Needs to have internal GPS capabilities (accuracy of 5m or better).

EXHIBIT 1
REQUIREMENTS

- Data must be able to transmit to HTTPS and FTP site formats.
- Capable of sending SMS message alarms to warn of data or instrument-related events.
- Utilize multiple cellular networks**,** including allowing the use of LTE-M.
- Include essential telemetry services (1 daily transmission with up to 24 data points).
- Compatible with In-Situ brand rugged twist lock cables already deployed in wells.
- Files must be in CSV or HTML format.
- Be capable of remote setup/configuration.
- Come with a minimum 2-year warranty.
- Come with manufacturer technical support for setup and troubleshooting to ensure successful deployment.
- Not require the purchase of new propriety software.
- Consist of all materials needed to deploy, install and maintain the telemetry system besides routine power tools.
- Work with Hydrovu data services.

The bid shall state the cost per unit well installation, including all items needed to deploy, install, and maintain the systems for 65 units purchased in FY25 and up to 60 units purchased in FY26-28. This shall include stock batteries for the telemetry unit. OWRB will utilize the available funds to purchase depending on the unit price.

Delivery Terms

Bid prices must be FOB destination. The vendor must pay for all shipping, packaging, handling, and delivery charges or be included in the bid and will be scored as an additional charge. The units must be delivered within 30 days of a written or verbal request by the OWRB. Batch delivery of units is possible and preferred if agreed upon with OWRB during the bidding process, to facilitate delays due to supply chain issues. If allowed, batch sizes and delivery schedules will be determined by OWRB. Each batch of units must be delivered within 30 days of a written or verbal request by the OWRB. Each batch of units may be invoiced separately and paid according to this solicitation's provisions.

EXHIBIT 1
REQUIREMENTS

Warranty

Each item will have a minimum two-year warranty for parts, labor, and return shipping from the date received by OWRB.

Price Increases for Future Fiscal Years

Prices for FY25 will be set as bid in this solicitation. For FY26-28, prices can either be bid as a set rate for each fiscal year or alternatively use the FY25 base rate with an allowance for up to 20 % price increases over the entire term. OWRB reserves the right to cancel any purchase for price increases it deems excessive or otherwise disagrees with. Bidders should clearly state which model they are utilizing. During any fiscal year the amount of units may be reduced depending on changes in requirements and the availability of funds.

Evaluation Criteria

This bid shall be scored as the lowest and best. All solicitation criteria are needed for the system's successful deployment and are listed below. Any bid not meeting these specifications will not be scored. Unless otherwise stated, bids meeting these criteria will be scored based on the cost per well unit for all equipment and supplies needed for the system's deployment, installation, and maintenance.

Attachemnt A: ITEMS (Please Bid on the Following)	*SKU # **	*feet per cable*	QTY.	Price	Cost
Vulink Telemetry System for FY25	0094840		65	0	0
Vulink Telemetry System for FY26-28. Up to 60 units depending on future project need and equipment attrition. Cost estimate based on potential changes in market value allowing upto 20% increase.	0094840		60	0	0
Shipping (Freight Estimate)					
Total					**$0.00**

The State Purchasing Director may award the contract to more than one bidder by awarding the contracts by item or groups of items. One vendor may not be able to supply all items required.

Please complete this attachment and include with bid response.

* SKU number for In-Situ brand provided for clarification of specifications of each item needed.

ATTACHMENT B

STATE OF OKLAHOMA NEGOTIABLE GENERAL TERMS

This State of Oklahoma General Terms ("General Terms") is a Contract document in connection with a Contract awarded by the Office of Management and Enterprise Services on behalf of the State of Oklahoma.

In addition to other terms contained in an applicable Contract document, Supplier and State agree to the following General Terms:

1 Contract Order of Priority

1.1 Contract documents shall be read to be consistent and complementary. Any conflict among the Contract documents shall be resolved by giving priority to Contract documents in the following order of precedence:

A. any Amendment;

B. terms contained in this Contract document.

C. any Contract-specific State terms contained in a Contract document including, without limitation, information technology terms and terms specific to a statewide Contract or a State agency Contract;

D. any applicable Solicitation;

E. any successful Bid as may be amended through negotiation and to the extent the Bid does not otherwise conflict with the Solicitation, Contract or applicable law;

F. any statement of work, work order, or other mutually agreed Contract documents.

1.2 If there is a conflict between the terms contained in this Contract document or in Contract-specific terms and an agreement provided by or on behalf of Supplier including but not limited to linked or supplemental documents which alter or diminish the rights of Customer or the State, the conflicting terms provided by Supplier shall not take priority over this Contract document or Acquisition-specific terms. In no event will any linked document alter or override such referenced terms except as specifically agreed in an Amendment.

2 Definitions

In addition to any defined terms set forth elsewhere in the Contract, the Oklahoma Central Purchasing Act and the Oklahoma Administrative Code, Title 260, the parties agree that, when used in the Contract, the following terms are defined as set forth below and may be used in the singular or plural form:

2.1 **Acquisition** means items, products, materials, supplies, services and equipment acquired by purchase, lease purchase, lease with option to purchase, value provided or rental under the Contract.

2.2 **Amendment** means any mutually executed, written modification to a Contract document or a written change, addition, correction or revision to a Solicitation.

2.3 **Bid** means an offer a Bidder submits in response to the Solicitation.

2.4 **Bidder** means an individual or business entity that submits a Bid in response to the Solicitation.

2.5 **Contract** means the written, mutually agreed and binding legal relationship resulting from the Contract documents and an appropriate encumbering document as may be amended from time to time, which evidences the final agreement between the parties with respect to the subject matter of the Contract.

2.6 **Customer** means the entity receiving goods or services contemplated by the Contract.

2.7 **Debarment** means action taken by a debarring official under federal or state law or regulations to exclude any business entity from inclusion on the Supplier list; bidding; offering to bid; providing a quote; receiving an award of contract with the State and may also result in cancellation of existing contracts with the State.

2.8 **Destination** means delivered to the receiving dock or other point specified in the applicable Contract document.

2.9 **Federal award** means the Federal financial assistance that a recipient receives directly from a Federal awarding agency or indirectly from a pass-through entity

2.10 **Governmental Entity** means any governmental entity specified as a political subdivision of the State pursuant to the Governmental Tort Claim Act including any associated institution, instrumentality, board, commission, committee, department, or other entity designated to act on behalf of the state.

2.11 **Indemnified Parties** means the State and Customer and/or its officers, directors, agents, employees, representatives, contractors, assignees and designees thereof.

2.12 **Inspection** means examining and testing an Acquisition (including, when appropriate, raw materials, components, and intermediate assemblies) to determine whether the Acquisition meets Contract requirements.

2.13 **Moral Rights** means any and all rights of paternity or integrity of the Work Product and the right to object to any modification, translation or use of the Work Product and any similar rights existing under the judicial or statutory law of any country in the world or under any treaty, regardless of whether or not such right is denominated or referred to as a moral right.

2.14 **OAC** means the Oklahoma Administrative Code.

2.15 **OMES** means the Office of Management and Enterprise Services.

2.16 **Solicitation** means the document inviting Bids for the Acquisition referenced in the Contract and any amendments thereto.

2.17 **State** means the government of the state of Oklahoma, its employees and authorized representatives, including without limitation any department, agency, or other unit of the government of the state of Oklahoma.

2.18 **Supplier** means the Bidder with whom the State enters into the Contract awarded pursuant to the Solicitation or the business entity or individual that is a party to the Contract with the State.

2.19 **Suspension** means action taken by a suspending official under federal or state law or regulations to suspend a Supplier from inclusion on the Supplier list; be eligible to submit Bids to State agencies and be awarded a contract by a State agency subject to the Central Purchasing Act.

2.20 **Supplier Confidential Information** means certain confidential and proprietary information of Supplier that is clearly marked as confidential and agreed by the State Purchasing Director or Customer, as applicable, but does not include information excluded from confidentiality in provisions of the Contract or the Oklahoma Open Records Act.

2.21 **Work Product** means any and all deliverables produced by Supplier under a statement of work or similar Contract document issued pursuant to this Contract, including any and all tangible or intangible items or things that have been or will be prepared, created, developed, invented or conceived at any time following the Contract effective date including but not limited to any (i) works

of authorship (such as manuals, instructions, printed material, graphics, artwork, images, illustrations, photographs, computer programs, computer software, scripts, object code, source code or other programming code, HTML code, flow charts, notes, outlines, lists, compilations, manuscripts, writings, pictorial materials, schematics, formulae, processes, algorithms, data, information, multimedia files, text web pages or web sites, other written or machine readable expression of such works fixed in any tangible media, and all other copyrightable works), (ii) trademarks, service marks, trade dress, trade names, logos, or other indicia of source or origin, (iii) ideas, designs, concepts, personality rights, methods, processes, techniques, apparatuses, inventions, formulas, discoveries, or improvements, including any patents, trade secrets and know-how, (iv) domain names, (v) any copies, and similar or derivative works to any of the foregoing, (vi) all documentation and materials related to any of the foregoing, (vii) all other goods, services or deliverables to be provided by or on behalf of Supplier under the Contract and (vii) all Intellectual Property Rights in any of the foregoing, and which are or were created, prepared, developed, invented or conceived for the use of benefit of Customer in connection with this Contract or with funds appropriated by or for Customer or Customer's benefit (a) by any Supplier personnel or Customer personnel or (b) any Customer personnel who then became personnel to Supplier or any of its affiliates or subcontractors, where, although creation or reduction-to-practice is completed while the person is affiliated with Supplier or its personnel, any portion of same was created, invented or conceived by such person while affiliated with Customer.

3 Additional Pricing

3.1 The price of a product offered under the Contract shall include and Supplier shall prepay all shipping, packaging, delivery and handling fees. All product deliveries will be free on board Customer's Destination. No additional fees shall be charged by Supplier for standard shipping and handling. If Customer requests expedited or special delivery, Customer may be responsible for any charges for expedited or special delivery.

3.2 Supplier shall have no right of setoff.

3.3 Because funds are typically dedicated to a particular fiscal year, an invoice will be paid only when timely submitted, which shall in no instance be later than six (6) months after the end of the fiscal year in which the goods are provided or services performed.

4 Ordering, Inspection, and Acceptance

4.1 Any product or service furnished under the Contract shall be ordered by issuance of a valid purchase order or other appropriate payment mechanism, including a pre-encumbrance, or by use of a valid Purchase Card. All orders and transactions are governed by the terms and conditions of the Contract. Any purchase order or other applicable payment mechanism dated prior to termination or expiration of the Contract shall be performed unless mutually agreed in writing otherwise.

4.2 Services will be performed in accordance with industry best practices and are subject to acceptance by the Customer. Notwithstanding any other provision in the Contract, deemed acceptance of a service or associated deliverable shall not apply automatically upon receipt of a deliverable or upon provision of a service.

Supplier warrants and represents that a product or deliverable furnished by or through the Supplier shall individually, and where specified by Supplier to perform as a system, be substantially uninterrupted and error-free in operation and guaranteed against faulty material and workmanship for a warranty period of the greater of ninety (90) days from the date of acceptance or the maximum allowed by the manufacturer. A defect in a product or deliverable furnished by or through the Supplier shall be repaired or replaced by Supplier at no additional cost or expense to the Customer if such defect occurs during the warranty period.

Any product to be delivered pursuant to the Contract shall be subject to final inspection and acceptance by the Customer at Destination. The Customer assumes no responsibility for a product until accepted by the Customer. Title and risk of loss or damage to a product shall be the responsibility of the Supplier until accepted. The Supplier shall be responsible for filing, processing, and collecting any and all damage claims accruing prior to acceptance.

Pursuant to OAC 260:115-9-1, payment for an Acquisition does not constitute final acceptance of the Acquisition. If subsequent inspection affirms that the Acquisition does not meet or exceed the specifications of the order or that the Acquisition has a latent defect, the Supplier shall be notified as soon as is reasonably practicable. The Supplier shall retrieve and replace the Acquisition at Supplier's expense or, if unable to replace, shall issue a refund to Customer. Refund under this section shall not be an exclusive remedy.

4.3 Supplier shall deliver products and services on or before the required date specified in a Contract document. Failure to deliver timely may result in liquidated damages as set forth in the applicable Contract document. Deviations, substitutions, or changes in a product or service, including changes of personnel directly providing services, shall not be made unless expressly authorized in writing by the Customer. Any substitution of personnel directly providing services shall be a person of comparable or greater skills, education and experience for performing the services as the person being replaced. Additionally, Supplier shall provide staff sufficiently experienced and able to perform with respect to any transitional services provided by Supplier in connection with termination or expiration of the Contract.

4.4 Product warranty and return policies and terms provided under any Contract document will not be more restrictive or more costly than warranty and return policies and terms for other similarly situated customers for a like product.

5 Maintenance of Insurance, Payment of Taxes, and Workers' Compensation

5.1 As a condition of this Contract, Supplier shall procure at its own expense, and provide proof of, insurance coverage with the applicable liability limits set forth below and any approved subcontractor of Supplier shall procure and provide proof of the same coverage. The required insurance shall be underwritten by an insurance carrier with an A.M. Best rating of A- or better.

Such proof of coverage shall additionally be provided to the Customer if services will be provided by any of Supplier's employees, agents or subcontractors at any Customer premises and/or employer vehicles will be used in connection with performance of Supplier's obligations under the Contract. Supplier may not commence performance hereunder until such proof has been provided. Additionally, Supplier shall ensure each insurance policy includes a notice of cancellation and includes the State and its agencies as certificate holder and shall promptly provide proof to the State of any renewals, additions, or changes to such insurance coverage. Supplier's obligation to maintain insurance coverage under the Contract is a continuing obligation until Supplier has no further obligation under the Contract. Any combination of primary and excess or umbrella insurance may be used to satisfy the limits of coverage for Commercial General Liability, Auto Liability and Employers' Liability. Unless agreed between the parties and approved by the State Purchasing Director, the minimum acceptable insurance limits of liability are as follows:

A. Workers' Compensation and Employer's Liability Insurance in accordance with and to the extent required by applicable law;

B. Commercial General Liability Insurance covering the risks of personal injury, bodily injury (including death) and property damage, including coverage for contractual liability, with a limit of liability of not less than $2,000,000 per occurrence;

C. Automobile Liability Insurance with limits of liability of not less than $2,000,000 combined single limit each accident;

D. If the Supplier will access, process, or store state data, then Security and Privacy Liability insurance, including coverage for failure to protect confidential information and failure of the security of Supplier's computer systems that results in unauthorized access to Customer data with limits $5,000,000 per occurrence; and

E. Additional coverage required in writing in connection with a particular Acquisition.

5.2 Supplier shall be entirely responsible during the existence of the Contract for the liability and payment of taxes payable by or assessed to Supplier or its employees, agents and subcontractors of whatever kind, in connection with the Contract. Supplier further agrees to comply with all state and federal laws applicable to any such persons, including laws regarding wages, taxes, insurance, and Workers' Compensation. Neither Customer nor the State shall be liable to the Supplier, its employees, agents, or others for the payment of taxes or the provision of unemployment insurance and/or Workers' Compensation or any benefit available to a State or Customer employee.

5.3 Supplier agrees to indemnify Customer, the State, and its employees, agents, representatives, contractors, and assignees for any and all liability, actions, claims, demands, or suits, and all related costs and expenses (including without limitation reasonable attorneys' fees and costs required to establish the right to indemnification) relating to tax liability, unemployment insurance and/or Workers' Compensation in connection with its performance under the Contract.

6 Compliance with Applicable Laws

6.1 As long as Supplier has an obligation under the terms of the Contract and in connection with performance of its obligations, the Supplier represents its present compliance, and shall have an ongoing obligation to comply, with all applicable federal, State, and local laws, rules, regulations, ordinances, and orders, as amended, including but not limited to the following:

A. Drug-Free Workplace Act of 1988 set forth at 41 U.S.C. §81.

B. Section 306 of the Clean Air Act, Section 508 of the Clean Water Act, Executive Order 11738, and Environmental Protection Agency Regulations which prohibit the use of facilities included on the EPA List of Violating Facilities under nonexempt federal contracts, grants or loans;

C. Prospective participant requirements set at 45 C.F.R. part 76 in connection with Debarment, Suspension and other responsibility matters;

D. 1964 Civil Rights Act, Title IX of the Education Amendment of 1972, Section 504 of the Rehabilitation Act of 1973, Americans with Disabilities Act of 1990, and Executive Orders 11246 and 11375;

E. Anti-Lobbying Law set forth at 31 U.S.C. §1325 and as implemented at 45 C.F.R. part 93;

F. Requirements of Internal Revenue Service Publication 1075 regarding use, access and disclosure of Federal Tax Information (as defined therein);

G. Obtaining certified independent audits conducted in accordance with Government Auditing Standards and Office of Management and Budget Uniform Guidance, 2 CFR 200 Subpart F §200.500 et seq. with approval and work paper examination rights of the applicable procuring entity;

H. Requirements of the Oklahoma Taxpayer and Citizen Protection Act of 2007, 25 O.S. §1312 and applicable federal immigration laws and regulations and be registered and participate in the Status Verification System. The Status Verification System is defined at 25 O.S. §1312, includes but is not limited to the free Employment Verification Program (E-Verify) through the Department of Homeland Security, and is available at **Home | E-Verify**;

I. Requirements of the Health Insurance Portability and Accountability Act of 1996; Health Information Technology for Economic and Clinical Health Act; Payment Card Industry Security Standards; Criminal Justice Information System Security Policy and Security Addendum; and Family Educational Rights and Privacy Act; and

J. Be registered as a business entity licensed to do business in the State, have obtained a sales tax permit, and be current on franchise tax payments to the State, as applicable.

6.2 The Supplier's employees, agents and subcontractors shall adhere to applicable Customer policies including, but not limited to acceptable use of Internet and electronic mail, facility and data security, press releases, and public relations. As applicable, the Supplier shall adhere to the State Information Security Policy, Procedures, Guidelines set forth at **Information Security Policy, Procedures, Guidelines (oklahoma.gov)** Supplier is responsible for reviewing and relaying such policies covering the above to the Supplier's employees, agents and subcontractors.

6.3 At no additional cost to Customer, the Supplier shall maintain all applicable licenses and permits required in association with its obligations under the Contract.

6.4 In addition to compliance under subsection 6.1 above, Supplier shall have a continuing obligation to comply with applicable Customer-specific mandatory contract provisions required in connection with the receipt of federal funds or other funding source.

6.5 The Supplier is responsible to review and inform its employees, agents, and subcontractors who provide a product or perform a service under the Contract of the Supplier's obligations under the Contract and Supplier certifies that its employees and each such subcontractor shall comply with minimum requirements and applicable provisions of the Contract. At the request of the State, Supplier shall promptly provide adequate evidence that such persons are its employees, agents or approved subcontractors and have been informed of their obligations under the Contract.

6.6 As applicable, Supplier agrees to comply with the Governor's Executive Orders related to the use of any tobacco product, electronic cigarette or vaping device on any and all properties owned, leased, or contracted for use by the State, including but not limited to all buildings, land and vehicles owned, leased, or contracted for use by agencies or instrumentalities of the State.

6.7 The execution, delivery and performance of the Contract and any ancillary documents by Supplier will not, to the best of Supplier's knowledge, violate, conflict with, or result in a breach of any provision of, or constitute a default (or an event which, with notice or lapse of time or both, would constitute a default) under, or result in the termination of, any written contract or other instrument between Supplier and any third party.

6.8 Supplier represents that it has the ability to pay its debts when due and it does not anticipate the filing of a voluntary or involuntary bankruptcy petition or appointment of a receiver, liquidator or trustee.

6.9 Supplier represents that, to the best of its knowledge, any litigation or claim or any threat thereof involving Supplier has been disclosed in writing to the State and Supplier is not aware of any other litigation, claim or threat thereof.

6.10 If services provided by Supplier include delivery of an electronic communication, Supplier shall ensure such communication and any associated support documents are compliant with Section 508 of the Federal Rehabilitation Act and with State standards regarding accessibility. Should any communication or associated support documents be non-compliant, Supplier shall correct and re-deliver such communication immediately upon discovery or notice, at no additional cost to the State. Additionally, as part of compliance with accessibility requirements where documents are only provided in non-electronic format, Supplier shall promptly provide such communication and any associated support documents in an alternate format usable by individuals with disabilities upon request and at no additional cost, which may originate from an intended recipient or from the State.

7 Audits and Records Clause

7.1 As used in this clause and pursuant to 67 O.S. §203, "record" includes a document, book, paper, photograph, microfilm, computer tape, disk, record, sound recording, film recording, video record, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

7.2 Supplier agrees any pertinent federal or State agency or governing entity of a Customer shall have the right to examine and audit, at no additional cost to a Customer, all records relevant to the execution and performance of the Contract except, unless otherwise agreed, costs of Supplier that comprise pricing under the Contract.

7.3 The Supplier is required to retain records relative to the Contract for the duration of the Contract and for a period of seven (7) years following completion or termination of an Acquisition unless otherwise indicated in the Contract terms. If a claim, audit, litigation or other action involving such records is started before the end of the seven-year period, the records are required to be maintained for two (2) years from the date that all issues arising out of the action are resolved, or until the end of the seven (7) year retention period, whichever is later.

7.4 Pursuant to 74 O.S. §85.41, if professional services are provided hereunder, all items of the Supplier that relate to the professional services are subject to examination by the State agency, State Auditor and Inspector and the State Purchasing Director.

8 Confidentiality

8.1 The Supplier shall maintain strict security of all State and citizen data and records entrusted to it or to which the Supplier gains access, in accordance with and subject to applicable federal and State laws, rules, regulations, and policies and shall use any such data and records only as necessary for Supplier to perform its obligations under the Contract. The Supplier further agrees to evidence such confidentiality obligation in a separate writing if required under such applicable federal or State laws, rules and regulations. The Supplier warrants and represents that such information shall not be sold, assigned, conveyed, provided, released, disseminated or otherwise disclosed by Supplier, its employees, officers, directors, subsidiaries, affiliates, agents, representatives, assigns, subcontractors, independent contractors, successor or any other persons or entities without Customer's prior express written permission. Supplier shall instruct all such persons and entities that the confidential information shall not be disclosed or used without the Customer's prior express written approval except as necessary for Supplier to render services under the Contract. The Supplier further warrants that it has a tested and proven system in effect designed to protect all confidential information.

8.2 Supplier shall establish, maintain and enforce agreements with all such persons and entities that have access to State and citizen data and records to fulfill Supplier's duties and obligations under the Contract and to specifically prohibit any sale, assignment, conveyance, provision, release, dissemination or other disclosure of any State or citizen data or records except as required by law or allowed by written prior approval of the Customer.

8.3 Supplier shall immediately report to the Customer any and all unauthorized use, appropriation, sale, assignment, conveyance, provision, release, access, acquisition, disclosure or other dissemination of any State or citizen data or records of which it or its parent company, subsidiaries, affiliates, employees, officers, directors, assignees, agents, representatives, independent contractors, and subcontractors is aware or have knowledge or reasonable should have knowledge. The Supplier shall also promptly furnish to Customer full details of the unauthorized use, appropriation, sale, assignment, conveyance, provision, release, access, acquisition, disclosure or other dissemination, or attempt thereof, and use its best efforts to assist the Customer in investigating or preventing the reoccurrence of such event in the future. The Supplier shall cooperate with the Customer in connection with any litigation and investigation deemed necessary by the Customer to protect any State or citizen data and records and shall bear all costs associated with the investigation, response and recovery in connection with any breach of State or citizen data or records including but not limited to credit monitoring services with a term of

at least three (3) years, all notice-related costs and toll free telephone call center services.

8.4 Supplier further agrees to promptly prevent a reoccurrence of any unauthorized use, appropriation, sale, assignment, conveyance, provision, release, access, acquisition, disclosure or other dissemination of State or citizen data and records.

8.5 Supplier acknowledges that any improper use, appropriation, sale, assignment, conveyance, provision, release, access, acquisition, disclosure or other dissemination of any State data or records to others may cause immediate and irreparable harm to the Customer and certain beneficiaries and may violate state or federal laws and regulations. If the Supplier or its affiliates, parent company, subsidiaries, employees, officers, directors, assignees, agents, representatives, independent contractors, and subcontractors improperly use, appropriate, sell, assign, convey, provide, release, access, acquire, disclose or otherwise disseminate such confidential information to any person or entity in violation of the Contract, the Customer will immediately be entitled to injunctive relief and/or any other rights or remedies available under this Contract, at equity or pursuant to applicable statutory, regulatory, and common law without a cure period.

8.6 The Supplier shall immediately forward to the State Purchasing Director, and any other applicable person listed in the Notices section(s) of the Contract, any request by a third party for data or records in the possession of the Supplier or any subcontractor or to which the Supplier or subcontractor has access and Supplier shall fully cooperate with all efforts to protect the security and confidentiality of such data or records in response to a third party request.

9 Assignment and Permitted Subcontractors

9.1 Supplier's obligations under the Contract may not be assigned or transferred to any other person or entity without the prior written consent of the State which may be withheld at the State's sole discretion. Should Supplier assign its rights to payment, in whole or in part, under the Contract, Supplier shall provide the State and all affected Customers with written notice of the assignment. Such written notice shall be delivered timely and contain details sufficient for affected Customers to perform payment obligations without any delay caused by the assignment.

9.2 Notwithstanding the foregoing, the Contract may be assigned by Supplier to any corporation or other entity in connection with a merger, consolidation, sale of all equity interests of the Supplier, or a sale of all or substantially all of the assets of the Supplier to which the Contract relates. In any such case, said

corporation or other entity shall by operation of law or expressly in writing assume all obligations of the Supplier as fully as if it had been originally made a party to the Contract. Supplier shall give the State and all affected Customers prior written notice of said assignment. Any assignment or delegation in violation of this subsection shall be void.

9.3 If the Supplier is permitted to utilize subcontractors in support of the Contract, the Supplier shall remain solely responsible for its obligations under the terms of the Contract, for its actions and omissions and those of its agents, employees and subcontractors and for payments to such persons or entities. Prior to a subcontractor being utilized by the Supplier, the Supplier shall obtain written approval of the State of such subcontractor and each employee, as applicable to a particular Acquisition, of such subcontractor proposed for use by the Supplier. Such approval is within the sole discretion of the State. Any proposed subcontractor shall be identified by entity name, and by employee name, if required by the particular Acquisition, in the applicable proposal and shall include the nature of the services to be performed. As part of the approval request, the Supplier shall provide a copy of a written agreement executed by the Supplier and subcontractor setting forth that such subcontractor is bound by and agrees, as applicable, to perform the same covenants and be subject to the same conditions and make identical certifications to the same facts and criteria, as the Supplier under the terms of all applicable Contract documents. Supplier agrees that maintaining such agreement with any subcontractor and obtaining prior written approval by the State of any subcontractor and associated employees shall be a continuing obligation. The State further reserves the right to revoke approval of a subcontractor or an employee thereof in instances of poor performance, misconduct or for other similar reasons.

9.4 All payments under the Contract shall be made directly to the Supplier, except as provided in subsection A above regarding the Supplier's assignment of payment. No payment shall be made to the Supplier for performance by unapproved or disapproved employees of the Supplier or a subcontractor.

9.5 Rights and obligations of the State or a Customer under the terms of this Contract may be assigned or transferred, at no additional cost, to other Customer entities.

10 Background Checks and Criminal History Investigations

Prior to the commencement of any services, performance of background checks and criminal history investigations of the Supplier's employees and subcontractors who will be providing services may be required. If required, the Suppler agree to provide the State with a description of the background check process to include any vendor's

used to gather information. Supplier will further attest that each employee and subcontractor providing services has passed the back ground check. Supplier's access to facilities, data and information may be withheld prior to completion of background verification acceptable to the State. The costs of additional background checks beyond Supplier's normal hiring practices shall be the responsibility of the Customer unless such additional background checks are required solely because Supplier will not provide verification of results of its otherwise acceptable normal background checks; in such an instance, Supplier shall pay for the additional background checks. Supplier will coordinate with the State and its employees to complete the necessary background checks and criminal history investigations. Should any employee or subcontractor of the Supplier who will be providing services under the Contract not be acceptable as a result of the background check or criminal history investigation, the Customer may require replacement of the employee or subcontractor in question and, if no suitable replacement is made within a reasonable time, terminate the purchase order or other payment mechanism associated with the project or services.

11 Patents and Copyrights

Without exception, a product or deliverable price shall include all royalties or costs owed by the Supplier to any third party arising from the use of a patent, intellectual property, copyright or other property right held by such third party. Should any third party threaten or make a claim that any portion of a product or service provided by Supplier under the Contract infringes that party's patent, intellectual property, copyright or other property right, Supplier shall enable each affected Customer to legally continue to use, or modify for use, the portion of the product or service at issue or replace such potentially infringing product, or re-perform or redeliver in the case of a service, with at least a functional non-infringing equivalent. Supplier's duty under this section shall extend to include any other product or service rendered materially unusable as intended due to replacement or modification of the product or service at issue. If the Supplier determines that none of these alternatives are reasonably available, the State shall return such portion of the product or deliverable at issue to the Supplier, upon written request, in exchange for a refund of the price paid for such returned goods as well as a refund or reimbursement, if applicable, of the cost of any other product or deliverable rendered materially unusable as intended due to removal of the portion of product or deliverable at issue. Any remedy provided under this section is not an exclusive remedy and is not intended to operate as a waiver of legal or equitable remedies because of acceptance of relief provided by Supplier.

12 Indemnification

12.1 Acts or Omissions

A. Supplier shall defend and indemnify the Indemnified Parties, as applicable, for any and all liability, claims, damages, losses, costs, expenses, demands, suits and actions of third parties (including without limitation reasonable attorneys' fees and costs required to establish the right to indemnification) arising out of, or resulting from any action or claim for bodily injury, death, or property damage brought against any of the Indemnified parties to the extent arising from any negligent act or omission or willful misconduct of the Supplier or its agents, employees, or subcontractors in the execution or performance of the Contract.

B. To the extent Supplier is found liable for loss, damage, or destruction of any property of Customer due to negligence, misconduct, wrongful act, or omission on the part of the Supplier, its employees, agents, representatives, or subcontractors, the Supplier and Customer shall use best efforts to mutually negotiate an equitable settlement amount to repair or replace the property unless such loss, damage or destruction is of such a magnitude that repair or replacement is not a reasonable option. Such amount shall be invoiced to, and is payable by, Supplier sixty (60) calendar days after the date of Supplier's receipt of an invoice for the negotiated settlement amount.

12.2 Infringement

Supplier shall indemnify the Indemnified Parties, as applicable, for all liability, claims, damages, losses, costs, expenses, demands, suits and actions of third parties (including without limitation reasonable attorneys' fees and costs required to establish the right to indemnification) arising from or in connection with Supplier's breach of its representations and warranties in the Contract or alleged infringement of any patent, intellectual property, copyright or other property right in connection with a product or service provided under the Contract. Supplier's duty under this section is reduced to the extent a claimed infringement results from: (a) a Customer's or user's content; (b) modifications by Customer or third party to a product delivered under the Contract or combinations of the product with any non-Supplier-provided services or products unless Supplier recommended or participated in such modification or combination; (c) use of a product or service by Customer in violation of the Contract unless done so at the direction of Supplier, or (d) a non-Supplier product that has not been provided to the State by, through or on behalf of Supplier as opposed to its combination with products Supplier provides to or develops for the State or a Customer as a system.

12.3 Notice and Cooperation

In connection with indemnification obligations under the Contract, the parties agree to furnish prompt written notice to each other of any third-party claim. Any Customer affected by the claim will reasonably cooperate with Supplier and defense of the claim to the extent its interests are aligned with Supplier. Supplier shall use counsel reasonably experienced in the subject matter at issue and will not settle a claim without the written consent of the party being defended and where applicable the Attorney General of Oklahoma, which consent will not be unreasonably withheld or delayed, except that no consent will be required to settle a claim against Indemnified Parties that are not a State agency, where relief against the Indemnified Parties is limited to monetary damages that are paid by the defending party under indemnification provisions of the Contract.

12.4 Limitation of Liability

A. With respect to any claim or cause of action arising under or related to the Contract, neither the State nor any Customer shall be liable to Supplier for lost profits, lost sales or business expenditures, investments, or commitments in connection with any business, loss of any goodwill, or for any other indirect, incidental, punitive, special or consequential damages, even if advised of the possibility of such damages.

B. Notwithstanding anything to the contrary in the Contract, no provision shall limit damages, expenses, costs, actions, claims, and liabilities arising from or related to property damage, bodily injury or death caused by Supplier or its employees, agents or subcontractors; indemnity, security or confidentiality obligations under the Contract; the bad faith, negligence, intentional misconduct or other acts for which applicable law does not allow exemption from liability of Supplier or its employees, agents or subcontractors.

C. The limitation of liability and disclaimers set forth in the Contract will apply regardless of whether Customer has accepted a product or service. The parties agree that Supplier has set its fees and entered into the Contract in reliance on the disclaimers and limitations set forth herein, that the same reflect an allocation of risk between the parties and form an essential basis of the bargain between the parties. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy.

13 Termination for Cause

13.1 Supplier may terminate the Contract if (i) it has provided the State with written notice of material breach and (ii) the State fails to cure such material breach within thirty (30) days of receipt of written notice. If there is more than one Customer, material breach by a Customer does not give rise to a claim of material breach as grounds for termination by Supplier of the Contract as a whole. The State may terminate the Contract in whole or in part if (i) it has provided Supplier with written notice of material breach, and (ii) Supplier fails to cure such material breach within thirty (30) days of receipt of written notice. Any partial termination of the Contract under this section shall not be construed as a waiver of, and shall not affect, the rights and obligations of any party regarding portions of the Contract that are not terminated.

13.2 The State may terminate the Contract in whole or in part immediately without a thirty (30) day written notice to Supplier if (i) Supplier fails to comply with confidentiality, privacy, security, environmental or safety requirements applicable to Supplier's performance or obligations under the Contract; (ii) Supplier's material breach is reasonably determined to be an impediment to the function of the State and detrimental to the State or to cause a condition precluding the thirty (30) day notice or (iii) when the State determines that an administrative error in connection with award of the Contract occurred prior to Contract performance.

13.3 The State may terminate the Contract if the scope includes PR Vendor services and the Supplier, or Supplier's employee, violate the lobbying clause. PR Vendor services is defined to include a contract for public relations (PR), marketing or communication services. The State may immediately terminate the Contract with no more than 10-day notice under this section.

13.4 Upon receipt of notice of a termination, Supplier shall immediately comply with the notice terms and take all necessary steps to minimize the incurrence of costs allocable to the work affected by the notice. If a purchase order or other payment mechanism has been issued and a product or service has been accepted as satisfactory prior to the effective date of termination, the termination does not relieve an obligation to pay for the product or service but there shall not be any liability for further payments ordinarily due under the Contract or for any damages or other amounts caused by or associated with such termination. Such termination is not an exclusive remedy but is in addition to any other rights and remedies provided for by law. Any amount paid to Supplier in the form of prepaid fees that are unused when the Contract or certain obligations are terminated shall be refunded. Termination of the Contract under this section, in whole or in part, shall not relieve the Supplier of liability for claims arising under the Contract.

13.5 The Supplier's repeated failure to provide an acceptable product or service; Supplier's unilateral revision of linked or supplemental terms that have a materially adverse impact on a Customer's rights or obligations under the Contract (except as required by a governmental authority); actual or anticipated failure of Supplier to perform its obligations under the Contract; Supplier's inability to pay its debts when due; assignment for the benefit of Supplier's creditors; or voluntary or involuntary appointment of a receiver or filing of bankruptcy of Supplier shall constitute a material breach of the Supplier's obligations, which may result in partial or whole termination of the Contract. This subsection is not intended as an exhaustive list of material breach conditions. Termination may also result from other instances of failure to adhere to the Contract provisions and for other reasons provided for by applicable law, rules or regulations; without limitation, OAC 260:115-9-1 is an example.

14 Termination for Convenience

14.1 The State may terminate the Contract, in whole or in part, for convenience if it is determined that termination is in the State's best interest. In the event of a termination for convenience, Supplier will be provided at least thirty (30) days' written notice of termination. Any partial termination of the Contract shall not be construed as a waiver of, and shall not affect, the rights and obligations of any party regarding portions of the Contract that remain in effect.

14.2 Upon receipt of notice of such termination, Supplier shall immediately comply with the notice terms and take all necessary steps to minimize the incurrence of costs allocable to the work affected by the notice. If a purchase order or other payment mechanism has been issued and a product or service has been accepted as satisfactory prior to the effective date of termination, the termination does not relieve an obligation to pay for the product or service but there shall not be any liability for further payments ordinarily due under the Contract or for any damages or other amounts caused by or associated with such termination. Such termination shall not be an exclusive remedy but shall be in addition to any other rights and remedies provided for by law. Any amount paid to Supplier in the form of prepaid fees that are unused when the Contract or certain obligations are terminated shall be refunded. Termination of the Contract under this section, in whole or in part, shall not relieve the Supplier of liability for claims arising under the Contract.

15 Suspension of Supplier

15.1 Supplier may be subject to Suspension without advance notice and may additionally be suspended from activities under the Contract if Supplier fails

to comply with confidentiality, privacy, security, environmental or safety requirements applicable to Supplier's performance or obligations under the Contract.

15.2 Upon receipt of a notice pursuant to this section, Supplier shall immediately comply with the notice terms and take all necessary steps to minimize the incurrence of costs allocable to the work affected by the notice. If a purchase order or other payment mechanism has been issued and a product or service has been accepted as satisfactory prior to receipt of notice by Supplier, the Suspension does not relieve an obligation to pay for the product or service but there shall not be any liability for further payments ordinarily due under the Contract during a period of Suspension or suspended activity or for any damages or other amounts caused by or associated with such Suspension or suspended activity. A right exercised under this section shall not be an exclusive remedy but shall be in addition to any other rights and remedies provided for by law. Any amount paid to Supplier in the form of prepaid fees attributable to a period of Suspension or suspended activity shall be refunded.

15.3 Such Suspension may be removed, or suspended activity may resume, at the earlier of such time as a formal notice is issued that authorizes the resumption of performance under the Contract or at such time as a purchase order or other appropriate encumbrance document is issued. This subsection is not intended to operate as an affirmative statement that such resumption will occur.

16 Certification Regarding State Employees Prohibition From Fulfilling Services

Pursuant to 74 O.S. § 85.42, the Supplier certifies that no person involved in any manner in development of the Contract employed by the State shall be employed to fulfill any services provided under the Contract.

17 Force Majeure

17.1 Either party shall be temporarily excused from performance to the extent delayed as a result of unforeseen causes beyond its reasonable control including fire or other similar casualty, act of God, strike or labor dispute, war or other violence, or any law, order or requirement of any governmental agency or authority provided the party experiencing the force majeure event has prudently and promptly acted to take any and all steps within the party's control to ensure continued performance and to shorten duration of the event. If a party's performance of its obligations is materially hindered as a result of a force majeure event, such party shall promptly notify the other party of its best reasonable assessment of the nature and duration of the force majeure event and steps it is taking, and plans to take, to mitigate the effects of the force majeure event. The party shall use commercially reasonable best efforts to

continue performance to the extent possible during such event and resume full performance as soon as reasonably practicable.

17.2 Subject to the conditions set forth above, non-performance as a result of a force majeure event shall not be deemed a default. However, a purchase order or other payment mechanism may be terminated if Supplier cannot cause delivery of a product or service in a timely manner to meet the business needs of Customer. Supplier is not entitled to payment for products or services not received and, therefore, amounts payable to Supplier during the force majeure event shall be equitably adjusted downward.

17.3 Notwithstanding the foregoing or any other provision in the Contract, (i) the following are not a force majeure event under the Contract: (a) shutdowns, disruptions or malfunctions in Supplier's system or any of Supplier's telecommunication or internet services other than as a result of general and widespread internet or telecommunications failures that are not limited to Supplier's systems or (b) the delay or failure of Supplier or subcontractor personnel to perform any obligation of Supplier hereunder unless such delay or failure to perform is itself by reason of a force majeure event and (ii) no force majeure event modifies or excuses Supplier's obligations related to confidentiality, indemnification, data security or breach notification obligations set forth herein.

18 Security of Property and Personnel

In connection with Supplier's performance under the Contract, Supplier may have access to Customer personnel, premises, data, records, equipment and other property. Supplier shall use commercially reasonable best efforts to preserve the safety and security of such personnel, premises, data, records, equipment, and other property of Customer. Supplier shall be responsible for damage to such property to the extent such damage is caused by its employees or subcontractors and shall be responsible for loss of Customer property in its possession, regardless of cause. If Supplier fails to comply with Customer's security requirements, Supplier is subject to immediate suspension of work as well as termination of the associated purchase order or other payment mechanism.

19 Miscellaneous

19.1 Transition Services

If transition services are needed at the time of Contract expiration or termination, Supplier shall provide such services on a month-to-month basis, at the contract rate or other mutually agreed rate. Supplier shall provide a proposed transition plan, upon request, and cooperate with any successor

supplier and with establishing a mutually agreeable transition plan. Failure to cooperate may be documented as poor performance of Supplier.

19.2 Publicity

The existence of the Contract or any Acquisition is in no way an endorsement of Supplier, the products or services and shall not be so construed by Supplier in any advertising or publicity materials. Supplier agrees to submit to the State all advertising, sales, promotion, and other publicity matters relating to the Contract wherein the name of the State or any Customer is mentioned or language used from which, in the State's judgment, an endorsement may be inferred or implied. Supplier further agrees not to publish or use such advertising, sales promotion, or publicity matter or release any informational pamphlets, notices, press releases, research reports, or similar public notices concerning the Contract or any Acquisition hereunder without obtaining the prior written approval of the State.

19.3 Mutual Responsibilities

A. No party to the Contract grants the other the right to use any trademarks, trade names, other designations in any promotion or publication without the express written consent by the other party.

B. The Contract is a non-exclusive contract and each party is free to enter into similar agreements with others.

C. The Customer and Supplier each grant the other only the licenses and rights specified in the Contract and all other rights and interests are expressly reserved.

D. The Customer and Supplier shall reasonably cooperate with each other and any Supplier to which the provision of a product and/or service under the Contract may be transitioned after termination or expiration of the Contract.

E. Except as otherwise set forth herein, where approval, acceptance, consent, or similar action by a party is required under the Contract, such action shall not be unreasonably delayed or withheld.

19.4 Entire Agreement

The Contract documents taken together as a whole constitute the entire agreement between the parties. The Contract documents include this Contract, any Amendments to this Contract, applicable Solicitation, and any successful bid as may be amended or limited through negotiation. No statement, promise,

condition, understanding, inducement or representation, oral or written, expressed or implied, which is not contained in a Contract document shall be binding or valid. The Supplier's certifications, including any completed electronically, are incorporated by reference into the Contract.

SOLICITATION #: EV00000673

I. DEFINITIONS

Definitions: As used herein, the following terms shall have the following meaning unless the context clearly indicates otherwise:

Acquisition: means items, products, materials, supplies, services, and equipment an entity acquires by purchase, lease purchase, lease with option to purchase, or rental.

Addendum: means a written restatement of or modification to a Contract Document executed by the Supplier and State.

Bid: means an offer in the form of a bid, proposal, or quote a bidder submits in response to a solicitation.

Bidder: means an individual or business entity that submits a bid in response to a solicitation.

Consultant: includes architects, engineers and other recognized consultants that may be necessary to plan a construction project (61 O.S. §61).

Construction: generally means the process of planning, acquiring, designing, building, equipping, altering, repairing, improving, maintaining or demolishing any structure or appurtenance thereto including facilities, utilities, or other improvements to any real property.

Contractor, Supplier. or Vendor: means an individual or business entity that sells or desires to sell acquisitions to state agencies.

Customer Data: shall mean all data supplied by or on behalf of Customer in connection with the Contract, excluding any confidential information of Vendor.

Data Breach: shall mean the unauthorized access by an unauthorized person that results in the access, use, disclosure or theft of Customer Data.

Environmentally Preferable Goods And Services (EPGS): are those that have a lesser or reduced impact on the environment over the life cycle of the good or service, when compared with competing goods or services that serve the same purpose. Environmentally preferable goods may also have one or more of the following characteristics: reduced packaging, ease of reuse, refurbishment, remanufacture, or recycling at end of life, reduction of greenhouse gas emissions and air contaminants, improved energy and water efficiency, use of alternative sources of energy and fuels, reduced waste, and practices that support reuse and recycling, use of renewable resources, reduced exposure to toxins and hazardous substances, and promote practices that support and sustain healthy communities and social.

Mandatory And Non-Mandatory Terms: Whenever the terms “shall”, “must”, “will”, or “is required” are referred to is a mandatory terms. Failure to meet any mandatory will result in noncompliance. Whenever the terms “can”, “may”, or “should” are referred to be a desirable item and preferred.by OWRB but will not result in noncompliance.

Non-Public Data: shall mean Customer Data, other than Personal Data, that is not subject to distribution to the public as public information. It is deemed to be sensitive and confidential by Customer because it contains information that is exempt by statute, ordinance or administrative rule from access by the general public as public information. Non-Public Data includes any data deemed confidential pursuant to the Contract, otherwise identified by Customer as Non-Public Data, or that a reasonable person would deem confidential.

Oklahoma Water Resources Board (OWRB): also referenced as the agency. OWRB is organized according to operational needs identified by the statutory responsibilities outlined in it empowering legislation. The organization consists of the Office of Executive Director, Administrative Services Division, Finance Assistance Division, Water Quality Division and Water Right Division and Engineering and Planning Division, each of which is responsible for the management of specific environmental program areas: For more information please visit our agency website : https://www.owrb.ok.gov/

Personal Data: shall mean Customer Data that contains 1) any combination of an individual's name, social security numbers, driver's license, state/federal identification number, account number, credit or debit card number and/or 2) contains electronic protected health information that is subject to the Health Insurance Portability and Accountability Act of 1996, as amended.

Provide: means that all coordination and materials must be included for an item and should be included in the bid cost.

Security Incident: shall mean the attempted or successful unauthorized access, use, disclosure, modification, or destruction of information or interference with the hosted environment used to perform the services

Solicitation: means a request or invitation by the State Purchasing Director or a state agency for a supplier to submit a priced offer to sell acquisitions to the state. A solicitation may be an invitation to bid, request for proposal, or a request for quotation.

II. REFERENCE WEBSITES:

i. OWRB - http://www.owrb.ok.gov/
ii. Oklahoma Office on Management and Enterprise Services: https://omes.ok.gov/
iii. United States Environmental Protection Agency - https://www.epa.gov/
iv. United States Department of Labor: https://www.dol.gov/
v. Oklahoma Department of Labor: https://www.ok.gov/odol/

III. GENERAL PROVISIONS

Executed Contract: The date of commencement of work shall be the dated one the Notice to Proceed issued by the agency and affixed to the Purchase Order issued to encumber the cost of work and Executed Contract. This contract is a fixed price contract. Projects may be invoiced after services have been complete. Projects may be incrementally invoices on a monthly basis, only if services on invoices have been rendered. Final payment will not be made until agency has verified project completion and is satisfied will all services rendered. No payment will be made to contractor until services are rendered and verified. No work can commence until Supplier has received a fully executed Notice to Proceed and Purchase Order. Any work commenced before the Notice to Proceed is an Unauthorized Obligation.

Procurement Ethics: prohibited conduct (a) Standard of conduct. The Oklahoma Central Purchasing Act, State Ethics Commission rules and other state laws contain regulations, prohibitions and penalties governing procurement ethics. Transactions relating to the public expenditure of funds require the highest degree of public trust and impeccable standards of conduct. (b) One year limitation for certain contracts. Unless otherwise provided by law, a state agency is prohibited from entering into a sole source contract, a professional service contract or a contract for the services of any person, who has terminated employment with or who has been terminated by that agency for one (1) year after the termination date of the employee from the agency. [Reference 74 O.S. §85.42(A)] An agency may enter into a sole source contract or a contract for professional services at any time with a person who is a qualified interpreter for the deaf. [Reference 74 O.S. §85.42(D)]. (c) Supplier gratuities. The State Purchasing Director and any state employee or agent of the State Purchasing Director, acting within the scope of delegated authority, or any member of their immediate family, under the Oklahoma Central Purchasing Act shall not accept any gift, donation, or gratuity for himself or any member of his immediate family from any supplier or prospective supplier of any acquisition covered by the Oklahoma Central Purchasing Act. This subsection shall

not apply to exceptions to the definition of "anything of value" established in rules promulgated by the Oklahoma Ethics Commission. [Reference 74 O.S. §85.13].

Publicity: The award of a Contract, purchase order, or any other documentation to Supplier is not in any way an endorsement by the State of Supplier or the products and shall not be so construed by Supplier in any advertising or publicity materials. Supplier agrees to submit to the State all advertising, sales promotion, and other publicity matters relating to this Contract wherein the State's name is mentioned or language used from which the connection of the State's name therewith may, in the State's judgment, be inferred or implied as an endorsement. Supplier further agrees not to publish or use such advertising, sales promotion, or publicity matter or release any informational pamphlets, notices, press releases, research reports, or similar public notices concerning this Contract without obtaining the prior written approval of the State All publicity shall be ran through the OWRB External Affairs Division.

Oklahoma Open Records Act: All documents are subject to public disclosure in accordance with the Oklahoma Open Records Act. All material submitted becomes the property of the State.

Energy Conservation: Oklahoma is an energy conservation State and we welcome any comments on the Suppliers response that would indicate energy savings

Environmental Conservation: Oklahoma is an energy conservation State and we welcome any comments on the Suppliers response that would indicate environmental protection and conservation to the State. Suppliers shall use EPGS products. IF EPGS products are not available, supplier shall right a justification on why they are not used.

Oral Agreements: No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in the Contract. All modifications to the contract must be made in writing by the OWRB and signed by the Chief Administrative Officer.

Non-Collusion: Neither the Supplier nor anyone subject to the Supplier's direction or control has been a party: A). to any collusion among Suppliers in restraint of freedom of competition by agreement to contract at a fixed price or to refrain from submitting supplier contract information; B). to any collusion with any state official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, nor; C) in any discussions between the awarded Supplier and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract, nor; D)to any collusion with any state agency or political subdivision official or employee as to create a sole-source acquisition in contradiction to Section 85.45j.1. of this title. E). Neither the Supplier nor anyone subject to the Supplier's direction or control has paid, given or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma any money or other thing of value, either directly or indirectly, in procuring this contract herein. F). For the purpose of a contract for services, the Supplier also certifies that no person who has been involved in any manner in the development of this contract while employed by the State of Oklahoma shall be employed by the Supplier to fulfill any of the services provided for under said contract.

Conflict Of Interest: The Contract hereunder is subject to the provisions of the Oklahoma Statutes. The Supplier certifies the name of any officer, director or agency who is also an employee of the State of Oklahoma or any of its agencies has been disclosed. Further, the Supplier certifies the name of any state employee who owns, directly or indirectly, an interest of five percent (5%) or more in the Suppliers' firm or any of its branches has been disclosed prior to the Contract.

Compliance With Applicable Laws: The Contract shall be subject to Oklahoma case law, the Oklahoma Central Purchasing Act (74 O.S.85.1), Central Purchasing Rules, and other statutory requirements as applicable.

Registration: Suppliers pending contract award MUST register with the state pursuant to 74 O.S. § 85.33.B. Online registration and additional information may be found:

https://oklahoma.gov/omes/services/purchasing/supplier-portal.html

Funding: Due to possible future reductions in State and/or Federal appropriations, the OWRB cannot guarantee the continued availability of funding for this contract, notwithstanding the consideration stated above. In the event funds to finance this contract become unavailable, either in full or in part, due to such reductions in appropriations, the OWRB may terminate the contract or reduce the consideration upon notice in writing to Contractor. The Department shall be the final authority as to the availability of funds. In the event of non-appropriation or discontinuance of funding for this contract, the vendor will be paid for products and/or services provided up to the effective date of termination.

Audit And Records Clause: As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form. In accepting any Contract with the State, the successful bidder(s) agree any pertinent State or Federal agency will have the right to examine and audit all records relevant to execution and performance of the resultant Contract.

The successful supplier(s) awarded the Contract(s) is required to retain records relative to the Contract for the duration of the Contract and for a period of seven (7) years following completion and/or termination of the Contract. If an audit, litigation, or other action involving such records is started before the end of the seven (7) year period, the records are required to be maintained for two (2) years from the date that all issues arising out of the action are resolved, or until the end of the seven (7) year retention period, whichever is later.

Non-Appropriation Clause: The terms of any Contract resulting from the solicitation and any Purchase Order issued for multiple years under the Contract are contingent upon sufficient appropriations being made by the Legislature or other appropriate government entity. Notwithstanding any language to the contrary in the solicitation, purchase order, or any other Contract document, the procuring agency may terminate its obligations under the Contract if sufficient appropriations are not made by the Legislature or other appropriate governing entity to pay amounts due for multiple year agreements. The Requesting (procuring) Agency's decisions as to whether sufficient appropriations are available shall be accepted by the supplier and shall be final and binding.

Choice Of Law: Any claims, disputes, or litigation relating to the solicitation, or the execution, interpretation, performance, or enforcement of the Contract shall be governed by the laws of the State of Oklahoma.

Choice Of Venue: Venue for any action, claim, dispute or litigation relating in any way to the Contract shall be in Oklahoma County, Oklahoma.

Termination For Cause: The supplier may terminate the Contract for default or other just cause with a 30-day written request and upon written approval from the Central Purchasing Division. The State may terminate the Contract for default or any other just cause upon a 30-day written notification to the supplier. The State may terminate the Contract immediately, without a 30-day written notice to the supplier, when violations are found to be an impediment to the function of an agency and detrimental to its cause, when conditions preclude the 30-day notice, or when the State Purchasing Director determines that an administrative error occurred prior to Contract performance. If the Contract is terminated, the State shall be liable only for payment for products and/or services delivered and accepted.

Termination For Convenience: The State may terminate the Contract, in whole or in part, for convenience if the State Purchasing Director determines that termination is in the State's best interest. The State Purchasing Director shall terminate the Contract by delivering to the supplier a Notice of Termination for Convenience specifying the terms and effective date of Contract termination. The Contract termination date shall be a minimum of 60 days from the date the Notice of Termination for Convenience is issued by the State Purchasing Director. If the Contract is terminated, the State shall be liable only for products and/or services delivered and accepted, and for costs and expenses (exclusive of profit) reasonably incurred prior to the date upon which the Notice of Termination for Convenience was received by the supplier.

Compliance With The Oklahoma Taxpayer And Citizen Protection Act Of 2007: The Vendor certifies that it and all proposed subcontractors and suppliers, whether known or unknown at the time this contract is executed or awarded, will comply with the provisions of the Oklahoma Taxpayer and Citizen Protection Act of 2007 and participate in the Status Verification System. The Status Verification System is defined in the Oklahoma Statutes, Title 25 §1312. The Status Verification System is defined in 25 O.S. §1312 and includes but is not limited to the free Employment Verification Program (E-Verify) through the Department of Homeland Security and available at www.dhs.gov/E-Verify .

Patents And Royalties: The Supplier, without exception, shall indemnify and hold harmless the State of Oklahoma and its employees from liability of any nature or kind, including cost and expenses for or on account of any copyrighted, patented, or unpatented invention, process, or article manufactured or used in the performance of the contract including its use by the State of Oklahoma. If the Supplier uses any design, device or materials covered by letters, patent copyright, it is mutually agreed and understood without exception that the proposal prices shall include all royalties or cost arising from the use of such design, device, or materials in any way involved in the work.

Disclosures Regarding Lobbyists: A Supplier may not reimburse itself within its contract pricing for its costs and expenses of lobbyists. Any Supplier using the services of a lobbyist to assist in obtaining a Contract shall (1) disclose all costs, fees, compensation, reimbursements, and other remunerations paid or to be paid to the lobbyist related to the contract (2) not bill or otherwise charge the State for such and (3) certify that no such costs were billed to the State. The Supplier certifies the name and address of each lobbyist or agent of the Supplier or subcontractor who communicated with a state employee about a Contract has been disclosed prior to Contract award.

Reservation Of Rights And Preferences: OWRB reserves the right of creative control over the project and the right to reject any portion of or all materials produced that do not, in the sole discretion of OWRB, comply with its mission, goals or requirements. OWRB reserves the right to use vendor's suggestion(s), not use vendor's suggestion(s) or use other suggestion(s) that may meet DEQ's goals. In any event vendor shall work with OWRB to produce a quality Brownfields Conference.

Development Of Intellectual Property: Any improvements to Intellectual Property items of OWRB, and any new items of Intellectual Property developed by vendor or vendor's employees, agents or sub-contractors, if any during the performance of this contract shall be the property of OWRB. Contractor shall sign all documents necessary to perfect the rights of such Intellectual Property, including the filing and/or prosecution of any applications for copyrights or patents.

Ownership Of Documents: All documentation generated as an instrument of service is and shall remain the property of the Owner, including shop drawings, equipment manuals, equipment warranties and as-built drawings. Contractor shall deliver said documents to Owner's Representative or as otherwise stated in the Solicitation upon final completion of the work.

Damages And Equipment: All work performed by Contractor's personnel shall be designed to preclude damage or disfigurement. Damage and/or loss to property of OWRB; property of OWRB staff and property of guests; and/or neighboring property, as a result of negligence or intent by Contractor, or Contractor's personnel shall be at Contractor's expense. All replacements and repair will be at the current cost, and paid by the Contractor. OWRB shall not be held responsible for any of Contractor's property and/or Contractor's personnel's property; including major equipment which may be lost, damaged, or stolen unless such loss, damage or theft is due to the negligence or intent of DEQ's employees or agents. Repair of damage to property of OWRB, property of OWRB staff and guests, or neighboring property, as a result of negligence or intent by supplier, or supplier's employee(s) shall be at supplier's expense. All replacements and repair will be at the current cost, and paid by the Supplier.

Severability: The provisions of this contract are severable, and if any part or provision hereof shall be held void, it shall not be deemed to render any other provisions void or affect or impair the effectiveness of other parts or provisions.

Indemnity : To the extent permitted by Oklahoma law, Contractor agrees to indemnify and hold OWRB harmless against any and all bodily injuries an property damages, civil rights violations, deficiencies or liability resulting from any action,

inaction or conduct on the part of Contractor or non-fulfillment of any term or condition of this Contract. Unless prohibited, by Article 10 of the Oklahoma Constitution, Contractor shall indemnify and hold OWRB harmless under this Contract from any and all assessments, judgments, costs including attorneys' fees, and legal and other reasonable expenses incidental to any of the foregoing.

Contractor agrees to ensure that any subcontractor under this Contract shall indemnify and hold OWRB harmless from any and all claims for bodily injuries, property damages, or other liabilities whatsoever arising from the subcontractor's actions, inaction, or other conduct relate to or arising from this Contract.

Force Majeure: No damages shall be due for a failure of performance occurring due to Acts of God, war, terrorist act, riots, disaster, or strikes, any one of which make performance impossible. The Hotel shall have no liability for power disruptions of any kind.

Confidentiality : Contractor recognizes that OWRB has and will have information, business models, and other proprietary information collectively, "Information", that is subject to confidentiality by virtue of statute or is a valuable, special and unique asset of OWRB requiring protection from improper disclosure. If such Information is disclosed, contractor agrees that contractor and their employees, agents or sub-contractors, will not at any time or in any manner, either directly or indirectly, use any Information for their own benefit, or divulge, disclose, or communicate in any manner, any Information to any third party, without prior written consent of the Executive Director of OWRB. Vendor and their employees, agents or sub-contractors will protect the Information and treat it as strictly confidential. A violation of this paragraph shall be a material violation of this agreement. The confidentiality provisions of this solicitation shall remain in full force and effect after the termination of the agreement.

Insurance: The successful supplier(s) awarded the Contract shall obtain and retain insurance, including workers' compensation, automobile insurance, medical malpractice, and general liability, as applicable, or as required by State or Federal law, prior to commencement of any work in connection with the Contract. The supplier awarded the Contract shall timely renew the policies to be carried pursuant to this section throughout the term of the Contract and shall provide the Central Purchasing Division and the procuring agency with evidence of such insurance and renewals.

Extension Of Services: Award of contracts for recurring and continuing service requirements are often delayed due to circumstances beyond the control of the OWRB may require continued performance of any services within the scope and at the rates specified in the contract. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. OWRB may exercise the option by written notice to the Contractor. The preliminary notice does not commit OWRB to an extension. All previous terms and conditions contained within the contract and any amendments shall remain in force throughout any contract period extension resulting from this clause.

Successors And Assigns: The Owner and the Contractor each binds themselves, partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors, assigns and legal representatives of such other party with respect to all covenants of this Agreement. The Contractor shall not assign, sublet or otherwise transfer its interest in this Agreement without the written consent of the Owner.

Travel And Miscellaneous Expenses: Travel expenses incurred are at the sole expense of the Contractor .This includes travel to all monthly planning meetings, which may be held in Oklahoma City, Tulsa, Norman or other towns or cities as necessary. The price proposed by the Contractor shall include all delivery and, if applicable, mailing charges. Only OWRB requested emergency courier or express charges may be reimbursed to the Contractor, if such are requested by authorized OWRB personnel. The Contractor must document expenses by providing receipts. OWRB shall not reimburse for the contractor's standard overhead expenses. Food and beverage costs will be paid for by conference registration fees and sponsorship revenue.

IV. FEDERAL FUNDS PROVISIONS

FEDERAL FUNDS: This contract may be subject to Federal Funds and subject to the following:

i. The Davis Bacon Act
ii. Fair Labor Standards Act of 1938, as Amended
iii. McNamara-O'Hara Service Contract Act of 1965, as Amended
iv. Contract Work Hours and Safety Standards Act, as Amended
v. Walsh-Healey Public Contracts Act
vi. Copeland Anti-Kickback Act

Audit With Federal Funds: Organizations that expend five hundred thousand dollars ($500,000.00) or more in a year in federal funds from all sources shall have a certified independent audit conducted in accordance with OMB Circular A-133, (June 26, 2003 Revision), "Audits of States, Local Governments and Non-Profit Organizations," pursuant to the Single Audit Act of 1984 31 U.S.C. 7501 *et seq.,* and subsequent amendments thereto.

Equal Opportunity/Non-Discrimination: The Contractor shall at all times comply with all federal laws relating to nondiscrimination, including, but not limited to, Presidential Executive Order 11246, as amended, and the Civil Rights Act of 1964, 42 U.S.C. §2000 *et seq*.; Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. §701 *et seq.*; the Americans With Disabilities Act of 1990, 42 U.S.C. §12101 *et seq.;* Title IX of the Education Amendments of 1972, 20 U.S.C. §1681 *et seq.*; the Age Discrimination in Employment Act, 42 U.S.C. §6101 *et seq*.; and all amendments to these acts, and all requirements imposed by the regulations issued pursuant to these acts, including, but not limited to, providing equal opportunity, both to those seeking employment and those seeking services, without regard to race, color, religion, sex, national origin, age, or handicap.

Lobbying Activities: The Contractor certifies the following:

No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer of Congress in connection with the making of any federal grant, the entering into of any cooperative agreement, and the extension, renewal, amendment, or modification of any federal grant or cooperative agreement;

If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

Debarment, Suspension, And Other Responsibility Matters: In accordance with Presidential Executive Order 12549, the Contractor certifies that neither it nor its principals are presently debarred, suspended or otherwise ineligible for participation in federal assistance programs.

Compliance With State And Federal Laws: The Contractor shall comply with all applicable state and federal laws, rules and regulations relevant to the performance of the Contract. Compliance shall be the responsibility of the Contractor, without reliance on or direction by the OWRB.

V. PERSONNEL REQUIREMENTS

All manpower necessary to fully satisfy the requirements of this contract shall be provided by Contractor. Contractor shall only employ qualified personnel who are proficient in performing assigned tasks using modern tools, methods and techniques.

Employment Relationship: The Contract does not create an employment relationship. Individuals performing services required by this Contract are not employees of the State of Oklahoma or the procuring agency. The supplier's employees shall not be considered employees of the State of Oklahoma nor of the procuring agency for any purpose, and accordingly shall not be eligible for rights or benefits accruing to state employees.

Changes To Key Personnel And Subcontractors: It is essential that the Contractor provides adequate experienced personnel and subcontractors, capable of and devoted to the successful accomplishment of work to be performed under this contract. Contractor agrees that once assigned to work under the contract, key personnel and subcontractors shall not be removed or replaced without written notice to the OWRB. If key personnel and subcontractors are not available for work under the contract for a continuous period exceeding thirty (30) calendar days, or are expected to devote substantially less effort to the work than initially anticipated, the Contractor shall immediately notify the OWRB, and shall, subject to the concurrence of the OWRB, replace such personnel with personnel of substantially equal ability and qualifications.

Conduct On Government Property: Contractor, Contractor's Personnel and Subcontractors shall follow the rules below while working on government property:

i. Contractor personnel shall present a neat, clean and well-groomed appearance at all times.
ii. Contractor will provide uniforms or visible identification to personnel to be worn on OWRB property during normal business hours.
iii. Contractor shall ensure that employees are available for each shift. When Contractor's personnel fail to report, the contractor will provide a replacement. The contractor will provide OWRB with the names and telephone numbers of equivalent representatives who are authorized to provide replacement personnel. OWRB must be able to reach contractor's competent representative within 30 minutes and shall not be required to call more than three phone numbers in order to make contact.
iv. Contractor and Contractor's personnel shall not be under the age of 18 years.
v. Due to the increase of violence in the work place, The Contractor and all Contractor's personnel shall meet the following requirements. The Contractor and Contractor's personnel shall have no history of a violent offense, and not be on probation for any criminal offense. In the event an employee is convicted of a violent act, or put on probation for any criminal offense, The Contractor and Contractor's personnel shall notify OWRB immediately and dismiss the employee from duties at OWRB.
vi. Contractor and Contractor's personnel must have a valid photo identification card and driver's license or other state or federally issued legally accepted identification documents and driver's license
vii. Contractor and Contractor's personnel are prohibited from having firearms or other weapons in their possession, whether licensed or not'.
viii. OWRB reserves the right to require the contractor to remove any of Contractor's personnel from OWRB Property, who endangers persons or property, displays impolite and socially unacceptable behavior, or whose continued employment under this contract is inconsistent with the interest of OWRB.

ix. Eating or smoking by Contractor and Contractor's personnel while in the performance of their duties shall be prohibited. Smoking is prohibited by state law in, on or within 25 yards of state property.

x. If Contractor and Contractor's personnel are allowed a break or lunch period during the course of their duties eating will be allowed in designated areas only.

xi. Contractor and Contractor's personnel are prohibited from possessing controlled substances or intoxicating beverages while on duty.

xii. Contractor and Contractor's personnel must treat OWRB Employees and/or visitors in a friendly and courteous professional manner at all times. Profanity will not be tolerated.

Subcontracts: Contractor may not enter into any subcontracts to provide the services required by this contract without first receiving written approval from OWRB reserves the right to not approve a subcontractor and Contractor will have to find a replacement. The services to be performed under the Contract shall not be subcontracted, in whole or in part, to any other person or entity without written approval by the OWRB reserves the right to not approve a subcontractor and Contractor will have to find a replacement. The terms of the Contract, and such additional terms as the OWRB may require, shall be included in any subcontract. Approval of the subcontract shall not relieve the Contractor of any responsibility for performing the Contract. Copies of all subcontractors shall be given to OWRB at the time of issuance and execution. Any proposed agreements (e.g. licenses, maintenance agreements, etc.) that vendor or any subcontractor(s) expects to be signed, as part of a resulting contract to this RFP, shall be approved or denied by OWRB and will or will not become a part of this contract.

Building Access :OWRB shall escort all of contractors staff throughout the building. If OWRB approved, the contract may be issued keys and access cards. If approval is granted, the Contractor shall maintain an updated list of its employees to whom keys and access cards have been checked out which includes the job title and telephone number of each named individual. 3. Contractor shall check out the OWRB keys and access cards only to Contractor's engineer(s) and maintenance person(s) assigned to OWRB.

State Of Oklahoma Governor's Executive Order 2012-01: Per the State of Oklahoma Governor's Executive Order 201201, filed February 6, 2012 and effective July 1, 2012, the use of any tobacco product shall be prohibited on any and all properties owned, leased or contracted for use by the State of Oklahoma, including but not limited to all buildings, land and vehicles owned, leased or contracted for use by agencies or instrumentalities of the State of Oklahoma. The Vendor certifies it will comply with this Order.

Security: Contractor and/or Contractor's personnel shall not permit any personnel to use OWRB keys to provide access to building or locked rooms or areas except upon approval of Contractor or OWRB Management. All contractors and contractor's personnel shall check in and out with the Security Desk. A picture ID is required to enter the building.

III. INVOICING AND PAYMENT

Tax Exemption: State Acquisitions are exempt from sales taxes and federal excise taxes.

Payment Terms: Pursuant to 74 O.S. §85.44(B), invoices will be paid in arrears after products have been delivered or services provided. Payment terms will be net 45. Interest on late payments made by the State of Oklahoma is governed by 62 O.S. § 34.72, unless there is an agreed Earl Payment Discount Amendment. Payment Terms start at the receipt and acceptance of a proper invoice.

Early Payment Discount: OWRB can pay early if a discount to price is offered. Additional terms which provide discounts for earlier payment may be evaluated when making an award. Any such additional terms shall be no less than ten (10) days increasing in five (5) day increments up to thirty (30) days. The date from which the discount time is calculated shall be the date of a proper invoice.

Final Payment: Final payment under this Contract or under a termination settlement shall be made only after the satisfactory completion of work performed under this Contract and Contractor's execution and delivery to the OWRB of a release of all claims against OWRB arising under or by virtue of this Contract. Unless otherwise provided herein, by Oklahoma law, or otherwise expressly agreed to by OWRB, Contractor and OMES, final payment under this Contract or settlement upon termination of this Contract shall not constitute a waiver of the State's claims against Contractor, his sureties or his liability bonds held under this Contract.

Proper Invoice: An invoice is considered proper if sent to the proper recipient and goods or services have been received. Contractor shall invoice OWRB monthly for the costs specified within the contract and/or purchase orders. The proper recipient of invoices is OWRB Accounts Payable. Invoices shall be sent to: accountspayable@owrb.ok.gov . Failure to comply may result in late payments. Invoices shall contain the purchase order number, a description of the products delivered or services provided, the dates of such delivery or provision of services, and the Contractor's Federal Employer Identification number.

Unauthorized Obligation: At no time during the performance of this contract shall the vendor have the authority to obligate DEQ for payment of any goods or services over and above the awarded contract. If the need arises for goods or services over and above the awarded contract for this project, vendor shall cease the project and contact the DEQ contract administrator for approval prior to proceeding. All work performed without an Executed Notice to Proceed and Purchase Order is an Unauthorized Obligation in which the agency will not be liable for.

Additional Terms and Conditions: This contract may be subject to additional provisions listed below:

i. Solicitations Provisions
ii. Information Services Provisions

ATTACHMENT D

STATE OF OKLAHOMA INFORMATION TECHNOLOGY TERMS

The parties further agree to the following terms ("Information Technology Terms"), as applicable, for any Acquisition of products or services with an information technology or telecommunication component. Pursuant to the Oklahoma Information Technology Consolidation and Coordination Act ("The Act" or "Act"), OMES- Information Services ("OMES-IS") is designated to purchase information technology and telecommunication products and services on behalf of the State. The Act directs OMES-IS to acquire necessary hardware, software and services and to authorize the use by other State agencies. OMES, as the owner of information technology and telecommunication assets and contracts on behalf of the State, allows other State agencies to use the assets while retaining ownership and the right to reassign the assets, at no additional cost, upon written notification to Supplier. OMES-IS is the data custodian for State agency data; however, such data is owned by the respective State agency.

1 DEFINITIONS

1.1 **Customer Data** means all data supplied by or on behalf of a Customer in connection with the Contract, excluding any confidential information of Supplier. Customer Data includes both Non-Public Data and Personal Data.

1.2 **Data Breach** means the unauthorized access or the reasonable suspicion of unauthorized access, by an unauthorized person that results in the use, destruction, loss, alteration, disclosure, or theft of Customer Data.

1.3 **Host** includes the terms Hosted or Hosting and means the accessing, processing or storing of Customer Data.

1.4 **Intellectual Property Rights** means the worldwide legal rights or interests evidenced by or embodied in any idea, design, concept, personality right, method, process, technique, apparatus, invention, discovery or improvement including any patents, trade secrets and know-how; any work of authorship including any copyrights, Moral Rights or neighboring rights; any trademark, service mark, trade dress, trade name or other indicia of source or origin; domain name registrations; and any other proprietary or similar rights. Intellectual Property Rights of a party also includes all worldwide legal rights or interests that the party may have acquired by assignment or license with the right to grant sublicenses.

1.5 **Non-Public Data** means Customer Data, other than Personal Data, that is not subject to distribution to the public as public information. It is deemed to be sensitive and confidential by Customer because it contains information that is exempt by statute, ordinance or administrative rule from access by the general public as public information. Non-Public Data includes any data deemed confidential pursuant to the Contract, otherwise identified by Customer as Non-Public Data, or that a reasonable person would deem confidential.

1.6 **Personal Data** means Customer Data that contains 1) any combination of an individual's name, social security numbers, driver's license, state/federal identification number,

account number, credit or debit card number and/or 2) data subject to protection under a federal, state or local law, rule, regulation or ordinance.

1.7 **Security Incident** means the attempted or successful unauthorized access, use, disclosure, modification, loss, theft, or destruction of information or interference with the Hosted environment used to perform the services.

1.8 **Supplier** means the Bidder with whom the State enters into the Contract awarded pursuant to the Solicitation or the business entity or individual that is a party to the Contract with the State. A Supplier with whom the State enters into an awarded Contract shall also be known as a Contractor.

1.9 **Supplier Intellectual Property** means all tangible or intangible items or things, including the Intellectual Property Rights therein, created or developed by Supplier and identified in writing as such (a) prior to providing any services or Work Product to Customer and prior to receiving any documents, materials, information or funding from or on behalf of a Customer relating to the services or Work Product, or (b) after the effective date of the Contract if such tangible or intangible items or things were independently developed by Supplier outside Supplier's provision of services or Work Product for Customer under the Contract and were not created, prepared, developed, invented or conceived by any Customer personnel who then became personnel to Supplier or any of its affiliates or subcontractors, where, although creation or reduction-to-practice is completed while the person is affiliated with Supplier or its personnel, any portion of same was created, invented or conceived by such person while affiliated with Customer.

1.10 **Third Party Intellectual Property** means the Intellectual Property Rights of any third party that is not a party to the Contract, and that is not directly or indirectly providing any goods or services to a Customer under the Contract.

2 TERMINATION OF MAINTENANCE AND SUPPORT SERVICES

Customer may terminate maintenance or support services without an adjustment charge, provided any of the following circumstances occur:

2.1 Customer removes the product for which the services are provided, from productive use; or,

2.2 The location at which the services are provided is no longer controlled by Customer (for example, because of statutory or regulatory changes or the sale or closing of a facility).

2.3 If Customer chooses to renew maintenance or support after maintenance has lapsed, Customer may choose to pay the additional fee, if any, associated with renewing a license after such maintenance or support has lapsed, or to purchase a new license. Any amount paid to Supplier in the form of prepaid fees that are unused when services under the Contract or purchase order are terminated shall be refunded to Customer.

3 COMPLIANCE AND ELECTRONIC AND INFORMATION TECHNOLOGY ACCESSIBILITY

3.1 State procurement of information technology is subject to certain federal and State laws, rules and regulations related to information technology accessibility, including but not limited to Oklahoma Information Technology Accessibility Standards ("Standards") set forth at Information and Communication Technology Accessibility Standards (oklahoma.gov). Supplier shall provide a Voluntary Product Accessibility Template ("VPAT") describing accessibility compliance via a URL linking to the VPAT and shall update the VPAT as necessary in order to allow a Customer to obtain current VPAT information as required by State law. If products require development or customization, additional requirements and documentation may be required and compliance shall be necessary by Supplier. Such requirements may be stated in appropriate documents including but not limited to a statement of work, riders, agreement, purchase order or Addendum.

All representations contained in the VPAT provided will be relied upon by the State or a Customer, as applicable, for accessibility compliance purposes.

4 MEDIA OWNERSHIP (Disk Drive and/or Memory Chip Ownership)

4.1 Any disk drives and memory cards purchased with or included for use in leased or purchased products under the Contract remain the sole and exclusive property of the Customer.

4.2 Personal information may be retained within electronic media devices and components; therefore, electronic media shall not be released either between Customers or for the resale, of refurbished equipment that has been in use by a Customer, by the Supplier to the general public or other entities. This provision applies to replacement devices and components, whether purchased or leased, supplied by Supplier, its agents or subcontractors during the downtime (repair) of products purchased or leased through the Contract. If a device is removed from a location for repairs, the Customer shall have sole discretion, prior to removal, to determine and implement sufficient safeguards (such as a record of hard drive serial numbers) to protect personal information that may be stored within the hard drive or memory of the device.

5 OFFSHORE SERVICES

No offshore services are provided for under the Contract. State data shall not be used or accessed internationally for troubleshooting or any other use not specifically provided for herein without the prior written permission, which may be withheld in the State's sole discretion, from the appropriate authorized representative of the State. Notwithstanding the above, back office administrative functions of the Supplier may be located offshore and the follow-the-sun support model may be used by the Supplier to the extent allowed by law applicable to any Customer data being accessed or used.

6 COMPLIANCE WITH TECHNOLOGY POLICIES

6.1 The Supplier agrees to adhere to the State of Oklahoma "Information Security Policy, Procedures, and Guidelines" available at https://oklahoma.gov/content/dam/ok/en/omes/documents/InfoSecPPG.pdf.

Supplier's employees and subcontractors shall adhere to the applicable State IT

Standards, policies, procedures and architectures as set forth at https://oklahoma.gov/omes/services/information-services.html or as otherwise provided by the State.

6.2 Supplier shall comply with applicable Federal Information Processing Standards including, without limitation, FIPS 200, FIPS 140-2 or successor standards and all recommendations from the National Institute of Standards and Technology. The confidentiality of Customer Data shall be protected and maintained in accordance with these standards as well as other applicable Customer standards.

7 EMERGING TECHNOLOGIES

The State reserves the right to enter into an Addendum to the Contract at any time to allow for emerging technologies not identified elsewhere in the Contract Documents if there are repeated requests for such emerging technology or the State determines it is warranted to add such technology.

8 EXTENSION RIGHT

In addition to extension rights of the State set forth in the Contract, the State Chief Information Officer reserves the right to extend any Contract at his or her sole option if the State Chief Information Officer determine such extension to be in the best interest of the State.

9 SOURCE CODE ESCROW

Pursuant to 62 O.S. § 34.31, if customized computer software is developed or modified exclusively for a State agency, the Supplier has a continuing obligation to comply with such law and place the source code for such software and any modifications thereto into escrow with an independent third-party escrow agent. Supplier shall pay all fees charged by the escrow agent and enter into an escrow agreement, the terms of which are subject to the prior written approval of the State, including terms that provide the State receives ownership of all escrowed source code upon the occurrence of any of the following:

9.1 A bona fide material default of the obligations of the Supplier under the agreement with the applicable Customer;

9.2 An assignment by the Supplier for the benefit of its creditors;

9.3 A failure by the Supplier to pay, or an admission by the Supplier of its inability to pay, its debts as they mature;

9.4 The filing of a petition in bankruptcy by or against the Supplier when such petition is not dismissed within sixty (60) days of the filing date;

9.5 The appointment of a receiver, liquidator or trustee appointed for any substantial part of the Supplier's property;

9.6 The inability or unwillingness of the Supplier to provide the maintenance and support services in accordance with the agreement with the agency;

9.7 Supplier's ceasing of maintenance and support of the software; or

9.8 Such other condition as may be statutorily imposed by the future amendment or enactment of applicable Oklahoma law.

10 COMMERCIAL OFF THE SHELF SOFTWARE OR SUPPLIER TERMS

If Supplier specifies terms and conditions or clauses in an electronic license, subscription, maintenance, support or similar agreement, including via a hyperlink or uniform resource locator address to a site on the internet, that conflict with the terms of this Contract, the additional terms and conditions or conflicting clauses shall not be binding on the State and the provisions of this Contract shall prevail. Further, no such terms and conditions or clauses shall expand the State's or Customer's liability or reduce the rights of Customer or the State.

11 OWNERSHIP RIGHTS

Any software developed, modified, or customized by the Supplier in accordance with a mutually negotiated statement of work pursuant to this Contract is for the sole and exclusive use of the State including but not limited to the right to use, reproduce, re-use, alter, modify, edit, or change the software as it sees fit and for any purpose. The parties mutually agree the State as a licensee of the Supplier does not make a claim of ownership to the existing Intellectual Property of Supplier. Moreover, except with regard to any deliverable based on Supplier Intellectual Property, the State shall be deemed the sole and exclusive owner of all right, title, and interest therein, including but not limited to all source data, information and materials furnished to the State, together with all plans, system analysis, and design specifications and drawings, completed programs and documentation thereof, reports and listing, all data and test procedures and all other items pertaining to the work and services to be performed pursuant to this Contract including all copyright and proprietary rights relating thereto. With respect to Supplier Intellectual Property, the Supplier grants the State, for no additional consideration, a perpetual, irrevocable, royalty-free license, solely for the internal business use of the State, to use, copy, modify, display, perform, transmit and prepare derivative works of Supplier Intellectual Property embodied in or delivered to the State in conjunction with the products.

Except for any Supplier Intellectual Property, all work performed by the Supplier of developing, modifying or customizing software and any related supporting documentation shall be considered as Work for Hire (as defined under the U.S. copyright laws) and, as such, shall be owned by and for the benefit of State.

In the event that it should be determined that any portion of such software or related supporting documentation does not qualify as "Work for Hire", Supplier hereby irrevocably grants to the State, for no additional consideration, a non-exclusive, irrevocable, royalty-free license to use, copy, modify, display, perform, transmit and prepare derivative works of any such software and any Supplier Intellectual Property embodied in or delivered to the State in conjunction with the products.

Supplier shall assist the State and its agents, upon request, in preparing U.S. and foreign copyright, trademark, and/or patent applications covering software developed, modified or customized for the State when made in accordance with a mutually negotiated statement of work pursuant to this Contract. Supplier shall sign any such applications, upon request, and deliver them to the State. The State shall bear all expenses that incurred in connection with such copyright, trademark, and/or patent applications.

If any Acquisition pursuant to this Contract is funded wholly or in part with federal funds, the source code and all associated software and related documentation owned by the State may be shared with other publicly funded agencies at the discretion of the State without permission from or additional compensation to the Supplier.

12 INTELLECTUAL PROPERTY OWNERSHIP TO WORK PRODUCT

The following terms apply to ownership and rights related to Intellectual Property:

12.1 As to the Intellectual Property Rights to Work Product between Supplier and Customer, Customer shall be the exclusive owner and not Supplier. Supplier specifically agrees that the Work Product shall be considered "works made for hire" and that the Work Product shall, upon creation, be owned exclusively by Customer. To the extent that the Work Product, under applicable law, may not be considered works made for hire, Supplier agrees that all right, title and interest in and to all ownership rights and all Intellectual Property Rights in the Work Product is effectively transferred, granted, conveyed, assigned, and relinquished exclusively to Customer, without the necessity of any further consideration, and Customer shall be entitled to obtain and hold in its own name all Intellectual Property Rights in and to the Work Product. Supplier acknowledges that Supplier and Customer do not intend Supplier to be a joint author of the Work Product within the meaning of the Copyright Act of 1976. Customer shall have access, during normal business hours (Monday through Friday, 8:00 a.m. to 5:00 p.m.) and upon reasonable prior notice to Supplier, to all Supplier materials, premises and computer files containing the Work Product. Supplier and Customer, as appropriate, will cooperate with one another and execute such other documents as may be reasonably appropriate to achieve the objectives herein. No license or other right is granted under the Contract to any Third-Party Intellectual Property, except as may be incorporated in the Work Product by Supplier.

12.2 Supplier, upon request and without further consideration, shall perform any acts that may be deemed reasonably necessary or desirable by Customer to evidence more fully the transfer of ownership and/or registration of all Intellectual Property Rights in all Work Product to Customer to the fullest extent possible including, but not limited to, the execution, acknowledgement and delivery of such further documents in a form determined by Customer. In the event Customer shall be unable to obtain Supplier's signature due to the dissolution of Supplier or Supplier's failure to respond to Customer's repeated requests for such signature on any document reasonably necessary for any purpose set forth in the foregoing sentence, Supplier hereby irrevocably designates and appoints Customer and its duly authorized officers and agents as Supplier's agent and Supplier's attorney-in-fact to act for and in Supplier's behalf and stead to execute and file any such document and to do all other lawfully permitted acts to further any such purpose with the same force and effect as if executed and delivered by Supplier, provided however that no such grant of right to Customer is applicable if Supplier fails to execute any document due to a good faith dispute by Supplier with respect to such document. It is understood that such power is coupled with an interest and is therefore irrevocable. Customer shall have the full and sole power to prosecute such applications and to take all other action concerning the Work Product, and Supplier shall cooperate, at Customer's sole expense, in the preparation and prosecution of all such applications and in any legal actions and proceedings concerning the Work Product.

12.3 Supplier hereby irrevocably and forever waives, and agrees never to assert, any Moral Rights in or to the Work Product which Supplier may now have or which may accrue to Supplier's benefit under U.S. or foreign copyright or other laws and any and all other residual rights and benefits which arise under any other applicable law now in force or hereafter enacted. Supplier acknowledges the receipt of equitable compensation for its assignment and waiver of such Moral Rights.

12.4 All documents, information and materials forwarded to Supplier by Customer for use in and preparation of the Work Product shall be deemed the confidential information of Customer, subject to the license granted by Customer to Supplier hereunder. Supplier shall not otherwise use, disclose, or permit any third party to use or obtain the Work Product, or any portion thereof, in any manner without the prior written approval of Customer.

12.5 These provisions are intended to protect Customer's proprietary rights pertaining to the Work Product and the Intellectual Property Rights therein and any misuse of such rights would cause substantial and irreparable harm to Customer's business. Therefore, Supplier acknowledges and stipulates that a court of competent jurisdiction may immediately enjoin a material breach of the Supplier's obligations with respect to confidentiality provisions of the Contract and the Work Product and a Customer's Intellectual Property Rights, upon a request by Customer, without requiring proof of irreparable injury, as same is presumed.

12.6 Upon the request of Customer, but in any event upon termination or expiration of this Contract or a statement of work, Supplier shall surrender to Customer all documents and things pertaining to the Work Product, generated or developed by Supplier or furnished by Customer to Supplier, including all materials embodying the Work Product, any Customer confidential information and Intellectual Property Rights in such Work Product, regardless of whether complete or incomplete. This section is intended to apply to all Work Product as well as to all documents and things furnished to Supplier by Customer or by anyone else that pertains to the Work Product.

12.7 Customer hereby grants to Supplier a non-transferable, non-exclusive, royalty-free, fully paid license to use any Work Product solely as necessary to provide services to Customer. Except as provided in this section, neither Supplier nor any subcontractor shall have the right to use the Work Product in connection with the provision of services to its other customers without the prior written consent of Customer, which consent may be withheld in Customer's sole discretion.

12.8 To the extent that any Third Party Intellectual Property is embodied or reflected in the Work Product or is necessary to provide services, Supplier shall obtain from the applicable third party for the Customer's benefit, an irrevocable, perpetual, non-exclusive, worldwide, royalty-free license, solely for Customer's internal business purposes; likewise, with respect to any Supplier Intellectual Property embodied or reflected in the Work Product or necessary to provide services, Supplier grants to Customer an irrevocable, perpetual, non- exclusive, worldwide, royalty-free license, solely for the Customer's internal business purposes. Each such license shall allow the applicable Customer to (i) use, copy, modify, display, perform (by any means), transmit and prepare derivative works of any Third Party Intellectual Property or Supplier Intellectual Property embodied in or delivered to Customer in conjunction with the Work

Product and (ii) authorize others to do any or all of the foregoing. Supplier agrees to notify Customer on delivery of the Work Product or services if such materials include any Third Party Intellectual Property. The foregoing license includes the right to sublicense third parties, solely for the purpose of engaging such third parties to assist or carry out Customer's internal business use of the Work Product. Except for the preceding license, all rights in Supplier Intellectual Property remain in Supplier. On request, Supplier shall provide Customer with documentation indicating a third party's written approval for Supplier to use any Third Party Intellectual Property that may be embodied or reflected in the Work Product.

12.9 Supplier agrees that it shall have written agreement(s) that are consistent with the provisions hereof related to Work Product and Intellectual Property Rights with any employees, agents, consultants, contractors or subcontractors providing services or Work Product pursuant to the Contract, prior to the provision of such services or Work Product and that it shall maintain such written agreements at all times during performance of this Contract which are sufficient to support all performance and grants of rights by Supplier. Copies of such agreements shall be provided to the Customer promptly upon request.

12.10 To the extent not inconsistent with Customer's rights in the Work Product or other provisions, nothing in this Contract shall preclude Supplier from developing for itself, or for others, materials which are competitive with those produced as a result of the services provided under the Contract, provided that no Work Product is utilized, and no Intellectual Property Rights of Customer therein are infringed by such competitive materials. To the extent that Supplier wishes to use the Work Product or acquire licensed rights in certain Intellectual Property Rights of Customer therein in order to offer competitive goods or services to third parties, Supplier and Customer agree to negotiate in good faith regarding an appropriate license and royalty agreement to allow for such.

12.11 If any Acquisition pursuant to the Contract is funded wholly or in part with federal funds, the source code and all associated software and related documentation and materials owned by a Customer may be shared with other publicly funded agencies at the discretion of such Customer without permission from or additional compensation to the Supplier.

13 HOSTING SERVICES

A Supplier shall be responsible for the obligations set forth in in this Contract, including those obligations related to breach reporting and associated costs when a Supplier Hosting Customer Data or providing products or services pursuant to an Acquisition, contributes to, or directly causes a Data Breach or a Security Incident. Likewise, Supplier shall be responsible for the obligations set forth in in this Contract, including those obligations related to breach reporting and associated costs when a Supplier's affiliate or subcontractor contributes to, or directly causes a Data Breach or a Security Incident.

14 CHANGE MANAGEMENT

When a scheduled change is made to products or services provided to a Customer that impacts the Customer's system related to such product or service, Supplier shall provide two (2) weeks' prior written notice of such change. When the change is an emergency change, Supplier shall provide twenty-four (24) hours' prior written notice of the change. Repeated failure to provide such notice may be an evaluation factor (as indicative of Supplier's past performance) upon

renewal or if future bids submitted by Supplier are evaluated by the State.

15 SERVICE LEVEL DEFICIENCY

In addition to other terms of the Contract, in instances of the Supplier's repeated failure to provide an acceptable level of service or meet service level agreement metrics, service credits shall be provided by Supplier and may be used as an offset to payment due.

16 OWNERSHIP OF IT AND TELECOMMUNICATION ASSETS

Notwithstanding any other provision in the Contract and pursuant to the Oklahoma Information Technology Consolidation and Coordination Act, all information technology and telecommunication assets and contracts on behalf of appropriated agencies of the State belong to OMES-IS. OMES-IS allows other State agencies to use the assets while retaining ownership and the right to reassign the assets, at no additional cost, upon written notification to Supplier.

17 CUSTOMER DATA

17.1 The parties agree to the following provisions in connection with any Customer Data accessed, processed transmitted, or stored by or on behalf of the Supplier and the obligations, representations and warranties set forth below shall continue as long as the Supplier has an obligation under the Contract.

17.2 Customer will be responsible for the accuracy and completeness of all Customer Data provided to Supplier by Customer. Customer shall retain exclusive ownership of rights, title, and interest in Customer Data. Non-Public Data and Personal Data shall be deemed to be Customer's confidential information. Supplier shall restrict access to Customer Data to their employees with a need to know (and advise such employees of the confidentiality and non-disclosure obligations assumed herein).

17.3 Supplier shall promptly notify the Customer upon receipt of any requests from unauthorized third parties which in any way might reasonably require access to Customer Data or Customer's use of the Hosted environment. Supplier shall notify the Customer by the fastest means available and also in writing pursuant to Contract notice provisions and the notice provision herein. Except to the extent required by law, Supplier shall not respond to subpoenas, service or process, Freedom of Information Act or other open records requests, and other legal request related to Customer without first notifying the Customer and obtaining the Customer's prior approval, which shall not be unreasonably withheld, of Supplier's proposed responses. Supplier agrees to provide its completed responses to the Customer with adequate time for Customer review, revision and approval.

17.4 Supplier will use commercially reasonable efforts to prevent the loss of or damage to Customer Data in its possession and will maintain commercially reasonable back-up procedures and copies to facilitate the reconstruction of any Customer Data that may be lost or damaged by Supplier. Supplier will promptly notify Customer of any loss, damage to, or unauthorized access of Customer Data. Supplier will use commercially reasonable efforts to reconstruct any Customer Data that has been lost or damaged by Supplier as a result of its negligence or willful misconduct. If Customer Data is lost or damaged for reasons other than as a result of Supplier's negligence or willful misconduct, Supplier, at

the Customer's expense, will, at the request of the State, use commercially reasonable efforts to reconstruct any Customer Data lost or damaged.

18 DATA SECURITY

18.1 Supplier will use commercially reasonable efforts, consistent with industry standards, to provide security for the Hosted environment and Customer Data and to protect against both unauthorized access to the Hosting environment, and unauthorized communications between the Hosting environment and the Customer's browser. Supplier shall implement and maintain appropriate administrative, technical and organizational security measures to safeguard against unauthorized access, disclosure or theft of Personal Data and Non-Public Data. Such security measures shall be in accordance with recognized industry practice and not less stringent than the measures the service provider applies to its own personal data and non-public data of similar kind.

18.2 All Personal Data and Non-public Data shall be encrypted at rest and in transit with controlled access. Unless otherwise stipulated, the service provider is responsible for encryption of Personal Data. All Personal Data and Non-Public Data shall be subject to controlled access. Any stipulation of responsibilities shall be included in a Statement of Work and will identify specific roles and responsibilities.

18.3 Supplier represents and warrants to the Customer that the Hosting equipment and environment will be routinely checked with a commercially available, industry standard software application with up-to-date virus definitions. Supplier will regularly update the virus definitions to ensure that the definitions are as up-to-date as is commercially reasonable. Supplier will promptly purge all viruses discovered during virus checks. If there is a reasonable basis to believe that a virus may have been transmitted to Customer by Supplier, Supplier will promptly notify Customer of such possibility in a writing that states the nature of the virus, the date on which transmission may have occurred, and the means Supplier has used to remediate the virus. Should the virus propagate to Customer's IT infrastructure, Supplier is responsible for costs incurred by Customer for Customer to remediate the virus.

18.4 At no time shall any Customer Data or processes – that either belong to or are intended for the use of the State - be copied, disclosed, or retained by Supplier or any party related to Supplier for subsequent use in any transaction that does not include the State unless otherwise agreed to by the State.

18.5 Supplier shall provide its services to Customer and its users solely from data centers in the U.S. Storage of Customer Data at rest shall be located solely in data centers in the U.S. Supplier shall not allow its personnel or contractors to store Customer Data on portable devices, including personal computers, except for devices that are used and kept only at its U.S. data centers. Supplier shall permit its personnel and contractors to access Customer Data remotely only as required to fulfill Supplier's obligations under the Contract.

18.6 Supplier shall allow the Customer to audit conformance to the Contract terms. The Customer may perform this audit or contract with a third party at its discretion and at Customer's expense.

18.7 Supplier shall perform an independent audit of its data centers at least annually at its expense and provide a redacted version of the audit report upon request. Supplier may remove its proprietary information from the redacted version. A Service Organization Control (SOC) 2 audit report or approved equivalent sets the minimum level of a third-party audit.

18.8 Any remedies provided are not exclusive and are in addition to other rights and remedies available under the terms of the Contract, at law or in equity.

19 SECURITY ASSESSMENT

19.1 The State requires any entity or third-party Supplier Hosting Oklahoma Customer Data to submit to a State Certification and Accreditation Review process to assess initial security risk. Supplier submitted to the review and met the State's minimum security standards at time the Contract was executed. Failure to maintain the State's minimum security standards during the term of the contract, including renewals, constitutes a material breach. Upon request, the Supplier shall provide updated data security information in connection with a potential renewal. If information provided in the security risk assessment changes, Supplier shall promptly notify the State and include in such notification the updated information; provided, however, Supplier shall make no change that results in lessened data protection or increased data security risk. Failure to provide the notice required by this section or maintain the level of security required in the Contract constitutes a material breach by Supplier and may result in a whole or partial termination of the Contract.

19.2 Any Hosting entity change must be approved in writing prior to such change. To the extent Supplier requests a different sub-contractor than the third-party Hosting Supplier already approved by the State, the different sub-contractor is subject to the State's approval. Supplier agrees not to migrate State's data or otherwise utilize the different third-party Hosting Supplier in connection with key business functions that are Supplier's obligations under the contract until the State approves the third-party Hosting Supplier's State Certification and Accreditation Review, which approval shall not be unreasonably withheld or delayed. In the event the third-party Hosting Supplier does not meet the State's requirements under the State Certification and Accreditation Review, Supplier acknowledges and agrees it will not utilize the third-party Supplier in connection with key business functions that are Supplier's obligations under the contract, until such third party meets such requirements.

20 SECURITY INCIDENT OR DATA BREACH NOTIFICATION

20.1 Supplier shall inform Customer of any Security Incident or Data Breach.

20.2 Supplier may need to communicate with outside parties regarding a Security Incident, which may include contacting law enforcement, fielding media inquiries and seeking external expertise as mutually agreed upon, defined by law or contained in the Contract. If a Security Incident involves Customer Data, Supplier will coordinate with Customer prior to any such communication.

20.3 Supplier shall report a Security Incident to the Customer identified contact set forth herein within five (5) days of discovery of the Security Incident or within a shorter notice

period required by applicable law or regulation (i.e., HIPAA requires notice to be provided within 24 hours).

20.4 Supplier shall maintain processes and procedures to identify, respond to and analyze Security Incidents; (ii) make summary information regarding such procedures available to Customer at Customer's request, (iii) mitigate, to the extent practicable, harmful effects of Security Incidents that are known to Vendor; and (iv) documents all Security Incidents and their outcomes.

20.5 If Supplier has reasonable belief or actual knowledge of a Data Breach, Supplier shall (1) promptly notify the appropriate Customer identified contact set forth herein within 24 hours or sooner, unless shorter time is required by applicable law, and (2) take commercially reasonable measures to address the Data Breach in a timely manner.

21 DATA BREACH NOTIFICATION AND RESPONSIBILITIES

This section only applies when a Data Breach occurs with respect to Personal Data or Non-Public Data within the possession or control of Supplier.

21.1 Supplier shall (1) cooperate with Customer as reasonably requested by Customer to investigate and resolve the Data Breach, (2) promptly implement necessary remedial measures, if necessary, and (3) document responsive actions taken related to the Data Breach, including any post-incident review of events and actions taken to make changes in business practices in providing the services, if necessary.

21.2 Unless otherwise stipulated, if a Data Breach is a direct result of Supplier's breach of its obligation to encrypt Personal Data and Non-Public Data or otherwise prevent its release, Supplier shall bear the costs associated with (1) the investigation and resolution of the Data Breach; (2) notifications to individuals, regulators or others required by state law; (3) credit monitoring services required by state or federal law; (4) a website or toll-free numbers and call center for affected individuals required by state law – all not to exceed the agency per record per person cost calculated for data breaches in the United States on the most recent Cost of Data breach Study: Global Analysis published by the Ponemon Institute at the time of the data breach; and (5) complete all corrective actions as reasonably determined by Supplier based on root cause.

21.3 If a Data Breach is a direct result of Supplier's breach of its obligations to encrypt Personal Data and Non-Public Data or otherwise prevent its release, Supplier shall indemnify and hold harmless the Customer against all penalties assessed to Indemnified Parties by governmental authorities in connection with the Data Breach.

22 SUPPLIER REPRESENTATIONS AND WARRANTIES

Supplier represents and warrants the following:

22.1 The product and services provided in connection with Hosting services do not infringe a third party's patent or copyright or other intellectual property rights.

22.2 Supplier will protect Customer's Non-Public Data and Personal Data from unauthorized dissemination and use with the same degree of care that each such party uses to protect

its own confidential information and, in any event, will use no less than a reasonable degree of care in protecting such confidential information.

22.3 The execution, delivery and performance of the Contract and any ancillary documents and the consummation of the transactions contemplated by the Contract or any ancillary documents by Supplier will not violate, conflict with, or result in a breach of any provision of, or constitute a default (or an event which, with notice or lapse of time or both, would constitute a default) under, or result in the termination of, any written contract or other instrument between Supplier and any third parties retained or utilized by Supplier to provide goods or services for the benefit of the Customer.

22.4 Supplier shall not knowingly upload, store, post, e-mail or otherwise transmit, distribute, publish or disseminate to or though the Hosting environment any material that contains software viruses, malware or other surreptitious code designed to interrupt, destroy or limit the functionality of any computer software or hardware or telecommunications equipment or circumvent any "copy-protected" devices, or any other harmful or disruptive program.

23 INDEMNITY

Supplier agrees to defend, indemnify and hold the State, its officers, directors, employees, and agents harmless from all liabilities, claims, damages, losses, costs, expenses, demands, suits and actions (including without limitation reasonable attorneys' fees and costs required to establish the right to indemnification), excluding damages that are the sole fault of Customer, arising from or in connection with Supplier's breach of its express representations and warranties in these Information Technology Terms and the Contract. If a third party claims that any portion of the products or services provided by Supplier under the terms of another Contract Document or these Information Technology Terms infringes that party's patent or copyright, Supplier shall defend, indemnify and hold harmless the State and Customer against the claim at Supplier's expense and pay all related costs, damages, and attorney's fees incurred by or assessed to, the State and/or Customer. The State and/or Customer shall promptly notify Supplier of any third-party claims and to the extent authorized by the Attorney General of the State, allow Supplier to control the defense and any related settlement negotiations. If the Attorney General of the State does not authorize sole control of the defense and settlement negotiations to Supplier, Supplier shall be granted authorization to equally participate in any proceeding related to this section, but Supplier shall remain responsible to indemnify Customer and the State for all associated costs, damages and fees incurred by or assessed to the State and/or Customer. Should the software become, or in Supplier's opinion, be likely to become the subject of a claim or an injunction preventing its use as contemplated in connection with Hosting services, Supplier may, at its option (i) procure for the State the right to continue using the software or (ii) replace or modify the software with a like or similar product so that it becomes non-infringing.

24 TERMINATION, EXPIRATION AND SUSPENSION OF SERVICE

24.1 During any period of service suspension, Supplier shall not take any action to intentionally disclose, alter or erase any Customer Data.

24.2 In the event of a termination or expiration of the Contract, the parties further agree:

Supplier shall implement an orderly return of Customer Data in a format specified by the Customer and, as determined by the Customer:

a. return the Customer Data to Customer at no additional cost, at a time agreed to by the parties and the subsequent secure disposal of State Data;

b. transitioned to a different Supplier at a mutually agreed cost and in accordance with a mutually agreed data transition plan and the subsequent secure disposal of State Data or

c. a combination of the two immediately preceding options.

24.3 Supplier shall not take any action to intentionally erase any Customer Data for a period of:

a. 10 days after the effective date of termination, if the termination is in accordance with the contract period;

b. 30 days after the effective date of termination, if the termination is for convenience; or

c. 60 days after the effective date of termination if the termination is for cause.

After such period, Supplier shall, unless legally prohibited or otherwise stipulated, delete all Customer Data in its systems or otherwise in its possession or under its control.

24.4 The State shall be entitled to any post termination or expiration assistance generally made available with respect to the services.

24.5 Disposal by Supplier of Customer Data in all of its forms, such as disk, CD/DVD, backup tape and paper, when requested by the Customer, shall be performed in a secure manner. Data shall be permanently deleted and shall not be recoverable, according to National Institute of Standards and Technology (NIST)-approved methods. Certificates of destruction shall be provided to Customer within thirty (30) calendar day of its request for disposal of data.

25 GENERAL INFORMATION SECURITY REQUIREMENTS

25.1 No employee of Contractor or its subcontractors will be granted access to State of Oklahoma agency information systems without the prior completion and approval of applicable logon authorization and acceptable use requests.

25.2 Contractor or its subcontractors will notify applicable State of Oklahoma agencies when employees who have access to agency information systems are terminated.

25.3 Contractor or its subcontractors will disclose to Client any suspected breach of the security of the information system or the data contained therein in the most expedient time possible and without unreasonable delay and will cooperate with Client during the investigation of any such incident.

25.4 Contractor or its subcontractors agree to adhere to the State of Oklahoma "Information Security Policy, Procedures, and Guidelines" available at: https://oklahoma.gov/content/dam/ok/en/omes/documents/InfoSecPPG.pdf

26 HIPAA REQUIREMENTS

26.1 Contractor shall agree to use and disclose Protected Health Information in its possession or control in compliance with the Standards for Privacy of Individually Identifiable Health Information (Privacy Rule) (45 C.F.R. Parts 160 and 164) under the Health Insurance Portability and Accountability Act (HIPAA) of 1996. The definitions set forth in the Privacy Rule are incorporated by reference into this Contract (45 C.F.R. §§ 160.103 and 164.501).

26.2 If applicable, Contractor will sign and adhere to a Business Associate Agreement (BAA). The Business Associate Agreement provides for satisfactory assurances that Contractor will use the information only for the purposes for which it was engaged. Contractor agrees it will safeguard the information from misuse and will comply with HIPAA as it pertains to the duties stated within the contract. Failure to comply with the requirements of this standard may result in funding being withheld from Contractor, and/or full audit and inspection of Contractor's security compliance as it pertains to this contract.

26.3 Business Associate Terms Definitions:

a. Unless otherwise defined in this BAA, all capitalized terms used in this BAA have the meanings ascribed in the HIPAA Regulations, provided; however, that "PHI" and "ePHI" shall mean Protected Health Information and Electronic Protected Health Information, respectively, as defined in 45 C.F.R. § 160.103, limited to the information Business Associate received from or created or received on behalf of the applicable State of Oklahoma agency as a Business Associate. "Administrative Safeguards" shall have the same meaning as the term "administrative safeguards in 45 C.F.R. § 164.304, with the exception that it shall apply to the management of the conduct of Business Associate's workforce, not the State of Oklahoma agency workforce, in relation to the protection of that information.

b. Business Associate. "Business Associate" shall generally have the same meaning as the term "Business Associate" at 45 C.F.R. 160.103, and in reference to the party to this agreement, shall mean the entity whose name appears below.

c. Covered Entity. "Covered Entity" shall generally have the same meaning as the term "Covered Entity" at 45 C.F.R. 160.103.

d. HIPAA Rules. "HIPAA Rules" shall mean the Privacy, Security, Breach Notification, and Enforcement Rules at 45 C.F.R. Part 160 and Part 164, all as may be amended.

e. The following terms used in this Agreement shall have the same meaning as those terms in the HIPAA Rules: Breach, Data Aggregation, Designated Record Set, Disclosure, Health Care Operations, Individual, Minimum Necessary, Notice of

Privacy Practices, Protected Health Information, required by law, Secretary, Security Incident, Sub-Contractor, Unsecured PHI, and Use.

26.4 Obligations of Business Associate: Business Associate may use Electronic PHI and PHI (collectively, "PHI") solely to perform its duties and responsibilities under this Agreement and only as provided in this Agreement. Business Associate acknowledges and agrees that PHI is confidential and shall not be used or disclosed, in whole or in part, except as provided in this Agreement or as required by law. Specifically, Business Associate agrees it will, as applicable:

a. use or further disclose PHI only as permitted in this Agreement or as Required by Law, including, but not limited to the Privacy and Security Rule;

b. use appropriate safeguards, and comply with Subpart C of 45 C.F.R. Part 164 with respect to Electronic PHI, to prevent use or disclosure of PHI other than as provided for by this Agreement;

c. implement and document appropriate administrative, physical, and technical safeguards to protect the confidentiality, integrity, and availability of PHI that it creates, receives, maintains, or transmits for or on behalf of Covered Entity in accordance with 45 C.F.R. 164;

d. implement and document administrative safeguards to prevent, detect, contain, and correct security violations in accordance with 45 C.F.R. 164;

e. make its applicable policies and procedures required by the Security Rule available to Covered Entity solely for purposes of verifying BA's compliance and the Secretary of the Department of Health and Human Services (HHS);

f. not receive remuneration from a third party in exchange for disclosing PHI received from or on behalf of Covered Entity;

g. in accordance with 45 C.F.R. 164.502(e)(1) and 164.308(b), if applicable, require that any Sub-Contractors that create, receive, maintain or transmit PHI on behalf of the Business Associate agree to the same restrictions, conditions, and requirements that apply to the Business Associate with respect to such information; this shall be in the form of a written HIPAA Business Associate Contract and a fully executed copy will be provided to the Contract Monitor;

h. report to Covered Entity in writing any use or disclosure of PHI that is not permitted under this Agreement as soon as reasonably practicable but in no event later than five calendar days from becoming aware of it and mitigate, to the extent practicable and in cooperation with Covered Entity, any harmful effects known to it of a use or disclosure made in violation of this Agreement;

i. promptly report to Covered Entity in writing and without unreasonable delay and in no case later than five calendar days any successful Security Incident, as defined in the Security Rule, with respect to Electronic PHI;

j. with the exception of law enforcement delays that satisfy the requirements of 45 C.F.R. 164.412, notify Covered Entity promptly, in writing and without

unreasonable delay and in no case later than five calendar days, upon the discovery of a breach of Unsecured PHI. Such notice shall include, to the extent possible, the name of each individual whose Unsecured PHI has been, or is reasonably believed by Business Associate to have been, accessed, acquired, or disclosed during such Breach. Business Associate shall also, to the extent possible, furnish Covered Entity with any other available information that Covered Entity is required to include in its notification to Individuals under 45 C.F.R. § 164.404(c) at the time of Business Associate's notification to Covered Entity or promptly thereafter as such information becomes available. As used in this Section, "breach" shall have the meaning given such term at 45 C.F.R. 164.402;

k. to the extent allowed by law, indemnify and hold Covered Entity harmless from all claims, liabilities costs, and damages arising out of or in any manner related to the unauthorized disclosure by Business Associate of any PHI resulting from the negligent acts or omissions of Business Associate or to the breach by Business Associate of any applicable obligation related to PHI;

l. provide access to PHI it maintains in a Designated Record Set to Covered Entity, or if directed by Covered Entity to an Individual in order to meet the requirements of 45 C.F.R. 164.524. In the event that any Individual requests access to PHI directly from Business Associate, Business Associate shall forward such request to Covered Entity within five working days of receiving a request. This shall be in the form of a written HIPAA Business Associate Contract and a fully executed copy will be provided to the Contract Monitor. Any denials of access to the PHI requested shall be the responsibility of Covered Entity;

m. make PHI it maintains in a Designated Record Set available to Covered Entity for amendment and incorporate any amendments to PHI in accordance with 45 C.F.R. 164.526;

n. document disclosure of PHI it maintains in a Designated Record Set and information related to such disclosure as would be required for Covered Entity to respond to a request by an Individual for an accounting of disclosures of PHI, in accordance with 45 C.F.R. 164.528, and within five working days of receiving a request from Covered Entity, make such disclosure documentation and information available to Covered Entity. In the event the request for an accounting is delivered directly to Business Associate, Business Associate shall forward within five working days of receiving a request such request to Covered Entity;

o. make its internal practices, books, and records related to the use and disclosure of PHI received from or created or received by Business Associate on behalf of Covered Entity available to the Secretary of the Department of HHS, authorized governmental officials, and Covered entity for the purpose of determining Business Associate's compliance with the Privacy Rule. Business Associate shall give Covered Entity advance written notice of requests from HHS or government officials and provide Covered Entity with a copy of all documents made available; and

p. require that all of its Sub-Contractors, vendors, and agents to whom it provides PHI or who create, receive, use, disclose, maintain, or have access to Covered Entity's PHI shall agree in writing to requirements, restrictions, and conditions at least as stringent as those that apply to Business Associate under this Agreement, including but not limited to implementing reasonable and appropriate safeguards to protect PHI, and shall require that its Sub-Contractors, vendors, and agents agree to indemnify and hold harmless Covered Entity for their failure to comply with each of the provisions of this Agreement.

26.5 Permitted Uses and Disclosures of PHI by Business Associate: Except as otherwise provided in this Agreement, Business Associate may use or disclose PHI on behalf of or to provide services to Covered Entity for the purposes specified in this Agreement, if such use or disclosure of PHI would not violate the Privacy Rule if done by Covered Entity. Unless otherwise limited herein, Business Associate may:

a. use PHI for its proper management and administration or to fulfill any present or future legal responsibilities of Business Associate;

b. disclose PHI for its proper management and administration or to fulfill any present or future legal responsibilities of Business Associate, provided that; (i) the disclosures required by law; or (ii) Business Associate obtains reasonable assurances from any person to whom the PHI is disclosed that such PHI will be kept confidential and will be used or further disclosed only as Required by Law or for the purpose(s) for which it was disclosed to the person, and the person commits to notifying Business Associate of any instances of which it is aware in which the confidentiality of the PHI has been breached;

c. disclose PHI to report violations of law to appropriate federal and state authorities; or

d. aggregate the PHI with other data in its possession for purposes of Covered Entity's Health Care Operations;

e. make uses and disclosures and requests for protected health information consistent with Covered Entity's minimum necessary policies and procedures;

f. de-identify any and all PHI obtained by Business Associate under this BAA, and use such de-identified data, all in accordance with the de-identification requirements of the Privacy Rule [45 C.F.R. § 164.502(d)].

26.6 Obligations of Covered Entity

a. Covered Entity shall notify Business Associate of any changes in, or revocation of, the permission by an individual to use or disclose his or her PHI, to the extent that such changes may affect Business Associate's use or disclosure of PHI.

b. Covered Entity shall notify Business Associate of any restriction on the use or disclosure of PHI that Covered Entity has agreed to or is required to abide by under 45 C.F.R. 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of protected health information.

c. Covered Entity shall not request Business Associate use or disclose PHI in any manner that would violate the Privacy Rule if done by Covered Entity.

d. Covered Entity agrees to timely notify Business Associate, in writing, of any arrangements between Covered Entity and the Individual that is the subject of PHI that may impact in any manner the use and/or disclosure of the PHI by Business Associate under this BAA.

e. Covered Entity shall provide the minimum necessary PHI to Business Associate.

26.7 Term and Termination:

a. Obligations of Business Associate upon Termination. Upon termination of this Agreement for any reason, Business Associate, with respect to PHI received from Covered Entity, or created, maintained, or received by Business Associate on behalf of Covered Entity, shall as applicable:

i. retain only that PHI that is necessary for Business Associate to continue its proper management and administration or to carry out its legal responsibilities;

ii. return to Covered Entity (or, if agreed to by Covered Entity, destroy) the remaining PHI that the Business Associate still maintains in any form;

iii. continue to use appropriate safeguards and comply with Subpart C of 45 C.F.R. Part 164 with respect to PHI to prevent use or disclosure of the PHI, other than as provided for in this Section, for as long as Business Associate retains the PHI;

iv. not use or disclose the PHI retained by Business Associate other than for the purposes for which such PHI was retained and subject to the same conditions set out at above under "Permitted Uses and Disclosures By Business Associate" that applied prior to termination; and

v. return to Covered Entity (or, if agreed to by Covered Entity, destroy) the PHI retained by Business Associate when it is no longer needed by Business Associate for its proper management and administration or to carry out its legal responsibilities.

b. All other applicable obligations of Business Associate under this Agreement shall survive termination.

c. Should the applicable State of Oklahoma agency become aware of a pattern of activity or practice that constitutes a material breach of a material term of this BAA by Business Associate, the agency shall provide Business Associate with written notice of such a breach in sufficient detail to enable Contractor to understand the specific nature of the breach. The Client shall be entitled to terminate the Underlying Contract associated with such breach if, after the applicable State of Oklahoma agency provides the notice to Business Associate, Business Associate fails to cure the breach within a reasonable time period not less than thirty (30) days specified in such notice; provided, however, that such

time period specified shall be based on the nature of the breach involved per 45 C.F.R. §§ 164.504(e)(1)(ii)-(iii) & 164.314 (a)(2)(i)(C).

26.8 Miscellaneous Provisions:

a. No Third-Party Beneficiaries: Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

b. Business Associate recognizes that any material breach of this Business Associate Terms section or breach of confidentiality or misuse of PHI may result in the termination of this Agreement and/or legal action. Said termination may be immediate and need not comply with any termination provision in the parties' underlying agreement, if any.

c. The parties agree to amend this Agreement from time to time as is necessary for Covered Entity or Business Associate to comply with the requirements of the Privacy Rule and related laws and regulations.

d. The applicable State of Oklahoma agency shall make available its Notice of Privacy Practices.

e. Any ambiguity in this Agreement shall be resolved in a manner that causes this Agreement to comply with HIPAA.

f. If Business Associate maintains a designated record set in an electronic format on behalf of Covered Entity, then Business Associate agrees that within 30 calendar days of expiration or termination of the parties' agreement, Business Associate shall provide to Covered Entity a complete report of all disclosures of and access to the designated record set covering the three years immediately preceding the termination or expiration. The report shall include patient name, date and time of disclosures/access, description of what was disclosed/accessed, purpose of disclosure/access, name of individual who received or accessed the information, and, if available, what action was taken within the designated record set.

g. Amendment: To the extent that any relevant provision of the HIPAA Regulations is materially amended in a manner that changes the obligations of Business Associates or Covered Entities, the Parties agree to negotiate in good faith appropriate amendment(s) to this Agreement to give effect to these revised obligations. The parties agree to amend this Agreement from time to time as is necessary for Covered Entity or to comply with the requirements of the Privacy Rule and related laws and regulations.

27 42 C.F.R. PART 2 RELATED PROVISIONS

27.1 Confidentiality of Information. Contractor's employees and agents shall have access to private data to the extent necessary to carry out the responsibilities, limited by the terms of this Agreement. Contractor accepts the responsibilities for providing adequate administrative supervision and training to their employees and agents to ensure

compliance with relevant confidentiality, privacy laws, regulations and contractual provisions. No private or confidential data collected, maintained, or used shall be disseminated except as authorized by statute and by terms of this Agreement, whether during the period of the Agreement or thereafter. Furthermore, Contractor:

27.2 Acknowledges that in receiving, transmitting, transporting, storing, processing, or otherwise dealing with any information received pursuant to this agreement that identifies or otherwise relates to the individuals under the care of or in the custody of a State of Oklahoma agency, it is fully bound by the provisions of the federal regulations governing the confidentiality of Alcohol and Drug Abuse Patient Records, 42 C.F.R. Part 2 and the HIPAA, 45 C.F.R. 45 Parts 142, 160, and 164, Title 43 A § 1-109 of Oklahoma Statutes, and may not use or disclose the information except as permitted or required by this Agreement or by law;

27.3 Acknowledges that pursuant to 43A O.S. §1-109, all mental health and drug or alcohol treatment information and all communications between physician or psychotherapist and patient are both privileged and confidential and that such information is available only to persons actively engaged in treatment of the client or consumer or in related administrative work. Contractor agrees that such protected information shall not be available or accessible to staff in general and shall not be used for punishment or prosecution of any kind;

27.4 Agrees to resist any efforts in judicial proceedings to obtain access to the protected information except as expressly provided for in the regulations governing the Confidentiality of Alcohol and Drug Abuse Patient Records, 42 C.F.R. Part 2;

27.5 Agrees to, when applicable and to the extent within Contractor's control, use appropriate administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of the electronic protected health information that it creates, receives, maintains, or transmits on behalf of the State of Oklahoma agency and to use appropriate safeguards to prevent the unauthorized use or disclosure of the protected health information, and agrees that protected information will not be placed in the Child Protective Services (CPS) record of any individual involved with the Oklahoma Department of Human Services (DHS).

27.6 Agrees to report to the State of Oklahoma agency any use or disclosure or any security incident involving protected information not provided for by this Agreement. Such a report shall be made immediately when an employee becomes aware of such a disclosure, use, or security incident.

27.7 Agrees to provide access to the protected information at the request of the State of Oklahoma agency or to an authorized individual as directed by the State of Oklahoma agency, in order to meet the requirement of 45 C.F.R. §164.524 which provides clients with the right to access and copy their own protected information;

27.8 Agrees to make any amendments to the protected information as directed or agreed to by the State of Oklahoma agency, pursuant to 45 C.F.R. §164.526;

27.9 Agrees to make available its internal practices, books, and records, including policies and procedures, relating to the use and disclosure of protected information received from the

State of Oklahoma agency or created or received by the Contractor on behalf of the State of Oklahoma agency, to the State of Oklahoma agency and to the Secretary of the Department of Health and Human Services for purpose of the Secretary determining the giving party's compliance with HIPAA;

27.10 Agrees to provide the State of Oklahoma agency, or an authorized individual, information to permit the State of Oklahoma agency to respond to a request by an individual for an accounting of disclosures in accordance with 45 C.F.R. §164.528.

28 DATA SECURITY

The Contractor agrees to, when applicable and to the extent within Contractor's control, maintain the data in a secure manner compatible with the content and use. The Contractor will, when applicable to the extent within Contractor's control, control access to the data in Contractor's possession or control compliance with the terms of this Agreement. Only the Contractor's personnel whose duties require the use of such information, will have regular access to the data. The Contractor's employees will be allowed access to the data only for the purpose set forth in this Agreement.

28.1 Data Destruction. Contractor agrees to, when applicable and to the extent within Contractor's control, follow State of Oklahoma agency policies regarding secure data destruction.

28.2 Use of Information. Contractor agrees that the information received or accessed through this Agreement shall not be used to the detriment of any individual nor for any purpose other than those stated in this Agreement.

28.3 Redisclosure of Data. The Contractor agrees not to redisclose any information to a third party not covered by the Agreement unless written permission by the State of Oklahoma agency is received and redisclosure is permitted under applicable law.

29 FEDERAL TAX INFORMATION REQUIREMENTS IRS PUBLICATION 1075

29.1 PERFORMANCE: If Contractor takes possession or control of Federal Tax Information in performance of this contract, the Contractor agrees to, when applicable and to the extent within Contractor's control, comply with and assume responsibility for compliance by officers or employees with the following requirements:

29.2 All work will be performed under the supervision of the State of Oklahoma.

29.3 The contractor and contractor's officers or employees to be authorized access to FTI must meet background check requirements defined in IRS Publication 1075. The contractor will maintain a list of officers or employees authorized access to FTI. Such list will be provided to the agency and, upon request, to the IRS.

29.4 FTI in hardcopy or electronic format shall be used only for the purpose of carrying out the provisions of this contract. FTI in any format shall be treated as confidential and shall not be divulged or made known in any manner to any person except as may be necessary in the performance of this contract. Inspection or disclosure of FTI to anyone other than the contractor or the contractor's officers or employees authorized is prohibited.

29.5 FTI will be accounted for upon receipt and properly stored before, during, and after processing. In addition, any related output and products require the same level of protection as required for the source material.

29.6 The contractor will certify that FTI processed during the performance of this contract will be completely purged from all physical and electronic data storage with no output to be retained by the contractor at the time the work is completed. If immediate purging of physical and electronic data storage is not possible, the contractor will certify that any FTI in physical or electronic storage will remain safeguarded to prevent unauthorized disclosures.

29.7 Any spoilage or any intermediate hard copy printout that may result during the processing of FTI will be given to the agency. When this is not possible, the contractor will be responsible for the destruction of the spoilage or any intermediate hard copy printouts and will provide the agency with a statement containing the date of destruction, description of material destroyed, and the destruction method.

29.8 All Contractor computer systems receiving, processing, storing, or transmitting FTI must meet the requirements in IRS Publication 1075. To meet functional and assurance requirements, the security features of the environment must provide for the managerial, operational, and technical controls. All security features must be available and activated to protect against unauthorized use of and access to FTI.

29.9 No work involving FTI furnished under this contract will be subcontracted without the prior written approval of the IRS.

29.10 Contractor will ensure that the terms of FTI safeguards described herein are included, without modification, in any approved subcontract for work involving FTI.

29.11 To the extent the terms, provisions, duties, requirements, and obligations of this contract apply to performing services with FTI, the contractor shall assume toward the subcontractor all obligations, duties and responsibilities that the agency under this contract assumes toward the contractor, and the subcontractor shall assume toward the contractor all the same obligations, duties and responsibilities which the contractor assumes toward the agency under this contract.

29.12 In addition to the subcontractor's obligations and duties under an approved subcontract, the terms and conditions of this contract apply to the subcontractor, and the subcontractor is bound and obligated to the contractor hereunder by the same terms and conditions by which the contractor is bound and obligated to the agency under this contract.

29.13 For purposes of this contract, the term "contractor" includes any officer or employee of the contractor with access to or who uses FTI, and the term "subcontractor" includes any officer or employee of the subcontractor with access to or who uses FTI.

29.14 The agency will have the right to void the contract if the contractor fails to meet the terms of FTI safeguards described herein.

30 CRIMINAL/CIVIL SANCTIONS

30.1 Each officer or employee of a contractor to whom FTI is or may be disclosed shall be notified in writing that FTI disclosed to such officer or employee can be used only for a purpose and to the extent authorized herein, and that further disclosure of any FTI for a purpose not authorized herein constitutes a felony punishable upon conviction by a fine of as much as $5,000 or imprisonment for as long as 5 years, or both, together with the costs of prosecution.

30.2 Each officer or employee of a contractor to whom FTI is or may be accessible shall be notified in writing that FTI accessible to such officer or employee may be accessed only for a purpose and to the extent authorized herein, and that access/inspection of FTI without an official need-to-know for a purpose not authorized herein constitutes a criminal misdemeanor punishable upon conviction by a fine of as much as $1,000 or imprisonment for as long as 1 year, or both, together with the costs of prosecution.

30.3 Each officer or employee of a contractor to whom FTI is or may be disclosed shall be notified in writing that any such unauthorized access, inspection or disclosure of FTI may also result in an award of civil damages against the officer or employee in an amount equal to the sum of the greater of $1,000 for each unauthorized access, inspection, or disclosure, or the sum of actual damages sustained as a result of such unauthorized access, inspection, or disclosure, plus in the case of a willful unauthorized access, inspection, or disclosure or an unauthorized access/inspection or disclosure which is the result of gross negligence, punitive damages, plus the cost of the action. These penalties are prescribed by IRC sections 7213, 7213A and 7431 and set forth at 26 CFR 301.6103(n)-1.

30.4 Additionally, it is incumbent upon the contractor to inform its officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a(i)(1), which is made applicable to contractors by 5 U.S.C. 552a(m)(1), provides that any officer or employee of a contractor, who by virtue of his/her employment or official position, has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is so prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than $5,000.

30.5 Granting a contractor access to FTI must be preceded by certifying that each officer or employee understands the agency's security policy and procedures for safeguarding FTI. A contractor and each officer or employee must maintain their authorization to access FTI through annual recertification of their understanding of the agency's security policy and procedures for safeguarding FTI. The initial certification and recertifications must be documented and placed in the agency's files for review. As part of the certification and at least annually afterwards, a contractor and each officer or employee must be advised of the provisions of IRC sections 7213, 7213A, and 7431 (see IRS Publication 1075, Exhibit 4, Sanctions for Unauthorized Disclosure, and IRS Publication 1075, Exhibit 5, Civil Damages for Unauthorized Disclosure). The training on the agency's security policy and procedures provided before the initial certification and annually thereafter must also cover the incident response policy and procedure for reporting unauthorized disclosures and data breaches. For the initial certification and the annual recertifications, the contractor and each officer or employee must sign, either with ink or

electronic signature, a confidentiality statement certifying their understanding of the security requirements.

31 INSPECTION

The IRS and the Agency, with 24-hour notice, shall have the right to send its inspectors into the offices and plants of the contractor to inspect facilities and operations performing any work with FTI under this contract for compliance with requirements defined in IRS Publication 1075. The IRS' right of inspection shall include the use of manual and/or automated scanning tools to perform compliance and vulnerability assessments of information technology (IT) assets that access, store, process or transmit FTI. Based on the inspection, corrective actions may be required in cases where the contractor is found to be noncompliant with FTI safeguard requirements.

32 SSA REQUIREMENTS

32.1 PERFORMANCE: If Contractor takes possession or control of in SSA provided information in the performance of this contract, the contractor agrees to, where applicable and to the extent within Contractor's control comply with and assume responsibility for compliance by his or her employees with the following requirements:

32.2 All work will be done under the supervision of the State of Oklahoma.

32.3 Any SSA provided information made available shall be used only for carrying out the provisions of this Agreement. Information contained in such material shall be treated as confidential and shall not be divulged or made known in any manner to any person except as may be necessary in the performance of this contract. Inspection by or disclosure to anyone other than an officer or employee of the Contractor is prohibited.

32.4 All SSA provided information shall be accounted for upon receipt and properly stored before, during, and after processing. In addition, all related output and products will be given the same level of protection as required for the source material.

32.5 No work involving SSA provided information furnished under this contract shall be subcontracted without prior written approval by the applicable State of Oklahoma agency and the SSA.

32.6 The Contractor shall maintain a list of employees authorized access. Such list shall be provided upon request to the applicable State of Oklahoma agency or the SSA.

32.7 Contractor or agents may not legally process, transmit, or store SSA-provided information in a cloud environment without explicit permission from SSA's Chief Information Officer. Proof of this authorization shall be provided to the Contractor by the applicable State of Oklahoma agency prior to accessing SSA provided information.

32.8 Contractor shall provide security awareness training to all employees, contractors, and agents who access SSA-provided information. The training should be annual, mandatory, and certified by the personnel who receive the training. Contractor is also required to certify that each employee, contractor, and agent who views SSA-provided information certify that they understand the potential criminal, civil, and administrative sanctions or penalties for unlawful assess and/or disclosure.

32.9 Contractor shall require employees, contractors, and agents to sign a non-disclosure agreement, attest to their receipt of Security Awareness Training, and acknowledge the rules of behavior concerning proper use and security in systems that process SSA-provided information. Contractor shall retain non-disclosure attestations for at least five (5) to seven (7) years for each employee who processes, views, or encounters SSA-provided information as part of their duties.

32.10 The applicable State of Oklahoma agency shall provide the Contractor a copy of the SSA exchange agreement and all related attachments before initial disclosure of SSA data. Contractor is required to follow the terms of the applicable State of Oklahoma agency's data exchange agreement with the SSA. Prior to signing this Agreement, and thereafter at SSA's request, the applicable State of Oklahoma agency shall obtain from the Contractor a current list of the employees of such Contractor with access to SSA data and provide such list to the SSA.

32.11 Where the Contractor processes, handles, or transmits information provided to the applicable State of Oklahoma agency by SSA or has authority to perform on the agency's behalf, the applicable State of Oklahoma agency shall clearly state the specific roles and functions of the Contractor within the Agreement.

32.12 SSA requires all parties subject to this Agreement to exercise due diligence to avoid hindering legal actions, warrants, subpoenas, court actions, court judgments, state or Federal investigations, and SSA special inquiries for matters pertaining to SSA-provided information.

32.13 SSA requires all parties subject to this Agreement to agree that any Client-owned or subcontracted facility involved in the receipt, processing, storage, or disposal of SSA-provided information operate as a "de facto" extension of the Client and is subject to onsite inspection and review by the Client or SSA with prior notice.

32.14 If the Contractor must send a Contractor computer, hard drive, or other computing or storage device offsite for repair, the Contractor must have a non-disclosure clause in their contract with the vendor. If the Contractor used the item in a business process that involved SSA-provided information and the vendor will retrieve or may view SSA-provided information during servicing, SSA reserves the right to inspect the Contractor's vendor contract. The Contractor must remove SSA-provided information from electronic devices before sending it to an external vendor for service. SSA expects the Contractor to render SSA-provided information unrecoverable or destroy the electronic device if they do not need to recover the information. The same applies to excessed, donated, or sold equipment placed into the custody of another organization.

32.15 In the event of a suspected or verified data breach involving SSA provided information, the Contractor shall notify the Client immediately.

32.16 The Client shall have the right to void the contract if the contractor fails to provide the safeguards described above.

33 CRIMINAL/CIVIL SANCTIONS

The Act specifically provides civil remedies, 5 U.S.C. Sec. 552a(g), including damages, and criminal penalties, 5 U.S.C. Sec. 552a(i), for violations of the Act. The civil action provisions are premised violations of the Act committed by parties subject to this Agreement or regulations promulgated thereunder. An individual claiming such a violation by parties subject to this Agreement may bring civil action in a federal district court. If the individual substantially prevails, the court may assess reasonable attorney fees and other litigation costs. In addition, the court may direct the parties subject to this Agreement to grant the plaintiff access to his/her records, and when appropriate direct an amendment or correction of records subject to the Act. Actual damages may be awarded to the plaintiff for intentional or willful refusal by parties subject to this Agreement to comply with the Act.

33.1 Civil Remedies

a. In any suit brought under the provisions of 5 U.S.C. § 552a(g)(1)(C) or (D) in which the court determines that the parties subject to this Agreement acted in a manner which was intentional or willful, shall be liable in an amount equal to the sum of

b. actual damages sustained by the individual because of the refusal or failure, but in no case, shall a person entitled to recovery receive less than the sum of $1,000; and

c. the costs of the action together with reasonable attorney fees as determined by the court.

d. An action to enforce any liability created under 5 U.S.C. § 552a may be brought in the district court of the United States in the district in which the complainant resides, or has his principal place of business, or in which the records are situated, or in the District of Columbia, without regard to the amount in controversy, within two years from the date on which the cause of action arises, except that where parties subject to this Agreement have materially and willfully misrepresented any information required under this section to be disclosed to an individual and the information so misrepresented is material to establishment of the liability of the agency to the individual under 5 U.S.C. § 552a, the action may be brought at any time within two years after discovery by the individual of the misrepresentation. Nothing in this section shall be construed to authorize any civil action because of any injury sustained as the result of a disclosure of a record prior to September 27, 1975.

33.2 Criminal Penalties

a. Any officer or employee of an agency, who by virtue of his employment or official position, has possession of, or access to, agency records which contain individually identifiable information the disclosure of which is prohibited by this section or by rules or regulations established thereunder, and who knowing that disclosure of the specific material is so prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than $5,000. See 5 U.S.C. § 552a(i)(1).

b. Any officer or employee of any agency who willfully maintains a system of records without meeting the notice requirements of subsection (e)(4) of this section shall be guilty of a misdemeanor and fined not more than $5,000. See 5 U.S.C. § 552a(i)(2).

c. Any person who knowingly and willfully requests or obtains any record concerning an individual from an agency under false pretenses shall be guilty of a misdemeanor and fined not more than $5,000. See 5 U.S.C. § 552a(i)(3).

34 CHILD SUPPORT FPLS REQUIREMENTS

34.1 Contractor, when applicable and to the extent within Contractor's control, and the applicable State of Oklahoma agency must comply with the security requirements established by the Social Security Act, the Privacy Act of 1974, the Federal Information Security Management Act of 2002 (FISMA), 42 United States Code (USC) 654(26), 42 UCS 654a(d)(1)-(5), the U.S. Department of Health and Human Services (HHS), the U.S. Department of Health and Human Services Administration of Children and Families Office of Child Support Enforcement Security Agreement and the Automated Systems for Child Support Enforcement: A Guide for States Section H Security and Privacy. Contractor and applicable State of Oklahoma agency also agree to use Federal Parent Locator Service (FPLS) information and Child Support (CS) program information solely for the authorized purposes in accordance with the terms in this agreement. The information exchanged between state Child Support agencies and all other state program information must be used for authorized purposes and protected against unauthorized access to reduce fraudulent activities and protect the privacy rights of individuals against unauthorized disclosure of confidential information.

34.2 This is applicable to the personnel, facilities, documentation, data, electronic and physical records and other machine-readable information systems of the applicable State of Oklahoma agency and Contractor, including, but not limited to, state employees and contractors working with FPLS information and CS program information and state CS agency data centers, statewide centralized data centers, contractor data centers, state Health and Human Services' data centers, comprehensive tribal agencies, data centers serving comprehensive tribes, and any other individual or entity collecting, storing, transmitting or processing FPLS information and CS program information. This is applicable to all FPLS information, which consists of the National Directory of New Hires (NDNH), Debtor File, and the Federal Case Registry (FCR). The NDNH, Debtor File and FCR are components of an automated national information system.

34.3 This is also applicable to all CS program information, which includes the state CS program information, other state and tribal program information, and confidential information. Confidential information means any information relating to a specified individual or an individual who can be identified by reference to one or more factors specific to him or her, including but not limited to the individual's Social Security number, residential and mailing addresses, employment information, and financial information. Ref. 45 Code of Federal Regulations (CFR) 303.21(a).

35 FERPA REQUIREMENTS

35.1 If Contractor takes possession or control of Information covered by FERPA in performance of this Agreement, Contractor agrees to, when applicable and to the extent within Contractor's control comply with and assume responsibility for compliance by its employees with the Family Educational Rights and Privacy Act; (20 U.S.C. § 1232g; 34 CFR Part 99) ("FERPA") and the Oklahoma Student Data Accessibility, Transparency, and Accountability Act of 2013; (70 O.S. § 3-168), where personally identifiable student education data is exchanged.

36 CJIS REQUIREMENTS

36.1 INTRODUCTION - This section shall be applicable to the extent that Contractor takes possession or control of CJIS data. The use and maintenance of all items of software or equipment offered for purchase herein must be in compliance with the most current version of the U.S. Department of Justice, Federal Bureau of Investigation ("FBI"), Criminal Justice Information Services (CJIS) Division's CJIS Security Policy ("CJIS Security Policy" or "Security Policy" herein).

36.2 The Entity or Affiliate acquiring the data or system is hereby ultimately responsible for compliance with the CJIS Security Policy and will be subject to an audit by the State of Oklahoma CJIS Systems Officer ("CSO") and the FBI CJIS Division's Audit Staff.

36.3 CJIS SECURITY POLICY REQUIREMENTS GENERALLY - The CJIS Security Policy outlines a number of administrative, procedural, and technical controls agencies must have in place to protect Criminal Justice Information ("CJI"). Our experience is that agencies will generally have many of the administrative and procedural controls in place but will need to implement additional technical safeguards in order to be in complete compliance with the mandate. A Criminal Justice Agency ("CJA") and certain other governmental agencies procuring technology equipment and services that could be used in hosting or connecting or transmitting or receiving CJI data may need to use the check list herein to make sure that the software, equipment, location, security, and persons having the ability to access CJI will meet the CJIS requirements per the then current CJIS Security Policy. A completed Appendix H to said Security Policy will need to be signed by Vendor or a 3rd party if it has access to CJI, such as incident to the maintenance or support of the purchased hardware or software within which resides CJI. Per Appendix "A" to said Security Policy, "access to CJI is the physical or logical (electronic) ability, right or privilege to view, modify or make use of CJI."

36.4 DIRECTIVE CONCERNING ACCESS TO CRIMINAL JUSTICE INFORMATION AND TO HARDWARE OR SOFTWARE WHICH INTERACTS WITH CJI AND CERTIFICATION- The FBI CJIS Division provides state-of-the-art identification and information services to the local, state, tribal, federal, and international criminal justice communities for criminal justice purposes, as well as the noncriminal justice communities for noncriminal justice purposes.

36.5 This Directive primarily concerns access to CJI and access to hardware and software in the use, retention, transmission, reception, and hosting of CJI for criminal justice purposes and not for noncriminal justice purposes. In that regard, this Directive is not only applicable to such data, but also to the hardware and software interacting with such data, their location(s), and persons having the ability to access such data. The CJIS data applicable to the Security Policy is the data described as such in said Policy plus all data

transmitted over the Oklahoma Law Enforcement Telecommunications System ("OLETS") which is operated by DPS.

36.6 In order to have access to CJI or to the aforesaid hardware or software, the vendor must be familiar with the FBI CJIS Security Policy, including but not limited to the following portions of said Security Policy:

a. the Definitions and Acronyms in §3 & Appendices "A" & "B";

b. the general policies in §4;

c. the Policies in §5;

d. the appropriate forms in Appendices "D", "E", "F" & "H"; and

e. the Supplemental Guidance in Appendices "J".

36.7 This FBI Security Policy is located and may be downloaded at:

a. https://le.fbi.gov/file-repository/cjis_security_policy_v5-9-2_20221207-5.pdf

b. By executing the Contract to which this Directive is attached, the vendor hereby CERTIFIES that the foregoing directive has and will be followed, including but not limited to full compliance with the FBI CJIS Security Policy, as amended and as applicable.

37 NOTICES

37.1 In addition to notice requirements under the terms of the Contract otherwise, the following individuals shall also be provided the request, approval or notice, as applicable:

Chief Information Officer
3115 N. Lincoln Blvd
Oklahoma City, OK 73105

With a copy, which shall not constitute notice, to:
OMES Deputy General Counsel
3115 North Lincoln Blvd
Oklahoma City, Oklahoma 73105

ATTACHMENT G

FEDERAL FUNDING TERMS

This State of Oklahoma Federal Funding Terms is a Contract Document in connection with a Contract awarded by and through the State of Oklahoma, Office of Management and Enterprise Services, with a vendor, supplier, or contractor ("Supplier"). Supplier acknowledges that acquisitions under this Contract may use federal assistance for purposes of funding the acquisition. When procuring property and services using Federal financial assistance, the State must follow the same policies it uses for procurements from its non-Federal funds along with all other requirements of the Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance). In addition, the State and Supplier ("Parties") must agree to the standards identified in Federal Regulations 2 CFR Sections 200.321 through 200.323 and ensure purchase orders, contracts, or subcontracts include clauses required by 2 CFR Section 200.327.

The terms and conditions provided in this Attachment are general Federal award requirements. Additional terms, conditions, or exceptions may be required that are specific to the Federal financial assistance used in each procurement transaction. Any additional terms, conditions, or exceptions shall be incorporated into a purchase order, contract, or subcontract to ensure compliance with the Federal financial assistance attached to this Contract.

In addition to the terms contained in applicable Contract documents and the requirements mentioned above, the Parties agree to the following Federal Funding Terms.

1 AFFIRMATIVE STEPS FOR CONTRACTING.

1.1 Parties acknowledge that any non-Federal entity included in this Contract must take affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. In addition to and in conjunction with 74 O.S. Sections 85.45 through 85.45i., those affirmative steps must include:

a. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

b. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

c. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;

d. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;

e. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and

f. Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (a.) through (e.) of this section.

2 INFORMATION SUBMITTED.

Supplier acknowledges that all information, reports, and other documents and data submitted to the State and its representatives in connection with this Contract were, at the time they were (or will be) furnished, and are, as of the date hereof (or will be as of the date they are furnished), true, correct, and complete in all material respects.

3 COMPETITIVE BIDDING.

All funds received by the Supplier herein are subject to the State Purchasing Act and the procurement standards found in 2 CFR Sections 200.321 through 200.323, and 2 CFR Section 200.327. The Supplier acknowledges and agrees that these funds were to the best of Supplier's knowledge competitively bid or covered by an exemption as described therein.

4 AUDITING AND MONITORING REQUIREMENTS.

Supplier acknowledges that the funds used in this transaction are subject to the requirements found in Sections 2 CFR Sections 200.500 through 2 CFR § 200.520; and therefore, the State is subject to audit by Federal and State entities.

4.1 The Supplier agrees to provide the State of Oklahoma, the U.S. Department of Treasury, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Supplier which are directly pertinent to this Contract for the purposes of making audits, examinations, excerpts, and transcriptions. The Supplier agrees to permit any of the foregoing parties to copy or reproduce, by any means, excerpts and transcriptions as reasonably needed, and agrees to cooperate with all such requests. All records related to this transaction must be kept for five years after the completion of this Contract.

4.2 If applicable, the Supplier agrees to provide the Treasury Department or authorized representatives access to construction or other work sites pertaining to the work being completed under the Contract.

4.3 No language in this Contract is intended to prohibit audits or internal reviews by the Treasury Department or the Comptroller General of the United States.

4.4 The Supplier further agrees to include a provision requiring such compliance in its lower tier covered transactions.

5 BUYING PREFERENCES.

5.1 Domestic Preferences, 2 CFR Section 200.322. Supplier should, to the greatest extent practicable under the scope of this Contract, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards, including all contracts and purchase orders for work or products under this Contract. For purposes of this section:

a. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;

b. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber; and

c. Federal financial assistance for infrastructure projects must implement the Buy America preferences set forth below.

5.2 Buy America Preference, 2 CFR Part 184. Applies to Federal awards where funds are appropriated or otherwise made available for infrastructure projects in the United States, regardless of whether infrastructure is the primary purpose of the Federal award. Must be included in all subawards, contracts, and purchase orders for the work performed, or products supplied under the Federal award. Infrastructure encompasses public infrastructure projects in the United States, which includes, at a minimum, the structures, facilities, and equipment for roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property; and structures, facilities, and equipment that generate, transport, and distribute energy including electric vehicle (EV) charging.

6 STATUTES AND REGULATIONS PROHIBITING DISCRIMINATION.

6.1 Executive Order 11246, "Equal Employment Opportunity," as amended by EO 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor. Applies to any construction work and subcontract work, or modification thereof, which is paid for in whole or in part with funds obtained from the Federal Government, unless otherwise exempted.

Construction Contracts 41 CFR Section 60-1.4(b). During the performance of this contract, the contractor agrees as follows:

a. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

   Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

b. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause. which includes that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

c. The contractor will not discharge or discriminate against any employee or applicant for employment because they inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This does not apply to instances in which an employee who has access to the compensation as part of the employee's essential job function discloses the compensation to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

d. The contractor will send to each labor union or representative of workers with which a collective bargaining agreement is in place or other contract or understanding, a notice to be provided advising the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

6.2 **Title VI of the Civil Rights Act of 1964** (42 U.S.C. §§ 2000d, *et seq.*) and Treasury's implementing regulations at 31 C.F.R. Part 22, which prohibits discrimination on the basis of race, color, or national origin under programs or activities receiving Federal financial assistance.

6.3 **Fair Housing Act, Title VIII of the Civil Rights Act of 1968** (42 U.S.C. §§ 3601, *et seq.*), which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability.

6.4 **Section 504 of the Rehabilitation Act of 1973,** as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance.

6.5 **Age Discrimination Act of 1975,** as amended (42 U.S.C. §§ 6101, *et seq.*), and Treasury's implementing regulations at 31 C.F.R. Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance.

6.6 **Title II of the Americans with Disabilities Act of 1990**, as amended (42 U.S.C. §§ 12101, *et seq.*), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto.

6.7 **Protections for Whistleblowers.** In accordance with 41 U.S.C. § 4712, the Parties may not discharge, demote, or otherwise discriminate against an employee in reprisal for disclosing to any of the list of persons or entities provided below, information that the employee reasonably believes is evidence of gross mismanagement of a federal contract or grant, a gross waste of federal funds, an abuse of authority relating to a federal contract or grant, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a federal contract (including the competition for or negotiation of a contract) or grant. The list of persons and entities referenced includes the following:

a. A member of Congress or a representative of a committee of Congress;

b. An Inspector General;

c. The Government Accountability Office;

d. A Treasury employee responsible for contract or grant oversight or management;

e. An authorized official of the Department of Justice or other law enforcement agency;

f. A court or grand jury; or

g. A management official or other employee of Recipient, contractor, or subcontractor who has the responsibility to investigate, discover, or address misconduct.

7 CONTRACT AND SUBCONTRACT LEVEL REQUIREMENTS.

In addition to State procurement regulations, the following Federal regulations apply.

7.1 **Contracts and Purchases in Excess of $2,000.** The following applies to contractors and subcontractors performing on Federal funded or assisted contracts in excess of $2,000 for the construction, alteration, or repair (including painting and decorating) of public buildings or public works, and requires that Supplier must comply with two sets of regulations:

a. **The Davis–Bacon Act (40 U.S.C. §§ 3141-3144, and 3146-3148)** as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). When applicable, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non–Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non–Federal entity must report all suspected or reported violations to the Federal awarding agency.

b. **Copeland "Anti–Kickback" Act (40 U.S.C. § 3145),** as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non–Federal entity must report all suspected or reported violations to the Federal awarding agency.

7.2 Contracts and Purchases in Excess of $10,000.

a. **Recovered Materials.** Any state agency or agency of a political subdivision of a state and its suppliers or contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

7.3 Contracts and Subcontracts for $25,000 and Above

a. **Suspension and Debarment**. Restricts awards, subawards, contracts, and subcontracts with Suppliers that are debarred, suspended, or otherwise excluded, or declared ineligible for participation in federal assistance programs and activities. This Contract is a covered transaction for purposes of 2 CFR pt. 180 and 2 CFR pt. 3000. As such, the Supplier is required to verify that none of Supplier's principals (defined at 2 CFR § 180.995) or its affiliates (defined at 2 CFR § 180.905) are excluded (defined at 2 CFR § 180.940) or disqualified (defined at 2 CFR § 180.935). The Supplier must comply with 2 CFR part 180,

subpart C and 2 CFR part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This certification is a material representation of fact relied upon by the State of Oklahoma. If it is later determined that the Supplier did not comply with 2 CFR part 180, subpart C and 2 CFR pt. 3000, subpart C, in addition to remedies available to the State, the federal government may pursue available remedies, including but not limited to suspension and/or debarment.

7.4 Contracts and Purchases $100,000 and Above

a. **The Contract Work Hours and Safety Standards Act,** 40 U.S.C. §§ 3701-3708. Applies to all contracts and subcontracts of more than $100,000 that involve the employment of mechanics or laborers. Under Section 3702 of the Act, contractors and subcontractors shall be required to compute the wages of every mechanic and laborer (including guards and watchmen) on the basis of a standard workweek of 40 hours. Work in excess of the standard workweek is permissible provided that the worker is compensated at a rate of not less than 1 1/2 times the basic rate of pay for all hours worked in excess of 40 hours in the workweek. The requirements of 40 U.S.C. § 3704 are applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous. *These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.*

b. **Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352, as amended.** Supplier certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. This Supplier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award and require any entities receiving subawards or contracts to do the same. Such disclosures are forwarded from tier-to-tier up to the recipient who in turn will forward the certification(s) to the awarding agency.
**** Contractors must sign the attached certification.***

7.5 Contracts and Purchases $150,000 and Above

a. **Clean Air Act (42 U.S.C. §§ 7401– 7671q.) and the Federal Water Pollution Control Act (33 U.S.C. §§ 1251-1387), as amended.** Supplier agrees to comply with, and require all subcontractors to comply with, all applicable standards, orders, or regulations issued pursuant to these Acts. Supplier agrees to report each violation to the State entity that is party to this Contract and understands and agrees that the State entity will, in turn, report each violation as required to assure notification to the appropriate Environmental Protection Agency.

7.6 Contracts and Purchases $250,000 and Above

a. **Remedies.** Contracts for more than the simplified acquisition threshold, currently set at $250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

8 OTHER APPLICABLE LAWS

8.1 **Increasing Seat Belt Use in the United States**. Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Supplier is encouraged to adopt and enforce on-the-job seat belt policies and programs for employees when operating company-owned, rented or personally owned vehicles.

8.2 **Reducing Text Messaging While Driving.** Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Supplier is encouraged to adopt and enforce policies that ban text messaging while driving and establish workplace safety policies to decrease accidents caused by distracted drivers.

8.3 **Publications.** Any publications produced with funds from a Federal award must display the following language: "This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAIN] awarded to [name of Recipient] by the U.S. Department of the Treasury."

8.4 **Rights to Inventions Made Under a Contract or Agreement.** If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

> The term ***funding agreement*** means any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

8.5 Prohibition of Certain Telecommunications and Video Surveillance Services or Equipment.

a. Parties agree that no Federal funds may be obligated or expended in any contract or subcontract that includes obtaining any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system.

> As described in Public Law 115–232, section 889, *Covered telecommunications equipment* is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

b. This prohibition does not prevent parties to this Contract or subcontractors from using covered telecommunications equipment and services for their own purposes, provided the covered telecommunications equipment or services are not procured with Federal funds.

c. In implementing the prohibition under Public Law 115–232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

8.6 Termination for Cause and Convenience – Provisions under Contract Attachment B apply.

This form is required for purchases of $100,000 and above

CERTIFICATION REGARDING LOBBYING
Required by 31 CFR Part 21

The undersigned certifies, to the best of their knowledge and belief, that:

I. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

II. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

III. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subawards, and contracts under grants, loans, and cooperative agreements) and that all Suppliers shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, of the U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Supplier certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Supplier understands and agrees that the remedies found in Title 31, Chapter 38 of the U.S. Code applies to this certification and disclosure.

_____

Signature of Supplier's Authorized Official

_____

Name Date

_____

Title

Attachemnt A: ITEMS (Please Bid on the Following)	***SKU # ****	***feet per cable***	**QTY.**	**Price**	**Cost**
Vulink Telemetry System for FY25	0094840		65	949.676	61728.91
Vulink Telemetry System for FY26-28. Up to 60 units depending on future project need and equipment attrition. Cost estimate based on potential changes in market value allowing upto 20% increase.	0094840		60	949.676	56980.53
Shipping (Freight Estimate)					
Total					**$118,709.44**

The State Purchasing Director may award the contract to more than one bidder by awarding the contracts by item or groups of items. One vendor may not be able to supply all items required.

Please complete this attachment and include with bid response.

* SKU number for In-Situ brand provided for clarification of specifications of each item needed.

CONTRACTS CHECKLIST – Telemetry Equipment Purchase

Before submitting a contract for inclusion in the Board agenda/packet, please complete the following and submit with the final agreement:

Initials

BC Draft approved by Division Chief

Jessica Billingsley: Contract amount has been budgeted

AP Anil Pillai: All purchasing requirements have been satisfied

CA All other parties have agreed to the terms of the contract

CA Final copy is free of any track changes or other highlighting, etc.

Final draft approved by General Counsel

Contact Info for OWRB	Contact info for Contractor
Chris Adams	Cody Preiss
chris.adams@owrb.ok.gov	cpreiss@in-situ.com
405.530.8998	970-498-1675

REMEMBER, any document that contains "terms" and requires a signature is considered a contract.

No contract will be added to the Board agenda/packet unless this checklist is complete. All tasks will need to be completed prior to the deadline for the draft agenda each month to be added to the agenda/packet.

AGENDA ITEM 3D(3)

AMENDMENT OF CONTRACT

WITH:	Oklahoma Department of Environmental Quality
PURPOSE:	To provide renewal of term for Bathymetric Survey of Select Dissolved Oxygen Impaired Reservoirs
AMOUNT:	No Cost
TERM:	July 1, 2025 through June 30, 2026

CONTRACTS CHECKLIST

Before submitting a contract for inclusion in the Board agenda/packet, please complete the following and submit with the final agreement:

Initials

BC Draft approved by Division Chief

Jessica Billingsley: Contract amount has been budgeted

Anil Pillai: All purchasing requirements have been satisfied

JC All other parties have agreed to the terms of the contract

JC Final copy is free of any track changes or other highlighting, etc.

Final draft approved by General Counsel

Contact Info for OWRB

Julie Chambers

julie.chambers@owrb.ok.gov

405-530-8932

Contact info for Contractor

Adriana Bustamante

andriana.bustamante@deq.ok.gov

405-702-8292

REMEMBER, any document that contains "terms" and requires a signature is considered a contract.

No contract will be added to the Board agenda/packet unless this checklist is complete. All tasks will need to be completed prior to the deadline for the draft agenda each month to be added to the agenda/packet.

Reference Number: 2929025726
Fiscal Year: FY26

Amendment of Contract

This Amendment of Contract is made on the 18th day of June, 202025, for the contract of Bathymetric Survey of Select Dissolved Oxygen Impaired Reservoirs (FY24/25), **EPA Strategic Plan Goal 5:** Ensure Clean and Safe Water for All Communities and **EPA Strategic Plan Objective 5.2:** Protect and Restore Waterbodies and Watersheds previously executed between the State of Oklahoma, ex.rel. The Department of Environmental Quality hereinafter referred to as "Department" and/or DEQ and Oklahoma Water Resources Board (OWRB) hereinafter referred to as "Contractor". In consideration of the provisions set forth herein; the parties mutually agree to the following contracting parties to amend the following that was previously executed. The amendments are as follows:

This is a no cost contract renewal for FY26 July 1, 2025, through June 30, 2026.

All other terms and conditions that are not hereby amended are to remain in full force and effect.

In witness whereof, this Contract and Amendments is now consisting of eight (8) pages has been executed and delivered effective as of the date first above written.

Electronic Signature page will replace this page if applicable.

State of Oklahoma **Oklahoma Water** **Resources Board** **3800 North Classen Boulevard** **Oklahoma City, Oklahoma, 73118**	**State of Oklahoma** **Oklahoma Department of** **Environmental Quality** **707 N. Robinson, P.O. Box 1677,** **Oklahoma City, Oklahoma, 73101-1677**
Signature of Authorized Representative	Signature of Authorized Representative
Printed Name of Authorized Representative	Printed Name of Authorized Representative
Title of Authorized Representative	Title of Authorized Representative

Amendment of Contract

This Amendment of Contract is made for the contract of Bathymetric Survey of Select Dissolved Oxygen Impaired Reservoirs (FY24/25), ***EPA Strategic Plan Goal 5:*** *Ensure Clean and Safe Water for All Communities* ***EPA Strategic Plan Objective 5.2:*** *Protect and Restore Waterbodies and Watersheds,* previously executed between the State of Oklahoma, ex.rel. The Department of Environmental Quality hereinafter referred to as "Department" and/or DEQ and **Oklahoma Water Resources Board** hereinafter referred to as "Contractor". In consideration of the provisions set forth herein; the parties mutually agree to the following contracting parties to amend the following that was previously executed. The amendments are as follows:

The current contract term ends June 30th, 2024. This is a no cost contract renewal for the term July 1, 2024 through June 30th, 2025.

All other terms and conditions that are not hereby amended are to remain in full force and effect.

In witness whereof, this Contract and Amendments is now consisting of seven (7) pages has been executed and delivered effective as of the date first above written.

Electronic Signature page will replace this page if applicable.

State of Oklahoma
Oklahoma Water Resources Board
3800 North Classen Boulevard
Oklahoma City, OK 73118

Signature of Authorized Representative

;f-0\'J\&c fa:A,a\ c
Printed Name of Authorized Representative

Chair
Title of Authorized Representative

OKLAHOMA WATER RESOURCES BOARD

State of Oklahoma
Oklahoma Department of Environmental Quality
707 N. Robinson, P.O. Box 1677,
Oklahoma City, Oklahoma, 73101-1677

Signature of Authorized Representative

Printed Name of Authorized Representative

Title of Authorized Representative

Project: 3 **Comment Addressed 9/21/23 -APPROVED 10/2/23**

Agency: Oklahoma Department of Environmental Quality (DEQ)

Title: Bathymetric Survey of Select Dissolved Oxygen Impaired Reservoirs (FY24/25)

EPA Strategic Plan Goal 5: Ensure Clean and Safe Water for All Communities
EPA Strategic Plan Objective 5.2: Protect and Restore Waterbodies and Watersheds

Introduction

The State of Oklahoma currently has many reservoirs impaired for fish and wildlife propagation due to dissolved oxygen impairment that have not been surveyed through bathymetric methods. Under the federally approved Oklahoma State Water Quality Standards, reservoirs can be assessed for dissolved oxygen (DO) in differing ways based on the availability of bathymetric survey data. If bathymetric survey data is unavailable, reservoirs are found to be not supporting its DO criterion if the portion of the water column with less than 2 mg/L DO is equal to or greater than 70% at any time of the year. If bathymetric data is available, reservoirs are found to be not supporting its DO criterion if 50% or greater of the volume of the reservoir has less than 2 mg/L DO throughout the year. Following the volume-depth curves of surveyed reservoirs in Oklahoma, it takes on average 78% of the water-column of lakes to exceed the 50% volumetric DO standard. This suggests that surveying reservoirs impaired for DO would provide the information necessary to likely remove the fish and wildlife propagation impairment from a subset of reservoirs. Lakes that are in the undetermined range (unmapped reservoirs with >50% water column anoxia but <70% water column anoxia) will be placed in category 3 of the 305(b) list indicating insufficient data is available for an impairment designation to be made. Bathymetric survey work on these reservoirs will provide the data necessary for an impairment designation to be made. Volumetric determination of reservoirs will allow for reassessment under the new volumetric DO water quality standard and may result in the removal of some reservoirs from the 303(d) list for fish and wildlife propagation impairment.

Project Objectives

The goal of this project is to complete mapping of reservoirs currently impaired for fish and wildlife propagation due to DO that are sampled by the states Beneficial Use Monitoring Program (BUMP). Previous FY work had mapped Boomer, Okmulgee, Hominy, John Wells, Elmer Thomas, Arbuckle, Clinton, Crowder, Fairfax, Brushy Creek, Greenleaf, Shell, Duncan, Clear Creek, Wewoka,Holdenville, Stilwell City, Wayne Wallace, Walters (DaveBoyer), Atoka, Cedar, and Spavinaw. Sardis and McGee Creek Reservoirs will be mapped in FY24 and Ponca City and Sooner Lakes will be mapped in FY25.

Table 1: DO Impaired Reservoirs for FY24

W...r body Name	W... Rights Holder	Surface Aru (acre)
Sardis	City of Oklahoma City	13,589
McGee Creek	City of Oklahoma City	3,709
Ponca City	City of Ponca City	805
Sooner	OG&E	5,400

General Procedure

The process of surveying a reservoir uses a combination of Geographic Positioning System (GPS) and acoustic depth sounding technologies that are incorporated into a hydrographic survey vessel. As the survey vessel travels across the lake's surface, the echosounder gathers multiple readings every second from the lake bottom. The depth readings are stored on the survey vessel's on-board computer along with the positional data generated from the vessel's GPS receiver. The collected data files are downloaded daily from the computer and brought to the office for editing after the survey is completed. During editing, data "noise" is removed or corrected, and average depths are converted to elevation readings based on the elevation of the lake on the day that data was collected. Geographic Information System (GIS) software is used to process the edited XYZ data collected from the survey. Accurate estimates of area-capacity can then be determined for the lake by building a 3-D TIN surface model of the reservoir from the collected data.

Survey Plan and Specifications

Data collection at the normal pool elevation by the OWRB will use an echosounder to determine elevation below the surface of the water. The reported accuracy of the echosounder is ±1.0cm. However, accuracy can be affected by different factors including, heave, pitch, roll, and bottom sediment types. A Differential Global Positioning System (DGPS) with submeter accuracy will provide positioning information. The data will be referenced to the appropriate zone in the Oklahoma State Plane Coordinate System.

The bathymetric survey will be conducted for elevations at and below the current water level at the time of survey. Survey lines will be spaced a maximum of 500 ft apart, and will extend as near to the shore as safety and equipment limitations permit. Positioning and sounding data will be collected and stored electronically at the rate of at least one measurement per second, with a maxmum spacing of 10 ft along the survey line. The lake elevation will be taken from a lake gage maintained by the U.S. Army Corps of Engineers or the U.S. Geological Survey.If neither is available, elevation will be measured using GNSS Positioning by OWRB.

The OWRB follows U.S. Army Corps of Engineers standards for quality control and quality assurance for Reservoir Surveys (Hydrography) found in EM 1110-2-1003 Engineering Design - Hydrographic Survey. For these surveys the following MPS will be met.

Table 2: Minimum Performance Standards and Quality Assurance Practices for Project's Hydrographic Surveys

Minimum Performance Standards and Quality Assurance Practices for Project's Hydrographic Surveys	
Repeatability (Bias)	**0.3 ft**
Standard Deviation (:t **ft at 95%)**	:t **0.8 ft**
Horizontal Positioning System Accuracy (95%)	5 m (16 ft)
Minimum Survey Coverage Density	**Not to Exceed 500 ft (150 m)**
Quality Control and Assurance Criteria	**–**
► Bar Check	**1/project**
► Sound Velocity QC calibration	**2/day**
► Squat Test	**1/year**
► Position calibration QC check	**1/project**
From the **2002** version of **M** 111o-,-1QQJ |	From the **2013** version of **!iiM** 1110-2-100J

A minimum of 75 cross-section line convergences will be recorded and used to evaluate the quality of the collected data according to the above table.

Product Requirements

A Quality Assurance Project Plan (QAPP) will be drafted and executed by OWRB and DEQ personnel prior to any data collection. Following data collection and editing, a final report will be drafted to include background information, the equipment used, the methods employed, as well as a summary section. New elevation-area-capacity tables showing cumulative volume and surface area by 1/10 ft elevation increments will be generated. A map showing the approximate locations of survey lines used to collect the positioning and sounding data will also be provided.

A draft copy of the report text, elevation-area-capacity data, and the DEM will be made available fcr review and comment. Comments and questions should be addressed in writing within 30 days, and will be addressed in the final report.

The final product will consist of three hard copies and one electronic copy of the final report. The report will include the Elevation-Area-Capacity table. All data from the survey will be stored for future reference and can be made available upon request.

Project Tasks

Task 1: **Data Quality Assurance Project Plan (QAPP)**

As a continuance and completion of work started under a previous contract the QAPP, Quality Assurance Project Plan for Bathymetric Mapping of Selected Water Supply Reservoirs Impaired for Dissolved Oxygen FY 20/21 Section 106 1-006400-20 Project 11, shall serve as the QAPP for this project. OWRB will cooperate with re-certifications as needed to ensure project coverage under an approved QAPP.

Task 2: **Reservoir Mapping**

The reservoirs identified in this workplan will be mapped using a shallow draft boat equipped with a high-precision Global Positioning System (GPS)coupled with a high-precision echo sounder. Data will be collected on transect lines spaced appropriately for application to that specific lake. Data will be reviewed for erroneous readings and elevation corrections applied. ArcGIS software will be utilized for area/capacity computations, volume-depth curves, and bottom contour map production. An electronic report will be developed and submitted to DEQ from the contractor detailing all work to date shall be presented as discussed in the approved QAPP.

Project Outputs

1. QAPP re-certification for FY24 Lakes
2. Final Report for FY24 Lakes
3. QAPP re-certification for FY25 Lakes
4. Final Report for FY25 Lakes

Project Management

This project will be managed by the Oklahoma Department of Environmental Quality. DEQ will provide oversight for all project activities and the contractor.

Project Duration

July 1, 2023 through June 30, 2026

Project Milestones

1. QAPP Revision and Approval ..... November 30, 2024
2. Final Report ..... June 30, 2025
1. QAPP Revision and Approval ..... November 30, 2025
2. Final Report ..... June 30, 2026

Budget

TOTAL $140,000

Resource Allocation

$70,000 FY 2024 Main Program, Contractual
$70,000 FY 2025 Main Program, Contractual

$140,000 Total Budget

Figure 1: Location of the FY24 Study Lakes

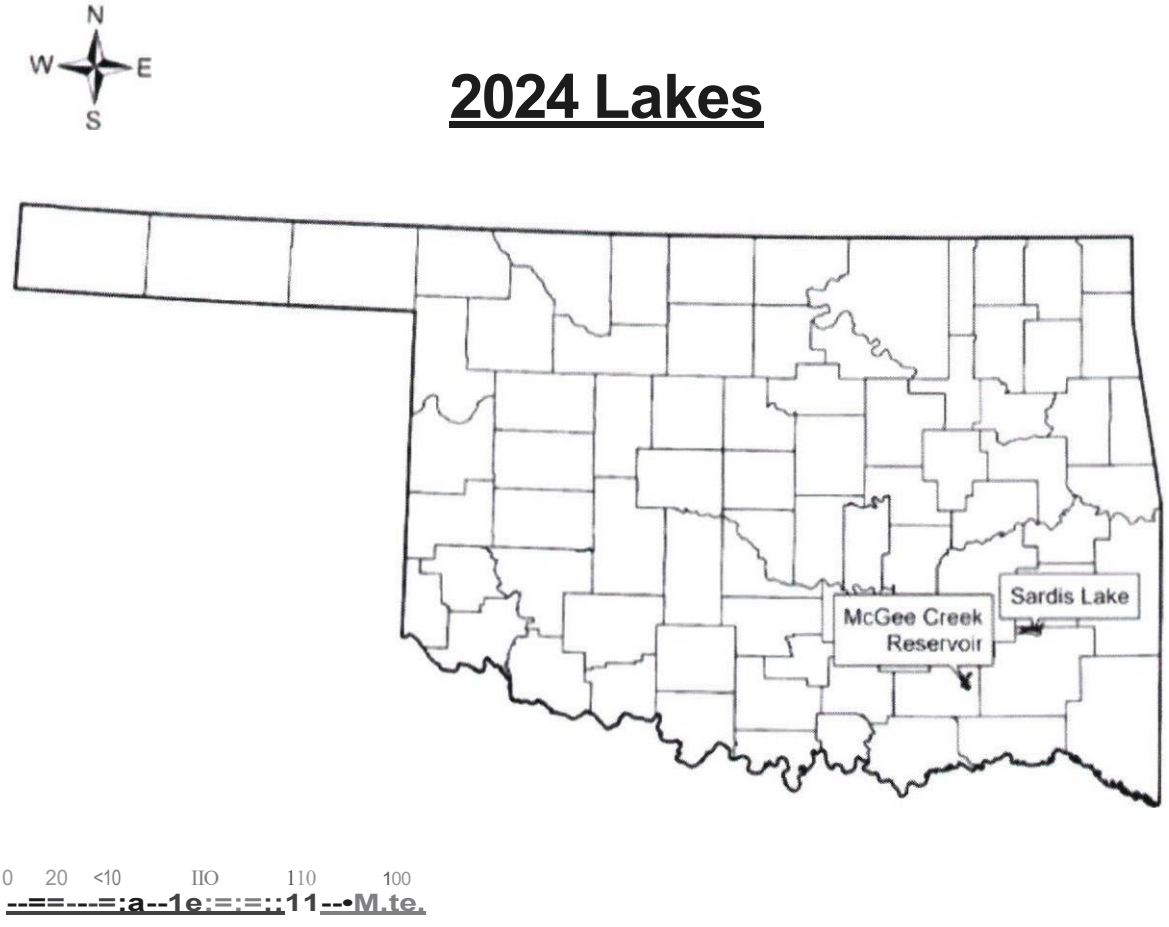
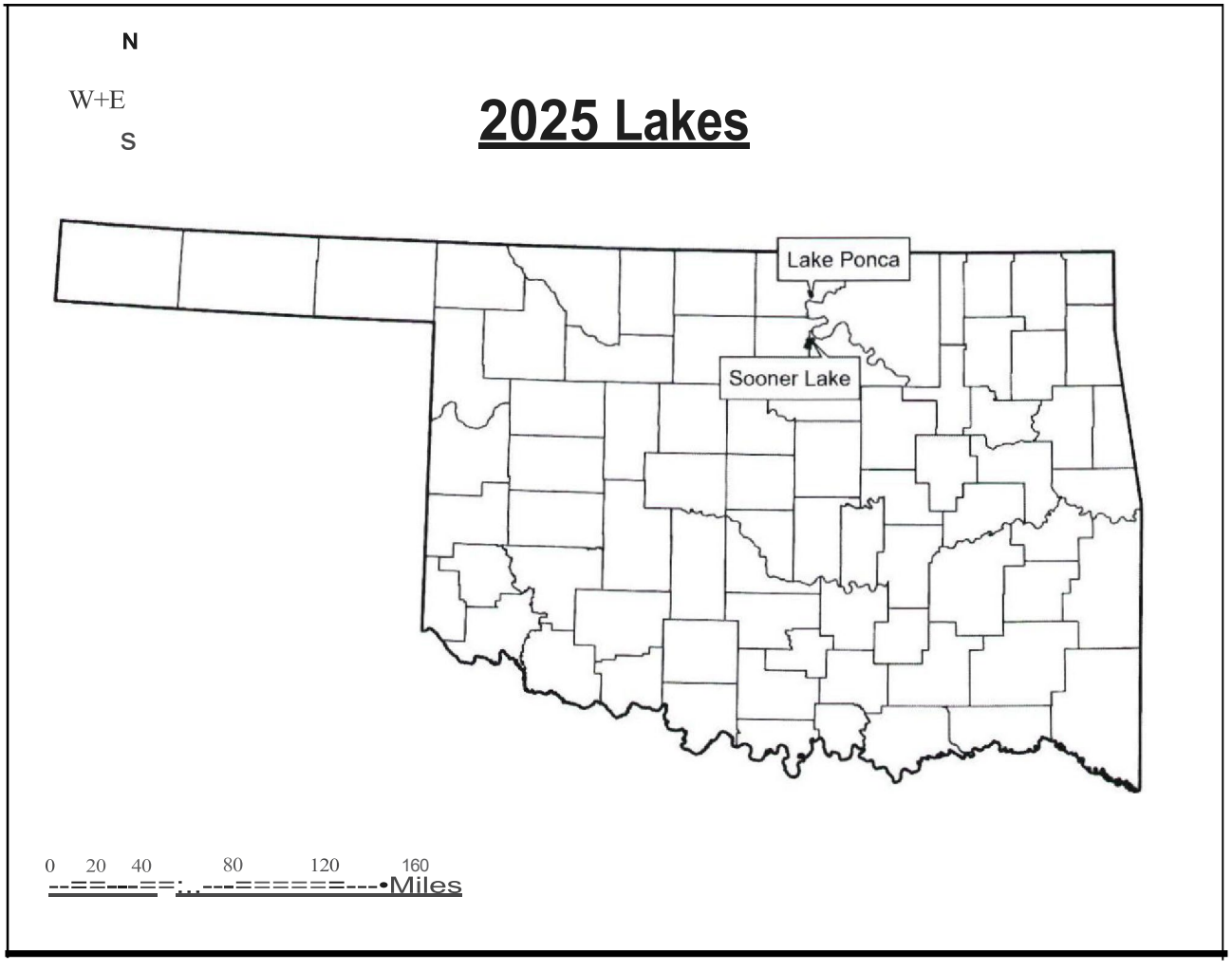


Figure 2: Location of FY25 Study Lakes



Signature: J//4Ue' cl,,c,.,wJ,e-r,-,

Email: julie.chambers@owrb.ok.gov

Signature: fJ;/t

Email: bill.cauthron@owrb.ok.gov

Signature:

Email: jessica.billingsley@owrb.ok.gov

Signature:
Anil on 19, 2025 12:36 CDT)

Email: anil.pillai@owrb.ok.gov

Signature:

Email: sara.gibson@

AGENDA ITEM 3D(4)

AMENDMENT OF CONTRACT

WITH:	Oklahoma Department of Environmental Quality
PURPOSE:	To provide renewal of term for SWS Lakes- Booker Lake and Watehrshet TMDL Monitoring
AMOUNT:	no cost
TERM:	July 1, 2025 through the fiscal year ending June 30, 2026.

CONTRACTS CHECKLIST

Before submitting a contract for inclusion in the Board agenda/packet, please complete the following and submit with the final agreement:

Initials

BC Draft approved by Division Chief

JB Jessica Billingsley: Contract amount has been budgeted

JF Jay Foote ~~Anil Pillai~~: All purchasing requirements have been satisfied

jc All other parties have agreed to the terms of the contract

jc Final copy is free of any track changes or other highlighting, etc.

Final draft approved by General Counsel

Contact Info for OWRB

Julie Chambers

julie.chambers@owrb.ok.gov

405-530-8932

Contact info for Contractor

Adriana Bustamante

andriana.bustamante@deq.ok.gov

405-702-8292

REMEMBER, any document that contains "terms" and requires a signature is considered a contract.

No contract will be added to the Board agenda/packet unless this checklist is complete. All tasks will need to be completed prior to the deadline for the draft agenda each month to be added to the agenda/packet.

Reference Number: 2929025719
Fiscal Year: FY26

Amendment of Contract

This Amendment of Contract is made on the 18th day of June, 202025, for the contract of SWS Lakes - Boomer Lake and Watershed TMDL Monitoring (FY24/25), **EPA Strategic Plan Goal 5:** Ensure Clean and Safe Water for All Communities and **EPA Strategic Plan Objective 5.2:** Protect and Restore Waterbodies and Watersheds previously executed between the State of Oklahoma, ex.rel. The Department of Environmental Quality hereinafter referred to as "Department" and/or DEQ and Oklahoma Water Resources Board (OWRB) hereinafter referred to as "Contractor". In consideration of the provisions set forth herein; the parties mutually agree to the following contracting parties to amend the following that was previously executed. The amendments are as follows:

This is a no cost contract renewal for FY26 July 1, 2025, through June 30, 2026.

All other terms and conditions that are not hereby amended are to remain in full force and effect.

In witness whereof, this Contract and Amendments is now consisting of six (6) pages has been executed and delivered effective as of the date first above written.

Electronic Signature page will replace this page if applicable.

State of Oklahoma **Oklahoma Water** **Resources Board** **3800 North Classen Boulevard** **Oklahoma City, Oklahoma, 73118**	**State of Oklahoma** **Oklahoma Department of** **Environmental Quality** **707 N. Robinson, P.O. Box 1677,** **Oklahoma City, Oklahoma, 73101-1677**
Signature of Authorized Representative	Signature of Authorized Representative
Printed Name of Authorized Representative	Printed Name of Authorized Representative
Title of Authorized Representative	Title of Authorized Representative

Amendment of Contract

This Amendment of Contract is made for the contract of SWS Lakes - Boomer Lake and Watershed TMDL Monitoring (FY24/25), ***EPA Strategic Plan Goal 5:*** *Ensure Clean and Safe Water for All Communities* ***EPA Strategic Plan Objective 5.2:*** *Protect and Restore Waterbodies and Watersheds,* previously executed between the State of Oklahoma, ex.rel. The Department of Environmental Quality hereinafter referred to as "Department" and/or DEQ and **Oklahoma Water Resources Board** hereinafter referred to as "Contractor". In consideration of the provisions set forth herein; the parties mutually agree to the following contracting parties to amend the following that was previously executed. The amendments are as follows:

The current contract term ends June 30th, 2024. This is a no cost contract renewal for the term July 1, 2024 through June 30th, 2025.

All other terms and conditions that are not hereby amended are to remain in full force and effect.

In witness whereof, this Contract and Amendments is now consisting of five (5) pages has been executed and delivered effective as of the date first above written.

Electronic Signature page will replace this page if applicable.

State of Oklahoma
Oklahoma Water Resources Board
3800 North Classen Boulevard
Oklahoma City, OK 73118

Jennifer Castillo
Signature of Authorized Representative

Jennifer Castillo
Printed Name of Authorized Representative

Chair
Title of Authorized Representative

OKLAHOMA WATER RESOURCES BOARD

State of Oklahoma
Oklahoma Department of Environmental Quality
707 N. Robinson, P.O. Box 1677,
Oklahoma City, Oklahoma, 73101-1677

Signature of Authorized Representative

Printed Name of Authorized Representative

Title of Authorized Representative

Project: 2 **Approved 10/2/23**

Agency: Oklahoma Department of Environmental Quality (DEQ)

Title: SWS Lakes - Boomer Lake and Watershed TMDL Monitoring (FY24/25)

EPA Strategic Plan Goal 5: Ensure Clean and Safe Water for All Communities
EPA Strategic Plan Objective 5.2: Protect and Restore Waterbodies and Watersheds

Table 1. Stations proposed for monitoring with their associated priority and cause codes.

No.	WBID	WATERBODY NAME	CAUSE
1	OK620900040190_00	Boomer Lake (3 sites and 1 bottom sample)	DO, Chlorophyll *a* and Turbidity
2	OK620900040180_00	Boomer Creek	WWAC (macroinvertebrates)
3	OK620900040180_00	Boomer Creek	WWAC (macroinvertebrates)

Problem Statement:

Boomer Lake, Oklahoma Waterbody ID (WBID) OK620900040190_00, is a 260-acre, hypereutrophic, urban lake located in the City of Stillwater, Oklahoma. Boomer Lake currently appears on the 303(d) list for several impairments including dissolved oxygen (DO), turbidity and chlorophyll *a*, (**Table 1**); however, these impairments have not been definitively documented therefore a Total Maximum Daily Load (TMDL) must be developed to further investigate these impairments.

The Oklahoma Water Resources Board (OWRB) in cooperation with the DEQ proposes to conduct monitoring on Boomer Lake and its watershed to verify water quality impairments in the lake and collect data for use in the TMDL development process.

Project Objectives:

The intent of this project is to collect water quality data to verify waterbody impairment and to support TMDL development for Boomer Lake. The data collection will be designed to assist in identifying the source(s) and extent of impairment to Boomer Lake. The specific objectives of the proposed sampling initiative are as follows:

- Establish if Boomer Lake is currently meeting its assigned beneficial uses, and
- Provide data for TMDL development in Boomer Lake; and
- Gather inflow, outflow, and elevation data; and
- Gather historical data (if available) to be used in Phase 1 of the TMDL process, and
- Gather watershed data to assist in TMDL development.

The specific waterbodies and associated cause codes (if existing) for which sampling is proposed are listed under Boomer Lake in **Table 1**. The OWRB proposes to monitor for all the causes listed for Boomer Lake. The DEQ State Environmental Laboratory will be utilized for all sample analysis. Oklahoma's Use Support Assessment Protocols (USAP) will be followed for the assessment of impairment status in both lake and streams. Furthermore, data will be analyzed to provide an estimate of nutrient and sediment loading to the lake, as well as a characterization of nutrient cycling and stressor-response relationships in the reservoir. Where USAPs do not exist, acceptable scientific methods will be followed to assess water quality. The methods to be utilized will be further explained in the Quality Assurance Project Plan (QAPP) for this project. A general description of monitoring efforts is included in **Task 2**. This monitoring plan is intended to be part of a multi-year effort.

Project Tasks:

Task 1. QAPP for all fieldwork and monitoring design

Before any data collection activities are undertaken, a Quality Assurance Project Plan will be written and submitted to EPA for approval

Task 2. Conduct Monitoring to Support TMDL Development

Streams listed in **Table 1** will be monitored monthly for total suspended solids, nutrients (phosphorus and nitrogen series), and general water quality variables (in-situ parameters and turbidity). To provide loading estimates for nutrients and sediments, five additional samples will be collected over the sampling period during targeted runoff events. Instantaneous discharge and stage will be measured during each site visit. Increased emphasis will be put on storm flow measurements to help fill in the higher flow regions of the rating curve. Stage will also be measured continuously by a telemetered stage recorder at all watershed monitoring locations. To aid in the collection of stormwater monitoring samples, all watershed sites will have a refrigerated auto-sampler installed in conjunction with the continuous stage recorder. Because turbidity is only assessable at base flow, additional turbidity samples may be taken to meet the data quality objective for completeness.

Boomer Lake will be monitored monthly for nutrients (phosphorus and nitrogen series) and general water quality variables (in-situ parameters). Turbidity samples will be collected at all sites during each sample event and suspended solids will also be collected to aid in verification of the turbidity listing and subsequent modeling for the reservoir. Three locations will be sampled to represent the lacustrine, transitional, and riverine zones of the lake. A bottom sample will be collected at the dam site to capture internal nutrient dynamics within the lake. In addition, chlorophyll-*a* samples will be collected at all sites during the sample period. A temperature string will be deployed to aid in determining lake stratification, mixing events, and its mictic nature in addition to evaluation of beneficial uses. HOBO® DO dataloggers will also be used to measure DO data at a finer temporal scale. A lake gauge will be installed to document lake elevation throughout the study period.

Task 3. Data Processing, Data Validation and Prepare Water Quality Data Report for Review

The OWRB will process, and quality assure all data according to the project's QAPP. Validated data will be used for analysis in the reporting process. A final water quality report will be provided for technical review by the TMDL Workgroup and EPA.

Measures of Success:
The overall measure of success for this project is to produce validated water quality data and final technical report needed to assess the impact of the pollutants of concern in Boomer Lake and support TMDL development. This includes the degree of impairment, as well as adequate data for allocation of the load to Boomer and assignment of load reductions within the watershed.

Outputs:

1. Project Monitoring Plan and QAPP
2. Water Quality Technical Report identifying:
    - Watershed description and characterization
    - Problem statement and conceptual model
    - Current waterbody condition
    - Magnitude and extent of impairment
    - Summary of pollutant sources and loadings
    - Data for model development, pollutant reduction scenarios, and waste load allocations

Project Management:
The DEQ will manage this project and will provide oversight for all project activities.

Project Duration:
TBD (30 months)

Project Milestones:

1. QAPP for all field work ..... September 30, 2024
2. Install Monitoring Equipment ..... September 30, 2024
3. Field monitoring and data Collection ..... October 1, 2026
4. Water Quality Data Report for technical review ..... April 30, 2027

Project Deliverables:

1. Annual Report ..... June 30, 2024
2. Semi-annual Report ..... December 31, 2024
3. AnnualReport ..... June 30, 2025
4. Semi-annual Report ..... December 31, 2025
5. Annual Report ..... June 30, 2026
6. Semi-annual Report ..... December 31, 2026
7. Final Report ..... June 30, 2026

F

Budget:

TOTAL $185,400

Resource Allocation

$92,700 FY 2024 Main Program, Contractual
$92,700 FY 2025 Main Program, Contractual

$185,400 Total Budget

Signature: Julie Chambers

Email: julie.chambers@owrb.ok.gov

Signature: Bill Cauthron

Email: bill.cauthron@owrb.ok.gov

Signature: Jessica Billingsley

Email: jessica.billingsley@owrb.ok.gov

Signature:

Email: anil.pillai@owrb.ok.gov

Signature:

Email: sara.gibson@owrb.ok.gov

AGENDA ITEM 3D(5)

SPONSORED RESEARCH AGREEMENT

WITH:	Board of Regents of the University of Oklahoma
PURPOSE:	Provide for the modernization and migration of OWRB Geospatial Resources
AMOUNT:	No cost
TERM:	July 1, 2025 through December 31, 2025

CONTRACTS CHECKLIST

Before submitting a contract for inclusion in the Board agenda/packet, please complete the following and submit with the final agreement:

Initials

JF Draft approved by Division Chief

Jessica Billingsley: Contract amount has been budgeted

AP Anil Pillai: All purchasing requirements have been satisfied

DS All other parties have agreed to the terms of the contract

DS Final copy is free of any track changes or other highlighting, etc.

SDG Final draft approved by General Counsel

Contact Info for OWRB	Contact info for Contractor
Derrick Stark GIS Manager	Todd Fagin, Ph.D.
3800 N Classen Blvd	3100 Monitor Ave, Two Partners Pl., Ste. 180
405-530-8864	405-325-9611

REMEMBER, any document that contains "terms" and requires a signature is considered a contract.

No contract will be added to the Board agenda/packet unless this checklist is complete. All tasks will need to be completed prior to the deadline for the draft agenda each month to be added to the agenda/packet.

Jay Foote

Jay Foote

Jessica Billingsley

Jessica Billingsley

Anil Pillai (Jun 11, 2025 14:49 CDT)

Anil Pillai

Sara Gibson

Signature: Derrick A. Stark

Email: derrick.stark@owrb.ok.gov

amendmentContractChecklist

Final Audit Report 2025-06-16

Created:	2025-06-11
By:	Derrick Stark (derrick.stark@owrb.ok.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAzLYnu95vsK8cayJjiPR-i6RjkLc0wWtM

"amendmentContractChecklist" History

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Agreement completed.
2025-06-16 - 8:02:18 PM GMT

Adobe Acrobat Sign

Amendment of Contract

This Amendment of Contract is made for the contract of **OU FY25-24-0457 Phase 4: Modernization and Migration of OWRB Geospatial Resources.** The **Board of Regents of the University of Oklahoma, a constitutional entity of the State of Oklahoma** (hereinafter referred to as "University") and the State of Oklahoma, **Water Resources Board** with principal offices at 3800 N. Classen Blvd., Oklahoma City, Oklahoma 73118 (hereinafter referred to as "Sponsor"). In consideration of the provisions set forth herein; the parties mutually agree to the following contracting parties to amend the following that was previously executed. The amendments are as follows:

The current contract term ends June 30th, 2025. This is a no cost contract renewal for the term July 1st, 2025, through December 31st, 2025.

All other terms and conditions that are not hereby amended are to remain in full force and effect.

In witness whereof, this Contract and Amendments is now consisting of 13 pages has been executed and delivered effective as of the date first above written.

Electronic Signature page will replace this page if applicable.

State of Oklahoma

Oklahoma Water Resources Board

_____

Signature of Authorized Representative

_____

Printed Name of Authorized Representative

_____

Title

_____

Date

_____

Oklahoma Water Resources Board Secretary

The Board of Regents of the University of Oklahoma

_____

Signature of Authorized Representative

Digitally signed by Michael Purcell
Date: 2025.05.29 10:30:58 -05'00'

Printed Name of Authorized Representative

Michael Purcell

Title

Executive Director, Office of Research Services,
Associate Vice President for Research and Partnerships

Date 5-29-2025

Read and Understood:

By: _____

Date: _____

SPONSORED RESEARCH AGREEMENT

FY25-24-0457-19

THIS AGREEMENT is entered into by and between the Board of Regents of the University of Oklahoma, a constitutional entity of the State of Oklahoma (hereinafter referred to as "University") and The State of Oklahoma, Water Resources Board with principal offices at 3800 N. Classen Blvd., Oklahoma City, Oklahoma 73118 (hereinafter referred to as "Sponsor").

WITNESSETH

WHEREAS, the research program contemplated by this Agreement is of mutual interest and benefit to University and to Sponsor, will further the instructional and research objectives of University in a manner consistent with its status as a public higher educational institution, and may derive benefits for both Sponsor and University through the advancement of knowledge through discovery and the creation of new technologies;

NOW, THEREFORE, in consideration of the mutual promises contained herein, the parties agree to the following:

SECTION 1. DEFINITIONS

1.1 "Invention" shall mean any invention, discovery, improvement, concept, product, or idea made during the Project whether or not patentable or copyrightable, including but not limited to processes, machines, methods, computer software, formulas, and know-how directly relating thereto. An Invention is "made during the Project" if it arises from work performed pursuant to the Project conducted under this Agreement and is made during the Period of Performance.

1.2 "Joint Invention" shall mean all Inventions conceived and/or made jointly by one or more employees of University and by one or more employees of Sponsor.

1.3 "Period of Performance" is the term of this Agreement as set forth in **Section 3** below, unless earlier terminated as provided for in **Section 5**.

1.4 "Project" shall mean the research project entitled "Phase 4: Modernization & Migration of OWRB Geospatial Resources" as described in **Appendix A**, under the direction of Dr. Todd Fagin, as Principal Investigator.

1.5 "Sponsor Invention" shall mean all Inventions conceived and/or made solely by one or more employees of Sponsor.

1.6 "University Invention" shall mean all Inventions conceived and/or made solely by one or more employees of University.

SECTION 2. RESEARCH WORK

2.1 University does not guarantee specific research results but will exercise good faith efforts to perform the Project substantially in accordance with the terms and conditions of this Agreement. Sponsor understands that University's primary mission is education and advancement of knowledge and consequently the Project will be designed to carry out that mission.

2.2 The manner of performance of the Project shall be determined solely by the Principal Investigator. In the event the Principal Investigator becomes unable or unwilling to continue the Project and a mutually acceptable substitute is not available, either party shall have the option to terminate the Project.

2.3 Sponsor agrees that, if funds are exhausted prior to completion of the research, University will, at the option of Sponsor, submit a final report of accomplishments or provide an estimate of additional funds required to complete the Project and will continue the research if such funds are provided by Sponsor.

2.4 Sponsor understands that University may be involved in similar research through the same or other researchers on behalf of itself and others. University shall be free to continue such research, and Sponsor shall not gain any rights *via* this Agreement to such other research.

2.5 The Principal Investigator shall furnish Sponsor periodic letter reports summarizing progress on the Project. The Principal Investigator shall prepare and submit, on behalf of University, a final report to the Sponsor within ninety (90) days of the termination of this Agreement.

2.6 As long as Principal Investigator is employed by University, it shall be conclusively presumed that any patentable invention conceived of and/or reduced to practice by such Principal Investigator was made in his/her/their capacity as an employee of University and shall be promptly disclosed to and exclusively owned by University regardless of the circumstances surrounding the conception and/or reduction to practice.

SECTION 3. PERIOD OF PERFORMANCE

3.1. The Period of Performance will be: January 1, 2024 through December 31, 2024.

SECTION 4. COSTS, BILLINGS AND OTHER SUPPORT

4.1 This is a cost reimbursable agreement. For the services, reports, and other items to be delivered hereunder, Sponsor shall pay University, in U.S. dollars, an amount not to exceed Eighty-Nine Thousand Five-Hundred Sixty-Five Dollars and zero cents ($**89,565.00**), payable to the University of Oklahoma and sent to the business/payment address in **Section 10**. University shall bill Sponsor monthly, on a cost reimbursable basis, at Sponsor's business address set forth in **Section 10**. Payment shall be due within thirty (30) days of receipt of invoice, with final invoice due ninety (90) days following termination of this Agreement.

4.2 The University agrees to incur expenses substantially in accordance with the cost estimate included in **Appendix B** ("Budget"), incorporated herein by reference. University reserves the right to re-budget funds as necessary for completion of the Project.

4.3 Pre-award costs to cover obligations and expenditures made up to ninety (90) days prior to the starting date of the period of performance in this Agreement will be allowed hereunder if also in accordance with the budget/estimate of costs included in **Appendix B**.

4.4 University shall retain title to any equipment purchased with funds provided by Sponsor under this Agreement. Title to equipment furnished by Sponsor to University, if any, shall remain with the Sponsor. The costs of transporting, installing and servicing any equipment used herein, whether the property of University or Sponsor, shall be allowable under this Agreement.

4.5 University shall maintain relevant accounting records in a central location sufficient to enable Sponsor to determine whether University has properly expended Sponsor funds. Sponsor may examine the records upon reasonable, prior written notice sent to the University business address.

SECTION 5. TERMINATION

5.1 Either party may terminate this Agreement at any time by giving not less than sixty (60) days prior written notice to the other party. In the event of early termination, University shall take all reasonable steps to minimize termination costs. Provided, notwithstanding anything in this Agreement to the contrary, in the event of early termination, Sponsor shall pay all costs and noncancellable obligations incurred by University as of the date of termination. Noncancellable obligations may include, without limitation, compensation for Project personnel through the end of their contract term.

5.2 In the event that either party shall commit any breach of or default in any of the terms or conditions of this Agreement, and also shall fail to remedy the default or breach within thirty (30) days after receipt of written notice thereof from the other party, the party giving notice may, at its option and in addition to any other remedies which it may have at law or in equity, terminate this Agreement by sending written notice of termination in accordance with **Section 10** to the defaulting party and the termination shall be effective as of the date of the receipt of the notice.

5.3 The performance by either Party hereunder shall be excused to the extent of unforeseen circumstances beyond such Party's reasonable control, including, but not limited to: National Weather Service forecasted weather events, hurricanes, tsunami, floods, ice storms, lightning, landslide or similarly cataclysmic occurrence, or other acts of God; extended power outages; epidemics, pandemics, or related outbreaks if declared by the World Health Organization or federal government; county, state, or national declaration(s) of emergency as issued by an authorized government entity; war. acts of terrorism, or acts of public enemies; sabotage, riots or civil disturbances; or material destruction of facilities. In such event, the Parties shall be excused from performing an obligation or undertaking provided for in this Agreement, and the period for the performance of any such obligation or undertaking shall be extended for a period equivalent to the period of actual delay; provided, however, if performance is not restored within one hundred and twenty (120) days, either Party may terminate this Agreement.

5.4 Termination of this Agreement by either party for any reason shall not affect the rights and obligations of the parties accrued prior to the effective date of termination of this Agreement, except insofar as Sponsor's breach of contract for failure to make payments under **Section 4** shall cause Sponsor to forfeit its rights under **Section 8**. The rights and duties of **Sections 6, 8, 9** and **Paragraph 11.10** of this Agreement shall survive termination.

SECTION 6. PUBLICITY

Neither party to this Agreement may use the name or mark of the other nor the name(s) of the other's employees in news releases, publicity, advertising, or product promotion without the prior written permission of the other.

SECTION 7. PUBLICATION

Subject to confidentiality provisions, University shall have the right at its discretion to release non-proprietary information or to publish any material resulting from the Project. University will furnish a copy of any proposed publication to Sponsor for its review at least thirty (30) days in advance of submission for publication. Publication of specific results may be delayed for a limited period, not to exceed sixty (60) days, to obtain any intellectual property protection and remove Sponsor Proprietary Information contained in the publication. Sponsor agrees to limit disclosure of such copies to its employees solely for the purposes of review and comment unless otherwise agreed in writing by University. No unreasonable delay shall be imposed on the filing, defense or publication of any student thesis or dissertation. University shall give Sponsor the option of being acknowledged in such publication for its sponsorship of the Project.

SECTION 8. INTELLECTUAL PROPERTY

8.1 Any University Invention shall belong to University and any Sponsor Invention shall belong to Sponsor; provided however, University is hereby granted a royalty-free, nonexclusive and nontransferable right and license to Sponsor Inventions for non-commercial, educational and research purposes. Any Joint Invention shall belong to University and Sponsor, jointly.

8.2 University will provide Sponsor with a written disclosure of any University Invention or Joint Invention promptly upon its being reported to the University by the Principal Investigator. Sponsor will provide University with a written disclosure of any Sponsor Invention or Joint Invention promptly upon its being reported to Sponsor by a Sponsor investigator. Sponsor shall execute a non-disclosure agreement covering Inventions, as may be required by the University.

8.3 University hereby grants to Sponsor a non-exclusive, royalty-free license to use any University Invention in connection with Sponsor's field of commercial interest, subject to all of the following conditions and qualifications: (a) the license herein described applies to any University Invention only to the extent to which said Invention was actually and formally disclosed to University, (b) Sponsor does not license University Invention to third party(-ies), and (c) Invention is not embodied in any product or services sold or provided by Sponsor, or Sponsor's affiliates, in any manner.

8.4 University here by grants to Sponsor an option to negotiate an exclusive license (to the extent University may be free to do so) to a University Invention and/or University rights in a Joint Invention subject to requirements that:

(a) Sponsor shall exercise its option to negotiate the exclusive license agreement for any such Invention(s), in writing, within sixty (60) days of disclosure of the Invention to Sponsor by University.

(b) Sponsor and University shall negotiate the terms and conditions of the license in good faith for a period that shall not exceed one hundred twenty (120) days from Sponsor's notice of intent to exercise said option, or such other period of time agreeable to both parties.

(c) In the event that Sponsor and University fail to enter into an agreement during that one hundred twenty (120) day period of time, the University shall have the right to dispose of the University Invention, at its sole and exclusive discretion with no further obligation to Sponsor.

8.5 The parties recognize that inventions, improvements, discoveries, copyrightable works, or other proprietary information may arise from research sponsored in whole or in part by governmental agencies. The parties agree that any such development shall be governed by the provisions of applicable law and subject to the reservation of the rights of the Government of the United States of America, as set forth in 37 CFR 401 and the Patent and Trademark Law Amendments Act of 1980 (Bayh-Dole Act).

SECTION 9. CONFIDENTIALITY

9.1 Any and all knowledge, proprietary information, know-how, practices, processes, or other information (hereinafter referred to as "Confidential Information") disclosed or submitted in writing or in other tangible form which is marked "Confidential Information" to either party by the other shall be submitted to the designated technical representative identified in Section 10 and maintained by the receiving party in strict confidence and shall not be disclosed to any third party. Furthermore, neither party shall use Confidential Information for any purpose other than those purposes specified in this Agreement. The parties may disclose Confidential Information to employees requiring access for the purposes of this Agreement; provided, however, that prior to making any such disclosure the employee shall be apprised of the duty to maintain Confidential Information in confidence and not to use such information for any purpose other than in accordance with the terms and conditions of this Agreement.

9.2 Each party shall use reasonable efforts to prevent the disclosure of any of the other party's Confidential Information to third parties for a period of three (3) years from receipt thereof, provided that the receiving party's obligation hereunder shall not apply to information that:

a. is generally available to the public, or thereafter becomes available to the public through no act of the receiving party, or

b. is documented to be independently known prior to receipt thereof, or is made available to the receiving party as a matter of lawful right by a third party, or

c. is required by law to be released; provided, however, that prior to any such release, the other party will be notified so that it may take protective measures if it deems necessary, or

d. is independently developed by an employee of receiving party that has not had access directly or indirectly to the Confidential Information, which claim is corroborated by written evidence.

SECTION 10. NOTICES

Notices, invoices, communications and payments shall be submitted to the offices identified below. All legal notices must be sent by personal delivery or certified mail, return receipt requested. All other contractual notices and communications hereunder shall be deemed made as of the date of mailing if given by overnight courier service or by registered, certified or first class mail, postage prepaid, and addressed to the party to receive such notice or communication at the address(es) given below, or such other address as may hereafter be designated by notice in writing.

If to Sponsor (Business/Invoices):	
Name: Address: City, State, ZIP Code: Phone/Fax: e-mail:	Anil Pillai, CPO | Accountant 3800 North Classen Blvd. Oklahoma City, OK 73118 (405) 530-8872 Anil.Pillai@owrb.ok.gov

If to Sponsor (Technical):	
Name: Address: City, State, ZIP Code: Phone/Fax: e-mail:	Derrick Stark | GIS Manager 3800 North Classen Blvd. Oklahoma City, OK 73118 (405) 530-8864 Derrick.Stark@owrb.ok.gov

If to University (Legal):	
Name: Address: City, State, ZIP Code:	The Executive Secretary of the Board of Regents of the University of Oklahoma 660 Parrington Oval, Room 119 Norman, OK 730191

If to University (Business/Payment):	
Name: Address: City, State, ZIP Code: Phone/Fax: e-mail:	Don Smith Research Financial Services University of Oklahoma 201 Stephenson Pkwy., Five Partners Place, Ste. 3100 Norman, OK 73019-5833 (405) 325-4979 Donald.E.Smith-1@ou.edu

If to University (Business/Contract Terms):	
Name: Address: City, State, ZIP Code: Phone/Fax: e-mail:	Joe Johnson Office of Research Services University of Oklahoma 201 Stephenson Pkwy., Five Partners Place, Ste. 3100 Norman, OK 73019-5833 (405) 325-4757 joej@ou.edu

If to University (Technical):	
Name: Address: City, State, ZIP Code: Phone : e-mail:	Todd Fagin, Ph.D. 3100 Monitor Ave, Two Partners Place, Suite 180 Norman, OK 73019 (405) 325-9611 Tfagin@ou.edu

SECTION 11. GENERAL TERMS AND CONDITIONS

11.1 This Agreement may not be assigned by either party in whole or in part without the prior written permission of the other party.

11.2 This agreement shall be governed by the laws of the state of Oklahoma, without giving force and effect to its choice of law provisions. Any legal action in connection with this agreement shall be filed in a state court of competent jurisdiction in the state of Oklahoma, to which jurisdiction and venue Sponsor expressly agrees.

11.3 Should the parties to this Agreement be unable to resolve between themselves any dispute arising from any of the provisions within this Agreement, each party shall have recourse under the law.

11.4 If any provision(s) of this Agreement shall be held invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

11.5 This Agreement constitutes the entire agreement and understanding between the parties and supersedes all prior and/or contemporaneous discussions, representations, or agreements, whether written or oral, of the parties relating to the work to be performed. This Agreement may be extended, renewed or otherwise amended at any time by the mutual written agreement of the parties.

11.6 This Agreement may be executed in several counterparts, each of which shall be deemed the original, but all of which shall constitute one and the same instrument. This Agreement may be executed using electronic or digital signatures, which shall have the same force and effect as a manual signature.

11.7 The parties agree that this Agreement shall be binding upon their respective successors, assigns or transferees of any nature, if assignment and/or transfer is permitted in accordance with the terms of this Agreement.

11.8 Sponsor agrees that it shall comply with the export control laws and regulations, embargoes and sanctions. Each party agrees that in the event that export controlled information/technology is disclosed, disclosing party shall provide receiving party with sufficient and appropriate information including Export Control Classification Numbers (ECCNs) and/or the Munitions List categories to allow receiving party to properly comply with the export controls regulations. Sponsor maintains an export management system adequate to ensure compliance. Sponsor agrees that it will comply with all other applicable laws, orders and regulations relating to the use and/or transfer of deliverables specified in **Appendix A** and that it will not at any time take any action which would cause University to be in violation of any such laws, orders and regulations.

11.9 In the performance of all services hereunder, the parties shall be deemed to be and shall be independent contractors and, as such, neither shall be entitled to any benefits applicable to employees of the other. Neither party is authorized or empowered to act for the other for any purpose and shall not on behalf of the other enter into any contract, warranty, and/or representation as to any matter. Neither shall be bound by the acts or conduct of the other.

11.10 Sponsor shall indemnify, defend, and hold University, its Regents, officers, agents, students, and employees harmless from and against liability for any and all claims, demands, damages, liabilities, fines, penalties, losses, expenses, costs, and fees of any nature (e.g., attorneys' fees) including, but not limited to, bodily injury, death, personal injury, illness, product liability, and property damage arising from Sponsor's use of information or materials received from University, by Sponsor or its officers, servants, agents, or of any third party acting on behalf of or under authorization from Sponsor including without limitation, use of products, developed or made arising out of or in connection with this Agreement **to the extent allowed by Oklahoma law**. University will give Sponsor notice of any claim it receives within ten (10) business days of receipt of a claim by University.

11.11 University agrees to be responsible for its own negligent acts and omissions and those of its employees and agents in accordance with the Oklahoma Governmental Tort Claims Act, 51 O.S. 1991 151, *et seq*., as amended.

11.12 As applicable, the provisions of Executive Order 11246, as amended by Executive Order No. 11375, Executive Order No. 11141, Executive Order No. 13665 and as supplemented in Department of Labor regulations (41 CFR Part 60-1.4(a), 60-300.5(a) and 60-741.5(a) et. seq.), are incorporated into this Agreement and must be included in any subcontracts awarded involving this Agreement. The parties represent that all services are provided without discrimination on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, national origin, disability, political beliefs, or veteran's status; they do not maintain nor provide for their employees any segregated facilities, nor will the parties permit their employees to perform their services at any location where segregated facilities are maintained. In addition, the parties agree to comply with the applicable provisions of Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. § 701, and the Vietnam Era Veteran's Readjustment Assistance Act of 1974, 38 U.S.C. § 4212.

11.13 The terms of this Agreement shall not be binding upon either of the parties hereto until it has been properly executed on behalf of each party to the Agreement in the spaces provided below. It is then effective as of the starting date of the period of performance.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives on the dates set forth below.

State of Oklahoma, Water Resources Board

BY: Jennifer Castillo

TITLE: Chair

DATE: Jan. 16, 2024

THE BOARD OF REGENTS OF THE UNIVERSITY OF OKLAHOMA

Digitally signed by Michael Purcell
Date: 2023.12.13 10:54:40 -06'00'

BY: Michael Purcell

TITLE: Executive Director, Office of Research Services, Associate Vice President for Research and Partnerships

DATE: 12-13-2023

READ AND UNDERSTOOD:

BY: Todd Fagin

DATE: 11/15/2023

Todd Fagin

Principal Investigator:

Oklahoma Water Resources Board Secretary

Robert L. Stallings, Jr., acting Secretary

OKLAHOMA WATER RESOURCES BOARD



APPENDIX A

Scope of Work

Oklahoma Water Resources Board

Phase 4: Modernization and Migration of OWRB Geospatial Resources

SUBMITTED TO

Derrick Stark
GIS Manager, OWRB

Oklahoma Water Resources Board
3800 North Classen Blvd
Oklahoma City, OK 73118

SUBMITTED BY

Todd Fagin, Executive Associate Director
Center for Spatial Analysis
The University of Oklahoma
Two Partners Place
3100 Monitor Ave. Suite 180
Norman, OK 73019

November 2023

Overview

The Oklahoma Water Resources Board (OWRB) manages both spatial and non-spatial datasets critical to its mission. Currently, the hosting of these resources is spread across several entities, including the Office of Management and Enterprise Services (OMES) and the Center for Spatial Analysis (CSA). Recently, OWRB encountered internal data access restrictions caused by issues with connecting to CSA-hosted resources that were located on OMES managed networks. CSA, OWRB, and OMES resolved these issues, however potential for further disruptions remains likely. For instance, at present, compatibility issues exist between Relational Database Management System (RDBMS) versions and GIS server versions. Specifically, the OWRB internal RBDMS limits the ArcGIS Server/Portal (Portal) version OWRB can run. OWRB currently uses an Oracle 11.2.01 (Oracle) RBDMS as a datastore for both its spatial and nonspatial data, limiting the Portal to version 10.6.1 (current release is 11.1). Therefore, OWRB must update its RDBMS version along with updating its Portal.

Upon discussion with key personnel at OWRB, CSA has proposed migrating select spatial OMES-hosted datasets (data) in its Oracle RDBMS to a CSA-hosted and Spatial Database Engine (SDE)-enabled PostgreSQL15 RDBMS. This will enable CSA to upgrade OWRB's Portal to 11.1. However, this will require first updating ArcGIS Server to 10.9 then to 11.1. Upon completion of the updates, CSA will migrate the data from Oracle to the PostgreSQL 15 RDBMS (PostgreSQL) following one of two proposed workflows, and noting that the method of data transfer is contingent upon data compatibility between Oracle and PostgreSQL. The first workflow involves the use of tools, such as Ora2pg, that extract, translate, and load (ETL) Oracle databases to PostgreSQL. However, CSA has not tested this with SDE databases, therefore an alternative workflow is direct geodatabase copies from Oracle to PostgreSQL via client software, such as ArcGIS Pro.

Goals of Phase IV

1. Establish whether data access between CSA and OMES remains necessary for any data that will continue to be hosted by OMES;
2. Update OWRB's GIS data stores to Postgres 15 and GIS server to ArcGIS Server to 10.9 then 11.1;
3. Migrate OWRB Portal content from 10.6.1 to 10.9 and, then, 11.1;
4. Update the data stores in Portal to ensure it is consuming data from the PostgreSQL server. CSA will complete all necessary upgrades concurrent with OWRB's current operations, ensuring no disruptions in critical services. Further, CSA will maintain the ArcGIS Server 10.6.1 until OWRB approves the final migration to the new resources.

Scope of Work

1. Update the ArcGIS Server and Portal instances to the latest version.
    a. Continue to support such upgrades as they become available under the current hosting agreement, while ensuring continuity of workflow.
2. Deploy a PostgreSQL RDBMS instance compatible with the latest ArcGIS Server and Portal instances.
3. Copy existing OWRB content from Oracle to the PostgreSQL instance identified in consensus between OWRB and CSA..
4. Evaluate and Discuss with OWRB any traceback, error message, error condition or intuition raised by execution of the existing OWRB data update scripting
5. Ensure all existing content (web maps, feature services, etc.) in the updated Portal for ArcGIS is consuming data from the PostgreSQL database (update data stores).

6. Continue to maintain old instances of ArcGIS Server and Portal for ArcGIS until the new system is fully operational.

Budget Justification

Todd Fagin, CSA executive associate director, will serve as a co-project lead on the project at 10.4 hours. He will assist all project tasks, including project management. Kelby Thomasson, GIS Systems Administrator, will take the lead on database configuration and migration. He will also provide IT support and set up new servers, database instance, ArcGIS Server, and Portal for ArcGIS Portal and assist in all aspects of data migration, at an estimated 780 hours. Daniela Spade, GIS Application and Outreach Coordinator, will work closely with both Kelby Thomasson in database and server configuration and data migration, at an estimated 780 hours. Jim Anderson, GIS Architect and Data Analyst, will provide technical support as needed at 80.6 hours. Leah Nash, Associate Director of Administration and Finance will administer the budget and assist in troubleshooting at 10.4 hours.

Todd Fagin
Hourly rate w/fringe: $56.48

Kelby Thomasson
Hourly rate w/fringe: $40.84

Daniela Spade
Hourly rate w/fringe: $44.19

Jim Anderson
Hourly rate w/fringe: $45.94

Leah Nash
Hourly rate w/fringe $44.23

APPENDIX B

UNIVERSITY of OKLAHOMA BUDGET
Budget Period 1

1/1/2024 to 12/31/2024

See notes at bottom of spreadsheet

A. SENIOR PERSONNEL	(Sel) Appt Mos					SALARY	SPONSOR REQUEST	OU COST SHARE	TOTAL	Salary Requested	Fringe Benefits	Total
1. Principal Investigator	12	0.50%	FTE	x	12 academic mos.	$87,673	$438		$438	$438	$149	$587
Todd Fagin			FTE	x	summer mos.	$87,673						
2. Co-Principal Investigator	12	37.50%	FTE	x	12 academic mos.	$63,400	$23,775		$23,775	$23,775	$8,084	$31,859
Kelby Thompson			FTE	x	summer mos.	$63,400						
3. Co-Principal Investigator	12	37.50%	FTE	x	12 academic mos.	$68,538	$25,728		$25,728	$25,728	$8,748	$34,476
Daniela Sosa			FTE	x	summer mos.	$68,538						
4. Co-Principal Investigator	12	0.50%	FTE	x	12 academic mos.	$68,662	$343		$343	$343	$117	$460
Leah Neef			FTE	x	summer mos.	$68,662						
5. Co-Principal Investigator	12		FTE	x	academic mos.							
			FTE	x	summer mos.							
TOTAL SENIOR PERSONNEL		Fringe Rate	34.00%		TOTAL	$60,284			$60,284	$60,284	$17,098	$67,382
B. OTHER PERSONNEL					Fringe Rate							
1 ( ) POST DOCTORAL ASSOCIATES					19.13%							
2 (1) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)					34.00%	$2,762			$2,762	$2,762	$939	$3,701
3 ( ) PROJECT SECRETARIAL/CLERICAL (restricted use - see POE)					34.00%							
4 ( ) GRADUATE STUDENTS	# MONTHS APPT				11.27%							
5 ( ) UNDERGRADUATE STUDENTS	# MONTHS APPT				0.35%							
6 ( ) OTHER					34.00%							
TOTAL SALARIES AND WAGES (A+B)						$53,046			$53,046	$53,046	$18,037	$71,083
C. FRINGE BENEFITS	(If temp employee or other FB rate needed contact POE)					$18,037			$18,037			
TOTAL SALARIES WAGES AND FRINGE BENEFITS (A+B+C)						$71,083			$71,083			

D. PERMANENT EQUIPMENT ($5,000 PER UNIT OR FABRICATED AND RETAINED BY OU AT LEAST 1 YEAR)*

Item	Cost	Item	Cost

TOTAL PERMANENT EQUIPMENT

E. TRAVEL Domestic ____ Foreign ____

Use federal/state rates. Detail travel costs in budget justification — TOTAL TRAVEL

F. PARTICIPANT SUPPORT COSTS (used only by NSF and some DoED)

(NON-EMPLOYEE CONFERENCE/WORKSHOP ATTENDEES)

1 STIPENDS — 3 SUBSISTENCE
2 TRAVEL — 4 OTHER
( ) Number of Participants — TOTAL PARTICIPANT SUPPORT

G. OTHER DIRECT COSTS

1 MATERIALS AND SUPPLIES

Item	Cost	Item	Cost

TOTAL MATERIALS & SUPPLIES

2 PUBLICATION COSTS/DOCUMENTATION DISSEMINATION
3 CONSULTANT SERVICES — PROVIDE DAILY RATE AND NUMBER OF DAYS IN JUSTIFICATION
4 COMPUTER (ADPE) SERVICES
5 SUBCONTRACTS * — AMOUNT FOR IDC CALCULATION $ -
6 TUITION FEE — To determine the total number of GRA months for more than one appointment add all months, for example one GRA appointed at 12 mos. plus one at 5 mos. = 16 months total. Partial month + full month (example 4.5 months + 5 months)
Total number of GRA months
7 SHIPPING COSTS (Shipping for materials, supplies, equipment, etc.)
8 INCENTIVES (Any allocation to study participants, focus groups,etc.)
9 OTHER

Item	Cost	Item	Cost

TOTAL OTHE
TOTAL OTHER DIRECT COSTS (G1 - 7)
Subtotal Direct Costs
If ARRC or LASI Fees should be included, make selection on Info tab.

H. TOTAL DIRECT COSTS (A THROUGH G)		$71,083		$71,083
I. INDIRECT COSTS:	MTDC Base = $71,083			
26.00%	TDC Base = N/A	$18,482		$18,482
J. TOTAL COSTS - PERIOD ONE		$89,565		$89,565
Third Party Costshare	Organization #1:			
	Organization #2:			
	TOTAL	$89,565		$89,565

NIH ONLY
Modular Amount = N/A
Total Direct Costs less IDC on subs

Gray shaded areas do not calculate-DO NOT USE
Yellow shaded areas to the right show salary related info in regards to sponsor request (no cost share)

* **Permanent Equipment:** Equipment, including fabricated equipment, that is not retained by OU does not qualify as permanent equipment. These items should be listed under materials and supplies and IDC will be charged on them.

Need more than 5 Senior Personnel? Select Rows 14 & 55, right-click, and select unhide.

Need more Budget Periods? Right-click on the "Cumulative" tab, select "Unhide", and select the budget period you wish to unhide. Repeat this process for each budget period you wish to unhide.

Does your project includes Intellectual Property? Please work with the Office of Technology Commercialization and include any

Amendment of Contract

This Amendment of Contract is made for the contract of **OU FY25-24-0457 Phase 4: Modernization and Migration of OWRB Geospatial Resources.** The **Board of Regents of the University of Oklahoma, a constitutional entity of the State of Oklahoma** (hereinafter referred to as "University") and the State of Oklahoma, **Water Resources Board** with principal offices at 3800 N. Classen Blvd., Oklahoma City, Oklahoma 73118 (hereinafter referred to as "Sponsor"). In consideration of the provisions set forth herein; the parties mutually agree to the following contracting parties to amend the following that was previously executed. The amendments are as follows:

The current contract term ends June 30th, 2025. This is a no cost contract renewal for the term July 1st, 2025, through December 31st, 2025.

All other terms and conditions that are not hereby amended are to remain in full force and effect.

In witness whereof, this Contract and Amendments is now consisting of 13 pages has been executed and delivered effective as of the date first above written.

Electronic Signature page will replace this page if applicable.

State of Oklahoma

Oklahoma Water Resources Board

_____

Signature of Authorized Representative

_____

Printed Name of Authorized Representative

_____

Title

_____

Date

_____

Oklahoma Water Resources Board Secretary

The Board of Regents of the University of Oklahoma

_____

Signature of Authorized Representative

Digitally signed by Michael Purcell
Date: 2025.05.29 10:30:58 -05'00'

Printed Name of Authorized Representative

Michael Purcell

Title

Executive Director, Office of Research Services,
Associate Vice President for Research and Partnerships

Date 5-29-2025

Read and Understood:

By: _____

Date: _____

SPONSORED RESEARCH AGREEMENT

FY25-24-0457-19

THIS AGREEMENT is entered into by and between the Board of Regents of the University of Oklahoma, a constitutional entity of the State of Oklahoma (hereinafter referred to as "University") and The State of Oklahoma, Water Resources Board with principal offices at 3800 N. Classen Blvd., Oklahoma City, Oklahoma 73118 (hereinafter referred to as "Sponsor").

WITNESSETH

WHEREAS, the research program contemplated by this Agreement is of mutual interest and benefit to University and to Sponsor, will further the instructional and research objectives of University in a manner consistent with its status as a public higher educational institution, and may derive benefits for both Sponsor and University through the advancement of knowledge through discovery and the creation of new technologies;

NOW, THEREFORE, in consideration of the mutual promises contained herein, the parties agree to the following:

SECTION 1. DEFINITIONS

1.1 "Invention" shall mean any invention, discovery, improvement, concept, product, or idea made during the Project whether or not patentable or copyrightable, including but not limited to processes, machines, methods, computer software, formulas, and know-how directly relating thereto. An Invention is "made during the Project" if it arises from work performed pursuant to the Project conducted under this Agreement and is made during the Period of Performance.

1.2 "Joint Invention" shall mean all Inventions conceived and/or made jointly by one or more employees of University and by one or more employees of Sponsor.

1.3 "Period of Performance" is the term of this Agreement as set forth in **Section 3** below, unless earlier terminated as provided for in **Section 5**.

1.4 "Project" shall mean the research project entitled "Phase 4: Modernization & Migration of OWRB Geospatial Resources" as described in **Appendix A**, under the direction of Dr. Todd Fagin, as Principal Investigator.

1.5 "Sponsor Invention" shall mean all Inventions conceived and/or made solely by one or more employees of Sponsor.

1.6 "University Invention" shall mean all Inventions conceived and/or made solely by one or more employees of University.

SECTION 2. RESEARCH WORK

2.1 University does not guarantee specific research results but will exercise good faith efforts to perform the Project substantially in accordance with the terms and conditions of this Agreement. Sponsor understands that University's primary mission is education and advancement of knowledge and consequently the Project will be designed to carry out that mission.

2.2 The manner of performance of the Project shall be determined solely by the Principal Investigator. In the event the Principal Investigator becomes unable or unwilling to continue the Project and a mutually acceptable substitute is not available, either party shall have the option to terminate the Project.

2.3 Sponsor agrees that, if funds are exhausted prior to completion of the research, University will, at the option of Sponsor, submit a final report of accomplishments or provide an estimate of additional funds required to complete the Project and will continue the research if such funds are provided by Sponsor.

2.4 Sponsor understands that University may be involved in similar research through the same or other researchers on behalf of itself and others. University shall be free to continue such research, and Sponsor shall not gain any rights *via* this Agreement to such other research.

2.5 The Principal Investigator shall furnish Sponsor periodic letter reports summarizing progress on the Project. The Principal Investigator shall prepare and submit, on behalf of University, a final report to the Sponsor within ninety (90) days of the termination of this Agreement.

2.6 As long as Principal Investigator is employed by University, it shall be conclusively presumed that any patentable invention conceived of and/or reduced to practice by such Principal Investigator was made in his/her/their capacity as an employee of University and shall be promptly disclosed to and exclusively owned by University regardless of the circumstances surrounding the conception and/or reduction to practice.

SECTION 3. PERIOD OF PERFORMANCE

3.1. The Period of Performance will be: January 1, 2024 through December 31, 2024.

SECTION 4. COSTS, BILLINGS AND OTHER SUPPORT

4.1 This is a cost reimbursable agreement. For the services, reports, and other items to be delivered hereunder, Sponsor shall pay University, in U.S. dollars, an amount not to exceed Eighty-Nine Thousand Five-Hundred Sixty-Five Dollars and zero cents ($**89,565.00**), payable to the University of Oklahoma and sent to the business/payment address in **Section 10**. University shall bill Sponsor monthly, on a cost reimbursable basis, at Sponsor's business address set forth in **Section 10**. Payment shall be due within thirty (30) days of receipt of invoice, with final invoice due ninety (90) days following termination of this Agreement.

4.2 The University agrees to incur expenses substantially in accordance with the cost estimate included in **Appendix B** ("Budget"), incorporated herein by reference. University reserves the right to re-budget funds as necessary for completion of the Project.

4.3 Pre-award costs to cover obligations and expenditures made up to ninety (90) days prior to the starting date of the period of performance in this Agreement will be allowed hereunder if also in accordance with the budget/estimate of costs included in **Appendix B**.

4.4 University shall retain title to any equipment purchased with funds provided by Sponsor under this Agreement. Title to equipment furnished by Sponsor to University, if any, shall remain with the Sponsor. The costs of transporting, installing and servicing any equipment used herein, whether the property of University or Sponsor, shall be allowable under this Agreement.

4.5 University shall maintain relevant accounting records in a central location sufficient to enable Sponsor to determine whether University has properly expended Sponsor funds. Sponsor may examine the records upon reasonable, prior written notice sent to the University business address.

SECTION 5. TERMINATION

5.1 Either party may terminate this Agreement at any time by giving not less than sixty (60) days prior written notice to the other party. In the event of early termination, University shall take all reasonable steps to minimize termination costs. Provided, notwithstanding anything in this Agreement to the contrary, in the event of early termination, Sponsor shall pay all costs and noncancellable obligations incurred by University as of the date of termination. Noncancellable obligations may include, without limitation, compensation for Project personnel through the end of their contract term.

5.2 In the event that either party shall commit any breach of or default in any of the terms or conditions of this Agreement, and also shall fail to remedy the default or breach within thirty (30) days after receipt of written notice thereof from the other party, the party giving notice may, at its option and in addition to any other remedies which it may have at law or in equity, terminate this Agreement by sending written notice of termination in accordance with **Section 10** to the defaulting party and the termination shall be effective as of the date of the receipt of the notice.

5.3 The performance by either Party hereunder shall be excused to the extent of unforeseen circumstances beyond such Party's reasonable control, including, but not limited to: National Weather Service forecasted weather events, hurricanes, tsunami, floods, ice storms, lightning, landslide or similarly cataclysmic occurrence, or other acts of God; extended power outages; epidemics, pandemics, or related outbreaks if declared by the World Health Organization or federal government; county, state, or national declaration(s) of emergency as issued by an authorized government entity; war. acts of terrorism, or acts of public enemies; sabotage, riots or civil disturbances; or material destruction of facilities. In such event, the Parties shall be excused from performing an obligation or undertaking provided for in this Agreement, and the period for the performance of any such obligation or undertaking shall be extended for a period equivalent to the period of actual delay; provided, however, if performance is not restored within one hundred and twenty (120) days, either Party may terminate this Agreement.

5.4 Termination of this Agreement by either party for any reason shall not affect the rights and obligations of the parties accrued prior to the effective date of termination of this Agreement, except insofar as Sponsor's breach of contract for failure to make payments under **Section 4** shall cause Sponsor to forfeit its rights under **Section 8**. The rights and duties of **Sections 6, 8, 9** and **Paragraph 11.10** of this Agreement shall survive termination.

SECTION 6. PUBLICITY

Neither party to this Agreement may use the name or mark of the other nor the name(s) of the other's employees in news releases, publicity, advertising, or product promotion without the prior written permission of the other.

SECTION 7. PUBLICATION

Subject to confidentiality provisions, University shall have the right at its discretion to release non-proprietary information or to publish any material resulting from the Project. University will furnish a copy of any proposed publication to Sponsor for its review at least thirty (30) days in advance of submission for publication. Publication of specific results may be delayed for a limited period, not to exceed sixty (60) days, to obtain any intellectual property protection and remove Sponsor Proprietary Information contained in the publication. Sponsor agrees to limit disclosure of such copies to its employees solely for the purposes of review and comment unless otherwise agreed in writing by University. No unreasonable delay shall be imposed on the filing, defense or publication of any student thesis or dissertation. University shall give Sponsor the option of being acknowledged in such publication for its sponsorship of the Project.

SECTION 8. INTELLECTUAL PROPERTY

8.1 Any University Invention shall belong to University and any Sponsor Invention shall belong to Sponsor; provided however, University is hereby granted a royalty-free, nonexclusive and nontransferable right and license to Sponsor Inventions for non-commercial, educational and research purposes. Any Joint Invention shall belong to University and Sponsor, jointly.

8.2 University will provide Sponsor with a written disclosure of any University Invention or Joint Invention promptly upon its being reported to the University by the Principal Investigator. Sponsor will provide University with a written disclosure of any Sponsor Invention or Joint Invention promptly upon its being reported to Sponsor by a Sponsor investigator. Sponsor shall execute a non-disclosure agreement covering Inventions, as may be required by the University.

8.3 University hereby grants to Sponsor a non-exclusive, royalty-free license to use any University Invention in connection with Sponsor's field of commercial interest, subject to all of the following conditions and qualifications: (a) the license herein described applies to any University Invention only to the extent to which said Invention was actually and formally disclosed to University, (b) Sponsor does not license University Invention to third party(-ies), and (c) Invention is not embodied in any product or services sold or provided by Sponsor, or Sponsor's affiliates, in any manner.

8.4 University here by grants to Sponsor an option to negotiate an exclusive license (to the extent University may be free to do so) to a University Invention and/or University rights in a Joint Invention subject to requirements that:

(a) Sponsor shall exercise its option to negotiate the exclusive license agreement for any such Invention(s), in writing, within sixty (60) days of disclosure of the Invention to Sponsor by University.

(b) Sponsor and University shall negotiate the terms and conditions of the license in good faith for a period that shall not exceed one hundred twenty (120) days from Sponsor's notice of intent to exercise said option, or such other period of time agreeable to both parties.

(c) In the event that Sponsor and University fail to enter into an agreement during that one hundred twenty (120) day period of time, the University shall have the right to dispose of the University Invention, at its sole and exclusive discretion with no further obligation to Sponsor.

8.5 The parties recognize that inventions, improvements, discoveries, copyrightable works, or other proprietary information may arise from research sponsored in whole or in part by governmental agencies. The parties agree that any such development shall be governed by the provisions of applicable law and subject to the reservation of the rights of the Government of the United States of America, as set forth in 37 CFR 401 and the Patent and Trademark Law Amendments Act of 1980 (Bayh-Dole Act).

SECTION 9. CONFIDENTIALITY

9.1 Any and all knowledge, proprietary information, know-how, practices, processes, or other information (hereinafter referred to as "Confidential Information") disclosed or submitted in writing or in other tangible form which is marked "Confidential Information" to either party by the other shall be submitted to the designated technical representative identified in Section 10 and maintained by the receiving party in strict confidence and shall not be disclosed to any third party. Furthermore, neither party shall use Confidential Information for any purpose other than those purposes specified in this Agreement. The parties may disclose Confidential Information to employees requiring access for the purposes of this Agreement; provided, however, that prior to making any such disclosure the employee shall be apprised of the duty to maintain Confidential Information in confidence and not to use such information for any purpose other than in accordance with the terms and conditions of this Agreement.

9.2 Each party shall use reasonable efforts to prevent the disclosure of any of the other party's Confidential Information to third parties for a period of three (3) years from receipt thereof, provided that the receiving party's obligation hereunder shall not apply to information that:

a. is generally available to the public, or thereafter becomes available to the public through no act of the receiving party, or

b. is documented to be independently known prior to receipt thereof, or is made available to the receiving party as a matter of lawful right by a third party, or

c. is required by law to be released; provided, however, that prior to any such release, the other party will be notified so that it may take protective measures if it deems necessary, or

d. is independently developed by an employee of receiving party that has not had access directly or indirectly to the Confidential Information, which claim is corroborated by written evidence.

SECTION 10. NOTICES

Notices, invoices, communications and payments shall be submitted to the offices identified below. All legal notices must be sent by personal delivery or certified mail, return receipt requested. All other contractual notices and communications hereunder shall be deemed made as of the date of mailing if given by overnight courier service or by registered, certified or first class mail, postage prepaid, and addressed to the party to receive such notice or communication at the address(es) given below, or such other address as may hereafter be designated by notice in writing.

If to Sponsor (Business/Invoices):	
Name: Address: City, State, ZIP Code: Phone/Fax: e-mail:	Anil Pillai, CPO | Accountant 3800 North Classen Blvd. Oklahoma City, OK 73118 (405) 530-8872 Anil.Pillai@owrb.ok.gov

If to Sponsor (Technical):	
Name: Address: City, State, ZIP Code: Phone/Fax: e-mail:	Derrick Stark | GIS Manager 3800 North Classen Blvd. Oklahoma City, OK 73118 (405) 530-8864 Derrick.Stark@owrb.ok.gov

If to University (Legal):	
Name: Address: City, State, ZIP Code:	The Executive Secretary of the Board of Regents of the University of Oklahoma 660 Parrington Oval, Room 119 Norman, OK 730191

If to University (Business/Payment):	
Name: Address: City, State, ZIP Code: Phone/Fax: e-mail:	Don Smith Research Financial Services University of Oklahoma 201 Stephenson Pkwy., Five Partners Place, Ste. 3100 Norman, OK 73019-5833 (405) 325-4979 Donald.E.Smith-1@ou.edu

If to University (Business/Contract Terms):	
Name: Address: City, State, ZIP Code: Phone/Fax: e-mail:	Joe Johnson Office of Research Services University of Oklahoma 201 Stephenson Pkwy., Five Partners Place, Ste. 3100 Norman, OK 73019-5833 (405) 325-4757 joej@ou.edu

If to University (Technical):	
Name: Address: City, State, ZIP Code: Phone : e-mail:	Todd Fagin, Ph.D. 3100 Monitor Ave, Two Partners Place, Suite 180 Norman, OK 73019 (405) 325-9611 Tfagin@ou.edu

SECTION 11. GENERAL TERMS AND CONDITIONS

11.1 This Agreement may not be assigned by either party in whole or in part without the prior written permission of the other party.

11.2 This agreement shall be governed by the laws of the state of Oklahoma, without giving force and effect to its choice of law provisions. Any legal action in connection with this agreement shall be filed in a state court of competent jurisdiction in the state of Oklahoma, to which jurisdiction and venue Sponsor expressly agrees.

11.3 Should the parties to this Agreement be unable to resolve between themselves any dispute arising from any of the provisions within this Agreement, each party shall have recourse under the law.

11.4 If any provision(s) of this Agreement shall be held invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

11.5 This Agreement constitutes the entire agreement and understanding between the parties and supersedes all prior and/or contemporaneous discussions, representations, or agreements, whether written or oral, of the parties relating to the work to be performed. This Agreement may be extended, renewed or otherwise amended at any time by the mutual written agreement of the parties.

11.6 This Agreement may be executed in several counterparts, each of which shall be deemed the original, but all of which shall constitute one and the same instrument. This Agreement may be executed using electronic or digital signatures, which shall have the same force and effect as a manual signature.

11.7 The parties agree that this Agreement shall be binding upon their respective successors, assigns or transferees of any nature, if assignment and/or transfer is permitted in accordance with the terms of this Agreement.

11.8 Sponsor agrees that it shall comply with the export control laws and regulations, embargoes and sanctions. Each party agrees that in the event that export controlled information/technology is disclosed, disclosing party shall provide receiving party with sufficient and appropriate information including Export Control Classification Numbers (ECCNs) and/or the Munitions List categories to allow receiving party to properly comply with the export controls regulations. Sponsor maintains an export management system adequate to ensure compliance. Sponsor agrees that it will comply with all other applicable laws, orders and regulations relating to the use and/or transfer of deliverables specified in **Appendix A** and that it will not at any time take any action which would cause University to be in violation of any such laws, orders and regulations.

11.9 In the performance of all services hereunder, the parties shall be deemed to be and shall be independent contractors and, as such, neither shall be entitled to any benefits applicable to employees of the other. Neither party is authorized or empowered to act for the other for any purpose and shall not on behalf of the other enter into any contract, warranty, and/or representation as to any matter. Neither shall be bound by the acts or conduct of the other.

11.10 Sponsor shall indemnify, defend, and hold University, its Regents, officers, agents, students, and employees harmless from and against liability for any and all claims, demands, damages, liabilities, fines, penalties, losses, expenses, costs, and fees of any nature (e.g., attorneys' fees) including, but not limited to, bodily injury, death, personal injury, illness, product liability, and property damage arising from Sponsor's use of information or materials received from University, by Sponsor or its officers, servants, agents, or of any third party acting on behalf of or under authorization from Sponsor including without limitation, use of products, developed or made arising out of or in connection with this Agreement **to the extent allowed by Oklahoma law**. University will give Sponsor notice of any claim it receives within ten (10) business days of receipt of a claim by University.

11.11 University agrees to be responsible for its own negligent acts and omissions and those of its employees and agents in accordance with the Oklahoma Governmental Tort Claims Act, 51 O.S. 1991 151, *et seq*., as amended.

11.12 As applicable, the provisions of Executive Order 11246, as amended by Executive Order No. 11375, Executive Order No. 11141, Executive Order No. 13665 and as supplemented in Department of Labor regulations (41 CFR Part 60-1.4(a), 60-300.5(a) and 60-741.5(a) et. seq.), are incorporated into this Agreement and must be included in any subcontracts awarded involving this Agreement. The parties represent that all services are provided without discrimination on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, national origin, disability, political beliefs, or veteran's status; they do not maintain nor provide for their employees any segregated facilities, nor will the parties permit their employees to perform their services at any location where segregated facilities are maintained. In addition, the parties agree to comply with the applicable provisions of Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. § 701, and the Vietnam Era Veteran's Readjustment Assistance Act of 1974, 38 U.S.C. § 4212.

11.13 The terms of this Agreement shall not be binding upon either of the parties hereto until it has been properly executed on behalf of each party to the Agreement in the spaces provided below. It is then effective as of the starting date of the period of performance.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives on the dates set forth below.

State of Oklahoma, Water Resources Board

BY: Jennifer Castillo

TITLE: Chair

DATE: Jan. 16, 2024

THE BOARD OF REGENTS OF THE UNIVERSITY OF OKLAHOMA

Digitally signed by Michael Purcell
Date: 2023.12.13 10:54:40 -06'00'

BY: Michael Purcell

TITLE: Executive Director, Office of Research Services, Associate Vice President for Research and Partnerships

DATE: 12-13-2023

READ AND UNDERSTOOD:

BY: Todd Fagin

DATE: 11/15/2023

Todd Fagin

Principal Investigator:

Oklahoma Water Resources Board Secretary

Robert L. Stallings, Jr., acting Secretary

OKLAHOMA WATER RESOURCES BOARD



APPENDIX A

Scope of Work

Oklahoma Water Resources Board

Phase 4: Modernization and Migration of OWRB Geospatial Resources

SUBMITTED TO

Derrick Stark
GIS Manager, OWRB

Oklahoma Water Resources Board
3800 North Classen Blvd
Oklahoma City, OK 73118

SUBMITTED BY

Todd Fagin, Executive Associate Director
Center for Spatial Analysis
The University of Oklahoma
Two Partners Place
3100 Monitor Ave. Suite 180
Norman, OK 73019

November 2023

Overview

The Oklahoma Water Resources Board (OWRB) manages both spatial and non-spatial datasets critical to its mission. Currently, the hosting of these resources is spread across several entities, including the Office of Management and Enterprise Services (OMES) and the Center for Spatial Analysis (CSA). Recently, OWRB encountered internal data access restrictions caused by issues with connecting to CSA-hosted resources that were located on OMES managed networks. CSA, OWRB, and OMES resolved these issues, however potential for further disruptions remains likely. For instance, at present, compatibility issues exist between Relational Database Management System (RDBMS) versions and GIS server versions. Specifically, the OWRB internal RBDMS limits the ArcGIS Server/Portal (Portal) version OWRB can run. OWRB currently uses an Oracle 11.2.01 (Oracle) RBDMS as a datastore for both its spatial and nonspatial data, limiting the Portal to version 10.6.1 (current release is 11.1). Therefore, OWRB must update its RDBMS version along with updating its Portal.

Upon discussion with key personnel at OWRB, CSA has proposed migrating select spatial OMES-hosted datasets (data) in its Oracle RDBMS to a CSA-hosted and Spatial Database Engine (SDE)-enabled PostgreSQL15 RDBMS. This will enable CSA to upgrade OWRB's Portal to 11.1. However, this will require first updating ArcGIS Server to 10.9 then to 11.1. Upon completion of the updates, CSA will migrate the data from Oracle to the PostgreSQL 15 RDBMS (PostgreSQL) following one of two proposed workflows, and noting that the method of data transfer is contingent upon data compatibility between Oracle and PostgreSQL. The first workflow involves the use of tools, such as Ora2pg, that extract, translate, and load (ETL) Oracle databases to PostgreSQL. However, CSA has not tested this with SDE databases, therefore an alternative workflow is direct geodatabase copies from Oracle to PostgreSQL via client software, such as ArcGIS Pro.

Goals of Phase IV

1. Establish whether data access between CSA and OMES remains necessary for any data that will continue to be hosted by OMES;
2. Update OWRB's GIS data stores to Postgres 15 and GIS server to ArcGIS Server to 10.9 then 11.1;
3. Migrate OWRB Portal content from 10.6.1 to 10.9 and, then, 11.1;
4. Update the data stores in Portal to ensure it is consuming data from the PostgreSQL server. CSA will complete all necessary upgrades concurrent with OWRB's current operations, ensuring no disruptions in critical services. Further, CSA will maintain the ArcGIS Server 10.6.1 until OWRB approves the final migration to the new resources.

Scope of Work

1. Update the ArcGIS Server and Portal instances to the latest version.
    a. Continue to support such upgrades as they become available under the current hosting agreement, while ensuring continuity of workflow.
2. Deploy a PostgreSQL RDBMS instance compatible with the latest ArcGIS Server and Portal instances.
3. Copy existing OWRB content from Oracle to the PostgreSQL instance identified in consensus between OWRB and CSA..
4. Evaluate and Discuss with OWRB any traceback, error message, error condition or intuition raised by execution of the existing OWRB data update scripting
5. Ensure all existing content (web maps, feature services, etc.) in the updated Portal for ArcGIS is consuming data from the PostgreSQL database (update data stores).

6. Continue to maintain old instances of ArcGIS Server and Portal for ArcGIS until the new system is fully operational.

Budget Justification

Todd Fagin, CSA executive associate director, will serve as a co-project lead on the project at 10.4 hours. He will assist all project tasks, including project management. Kelby Thomasson, GIS Systems Administrator, will take the lead on database configuration and migration. He will also provide IT support and set up new servers, database instance, ArcGIS Server, and Portal for ArcGIS Portal and assist in all aspects of data migration, at an estimated 780 hours. Daniela Spade, GIS Application and Outreach Coordinator, will work closely with both Kelby Thomasson in database and server configuration and data migration, at an estimated 780 hours. Jim Anderson, GIS Architect and Data Analyst, will provide technical support as needed at 80.6 hours. Leah Nash, Associate Director of Administration and Finance will administer the budget and assist in troubleshooting at 10.4 hours.

Todd Fagin
Hourly rate w/fringe: $56.48

Kelby Thomasson
Hourly rate w/fringe: $40.84

Daniela Spade
Hourly rate w/fringe: $44.19

Jim Anderson
Hourly rate w/fringe: $45.94

Leah Nash
Hourly rate w/fringe $44.23

APPENDIX B

UNIVERSITY of OKLAHOMA BUDGET
Budget Period 1

1/1/2024 to 12/31/2024

See notes at bottom of spreadsheet

A. SENIOR PERSONNEL	(Sel) Appt Mos						SALARY	SPONSOR REQUEST	OU COST SHARE	TOTAL	Salary Requested	Fringe Benefits	Total
1 Principal Investigator	12	0.50%	FTE	x	12	academic mos.	$87,673	$438		$438	$438	$149	$587
Todd Fagh			FTE	x		summer mos.	$87,673						
2 Co-Principal Investigator	12	37.50%	FTE	x	12	academic mos.	$63,400	$23,775		$23,775	$23,775	$8,084	$31,859
Kelby Thomasson			FTE	x		summer mos.	$63,400						
3 Co-Principal Investigator	12	37.50%	FTE	x	12	academic mos.	$68,608	$25,728		$25,728	$25,728	$8,748	$34,475
Daniela Sorde			FTE	x		summer mos.	$68,608						
4 Co-Principal Investigator	12	0.50%	FTE	x	12	academic mos.	$68,662	$343		$343	$343	$117	$460
Leah Neef			FTE	x		summer mos.	$68,662						
5 Co-Principal Investigator	12		FTE	x		academic mos.							
			FTE	x		summer mos.							
TOTAL SENIOR PERSONNEL			Fringe Rate	34.00%		TOTAL	$60,284			$60,284	$60,284	$17,098	$67,382
B. OTHER PERSONNEL						Fringe Rate							
1 ( ) POST DOCTORAL ASSOCIATES						19.13%							
2 (1) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)						34.00%	$2,762			$2,762	$2,762	$939	$3,701
3 ( ) PROJECT SECRETARIAL/CLERICAL (restricted use --see POE)						34.00%							
4 ( ) GRADUATE STUDENTS	# MONTHS APPT					11.27%							
5 ( ) UNDERGRADUATE STUDENTS	# MONTHS APPT					0.35%							
6 ( ) OTHER						34.00%							
TOTAL SALARIES AND WAGES (A+B)							$63,046			$63,046	$63,046	$18,037	$71,083
C. FRINGE BENEFITS	(If temp employee or other FB rate needed contact POE)						$18,037			$18,037			
TOTAL SALARIES WAGES AND FRINGE BENEFITS (A+B+C)							$71,083			$71,083			

D. PERMANENT EQUIPMENT ($5,000 PER UNIT OR FABRICATED AND RETAINED BY OU AT LEAST 1 YEAR)*

Item	Cost	Item	Cost

TOTAL PERMANENT EQUIPMENT

E. TRAVEL Domestic / Foreign

Use federal/state rates. Detail travel costs in budget justification — TOTAL TRAVEL

F. PARTICIPANT SUPPORT COSTS (used only by NSF and some DoED)

(NON-EMPLOYEE CONFERENCE/WORKSHOP ATTENDEES)

1 STIPENDS — 3 SUBSISTENCE
2 TRAVEL — 4 OTHER
( ) Number of Participants — TOTAL PARTICIPANT SUPPORT

G. OTHER DIRECT COSTS

1 MATERIALS AND SUPPLIES

Item	Cost	Item	Cost

TOTAL MATERIALS & SUPPLIES

2 PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION
3 CONSULTANT SERVICES — PROVIDE DAILY RATE AND NUMBER OF DAYS IN JUSTIFICATION
4 COMPUTER (ADPE) SERVICES
5 SUBCONTRACTS * — AMOUNT FOR IDC CALCULATION $ -
6 TUITION FEE — To determine the total number of GRA months for more than one appointment add all months, for example one GRA appointed at 12 mos. plus one at 9 mos. = 16 months total. Partial month + full month (example 4.5 months + 5 months)
Total number of GRA months
7 SHIPPING COSTS (Shipping for materials, supplies, equipment, etc.)
8 INCENTIVES (Any allocation to study participants, focus groups,etc.)
9 OTHER

Item	Cost	Item	Cost

TOTAL OTHE
TOTAL OTHER DIRECT COSTS (G1 - 7)
Subtotal Direct Costs
If ARRC or LASI Fees should be included, make selection on Info tab.

H. TOTAL DIRECT COSTS (A THROUGH G)		$71,083		$71,083
I. INDIRECT COSTS:	MTDC Base = $71,083			
26.00%	TDC Base = N/A	$18,482		$18,482
J. TOTAL COSTS - PERIOD ONE		$89,565		$89,565
Third Party Costshare	Organization #1:			
	Organization #2:			
	TOTAL	$89,565		$89,565

NIH ONLY
Modular Amount = N/A
Total Direct Costs less IDC on subs

Gray shaded areas do not calculate-DO NOT USE
Yellow shaded areas to the right show salary related info in regards to sponsor request (no cost share)

* **Permanent Equipment:** Equipment, including fabricated equipment, that is not retained by OU does not qualify as permanent equipment. These items should be listed under materials and supplies and IDC will be charged on them.

Need more than 5 Senior Personnel? Select Rows 14 & 55, right-click, and select unhide.

Need more Budget Periods? Right-click on the "Cumulative" tab, select "Unhide", and select the budget period you wish to unhide. Repeat this process for each budget period you wish to unhide.

Does your project includes Intellectual Property? Please work with the Office of Technology Commercialization and include any

AGENDA ITEM 3D(6)

AGREEMENT

WITH:	City of Sapulpa
PURPOSE:	Rehabilitation of High Hazard Potential Dams Grant Agreement
AMOUNT:	Not to Exceed $2,990,000.00
TERM:	July 15, 2025 through September 24, 2027

CONTRACTS CHECKLIST

Before submitting a contract for inclusion in the Board agenda/packet, please complete the following and submit with the final agreement:

Initials

NK Draft approved by Division Chief

JF Jessica Billingsley/Jay Foote: Contract amount has been budgeted

AP Anil Pillai: All purchasing requirements have been satisfied

NAO All other parties have agreed to the terms of the contract

NAO Final copy is free of any track changes or other highlighting, etc.

SG Final draft approved by General Counsel

Contact Info for OWRB	Contact info for Contractor
Natalie Orbesen	Steve Hardt
Dam Safety Program Manager	Public Works Director
Natalie.Orbesen@owrb.ok.gov	Shardt@SapulpaOK.gov
405-530-8847	918-216-4352

REMEMBER, any document that contains "terms" and requires a signature is considered a contract.

No contract will be added to the Board agenda/packet unless this checklist is complete. All tasks will need to be completed prior to the deadline for the draft agenda each month to be added to the agenda/packet.

Signature:
Email: ~~Jessica.Billingsley@owrb.ok.gov~~ Jay.Foote@owrb.ok.gov

Signature: Natalie Orbesen
Email: Natalie.Orbesen@owrb.ok.gov

Signature: Yohanes Sugeng (Jun 24, 2025 11:41 CDT)
Email: Yohanes.Sugeng@owrb.ok.gov

Signature: Anil Pillai (Jun 24, 2025 13:04 CDT)
Email: Anil.Pillai@owrb.ok.gov

Signature: Sara Gibson (Jun 24, 2025 16:15 CDT)
Email: Sara.Gibson@OWRB.ok.gov

OKLAHOMA WATER RESOURCES BOARD

REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT AGREEMENT
Between the City of Sapulpa, Creek County and Oklahoma Water Resources Board

This Agreement, dated as of the date of the last signature herein but to be effective as provided below, by and between the City of Sapulpa, Creek County (UEI: **MJLKRLM8M9G5**) (hereinafter "Subrecipient"), and the Oklahoma Water Resources Board (hereinafter "the Board"), an agency of the State of Oklahoma and State Administrative Agency of the Federal Emergency Management Agency's (hereinafter "FEMA") Rehabilitation of High Hazard Potential Dams (hereinafter "HHPD") Grant Program.

The Board is a Recipient of a Federal grant award from FEMA, Federal Award Identification Number EMT-2024-GR-05000 Catalog of Federal Domestic Assistance Number 97.041, National Dam Safety Program. The award was received on September 25, 2024. This agreement is a contract from the Board to Subrecipient, of said federal grant funds and is for non-research related activities. No indirect costs are allowed under this award, however, Management & Administration (M&A) costs are available and up to five percent (5%) of expenditures can be used for this purpose if identified as an eligible expense in the approved Scope of Work (Attachment 2). The Period of Performance of this award is from July 15, 2025, to September 24, 2027.

In accepting said grant, Subrecipient duly acknowledges and agrees that in all regards and respects, Subrecipient must and shall comply with the requirements of all applicable federal and state statutory provisions and all Board rules, regulations, and the HHPD Grant Program applicable policies. Without limiting the generality of the foregoing, Subrecipient agrees as follows:

1. **Description of Approved Project** This grant has been approved by the Board for Subrecipient's project which shall consist of the Sahoma Lake Dam Structural Improvements Project; the scoping narrative for the project is attached hereto as Attachment 2. The Subrecipient shall provide the services to the Board set forth in the Agreement documents and, specifically, as defined in the Scope of Work and Milestones. All deliverables shall conform to accepted standards and practices.

2. **Determination of Amount of Grant** The amount of this grant shall not exceed sixty-five percent (65%) of the eligible activity costs or the amount of $2,990,000.00 whichever is less. Cost share will be required as described in Paragraph 10.

3. **Creation and Maintenance of Separate Accounting** As a prerequisite to receiving grant funds from the Board, Subrecipient shall establish and maintain, to the satisfaction of the Board staff, separate accounting for said HHPD funds. Prior to the Board's release of any grant funds, Subrecipient shall file a Vendor/Payee form with the State of Oklahoma identifying the method by which funds will be administered, in accordance with 2 CFR 200.305.

4. **Award Compensation** The Board shall release the grant award to the Subrecipient on a cost-reimbursement basis upon receipt and approval of the Subrecipient's programmatic and/or fiscal reports, as required by this Agreement. Matching funds must be reported and expended in proportion to federal fund expenditures. The Board is under no obligation to reimburse work performed prior to the commencement or after the expiration of the contracted time of performance. The Board reserves the right to withhold a minimum of fifteen percent (15%) of the Subrecipient's total grant allocation until the final grant report and all services, reports and deliverable are received and approved by the Board. Acceptance of work completed under this Agreement shall be decided at the sole discretion of the Board and shall be final.

5. **Requests for Reimbursement** To receive reimbursement funding, Subrecipient shall submit to the Board a FEMA Rehabilitation of High Hazard Potential Dams Grant Reimbursement Form (Attachment 4), an expenditure report, including proof of payment, detailing the project activities to be funded, and the total cost of those activities. Once the Board has deemed the proposed activities listed in the reimbursement request are eligible for HHPD Grant Program funding and are within the approved scope of work, the Board shall reimburse up to sixty-five percent (65%) of the total eligible activity cost as defined above in Section 2. Subrecipient shall then expend funds from the account only as permitted in this Agreement, Board rules, FEMA Guidelines, and all

applicable Federal award regulations. The remaining thirty-five percent (35%) of the eligible activity costs shall be considered matching fund expenditures to be paid by Subrecipient. Matching fund expenditures or in-kind contributions must be directly related to the project or statement of work for eligible activities.

6. **Expenditure of Funds in Grant Account only for Authorized Project Purposes** Subrecipient shall disburse or expend funds from the HHPD Grant Account only toward reimbursement of eligible and authorized purposes for the project approved by the Board. Authorized project costs include technical, planning, design, other pre-construction activities, and approved construction activities. The Board shall deny reimbursement of any costs not directly related to the award project or approved Scope of Work (Attachment 2). Any amount of grant funds expended from the HHPD Grant Account for unauthorized purposes shall be repaid by Subrecipient to the Board, together with payment of interest accrued from the date of the expenditure at the maximum rate allowed by law, no later than thirty (30) days after the date of written demand from Board staff.

7. **Subrecipient Reporting** The Board shall report awards in the Federal Funding Accountability and Transparency Act (FFATA) Subaward Reporting System (FSRS). The FFATA requires Recipients to report Subrecipient awards of $30,000.00 or more in the FSRS by the end of the month, following the month the subaward or obligation was made.

   Subrecipient shall maintain proper books, records, and supporting documentation (such as invoices, billing statements, and canceled checks drawn on the HHPD Grant Account) showing to the satisfaction of the Board staff the amounts and purposes of all expenditures from the HHPD Grant Account and shall make the same available for inspection and examination by the Board. Any disbursement of grant funds without adequate supporting documentation shall be deemed to be an unauthorized expenditure of grant funds which Subrecipient shall repay to the Board with interest as provided above. Subrecipient shall direct to the Board staff any and all questions regarding whether an expenditure is authorized prior to making the expenditure.

   The Subrecipient shall provide the Board with quarterly reports and a final report, on Performance and Financial Progress, detailing the progress of work set forth in the Agreement documents. Reporting quarters shall be defined by the attached HHPD Quarterly Milestone Workplan Table (Attachment 4b). Incomplete or inaccurate reports may result in reimbursement delays. These reports shall be certified by an authorized agent of the Subrecipient as being true and accurate to the best of the Subrecipient's knowledge, as indicated by their signature on Attachment 4.

   Each report, due on the 15th day following the close of the quarter, shall contain the following:

   1. A Succinct Narrative - Describe the progress fulfilling the Scope of Work and activities for each deliverable. Provide a financial narrative with itemized details of expenditures, and

   2. An Updated Quarterly Milestones Workplan Table Provide target and actual completion dates by quarter for each project activity defined in the Scope of Work. The Quarterly Milestone Workplan Table (Attachment 4b) shall be provided by the Board. Reporting quarters are defined as follows:
      January-March
      April-June
      July-September
      October-December

   The final report, due within thirty (30) days after the Agreement termination date, shall summarize all major project accomplishments and challenges, as well as expenditures and matching contributions during the period after the project began through the completion of all required work. Deliverable in the approved Board Construction Permit and photographs taken before, during, and after project implementation should be included in the final report. The final reimbursement request must be submitted with the final report and the Board will not reimburse any requests received thirty (30) days after the Agreement termination date.

8. **Time Limit to File for Reimbursement; Expiration of Approval** Reimbursements for eligible activities are only applicable for approved activities to be completed after the finalization of this agreement. Any costs incurred prior to this agreement date are not allowable. All reimbursement requests for eligible project activities must be received by the Board by June 24, 2027. If the project is unable to be completed by June 24, 2027, the Subrecipient

shall submit a request for a project extension. If the extension is determined by the Board to be necessary and appropriate, the Board or its staff may permit additional time, but no later than September 24, 2027, to file an acceptable reimbursement request. The approval of this grant shall not extend past September 24, 2027 without prior approval from the grantor (FEMA). If an acceptable reimbursement is not received on or before September 24, 2027, then the approval of this grant shall expire and no grant funds will be released to Subrecipient, unless authorized by the grantor.

9. **Return of unexpended grant funds** Subrecipient shall return to the Board any unexpended grant funds, including any unexpended contingencies funds, within thirty (30) days after completion of the construction of the project or within thirty (30) days from Subrecipient's receipt of all invoices, whichever is later.

10. **Subrecipient Cost Share** Subrecipient will provide documentation to the Board showing the appropriate amount of subrecipient cost share is available for the grant, prior to approval. Subrecipient shall provide match of thirty-five percent (35%) of eligible project costs under this award. To receive the full award amount described in Paragraph 2, the minimum Subrecipient matching funds in the amount of $1,610,000.00 are required.

11. **Additional Requirements** Subrecipient may be subject to additional requirements as may be directed by the Board in accordance with the HHPD Grant Program and associated procedures for implementing the program. The Board may require additional documentation or information as needed to meet any of the requirements of the HHPD Grant Program.

12. **Retention of Records** All documents, books, records related to the sub-award must be retained and made available to the federal awarding agency, Department of Homeland Security Office of the Inspector General, Recipient, and state auditors for a minimum period of three years from the date of the Board's final financial report. The final date of records retention will be communicated through a closeout letter from the Board to the Subrecipient.

13. **Regulatory** All Federal funds awarded are subject to the provisions of 2 CFR 200 Uniform Administrative Requirement, Cost Principles, and Audit Requirements for Federal Awards. Additionally, Subrecipient must and shall comply with the requirements of all applicable federal, state, and local statutory provisions; all Board rules, regulations, and grant program guidance; HHPD Grant Program applicable policies and HHPD Notice of Funding Opportunity provisions and policies.

14. **Hazard Mitigation Plan** All activities relating to the public in the area around the dam will be performed in accordance with the hazard mitigation plan. Subrecipient has been granted use by FEMA of the *Mitigation Plan Extraordinary Circumstances* request to fulfill the Hazard Mitigation Plan (HMP) requirements of this award. The HMP must be approved by FEMA by 05/17/2026.

15. **EHP Requirements** Subrecipient must comply with Federal Environment Planning and Historic Preservation (EHP) regulations and submit to the Board, summary reports/studies conducted as part of this project.

16. **Floodplain Management Plan** Subrecipient must have in place (or develop not later than 2 years after the date of execution of the dam rehabilitation project and implement not later than 2 years after the date of completion of the project) a floodplain management plan to reduce the impacts of future flood events in the area impacted by the project.

Programmatic Terms and Conditions

17. **Assistance** The Board agrees, upon request of the Subrecipient, to furnish, or otherwise make available to the Subrecipient, copies of existing non-proprietary materials in the possession of the Board that are reasonably associated with this project. This includes materials that are necessary to Subrecipient for completion of its performance under this agreement.

18. **Financial Records Availability** The Subrecipient agrees to retain all books, records and other documents relative to this agreement for three years after final payment. The Board, its authorized agents, and/or state auditors shall have full access to, and the right to examine any of, said materials during said period.

19. **Food and Refreshments** Not applicable to this award.

20. **Federal Employee Costs** The Subrecipient understands that the funds for this project may not be used to pay for the travel of federal employees, or for other costs associated with federal participation in this project unless the federal agency is performing special technical assistance to the Subrecipient as allowed under the provisions of the Intergovernmental Cooperation Act.

21. **Termination and Breach** Either party may terminate this agreement upon 30 days written notice to the other party. The Board may terminate this Agreement for any reason necessary to support its current policy and financial status, including the need to redirect funds to another program. The Board may also terminate this agreement for failure of Subrecipient to make sufficient progress so as to reasonably ensure completion of the project within the project period. Sufficient progress will be measured by examining the performance required under the scope of work (Attachment 2) and milestones, the time remaining for performance within the project period, and/or the availability of funds necessary to complete the project.

    It is understood and agreed between the parties, herein, that the Board shall be bound, hereunder, only to the extent of the funds available or which may hereafter become available for the purpose of this Agreement.

    In the event of breach by the Subrecipient of this Agreement, the Board shall provide written notice to the Subrecipient specifying the manner in which the Agreement has been breached. If a notice of breach is given and the Subrecipient has not substantially corrected the breach within sixty (60) days of receipt of the written notice, the Board shall have the right to terminate the Agreement. The Subrecipient shall not be paid for services rendered nor expenses incurred after receipt of the notice of termination, except such fees and expenses incurred prior to the effective date of termination as are necessary for curtailment of its work under this Agreement.

22. **Indemnification** (Not Applicable)

23. **Labor Concerns** As a condition of award, Subrecipient will certify compliance with 42 U.S.C. § 5196 - U.S. Code - Unannotated Title 42. The Public Health and Welfare § 5196. Detailed functions of administration, Item (j)(9) as a condition of grant acceptance. The applicable section is as follows:
    a. All laborers and mechanics employed by contractors or subcontractors in the performance of construction work financed with the assistance of any contribution of Federal funds made by the Administrator under this subsection shall be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with sections 3141 - 3144 , 3146 , and 3147 of Title 40 , and every such employee shall receive compensation at a rate not less than one and one-half times the basic rate of pay of the employee for all hours worked in any workweek in excess of eight hours in any workday or forty (40) hours in the work week, as the case may be. The Administrator shall make no contribution of Federal funds without first obtaining adequate assurance that these labor standards will be maintained upon the construction work. The Secretary of Labor shall have, with respect to the labor standards specified in this subsection, the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (5 U.S.C. App.) and section 3145 of Title 40.

    b. As a condition of award, Subrecipient will certify compliance with 40 U.S.C. Chapter 11; Selection of Architects and Engineers. The language can be viewed at: https://uscode.house.gov/view.xhtml?path=/prelim@title40/subtitle1/chapter11&edition=prelim

24. **Management Fees** The Subrecipient agrees that management fees or similar charges in excess of the direct costs and approved indirect rates (if applicable) are not allowable. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs which are not allowable under this Agreement.

Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work (Attachment 2). Management and Administration (M&A) costs up to five percent (5%) of this subaward is allowable for direct costs of management and administration of this award (i.e. employee salary and fringe costs for preparation and submission of reports, requests for reimbursements, preparation and submission of award closeout reports). M&A costs must be listed in the subrecipient's approved application and budget to be eligible for reimbursement.

FEDERAL PUBLIC POLICY REQUIREMENTS

25. **Whistleblower** Congress has enacted the whistleblower protection statute 41 U.S.C. §4712 to encourage employees to report fraud, waste, and abuse without repercussions. This statute applies to all employees working for contractors, Subrecipients, subcontractors, and sub Subrecipients in accordance with this Agreement. All contractors, Subrecipients, sub Subrecipients, and subcontractors for federal grants and contracts are required to:
    1. Inform their employees in writing of the whistleblower protections under 41 U.S.C. §4712 in the predominant native language of the workforce, to include the specific requirements of the statute, and
    2. Include this term and condition in any agreement made with a subcontractor or sub Subrecipient. The employees· rights under 41 U.S.C. §4712 shall survive termination of this Contract.

26. **Buy American Act** Subrecipient warrants that the purchase of supplies. equipment, and construction materials for the project with grant funds shall comply to the greatest extent practicable, with the Buy American Act requirement or 43 CFR 12, Subpart E., unless DCR allows an exception specified in 43 CFR 12.710(d) and (e) and 43 CFR 12.715.

27. **Non-Discrimination** In its performance of this Agreement, Subrecipient warrants that it will not discriminate against any employee or applicant for employment on account of race, color, sex. religion, age. disability. or national origin. Subrecipient agrees to post in conspicuous places, available to employees and applicants for employment notices setting forth the provision of this non-discrimination clause.

    Subrecipient must comply with Title VI of the Civil Rights Act of 1964 including providing meaningful access to LEP individuals, Section 504 of the Rehabilitation Act of 1973. The Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972 if conducting an education program under this award, if applicable, Section 13 of the Federal Water Pollution Control Act Amendments of 1972 and Title IX obligations 40 CFR Part 5.

28. **Smoke-Free Environment** Public Law l03-277, also known as the Pro-Children Act of 1994. requires that smoking not be permitted in any portion of any indoor facility owned or leased or contracted for by an entity and used routinely or regularly for the provision of health, day care, early childhood development services, education or library services to children under the age of eighteen (18), if the services are funded by Federal programs either directly or through State or local governments by Federal grant, contract, loan or loan guarantee. Failure to comply with the provisions or the law may result in the imposition of a civil monetary penalty of up to $1000 for each violation and/or the imposition of an administrative compliance order on the responsible entity.

29. **Hotel-Motel Fire Safety Act** Pursuant to 15 USC § 2225a. the Subrecipient agrees to ensure that all space for conferences, meetings, conventions or training seminars funded in whole or in part with federal funds complies with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PL I01 - 391 as amended). Recipients may search the Hotel-Motel National Master list at https://apps.usfa.fema.gov/hotel/femaIDSearch to see if a property is in compliance.

30. **Recycled Paper** When directed to provide paper documents the Subrecipient agrees to use recycled paper and double-sided printing for all reports which are prepared as a part of this agreement and delivered to the Board. This requirement does not apply to reports prepared on forms supplied by the Board.

31. **Resource Conservation and Recovery Act** Consistent with goals of section 6002 of RCRA (42 U.S.C. 6962),

State and local institutions or higher education hospitals and non-profit organization recipients agree to give preference in procurement programs to the purchase of specific products containing recycled materials. as identified in 40 CFR Part 247. Consistent with section 6002 of RCRA (42 U.S.C. 6962) and 2 CFR 200.322. Slate agencies or agencies of a political subdivision of a Slate and its contractors are required to purchase certain items made from recycled materials, as identified in 40 CFR Part 247. when the purchase price exceeds $10.000 during the course of a fiscal year or where the quantity of such items acquired in the course of the preceding fiscal year was $10,000 or more. Pursuant to 40 CFR 247.2 (d), the Subrecipient may decide not to procure such items if they are not reasonably available in a reasonable period of time: fail to meet reasonable performance standards; or are only available at an unreasonable price.

32. **Trafficking Victims Protection Act** To implement the requirements of Section 106 of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), the Subrecipient must abide by the Prohibition Statement below. The Subrecipient must inform the Board immediately of any information you received from any source alleging a violation of the Prohibition Statement below. FEMA and the associated federal funding agency have the right to unilaterally terminate this Agreement without penalty, if the Subrecipient or an employee is determined to have violated an applicable prohibition in the Prohibition Statement.

    i. **Prohibition Statement** The Board as the recipient, its employees, sub-recipients under this Agreement, and sub-recipients' employees may not engage in severe forms of trafficking in persons during the period of time that the Agreement is in effect; procure a commercial sex act during the period of time that the Agreement is in effect; or use forced labor in the performance of tine Agreement or sub-awards under the Agreement.

33. **Quality Assurance/Quality Control Project Plans (if applicable)** Within 60 days of the effective date of this Agreement and if required in Attachment 4 of this Agreement, the Subrecipient will submit to the Board, for review and approval, a Quality Assurance/Quality Control Project Plan.

34. **Reporting and Tracking Information Management Systems** In accepting these funds, the Subrecipient agrees to the sharing of all deliverable and related information through state and/or federal channels (including Internet use) and, wherever possible, to provide with deliverable in a format that can be made available to other partners and the public, as appropriate.

35. **Electronic and Information Technology Accessibility** Subrecipients are subject to the program accessibility provisions of Section 504 of the Rehabilitation Act, codified in 40 CFR Part 7, which includes an obligation to provide individuals with disabilities reasonable accommodations and an equal and effective opportunity to benefit from or participate in a program, including those offered through electronic and information technology.

36. **Creation of Intellectual Property** In accordance with 2 CFR 200.315, U.S. Department of Homeland Security (DHS) has the right to reproduce, publish, use and authorize others to reproduce publish and use copyrighted works or other data developed under this agreement for Federal purposes. The Board hereby grants to the Subrecipient a license to use any such material for public, non-commercial purposes within the territory of the project. Subrecipient hereby grants to the Board a license to use any such material for public, non- commercial purposes within the territory of the project.

    A copyright notice shall be placed in an appropriate location on any copyrightable material being distributed or published. Such notice shall include (1) either the symbol "©", the word "Copyright" or the abbreviation "Copr." (2) the year of first publication, and (3) the name of the copyright owner (the State of Oklahoma). This information shall be followed by the words, "all rights reserved."

37. **Documents** The Subrecipient may retain any reports, studies, photographs, negatives or other documents prepared in the performance of their obligations under this Agreement and not required to be delivered to the Board shall have certain rights to use any such materials as specified above. Where necessary for its enjoyment of its rights and other rights referenced in this Agreement, the Subrecipient shall provide a clear, reproducible copy of such materials (machine readable upon request, if readily available to, the Subrecipient in such form) to the Board.

38. **Disclaimer** For reports or papers produced for public distribution (including the final product), the following sentence must be added to the end of the above credit: *The views expressed herein are those of the author(s) and do not necessarily reflect the views of U.S. Department of Homeland Security (DHS) and the State of Oklahoma.*

39. **Acknowledgements** The role of the Board, U.S. Department of Homeland Security (DHS) and the State of Oklahoma must be clearly stated in all press releases, news articles, requests for proposals, bid solicitations and other documents describing this project, whether funded in whole or in part.

    Acknowledgment of financial assistance, with the use of the Board, U.S. Department of Homeland Security (DHS) and City of Sapulpa logos, as appropriate, must be printed on the cover of all reports, studies, web sites, map products, or other products supported by this award or any sub-award. The Subrecipient is responsible for contacting staff in adequate time to obtain the required logos in camera-ready or digital form. Prior to production, the Board's project management staff must approve the final draft. The acknowledgment should read:

    This project was funded wholly or in part by the *U.S. Department of Homeland Security (DHS) to support protecting the lives of Americans and their property from the risks associated with dams. The Rehabilitation of High Hazard Potential Dams Grant Program (HHPD), administered in connection with the National Dam Safety Program provides technical, planning, design, and construction assistance in the form of grants to states for non- Federal governmental organizations or nonprofit organizations for rehabilitation of eligible high hazard potential dams. For FY2024, the HHPD Grant Program will provide assistance for technical, planning, design, pre-construction, and construction activities through* EMT-2024-GR-05000. *The contents of this document/report etc. do not necessarily reflect the views and policies of DHS nor does DHS endorse trade names or recommend the use of commercial products mentioned in this document."*

40. **Assurances** By entering into this Agreement, the Subrecipient certifies that it has the legal authority to apply for federal assistance, and it has the institutional, managerial and financial capability (including funds sufficient to pay for subjects costs until reimbursement or pay for the non-federal share of project costs) to ensure proper planning, management and completion of the project description.

41. **Suspension and debarment** Non-Federal entities are subject to the non-procurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, 2 CFR part 180. The regulations in 2 CFR part 180 restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs or activities.

42. **Prohibition on certain telecommunications and video surveillance services or equipment**
    a. Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
        1. Procure or obtain,
        2. Extend or renew a contract to procure or obtain; or
            i. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
            ii. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
            iii. Telecommunications or video surveillance services provided by such entities or using such equipment.
            iv. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

b. In implementing the prohibition under Public Law 115–232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.
c. See Public Law 115–232, section 889 for additional information.
d. See also § 200.471.

43. **Appendix II to Part 200 – Contract provision for Non-federal entity contracts under Federal awards**
In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.
a. Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.
b. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.
c. Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60–1.3 must include the equal opportunity clause provided under 41 CFR 60–1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964–1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
d. Davis-Bacon Act, as amended (40 U.S.C. 3141–3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141–3144, and 3146–3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.
e. Contract Work Hours and Safety Standards Act (40 U.S.C. 3701–3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

f. Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

g. Clean Air Act (42 U.S.C. 7401–7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251–1387), as amended—Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

h. Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

i. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

j. See § 200.323.

k. See § 200.216.

l. See § 200.322.

In consideration of Subrecipient's agreement to these terms and conditions, Subrecipient has entered and signed this HHPD Grant Agreement this _____ day of _____, 20___

OKLAHOMA WATER RESURCES BOARD

_____

Thomas Gorman, Vice-Chair

ATTEST:

_____

Suzanne Landess, Secretary

(BOARD SEAL)

* * * * *

Reviewed by:

_____
Yohanes Sugeng, Chief
Engineering and Planning Division

City of Sapulpa, Creek County Oklahoma

_____
Joan Riley, City Manager

Date: _____

ATTEST:

By: _____

Title:_____

Attachment 1
FEDERAL AWARD IDENTIFICATION INFORMATION

2 C.F.R. §§ 200.332(a)(1)(i)-(xiv)
Requirements for pass-through entities

Pass-through entity, and contact information for awarding official of the Pass-through entity
Oklahoma Water Resources Board
Jay Foote, CFO
405-530-8800
Jay.Foote@owrb.ok.gov

(i) Subrecipient name
City of Sapulpa

(ii) Subrecipient's unique entity identifier (UEI)
MJLKRLM8M9G5

(iii) Federal Award Identification Number (FAIN)
EMT-2024-GR-05000

(iv) Federal Award Date
09/25/2024

(v) Subaward Period of Performance Start and End Date
9/25/2024 – 9/24/2027

(vi) Subaward Budget Period Start and End Date
7/15/2025 – 9/24/2027

(vii) Amount of Federal Funds Obligated by this action by the pass-through entity to the subrecipient
$2,990,000.00

(viii) Total Amount of Federal Funds Obligated to the subrecipient by the pass-through entity including the current financial obligation
Total Pass-through Federal Funds: $2,990,000.00

FY 2024 HHPD

Sahoma Lake Dam Structural Improvements Project: $2,990,000.00

(ix) Total Amount of the Federal Award committed to the subrecipient by the pass-through entity
$0

(x) Federal award project description, as required to be responsive to the Federal Funding Accountability and Transparency Act (FFATA)
Sahoma Lake Dam Structural Improvements Project

(xi) Name of Federal awarding agency
Federal Emergency Management Administration

(xii) Assistance listings number and title; the pass-through entity must identify the dollar amount made available under each Federal award and the Assistance Listings Number at time of disbursement

a. 97.041-National Dam Safety Program DHS-24-[MT]-[041]-[00]-[98]
    i. $2,990,000.00

(xiii) Identification of whether the award is Research and Development (R&D)

R&D is not allowed under this agreement

(xiv) Indirect cost rate for the Federal award (including if the de minimis rate is charged) per 2 CFR § 200.414

Indirect costs are not allowed under this agreement

ATTACHMENT 2

Scope of Work
Sahoma Lake Dam Structural Improvements Project
Keithline Engineering Group, PLLC
[Following pages]

3.1 SCOPE OF PROJECT:

TASK A - REINFORCED CONCRETE OVERLAY ON UNCONTROLLED SPILLWAY SURFACE AND FILL ALL VOIDS UNDERNEARTH:
The existing spillway surface has significant concrete deteriorated surface, significant eroded and damage panel joints, voids underneath monoliths, and apron damaged. Spillway deterioration is from construction means and methods of the day. All voids need to be filled underneath the spillway, spillway surface needs to be repaired with a new reinforced concrete overlaid surface. The ground will not be disturbed on Task A.

TASK B - THICKEN EARTHEN DAM, STOP SEEPAGE, ADD RIPRAP AND TOE DRAINS:
The downstream slope of the earthen dam is too steep and needs to be have a maximum slope of 3'(H) to 1'(V). Fill soils would be imported to expand and strength the base of the earth embankment. The thickening of the dam base will mitigate seepage by the installation of a filter blanket drainage layers with an underdrain system. The existing downstream earthen ground will be disturbed on Task B at approximately 700' x 100' = 70,000 SF or 1.6 Acres during the expanding base.

TASK C - FILLIN AND HARDEN SURFACE OR SPILLWAY CHANNEL - PROTECT THE ROCK FROM DAMAGING EROSION AND ADDITIONAL UNDERMINING:
Over the last 75 years the downstream rock has significant erosion and has partly undermining the existing spillway. The areas need to be hardened to stop the erosion from undermining the spillway. Area but will be covered up and protected from further erosion and de-stabilizing the uncontrolled spillway. The ground will not be disturbed on Task C.

TASK D - HARDEN SURFACE BEHIND ABUTMENT WALLS AND REINFORCE WALL TO SPILLWAY CORNER TOE:
Add harden surface behind abutment walls and reinforce wall to spillway corner toe surface. This action shall stabilize the spillway to abutment contracts and eliminate any possible backfill erosion issues. The ground will be disturbed on Task D at approximately 5,000 SF X 2 Areas = 10,000 SF or 0.23 acres.

TASK E - INTAKE STRUCTURE ITEMS TO BE UPGRADED, REPLACED AND/OR IMPROVED:
Upgrade operating gate to stainless steel and state-of-the-art gear boxes. Replace handrails/steps to improve safety. The ground will not be disturbed on Task E.

3.2 SEE DETAILS OF PROJECT SCHEDULE, NEXT SHEET:

3.3 SEE DETAILS OF PROJECT BUDGET, SECOND SHEET:

3.4 NOTE AT THE END OF APPLICATION:

EXHIBIT "1" – Project Overview of 2025 Improvements
EXHIBIT "2" – Earthen Dam & Spillway Photographs
EXHIBIT "3" – Dam Area Soils Report
EXHIBIT "4" – Farmland Soils
EXHIBIT "5" – Floodplain
EXHIBIT "6" – National Wetland Inventory
EXHIBIT "7" – Sapulpa Resolution Adopting the Creek County Hazard Mitigation

ATTACHMENT 3

OWRB BOARD RESOLUTION APPROVING
REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT APPLICATION
[Following pages]

PLEASE RETAIN THE FOLLOWING
BOARD ORDER FOR YOUR RECORDS

A RESOLUTION OF THE OKLAHOMA WATER RESOURCES BOARD AUTHORIZING AN APPLICATION FOR FUNDING ASSISTANCE THROUGH THE FEDERAL EMERGENCY MANAGEMENT AGENCY PROGRAM TO REHABILITATE HIGH HAZARD POTENTIAL DAMS

WHEREAS, the United States Department of Homeland Security, Federal Emergency Management Agency ("FEMA") has implemented the Rehabilitation of High Hazard Potential Dams (HHPD) program to provide grant funds to reduce or eliminate the risk of dams of highest consequence and increase understanding and management of risks posed by eligible dams.

WHEREAS, FEMA has solicited proposals for cost-shared financial assistance from States, Indian Tribes, and nonprofit dam owners for projects to develop.

WHEREAS, the Oklahoma Water Resources Board ("Agency") has identified itself as an eligible applicant under FEMA's HHPD Grant Program, Funding Opportunity Number: DHS-24-[MT]-[041]-[00]-[98].

WHEREAS, the Agency is pursuing grant funding assistance under the HHPD grant program to provide technical, planning, design, pre-construction, and construction activities related to the repair, removal, or rehabilitation of eligible high hazard dams. The amount of the grant award is formula based and is calculated using the nationwide number of eligible dams and the number of states that have applied for the grant.

NOW, THEREFORE, be it resolved by the Board as follows:

1. The Board has reviewed the scope and purpose of the funding application and finds that the Project will serve the needs of the people of Oklahoma and satisfy the goals of the HHPD program, and on that basis, supports the staff submittal of the grant proposal to FEMA.

2. The Agency is acting as a pass-through entity and will work with eligible subrecipients to meet the minimum 35-percent cost share required to obtain grant funding under the HHPD Grant Program.

3. Pursuant to state policy, the Agency has sought approval from the Office of the Secretary of Energy and Environment to pursue this funding opportunity.

4. The Board hereby ratifies the action of its Chief Financial Officer or his designee of the Agency in applying for financial assistance from FEMA's HHPD Grant Program and authorizes the Chief Financial Officer or his designee to execute any related document, including a cooperative financial assistance agreement with FEMA.

5. The Chief Financial Officer and staff are directed to take all other actions necessary to secure funding for the Project under the HHPD Grant Program, including

working with FEMA to meet established deadlines for entering into a cooperative financial assistance agreement.

PASSED AND ADOPTED by the Oklahoma Water Resources Board on the 20th day of February, 2024:

~~Jennifer Castillo, Chairman~~

Tom Gorman, Acting Chairman

ATTEST:

~~Suzanne Landes, Secretary~~

Robert L. Stallings, Acting Secretary

OKLAHOMA WATER RESOURCES BOARD

ATTACHMENT 4

Reporting Guidelines & Forms

[Following pages]

FEMA REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT REIMBURSEMENT FORM

OUTLAY REPORT AND REQUEST FOR GRANT PROCEEDS FOR HHPD FUNDING		1. DISBURSEMENT REQUEST NO. 1	PAGE 1 OF 1
2. GRANT NUMBER:	EMW-xxxx-xx-xxxxx	5. PERIOD OF PERFORMANCE	
3. PROJECT NUMBER:	075228_xx	FROM: (mm/dd/yyyy)	TO: (mm/dd/yyyy)
4. PO NUMBER	xxxxxxxxxx		
6. EMPLOYEE IDENTIFICATION NUMBER: XX-XXXXXX	7. RECIPIENT ACCOUNT OR OTHER ID NUMBER: ABA #xxxxxxx CHECKING #xxxxxx	8. PERIOD COVERED BY THIS REPORT: FROM: (mm/dd/yyyy)	TO: (mm/dd/yyyy)

9. RECIPIENT ORGANIZATION	10. PAYEE (if different than No. 9)
Name:	Name: name placeholder
No. and Street: street	No. and Street: street placeholder
City/State/Zip: city zip	City/State/Zip: city placeholder

11. STATUS OF FUNDS

PROJECT TRACKING

PROJECT CONTRACTS	TOTAL BUDGET	PREVIOUS AMOUNT	CONTRACTOR INVOICE	CUMULATIVE TOTAL
a. Engineering Contract 1	$ -	$ -	$ -	$ -
b. Engineering Contract 2	$ -	$ -	$ -	$ -
c.	$ -	$ -	$ -	$ -
d.	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ -	$ -

FUNDING TRACKING

ALLOCATION OF FUNDS	TOTAL ALLOCATION	PREVIOUS AMOUNT	REIMBURSEMENT INVOICE	REMAINING ALLOCATION
a. Maximum Grant Funds	$ -	$ -	$ -	$ -
b. Local Funds	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ -	$ -

HHPD DISBURSEMENT	$0.00

12. SUMMARY OF INVOICE ACTIVITIES

13. CERTIFICATION

I certify that to the best of my knowledge and belief, the billed cost or disbursement represents the amount due which has not been previously requested, and that all invoiced activities are considered eligible under the FEMA HHPD requirements.	a. Recipient	SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	DATE REPORT SUBMITTED
		TYPED/PRINTED NAME AND TITLE X, XXXXXXX	TELEPHONE NO.
	b. Representative Certifying to line 9.	SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	DATE REPORT SUBMITTED
		TYPED/PRINTED NAME AND TITLE Y, YYYYYYY	TELEPHONE NO.

FY24 HHPD Quarterly Milestone Workplan

State Agency:	OK Water Resources Board
HHPD Project POC:	Natalie Orbesen
Award#:	EMT-2024-GR-05000
Period of Performance	9/25/2024-9/24/2027

Person completing this worksheet:	
Date completed:	

Instructions: Column C is the list of FEMA approved activities and deliverables in your workplan.
Report and validate actual % completed in ACTUALS column.

			Period of Performance																							
			July -Sep 24		Oct-Dec 24		Jan-March 25		Apr-June 25		July -Sep 25		Oct-Dec 25		Jan-March 26		Apr-June 26		July -Sep 26		Oct-Dec 26		Jan-March 27		Apr-June 27	
			Q1		Q2		Q3		Q4		Q5		Q6		Q7		Q8		Q9		Q10		Q11		Q12	
			Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
	Quarterly Progress Reports due			10/30/2024		1/30/2025		4/30/2025		7/30/2025		10/30/2025		1/30/2026		4/30/2026		7/30/2026		10/30/2026		1/30/2027		4/30/2027		7/30/2027
	Enter ALL Deliverables and Milestones per FEMA approved Scope			0%		0%																				
	Project Name	**Performance Metric (Drop down)**																								
0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
2			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								

AGENDA ITEM 3D(7)

AGREEMENT

WITH:	City of Norman
PURPOSE:	Rehabilitation of High Hazard Potential Dams Grant Agreement
AMOUNT:	Not to Exceed $474,500.00
TERM:	July 15, 2025 through September 24, 2027

CONTRACTS CHECKLIST

Before submitting a contract for inclusion in the Board agenda/packet, please complete the following and submit with the final agreement:

Initials

YS Draft approved by Division Chief

JB Jessica Billingsley: Contract amount has been budgeted

AP Anil Pillai: All purchasing requirements have been satisfied

NAO All other parties have agreed to the terms of the contract

NAO Final copy is free of any track changes or other highlighting, etc.

SG Final draft approved by General Counsel

Contact Info for OWRB	Contact info for Contractor
Natalie Orbesen	Jason Murphy
Dam Safety Program Manager	City of Norman
Natalie.Orbesen@owrb.ok.gov	Jason.murphy@normanok.gov
405-530-8847	405-366-5455

REMEMBER, any document that contains "terms" and requires a signature is considered a contract.

No contract will be added to the Board agenda/packet unless this checklist is complete. All tasks will need to be completed prior to the deadline for the draft agenda each month to be added to the agenda/packet.

Signature: Jessica Billingsley (Jun 23, 2025 09:26 CDT)
Email: Jessica.Billingsley@owrb.ok.gov

Signature: Natalie Orbesen
Email: Natalie.Orbesen@owrb.ok.gov

Signature: yohanes sugeng (Jun 19, 2025 [illegible] CDT)
Email: Yohanes.Sugeng@owrb.ok.gov

Signature: Anil Pillai (Jun 19, 2025 18:20 CDT)
Email: Anil.Pillai@owrb.ok.gov

Signature: Sara Gibson (Jun 20, 2025 08:08 CDT)
Email: Sara.Gibson@OWRB.ok.gov

OKLAHOMA WATER RESOURCES BOARD

REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT AGREEMENT
Between the City of Norman, Cleveland County and Oklahoma Water Resources Board

This Agreement, dated as of the date of the last signature herein but to be effective as provided below, by and between the City of Norman, Cleveland County (UEI: FLEJSZ8NQCK4) (hereinafter "Subrecipient"), and the Oklahoma Water Resources Board (hereinafter "the Board"), an agency of the State of Oklahoma and State Administrative Agency of the Federal Emergency Management Agency's (hereinafter "FEMA") Rehabilitation of High Hazard Potential Dams (hereinafter "HHPD") Grant Program.

The Board is a Recipient of a Federal grant award from the FEMA, Federal Award Identification Number EMT-2024-GR-05000 Catalog of Federal Domestic Assistance Number 97.041, National Dam Safety Program. The award was received on September 25, 2024. This agreement is a contract from the Board to Subrecipient of said federal grant funds and is for non-research related activities. No indirect costs are allowed under this award, however, Management & Administration (M&A) costs are available and up to five percent (5%) of expenditures can be used for this purpose if identified as an eligible expense in the approved Scope of Work (Attachment 2). The Period of Performance of this award is from July 15, 2025, to September 24, 2027.

In accepting said grant, the Subrecipient duly acknowledges and agrees that in all regards and respects, Subrecipient must and shall comply with the requirements of all applicable federal and state statutory provisions and all Board rules, regulations, and the HHPD Grant Program applicable policies. Without limiting the generality of the foregoing, Subrecipient agrees as follows:

1. **Description of Approved Project** This grant has been approved by the Board for Subrecipient's project which shall consist of the Summit Lake Rehabilitation Project; the scoping narrative for the project is attached hereto as Attachment 2. The Subrecipient shall provide the services to the Board set forth in the Agreement documents and, specifically, as defined in the Scope of Work and Milestones. All deliverables shall conform to accepted standards and practices.

2. **Determination of Amount of Grant** The amount of this grant shall not exceed sixty-five percent (65%) of the eligible activity costs or the amount of $747,500.00 whichever is less. Cost share will be required as described in Paragraph 10.

3. **Creation and Maintenance of Separate Accounting** As a prerequisite to receiving grant funds from the Board, the Subrecipient shall establish and maintain, to the satisfaction of the Board staff, separate accounting for said HHPD funds. Prior to the Board's release of any grant funds, Subrecipient shall file a Vendor/Payee form with the State of Oklahoma identifying the method by which funds will be administered, in accordance with 2 CFR 200.305.

4. **Award Compensation** The Board shall release the grant award to the Subrecipient on a cost-reimbursement basis upon receipt and approval of the Subrecipient's programmatic and/or fiscal reports, as required by this Agreement. Matching funds must be reported and expended in proportion to federal fund expenditures. The Board is under no obligation to reimburse work performed prior to the commencement or after the expiration of the contracted time of performance. The Board reserves the right to withhold a minimum of fifteen percent (15%) of the Subrecipient's total grant allocation until the final grant report and all services, reports and deliverables are received and approved by the Board. Acceptance of work completed under this Agreement shall be decided at the sole discretion of the Board and shall be final.

5. **Requests for Reimbursement** To receive reimbursement funding, Subrecipient shall submit to the Board a FEMA Rehabilitation of High Hazard Potential Dams Grant Reimbursement Form (Attachment 4), an expenditure report, including proof of payment, detailing the project activities to be funded, and the total cost of those activities. Once the Board has deemed the proposed activities listed in the reimbursement request are eligible for HHPD Grant Program funding and are within the approved scope of work, the Board shall reimburse up to sixty-five percent (65%) of the total eligible activity cost as defined above in Section 2. Subrecipient shall then

expend funds from the account only as permitted in this Agreement, Board rules, FEMA Guidelines, and all applicable Federal award regulations. The remaining thirty-five percent (35%) of the eligible activity costs shall be considered matching fund expenditures to be paid by Subrecipient. Matching fund expenditures or in-kind contributions must be directly related to the project or statement of work for eligible activities.

6. **Expenditure of Funds in Grant Account only for Authorized Project Purposes** Subrecipient shall disburse or expend funds from the HHPD Grant Account only toward reimbursement of eligible and authorized purposes for the project approved by the Board. Authorized project costs include technical, planning, design, other pre-construction activities, and approved construction activities. The Board shall deny reimbursement of any costs not directly related to the award project or approved Scope of Work (Attachment 2). Any amount of grant funds expended from the HHPD Grant Account for unauthorized purposes shall be repaid by Subrecipient to the Board, together with payment of interest accrued from the date of the expenditure at the maximum rate allowed by law, no later than thirty (30) days after the date of written demand from Board staff.

7. **Subrecipient Reporting** The Board shall report awards in the Federal Funding Accountability and Transparency Act (FFATA) Subaward Reporting System (FSRS). The FFATA requires Recipients to report Subrecipient awards of $30,000.00 or more in the FSRS by the end of the month, following the month the subaward or obligation was made.

   Subrecipient shall maintain proper books, records, and supporting documentation (such as invoices, billing statements, and canceled checks drawn on the HHPD Grant Account) showing to the satisfaction of the Board staff the amounts and purposes of all expenditures from the HHPD Grant Account and shall make the same available for inspection and examination by the Board. Any disbursement of grant funds without adequate supporting documentation shall be deemed to be an unauthorized expenditure of grant funds which the Subrecipient shall repay to the Board with interest as provided above. The subrecipient shall direct to the Board staff any and all questions regarding whether an expenditure is authorized prior to making the expenditure.

   The Subrecipient shall provide the Board with quarterly reports and a final report on Performance and Financial Progress, detailing the progress of work set forth in the Agreement documents. Reporting quarters shall be defined by the attached HHPD Quarterly Milestone Workplan Table (Attachment 4b). Incomplete or inaccurate reports may result in reimbursement delays. These reports shall be certified by an authorized agent of the Subrecipient as being true and accurate to the best of the Subrecipient's knowledge, as indicated by their signature on Attachment 4.

   Each report, due on the 15th day following the close of the quarter, shall contain the following:

   1. A Succinct Narrative - Describe the progress fulfilling the Scope of Work and activities for each deliverable. Provide a financial narrative with itemized details of expenditures, and

   2. An Updated Quarterly Milestones Workplan Table Provide target and actual completion dates by quarter for each project activity defined in the Scope of Work. The Quarterly Milestone Workplan Table (Attachment 4b) shall be provided by the Board. Reporting quarters are defined as follows:
      January-March
      April-June
      July-September
      October-December

   The final report, due within thirty (30) days after the Agreement termination date, shall summarize all major project accomplishments and challenges, as well as expenditures and matching contributions during the period after the project began through the completion of all required work. Deliverable in the approved Board Construction Permit and photographs taken before, during, and after project implementation should be included in the final report. The final reimbursement request must be submitted with the final report and the Board will not reimburse any requests received thirty (30) days after the Agreement termination date.

8. **Time Limit to File for Reimbursement; Expiration of Approval** Reimbursements for eligible activities are only applicable for approved activities to be completed after the finalization of this agreement. Any costs incurred prior to this agreement date are not allowable. All reimbursement requests for eligible project activities must be

received by the Board by June 24, 2027. If the project is unable to be completed by June 24, 2027, the Subrecipient shall submit a request for a project extension. If the extension is determined by the Board to be necessary and appropriate, the Board or its staff may permit additional time, but no later than September 24, 2027, to file an acceptable reimbursement request. The approval of this grant shall not extend past September 24, 2027, without prior approval from the grantor (FEMA). If an acceptable reimbursement is not received on or before September 24, 2027, then the approval of this grant shall expire and no grant funds will be released to Subrecipient, unless authorized by the grantor.

9. **Return of unexpended grant funds** Subrecipient shall return to the Board any unexpended grant funds, including any unexpended contingencies funds, within thirty (30) days after completion of the construction of the project or within thirty (30) days from Subrecipient's receipt of all invoices, whichever is later.

10. **Subrecipient Cost Share** Subrecipient will provide documentation to the Board showing the appropriate amount of subrecipient cost share is available for the grant, prior to approval. Subrecipient shall provide match of thirty-five percent (35%) of eligible project costs under this award. To receive the full award amount described in Paragraph 2, the minimum Subrecipient matching funds in the amount of $402,500.00 are required.

11. **Additional Requirements** Subrecipient may be subject to additional requirements as may be directed by the Board in accordance with the HHPD Grant Program and associated procedures for implementing the program. The Board may require additional documentation or information as needed to meet any of the requirements of the HHPD Grant Program.

12. **Retention of Records** All documents, books, records related to the sub-award must be retained and made available to the federal awarding agency, Department of Homeland Security Office of the Inspector General, Recipient, and state auditors for a minimum period of three years from the date of the Board's final financial report. The final date of records retention will be communicated through a closeout letter from the Board to the Subrecipient.

13. **Regulatory** All Federal funds awarded are subject to the provisions of 2 CFR 200 Uniform Administrative Requirement, Cost Principles, and Audit Requirements for Federal Awards. Additionally, Subrecipient must and shall comply with the requirements of all applicable federal, state, and local statutory provisions; all Board rules, regulations, and grant program guidance; HHPD Grant Program applicable policies and HHPD Notice of Funding Opportunity provisions and policies.

14. **Hazard Mitigation Plan** All activities relating to the public in the area around the dam will be performed in accordance with the hazard mitigation plan. Subrecipient has been granted use by FEMA of the *Mitigation Plan Extraordinary Circumstances* request to fulfill the Hazard Mitigation Plan (HMP) requirements of this award. The HMP must be approved by FEMA by 05/17/2026.

15. **EHP Requirements** Subrecipient must comply with Federal Environment Planning and Historic Preservation (EHP) regulations and submit to the Board, summary reports/studies conducted as part of this project.

16. **Floodplain Management Plan** Subrecipient must have in place (or develop not later than 2 years after the date of execution of the dam rehabilitation project and implement not later than 2 years after the date of completion of the project) a floodplain management plan to reduce the impacts of future flood events in the area impacted by the project.

Programmatic Terms and Conditions

17. **Assistance** The Board agrees, upon request of the Subrecipient, to furnish, or otherwise make available to the Subrecipient, copies of existing non-proprietary materials in the possession of the Board that are reasonably associated with this project. This includes materials that are necessary to Subrecipient for completion of its performance under this agreement.

18. **Financial Records Availability** The Subrecipient agrees to retain all books, records and other documents relative to this agreement for three years after final payment. The Board, its authorized agents, and/or state auditors shall

have full access to, and the right to examine any of, said materials during said period.

19. **Food and Refreshments** Not applicable to this award.

20. **Federal Employee Costs** The Subrecipient understands that the funds for this project may not be used to pay for the travel of federal employees, or for other costs associated with federal participation in this project unless the federal agency is performing special technical assistance to the Subrecipient as allowed under the provisions of the Intergovernmental Cooperation Act.

21. **Termination and Breach** Either party may terminate this agreement upon 30 days written notice to the other party. The Board may terminate this Agreement for any reason necessary to support its current policy and financial status, including the need to redirect funds to another program. The Board may also terminate this agreement for failure of Subrecipient to make sufficient progress so as to reasonably ensure completion of the project within the project period. Sufficient progress will be measured by examining the performance required under the scope of work (Attachment 2) and milestones, the time remaining for performance within the project period, and/or the availability of funds necessary to complete the project.

    It is understood and agreed between the parties, herein, that the Board shall be bound, hereunder, only to the extent of the funds available or which may hereafter become available for the purpose of this Agreement.

    In the event of breach by the Subrecipient of this Agreement, the Board shall provide written notice to the Subrecipient specifying the manner in which the Agreement has been breached. If a notice of breach is given and the Subrecipient has not substantially corrected the breach within sixty (60) days of receipt of the written notice, the Board shall have the right to terminate the Agreement. The Subrecipient shall not be paid for services rendered nor expenses incurred after receipt of the notice of termination, except such fees and expenses incurred prior to the effective date of termination as are necessary for curtailment of its work under this Agreement.

22. **Indemnification** (Not Applicable)

23. **Labor Concerns** As a condition of award, Subrecipient will certify compliance with 42 U.S.C. § 5196 - U.S. Code - Unannotated Title 42. The Public Health and Welfare § 5196. Detailed functions of administration, Item (j)(9) as a condition of grant acceptance. The applicable section is as follows:
    a. All laborers and mechanics employed by contractors or subcontractors in the performance of construction work financed with the assistance of any contribution of Federal funds made by the Administrator under this subsection shall be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with sections 3141 - 3144 , 3146 , and 3147 of Title 40 , and every such employee shall receive compensation at a rate not less than one and one-half times the basic rate of pay of the employee for all hours worked in any workweek in excess of eight hours in any workday or forty (40) hours in the work week, as the case may be. The Administrator shall make no contribution of Federal funds without first obtaining adequate assurance that these labor standards will be maintained upon the construction work. The Secretary of Labor shall have, with respect to the labor standards specified in this subsection, the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (5 U.S.C. App.) and section 3145 of Title 40.

    b. As a condition of award, Subrecipient will certify compliance with 40 U.S.C. Chapter 11; Selection of Architects and Engineers. The language can be viewed at: https://uscode.house.gov/view.xhtml?path=/prelim@title40/subtitle1/chapter11&edition=prelim

24. **Management Fees** The Subrecipient agrees that management fees or similar charges in excess of the direct costs and approved indirect rates (if applicable) are not allowable. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business

expenses, unforeseen liabilities, or for other similar costs which are not allowable under this Agreement. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work (Attachment 2). Management and Administration (M&A) costs up to five percent (5%) of this subaward is allowable for direct costs of management and administration of this award (i.e. employee salary and fringe costs for preparation and submission of reports, requests for reimbursements, preparation and submission of award closeout reports). M&A costs must be listed in the subrecipient's approved application and budget to be eligible for reimbursement.

FEDERAL PUBLIC POLICY REQUIREMENTS

25. **Whistleblower** Congress has enacted the whistleblower protection statute 41 U.S.C. §4712 to encourage employees to report fraud, waste, and abuse without repercussions. This statute applies to all employees working for contractors, Subrecipients, subcontractors, and sub Subrecipients in accordance with this Agreement. All contractors, Subrecipients, sub Subrecipients, and subcontractors for federal grants and contracts are required to:
    1. Inform their employees in writing of the whistleblower protections under 41 U.S.C. §4712 in the predominant native language of the workforce, to include the specific requirements of the statute, and
    2. Include this term and condition in any agreement made with a subcontractor or sub Subrecipient. The employees· rights under 41 U.S.C. §4712 shall survive termination of this Contract.

26. **Buy American Act** Subrecipient warrants that the purchase of supplies. equipment, and construction materials for the project with grant funds shall comply to the greatest extent practicable, with the Buy American Act requirement or 43 CFR 12, Subpart E., unless DCR allows an exception specified in 43 CFR 12.710(d) and (e) and 43 CFR 12.715.

27. **Non-Discrimination** In its performance of this Agreement, Subrecipient warrants that it will not discriminate against any employee or applicant for employment on account of race, color, sex. religion, age. disability. or national origin. Subrecipient agrees to post in conspicuous places available to employees and applicants for employment notices setting forth the provision of this non-discrimination clause.

    Subrecipient must comply with Title VI of the Civil Rights Act of 1964 including providing meaningful access to LEP individuals, Section 504 of the Rehabilitation Act of 1973. The Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972 if conducting an education program under this award, if applicable, Section 13 of the Federal Water Pollution Control Act Amendments of 1972 and Title IX obligations 40 CFR Part 5.

28. **Smoke-Free Environment** Public Law l03-277, also known as the Pro-Children Act of 1994. requires that smoking not be permitted in any portion of any indoor facility owned or leased or contracted for by an entity and used routinely or regularly for the provision of health, day care, early childhood development services, education or library services to children under the age of eighteen (18), if the services are funded by Federal programs either directly or through State or local governments by Federal grant, contract, loan or loan guarantee. Failure to comply with the provisions or the law may result in the imposition of a civil monetary penalty of up to $1000 for each violation and/or the imposition of an administrative compliance order on the responsible entity.

29. **Hotel-Motel Fire Safety Act** Pursuant to 15 USC *§* 2225a. the Subrecipient agrees to ensure that all space for conferences, meetings, conventions or training seminars funded in whole or in part with federal funds complies with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PL I01 - 391 as amended). Recipients may search the Hotel-Motel National Master list at https://apps.usfa.fema.gov/hotel/femaIDSearch to see if a property is in compliance.

30. **Recycled Paper** When directed to provide paper documents the Subrecipient agrees to use recycled paper and double-sided printing for all reports which are prepared as a part of this agreement and delivered to the Board. This requirement does not apply to reports prepared on forms supplied by the Board.

31. **Resource Conservation and Recovery Act** Consistent with goals of section 6002 of RCRA (42 U.S.C. 6962), State and local institutions or higher education hospitals and non-profit organization recipients agree to give preference in procurement programs to the purchase of specific products containing recycled materials. as identified in 40 CFR Part 247. Consistent with section 6002 of RCRA (42 U.S.C. 6962) and 2 CFR 200.322. Slate agencies or agencies of a political subdivision of a Slate and its contractors are required to purchase certain items made from recycled materials, as identified in 40 CFR Part 247. when the purchase price exceeds $10.000 during the course of a fiscal year or where the quantity of such items acquired in the course of the preceding fiscal year was $10,000 or more. Pursuant to 40 CFR 247.2 (d), the Subrecipient may decide not to procure such items if they are not reasonably available in a reasonable period of time: fail to meet reasonable performance standards; or are only available at an unreasonable price.

32. **Trafficking Victims Protection Act** To implement the requirements of Section 106 of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), the Subrecipient must abide by the Prohibition Statement below. The Subrecipient must inform the Board immediately of any information you received from any source alleging a violation of the Prohibition Statement below. FEMA and the associated federal funding agency have the right to unilaterally terminate this Agreement without penalty, if the Subrecipient or an employee is determined to have violated an applicable prohibition in the Prohibition Statement.

    i. **Prohibition Statement** The Board as the recipient, its employees, sub-recipients under this Agreement, and sub-recipients' employees may not engage in severe forms of trafficking in persons during the period of time that the Agreement is in effect; procure a commercial sex act during the period of time that the Agreement is in effect; or use forced labor in the performance of tine Agreement or sub-awards under the Agreement.

33. **Quality Assurance/Quality Control Project Plans (if applicable)** Within 60 days of the effective date of this Agreement and if required in Attachment 4 of this Agreement, the Subrecipient will submit to the Board, for review and approval, a Quality Assurance/Quality Control Project Plan.

34. **Reporting and Tracking Information Management Systems** In accepting these funds, the Subrecipient agrees to the sharing of all deliverable and related information through state and/or federal channels (including Internet use) and, wherever possible, to provide with deliverable in a format that can be made available to other partners and the public, as appropriate.

35. **Electronic and Information Technology Accessibility** Subrecipients are subject to the program accessibility provisions of Section 504 of the Rehabilitation Act, codified in 40 CFR Part 7, which includes an obligation to provide individuals with disabilities reasonable accommodations and an equal and effective opportunity to benefit from or participate in a program, including those offered through electronic and information technology.

36. **Creation of Intellectual Property** In accordance with 2 CFR 200.315, U.S. Department of Homeland Security (DHS) has the right to reproduce, publish, use and authorize others to reproduce publish and use copyrighted works or other data developed under this agreement for Federal purposes. The Board hereby grants to the Subrecipient a license to use any such material for public, non-commercial purposes within the territory of the project. Subrecipient hereby grants to the Board a license to use any such material for public, non- commercial purposes within the territory of the project.

    A copyright notice shall be placed in an appropriate location on any copyrightable material being distributed or published. Such notice shall include (1) either the symbol "©", the word "Copyright" or the abbreviation "Copr." (2) the year of first publication, and (3) the name of the copyright owner (the State of Oklahoma). This information shall be followed by the words, "all rights reserved."

37. **Documents** The Subrecipient may retain any reports, studies, photographs, negatives or other documents prepared in the performance of their obligations under this Agreement and not required to be delivered to the Board shall have certain rights to use any such materials as specified above. Where necessary for its enjoyment of its rights and other rights referenced in this Agreement, the Subrecipient shall provide a clear, reproducible copy of such materials (machine readable upon request, if readily available to, the Subrecipient in such form) to the Board.

38. **Disclaimer** For reports or papers produced for public distribution (including the final product), the following sentence must be added to the end of the above credit: *The views expressed herein are those of the author(s) and do not necessarily reflect the views of U.S. Department of Homeland Security (DHS) and the State of Oklahoma.*

39. **Acknowledgements** The role of the Board, U.S. Department of Homeland Security (DHS) and the State of Oklahoma must be clearly stated in all press releases, news articles, requests for proposals, bid solicitations and other documents describing this project, whether funded in whole or in part.

    Acknowledgment of financial assistance, with the use of the Board, U.S. Department of Homeland Security (DHS) and City of Norman logos, as appropriate, must be printed on the cover of all reports, studies, web sites, map products, or other products supported by this award or any sub-award. The Subrecipient is responsible for contacting staff in adequate time to obtain the required logos in camera-ready or digital form. Prior to production, the Board's project management staff must approve the final draft. The acknowledgment should read:

    This project was funded wholly or in part by the *U.S. Department of Homeland Security (DHS) to support protecting the lives of Americans and their property from the risks associated with dams. The Rehabilitation of High Hazard Potential Dams Grant Program (HHPD), administered in connection with the National Dam Safety Program provides technical, planning, design, and construction assistance in the form of grants to states for non- Federal governmental organizations or nonprofit organizations for rehabilitation of eligible high hazard potential dams. For FY2024, the HHPD Grant Program will provide assistance for technical, planning, design and other pre-construction activities through* EMT-2024-GR-05000. *The contents of this document/report etc. do not necessarily reflect the views and policies of DHS nor does DHS endorse trade names or recommend the use of commercial products mentioned in this document."*

40. **Assurances** By entering into this Agreement, the Subrecipient certifies that it has the legal authority to apply for federal assistance, and it has the institutional, managerial and financial capability (including funds sufficient to pay for subjects costs until reimbursement or pay for the non-federal share of project costs) to ensure proper planning, management and completion of the project description.

41. **Suspension and debarment** Non-Federal entities are subject to the non-procurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, 2 CFR part 180. The regulations in 2 CFR part 180 restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs or activities.

42. **Prohibition on certain telecommunications and video surveillance services or equipment**
    a. Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
        1. Procure or obtain,
        2. Extend or renew a contract to procure or obtain; or
            i. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
            ii. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
            iii. Telecommunications or video surveillance services provided by such entities or using such equipment.
            iv. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or

controlled by, or otherwise connected to, the government of a covered foreign country.

b. In implementing the prohibition under Public Law 115–232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.
c. See Public Law 115–232, section 889 for additional information.
d. See also § 200.471.

43. **Appendix II to Part 200 – Contract provision for Non-federal entity contracts under Federal awards**
In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

a. Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.
b. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.
c. Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60–1.3 must include the equal opportunity clause provided under 41 CFR 60–1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964–1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
d. Davis-Bacon Act, as amended (40 U.S.C. 3141–3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141–3144, and 3146–3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.
e. Contract Work Hours and Safety Standards Act (40 U.S.C. 3701–3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases

of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

f. Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

g. Clean Air Act (42 U.S.C. 7401–7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251–1387), as amended—Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

h. Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

i. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

j. See § 200.323.

k. See § 200.216.

l. See § 200.322.

In consideration of Subrecipient's agreement to these terms and conditions, Subrecipient has entered and signed this HHPD Grant Agreement this_____day of_____, 20___

OKLAHOMA WATER RESURCES BOARD

_____

Thomas Gorman, Vice-Chair

ATTEST:

_____

Suzanne Landess, Secretary

(BOARD SEAL)

* * * * *

Reviewed by:

Yohanes Sugeng, Chief
Engineering and Planning Division

City of Norman, Cleveland County Oklahoma

APPROVED BY CITY OF NORMAN LEGAL DEPARTMENT
BY _____ DATE 6/20/25

Larry Heikkila, City Mayor

Date: 6-24-25

ATTEST:

By: Brenda Hall

Title: City Clerk

CITY OF NORMAN
CORPORATE
SEAL
OKLAHOMA

Attachment 1
FEDERAL AWARD IDENTIFICATION INFORMATION

2 C.F.R. §§ 200.332(a)(1)(i)-(xiv)
Requirements for pass-through entities

Pass-through entity, and contact information for awarding official of the Pass-through entity

Oklahoma Water Resources Board
Jay Foote, CFO
405-530-8800
Jay.Foote@owrb.ok.gov

(i) Subrecipient name

City of Norman

(ii) Subrecipient's unique entity identifier (UEI)

FLEJSZ8NQCK4

(iii) Federal Award Identification Number (FAIN)

EMT-2024-GR-05000

(iv) Federal Award Date

09/25/2024

(v) Subaward Period of Performance Start and End Date

9/25/2024 – 9/24/2027

(vi) Subaward Budget Period Start and End Date

7/15/2025 – 9/24/2027

(vii) Amount of Federal Funds Obligated by this action by the pass-through entity to the subrecipient

$747,500.00

(viii) Total Amount of Federal Funds Obligated to the subrecipient by the pass-through entity including the current financial obligation

Total Pass-through Federal Funds: $

FY 2024 HHPD

Summit Lake Rehabilitation Project: $747,500.00

(ix) Total Amount of the Federal Award committed to the subrecipient by the pass-through entity

$0

(x) Federal award project description, as required to be responsive to the Federal Funding Accountability and Transparency Act (FFATA)

(xi) Name of Federal awarding agency

Federal Emergency Management Administration

(xii) Assistance listings number and title; the pass-through entity must identify the dollar amount made available under each Federal award and the Assistance Listings Number at time of disbursement

a. 97.041-National Dam Safety Program DHS-24-[MT]-[041]-[00]-[98]
   i. $747,500.00

(xiii) Identification of whether the award is Research and Development (R&D)

R&D is not allowed under this agreement

(xiv) Indirect cost rate for the Federal award (including if the de minimis rate is charged) per 2 CFR § 200.414

Indirect costs are not allowed under this agreement

ATTACHMENT 2

Scope of Work
Summit Lake Rehabilitation Project
City of Norman
[Following pages]

3. Scoping Narrative, Schedule, and Budget

Proposed Activity:

Misty Lake Dam is a 20-foot high, high hazard potential, earthen dam. During a 2015 inspection, uncontrolled seepage was observed from under the dam that had caused extensive soil saturation. To protect the structural integrity of the dam, the lake level has been kept at a minimum of three feet below the top of the emergency spillway until repairs can be completed. This project consists of clearing and grubbing of the project site, construction of a construction entrance, installation of an embankment toe drain to control the seepage through the dam, widening of the downstream toe, raising and regrading of dam face, installation of revetment, revegetation of the dam, and installing sod on all disturbed areas.

Activity Duration:

Request for Bids and Contract Award :	90 Days
Construction:	150 Days
Total:	240 Days

Estimated Budget:

Administrative and Legal Expenses	$79,318
Land, Structure, RoW, Appraisals, Etc.	$ -
Relocation Expenses and Payments	$ -
Architectural and Engineering Fees	$85,000
Other Architectural and Engineering Fees	$30,000
Project Inspection Fees	$ -
Site Work	$661,675
Demolition and Removal	$29,795
Construction	$137,792
Equipment	$ -
Miscellaneous	$47,213
Total	$1,070,793

ATTACHMENT 3

OWRB BOARD RESOLUTION APPROVING
REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT APPLICATION
[Following pages]

PLEASE RETAIN THE FOLLOWING
BOARD ORDER FOR YOUR RECORDS

A RESOLUTION OF THE OKLAHOMA WATER RESOURCES BOARD AUTHORIZING AN APPLICATION FOR FUNDING ASSISTANCE THROUGH THE FEDERAL EMERGENCY MANAGEMENT AGENCY PROGRAM TO REHABILITATE HIGH HAZARD POTENTIAL DAMS

WHEREAS, the United States Department of Homeland Security, Federal Emergency Management Agency ("FEMA") has implemented the Rehabilitation of High Hazard Potential Dams (HHPD) program to provide grant funds to reduce or eliminate the risk of dams of highest consequence and increase understanding and management of risks posed by eligible dams.

WHEREAS, FEMA has solicited proposals for cost-shared financial assistance from States, Indian Tribes, and nonprofit dam owners for projects to develop.

WHEREAS, the Oklahoma Water Resources Board ("Agency") has identified itself as an eligible applicant under FEMA's HHPD Grant Program, Funding Opportunity Number: DHS-24-[MT]-[041]-[00]-[98].

WHEREAS, the Agency is pursuing grant funding assistance under the HHPD grant program to provide technical, planning, design, pre-construction, and construction activities related to the repair, removal, or rehabilitation of eligible high hazard dams. The amount of the grant award is formula based and is calculated using the nationwide number of eligible dams and the number of states that have applied for the grant.

NOW, THEREFORE, be it resolved by the Board as follows:

1. The Board has reviewed the scope and purpose of the funding application and finds that the Project will serve the needs of the people of Oklahoma and satisfy the goals of the HHPD program, and on that basis, supports the staff submittal of the grant proposal to FEMA.

2. The Agency is acting as a pass-through entity and will work with eligible subrecipients to meet the minimum 35-percent cost share required to obtain grant funding under the HHPD Grant Program.

3. Pursuant to state policy, the Agency has sought approval from the Office of the Secretary of Energy and Environment to pursue this funding opportunity.

4. The Board hereby ratifies the action of its Chief Financial Officer or his designee of the Agency in applying for financial assistance from FEMA's HHPD Grant Program and authorizes the Chief Financial Officer or his designee to execute any related document, including a cooperative financial assistance agreement with FEMA.

5. The Chief Financial Officer and staff are directed to take all other actions necessary to secure funding for the Project under the HHPD Grant Program, including

working with FEMA to meet established deadlines for entering into a cooperative financial assistance agreement.

PASSED AND ADOPTED by the Oklahoma Water Resources Board on the 20th day of February, 2024:

~~Jennifer Castillo, Chairman~~

Tom Gorman, Acting Chairman

ATTEST:

~~Suzanne Landes, Secretary~~

Robert L. Stallings, Acting Secretary

OKLAHOMA WATER RESOURCES BOARD

ATTACHMENT 4

Reporting Guidelines & Forms

[Following pages]

FEMA REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT REIMBURSEMENT FORM

OUTLAY REPORT AND REQUEST FOR GRANT PROCEEDS FOR HHPD FUNDING		1. DISBURSEMENT REQUEST NO. 1	PAGE 1 OF 1
2. GRANT NUMBER:	EMW-xxxx-xx-xxxxx	5. PERIOD OF PERFORMANCE	
3. PROJECT NUMBER:	075228_xx	FROM: (mm/dd/yyyy)	TO: (mm/dd/yyyy)
4. PO NUMBER	xxxxxxxxxx		
6. EMPLOYEE IDENTIFICATION NUMBER: XX-XXXXXX	7. RECIPIENT ACCOUNT OR OTHER ID NUMBER: ABA #xxxxxxx CHECKING #xxxxxx	8. PERIOD COVERED BY THIS REPORT: FROM: (mm/dd/yyyy)	TO: (mm/dd/yyyy)

9. RECIPIENT ORGANIZATION	10. PAYEE (if different than No. 9)
Name:	Name: name placeholder
No. and Street: street	No. and Street: street placeholder
City/State/Zip: city zip	City/State/Zip: city placeholder

11. STATUS OF FUNDS

PROJECT TRACKING

PROJECT CONTRACTS	TOTAL BUDGET	PREVIOUS AMOUNT	CONTRACTOR INVOICE	CUMULATIVE TOTAL
a. Engineering Contract 1	$ -	$ -	$ -	$ -
b. Engineering Contract 2	$ -	$ -	$ -	$ -
c.	$ -	$ -	$ -	$ -
d.	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ -	$ -

FUNDING TRACKING

ALLOCATION OF FUNDS	TOTAL ALLOCATION	PREVIOUS AMOUNT	REIMBURSEMENT INVOICE	REMAINING ALLOCATION
a. Maximum Grant Funds	$ -	$ -	$ -	$ -
b. Local Funds	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ -	$ -

HHPD DISBURSEMENT	$0.00

12. SUMMARY OF INVOICE ACTIVITIES

13. CERTIFICATION

I certify that to the best of my knowledge and belief, the billed cost or disbursement represents the amount due which has not been previously requested, and that all invoiced activities are considered eligible under the FEMA HHPD requirements.	a. Recipient	SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	DATE REPORT SUBMITTED
		TYPED/PRINTED NAME AND TITLE X, XXXXXXX	TELEPHONE NO.
	b. Representative Certifying to line 9.	SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	DATE REPORT SUBMITTED
		TYPED/PRINTED NAME AND TITLE Y, YYYYYYY	TELEPHONE NO.

FY24 HHPD Quarterly Milestone Workplan

Person completing this worksheet:	
Date completed:	

State Agency:	OK Water Resources Board
HHPD Project POC:	Natalie Orbesen
Award#:	EMT-2024-GR-05000
Period of Performance	9/25/2024-9/24/2027

Instructions: Column C is the list of FEMA approved activities and deliverables in your workplan.
Report and validate actual % completed in ACTUALS column.

			Period of Performance																							
			July -Sep 24		Oct-Dec 24		Jan-March 25		Apr-June 25		July -Sep 25		Oct-Dec 25		Jan-March 26		Apr-June 26		July -Sep 26		Oct-Dec 26		Jan-March 27		Apr-June 27	
			Q1		Q2		Q3		Q4		Q5		Q6		Q7		Q8		Q9		Q10		Q11		Q12	
			Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
	Quarterly Progress Reports due			10/30/2024		1/30/2025		4/30/2025		7/30/2025		10/30/2025		1/30/2026		4/30/2026		7/30/2026		10/30/2026		1/30/2027		4/30/2027		7/30/2027
	Enter ALL Deliverables and Milestones per FEMA approved Scope			0%		0%																				
	Project Name	**Performance Metric (Drop down)**																								
0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
1			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
2			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								

AGENDA ITEM 3D(8)

AGREEMENT

WITH:	Bryan County Rural Water, Sewer & Solid Waste Management District No. 2, Bryan County
PURPOSE:	Rehabilitation of High Hazard Potential Dams Grant Agreement
AMOUNT:	Not to Exceed $845,449.94
TERM:	July 15, 2025 through September 24, 2027

CONTRACTS CHECKLIST

Before submitting a contract for inclusion in the Board agenda/packet, please complete the following and submit with the final agreement:

Initials

- ___ Draft approved by Division Chief
- JB Jessica Billingsley: Contract amount has been budgeted
- AP Anil Pillai: All purchasing requirements have been satisfied
- NAO All other parties have agreed to the terms of the contract
- NAO Final copy is free of any track changes or other highlighting, etc.
- SG Final draft approved by General Counsel

Contact Info for OWRB	Contact info for Contractor
Natalie Orbesen	Regina Clinton
Dam Safety Program Manager	Bryan County Rural Water, Sewer &
Natalie.Orbesen@owrb.ok.gov	Solid Waste Management District No. 2
405-530-8847	rwd@totalnet.us
	580-924-8517

REMEMBER, any document that contains "terms" and requires a signature is considered a contract.

No contract will be added to the Board agenda/packet unless this checklist is complete. All tasks will need to be completed prior to the deadline for the draft agenda each month to be added to the agenda/packet.

Signature: Jessica Billingsley (Jun 23, 2025 09:23 CDT)
Email: Jessica.Billingsley@owrb.ok.gov

Signature: Anil Pillai (Jun 19, 2025 18:24 CDT)
Email: Anil.Pillai@owrb.ok.gov

Signature: Natalie Orbesen
Email: Natalie Orbesen@owrb.ok.gov

Signature: Sara Gibson (Jun 20, 2025 08:06 CDT)
Email: Sara.Gibson@OWRB.ok.gov

Signature: Yohanes Sugeng (Jun 19, 2025 14:38 CDT)
Email: Yohanes.Sugeng@owrb.ok.gov

OKLAHOMA WATER RESOURCES BOARD

REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT AGREEMENT
Between the Bryan County Rural Water, Sewer & Solid Waste Management District No. 2, Bryan County and Oklahoma Water Resources Board

This Agreement, dated as of the date of the last signature herein but to be effective as provided below, by and between the Bryan County Rural Water, Sewer & Solid Waste Management District No. 2, Bryan County (UEI: **FVPFJJ3EFHN8**) (hereinafter "Subrecipient"), and the Oklahoma Water Resources Board (hereinafter "the Board"), an agency of the State of Oklahoma and State Administrative Agency of the Federal Emergency Management Agency's (hereinafter "FEMA") Rehabilitation of High Hazard Potential Dams (hereinafter "HHPD") Grant Program.

The Board is a Recipient of a Federal grant award from the FEMA, Federal Award Identification Number EMT-2024-GR-05000 Catalog of Federal Domestic Assistance Number 97.041, National Dam Safety Program. The award was received on September 25, 2024. This agreement is a contract from the Board to Subrecipient, of said federal grant funds and is for non-research related activities. No indirect costs are allowed under this award, however, Management & Administration (M&A) costs are available and up to five percent (5%) of expenditures can be used for this purpose if identified as an eligible expense in the approved Scope of Work (Attachment 2). The Period of Performance of this award is from July 15, 2025, to September 24, 2027.

In accepting said grant, Subrecipient duly acknowledges and agrees that in all regards and respects, Subrecipient must and shall comply with the requirements of all applicable federal and state statutory provisions and all Board rules, regulations, and the HHPD Grant Program applicable policies. Without limiting the generality of the foregoing, Subrecipient agrees as follows:

1. **Description of Approved Project** This grant has been approved by the Board for Subrecipient's project which shall consist of the Blue River Dam Rehabilitation Project; the scoping narrative for the project is attached hereto as Attachment 2. The Subrecipient shall provide the services to the Board set forth in the Agreement documents and, specifically, as defined in the Scope of Work and Milestones. All deliverables shall conform to accepted standards and practices.

2. **Determination of Amount of Grant** The amount of this grant shall not exceed sixty-five percent (65%) of the eligible activity costs or the amount of $854,449.94 whichever is less. Cost share will be required as described in Paragraph 10.

3. **Creation and Maintenance of Separate Accounting** As a prerequisite to receiving grant funds from the Board, Subrecipient shall establish and maintain, to the satisfaction of the Board staff, separate accounting for said HHPD funds. Prior to the Board's release of any grant funds, Subrecipient shall file a Vendor/Payee form with the State of Oklahoma identifying the method by which funds will be administered, in accordance with 2 CFR 200.305.

4. **Award Compensation** The Board shall release the grant award to the Subrecipient on a cost-reimbursement basis upon receipt and approval of the Subrecipient's programmatic and/or fiscal reports, as required by this Agreement. Matching funds must be reported and expended in proportion to federal fund expenditures. The Board is under no obligation to reimburse work performed prior to the commencement or after the expiration of the contracted time of performance. The Board reserves the right to withhold a minimum of fifteen percent (15%) of the Subrecipient's total grant allocation until the final grant report and all services, reports and deliverable are received and approved by the Board. Acceptance of work completed under this Agreement shall be decided at the sole discretion of the Board and shall be final.

5. **Requests for Reimbursement** To receive reimbursement funding, Subrecipient shall submit to the Board a FEMA Rehabilitation of High Hazard Potential Dams Grant Reimbursement Form (Attachment 4), an expenditure report, including proof of payment, detailing the project activities to be funded, and the total cost of those activities. Once the Board has deemed the proposed activities listed in the reimbursement request are eligible for HHPD Grant Program funding and are within the approved scope of work, the Board shall reimburse up to sixty-five percent (65%) of the total eligible activity cost as defined above in Section 2. Subrecipient shall then

expend funds from the account only as permitted in this Agreement, Board rules, FEMA Guidelines, and all applicable Federal award regulations. The remaining thirty-five percent (35%) of the eligible activity costs shall be considered matching fund expenditures to be paid by Subrecipient. Matching fund expenditures or in-kind contributions must be directly related to the project or statement of work for eligible activities.

6. **Expenditure of Funds in Grant Account only for Authorized Project Purposes** Subrecipient shall disburse or expend funds from the HHPD Grant Account only toward reimbursement of eligible and authorized purposes for the project approved by the Board. Authorized project costs include technical, planning, design, other pre-construction activities, and approved construction activities. The Board shall deny reimbursement of any costs not directly related to the award project or approved Scope of Work (Attachment 2). Any amount of grant funds expended from the HHPD Grant Account for unauthorized purposes shall be repaid by Subrecipient to the Board, together with payment of interest accrued from the date of the expenditure at the maximum rate allowed by law, no later than thirty (30) days after the date of written demand from Board staff.

7. **Subrecipient Reporting** The Board shall report awards in the Federal Funding Accountability and Transparency Act (FFATA) Subaward Reporting System (FSRS). The FFATA requires Recipients to report Subrecipient awards of $30,000.00 or more in the FSRS by the end of the month, following the month the subaward or obligation was made.

   Subrecipient shall maintain proper books, records, and supporting documentation (such as invoices, billing statements, and canceled checks drawn on the HHPD Grant Account) showing to the satisfaction of the Board staff the amounts and purposes of all expenditures from the HHPD Grant Account and shall make the same available for inspection and examination by the Board. Any disbursement of grant funds without adequate supporting documentation shall be deemed to be an unauthorized expenditure of grant funds which Subrecipient shall repay to the Board with interest as provided above. The subrecipient shall direct to the Board staff any and all questions regarding whether an expenditure is authorized prior to making the expenditure.

   The Subrecipient shall provide the Board with quarterly reports and a final report, on Performance and Financial Progress, detailing the progress of work set forth in the Agreement documents. Reporting quarters shall be defined by the attached HHPD Quarterly Milestone Workplan Table (Attachment 4b). Incomplete or inaccurate reports may result in reimbursement delays. These reports shall be certified by an authorized agent of the Subrecipient as being true and accurate to the best of the Subrecipient's knowledge, as indicated by their signature on Attachment 4.

   Each report, due on the 15th day following the close of the quarter, shall contain the following:

   1. A Succinct Narrative - Describe the progress fulfilling the Scope of Work and activities for each deliverable. Provide a financial narrative with itemized details of expenditures, and

   2. An Updated Quarterly Milestones Workplan Table Provide target and actual completion dates by quarter for each project activity defined in the Scope of Work. The Quarterly Milestone Workplan Table (Attachment 4b) shall be provided by the Board. Reporting quarters are defined as follows:
      January-March
      April-June
      July-September
      October-December

   The final report, due within thirty (30) days after the Agreement termination date, shall summarize all major project accomplishments and challenges, as well as expenditures and matching contributions during the period after the project began through the completion of all required work. Deliverable in the approved Board Construction Permit and photographs taken before, during, and after project implementation should be included in the final report. The final reimbursement request must be submitted with the final report and the Board will not reimburse any requests received thirty (30) days after the Agreement termination date.

8. **Time Limit to File for Reimbursement; Expiration of Approval** Reimbursements for eligible activities are only applicable for approved activities to be completed after the finalization of this agreement. Any costs incurred prior to this agreement date are not allowable. All reimbursement requests for eligible project activities must be

received by the Board by June 24, 2027. If the project is unable to be completed by June 24, 2027, the Subrecipient shall submit a request for a project extension. If the extension is determined by the Board to be necessary and appropriate, the Board or its staff may permit additional time, but no later than September 24, 2027, to file an acceptable reimbursement request. The approval of this grant shall not extend past September 24, 2027, without prior approval from the grantor (FEMA). If an acceptable reimbursement is not received on or before September 24, 2027, then the approval of this grant shall expire and no grant funds will be released to Subrecipient, unless authorized by the grantor.

9. **Return of unexpended grant funds** Subrecipient shall return to the Board any unexpended grant funds, including any unexpended contingencies funds, within thirty (30) days after completion of the construction of the project or within thirty (30) days from Subrecipient's receipt of all invoices, whichever is later.

10. **Subrecipient Cost Share** Subrecipient will provide documentation to the Board showing the appropriate amount of subrecipient cost share is available for the grant, prior to approval. Subrecipient shall provide match of thirty-five percent (35%) of eligible project costs under this award. To receive the full award amount described in Paragraph 2, the minimum Subrecipient matching funds in the amount of $460,088.43 are required.

11. **Additional Requirements** Subrecipient may be subject to additional requirements as may be directed by the Board in accordance with the HHPD Grant Program and associated procedures for implementing the program. The Board may require additional documentation or information as needed to meet any of the requirements of the HHPD Grant Program.

12. **Retention of Records** All documents, books, records related to the sub-award must be retained and made available to the federal awarding agency, Department of Homeland Security Office of the Inspector General, Recipient, and state auditors for a minimum period of three years from the date of the Board's final financial report. The final date of records retention will be communicated through a closeout letter from the Board to the Subrecipient.

13. **Regulatory** All Federal funds awarded are subject to the provisions of 2 CFR 200 Uniform Administrative Requirement, Cost Principles, and Audit Requirements for Federal Awards. Additionally, Subrecipient must and shall comply with the requirements of all applicable federal, state, and local statutory provisions; all Board rules, regulations, and grant program guidance; HHPD Grant Program applicable policies and HHPD Notice of Funding Opportunity provisions and policies.

14. **Hazard Mitigation Plan** All activities relating to the public in the area around the dam will be performed in accordance with the hazard mitigation plan. Subrecipient has been granted use by FEMA of the *Mitigation Plan Extraordinary Circumstances* request to fulfill the Hazard Mitigation Plan (HMP) requirements of this award. The HMP must be approved by FEMA by 05/17/2026.

15. **EHP Requirements** Subrecipient must comply with Federal Environment Planning and Historic Preservation (EHP) regulations and submit to the Board, summary reports/studies conducted as part of this project.

16. **Floodplain Management Plan** Subrecipient must have in place (or develop not later than 2 years after the date of execution of the dam rehabilitation project and implement not later than 2 years after the date of completion of the project) a floodplain management plan to reduce the impacts of future flood events in the area impacted by the project.

Programmatic Terms and Conditions

17. **Assistance** The Board agrees, upon request of the Subrecipient, to furnish, or otherwise make available to the Subrecipient, copies of existing non-proprietary materials in the possession of the Board that are reasonably associated with this project. This includes materials that are necessary to Subrecipient for completion of its performance under this agreement.

18. **Financial Records Availability** The Subrecipient agrees to retain all books, records and other documents relative to this agreement for three years after final payment. The Board, its authorized agents, and/or state auditors shall

have full access to, and the right to examine any of, said materials during said period.

19. **Food and Refreshments** Not applicable to this award.

20. **Federal Employee Costs** The Subrecipient understands that the funds for this project may not be used to pay for the travel of federal employees, or for other costs associated with federal participation in this project unless the federal agency is performing special technical assistance to the Subrecipient as allowed under the provisions of the Intergovernmental Cooperation Act.

21. **Termination and Breach** Either party may terminate this agreement upon 30 days written notice to the other party. The Board may terminate this Agreement for any reason necessary to support its current policy and financial status, including the need to redirect funds to another program. The Board may also terminate this agreement for failure of Subrecipient to make sufficient progress so as to reasonably ensure completion of the project within the project period. Sufficient progress will be measured by examining the performance required under the scope of work (Attachment 2) and milestones, the time remaining for performance within the project period, and/or the availability of funds necessary to complete the project.

    It is understood and agreed between the parties, herein, that the Board shall be bound, hereunder, only to the extent of the funds available or which may hereafter become available for the purpose of this Agreement.

    In the event of breach by the Subrecipient of this Agreement, the Board shall provide written notice to the Subrecipient specifying the manner in which the Agreement has been breached. If a notice of breach is given and the Subrecipient has not substantially corrected the breach within sixty (60) days of receipt of the written notice, the Board shall have the right to terminate the Agreement. The Subrecipient shall not be paid for services rendered nor expenses incurred after receipt of the notice of termination, except such fees and expenses incurred prior to the effective date of termination as are necessary for curtailment of its work under this Agreement.

22. **Indemnification** (Not Applicable)

23. **Labor Concerns** As a condition of award, Subrecipient will certify compliance with 42 U.S.C. § 5196 - U.S. Code - Unannotated Title 42. The Public Health and Welfare § 5196. Detailed functions of administration, Item (j)(9) as a condition of grant acceptance. The applicable section is as follows:
    a. All laborers and mechanics employed by contractors or subcontractors in the performance of construction work financed with the assistance of any contribution of Federal funds made by the Administrator under this subsection shall be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with sections 3141 - 3144 , 3146 , and 3147 of Title 40 , and every such employee shall receive compensation at a rate not less than one and one-half times the basic rate of pay of the employee for all hours worked in any workweek in excess of eight hours in any workday or forty (40) hours in the work week, as the case may be. The Administrator shall make no contribution of Federal funds without first obtaining adequate assurance that these labor standards will be maintained upon the construction work. The Secretary of Labor shall have, with respect to the labor standards specified in this subsection, the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (5 U.S.C. App.) and section 3145 of Title 40.

    b. As a condition of award, Subrecipient will certify compliance with 40 U.S.C. Chapter 11; Selection of Architects and Engineers. The language can be viewed at: https://uscode.house.gov/view.xhtml?path=/prelim@title40/subtitle1/chapter11&edition=prelim

24. **Management Fees** The Subrecipient agrees that management fees or similar charges in excess of the direct costs and approved indirect rates (if applicable) are not allowable. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business

expenses, unforeseen liabilities, or for other similar costs which are not allowable under this Agreement. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work (Attachment 2). Management and Administration (M&A) costs up to five percent (5%) of this subaward is allowable for direct costs of management and administration of this award (i.e. employee salary and fringe costs for preparation and submission of reports, requests for reimbursements, preparation and submission of award closeout reports). M&A costs must be listed in the subrecipient's approved application and budget to be eligible for reimbursement.

FEDERAL PUBLIC POLICY REQUIREMENTS

25. **Whistleblower** Congress has enacted the whistleblower protection statute 41 U.S.C. §4712 to encourage employees to report fraud, waste, and abuse without repercussions. This statute applies to all employees working for contractors, Subrecipients, subcontractors, and sub Subrecipients in accordance with this Agreement. All contractors, Subrecipients, sub Subrecipients, and subcontractors for federal grants and contracts are required to:
    1. Inform their employees in writing of the whistleblower protections under 41 U.S.C. §4712 in the predominant native language of the workforce, to include the specific requirements of the statute, and
    2. Include this term and condition in any agreement made with a subcontractor or sub Subrecipient. The employees· rights under 41 U.S.C. §4712 shall survive termination of this Contract.

26. **Buy American Act** Subrecipient warrants that the purchase of supplies. equipment, and construction materials for the project with grant funds shall comply to the greatest extent practicable, with the Buy American Act requirement or 43 CFR 12, Subpart E., unless DCR allows an exception specified in 43 CFR 12.710(d) and (e) and 43 CFR 12.715.

27. **Non-Discrimination** In its performance of this Agreement, Subrecipient warrants that it will not discriminate against any employee or applicant for employment on account of race, color, sex. religion, age. disability. or national origin. Subrecipient agrees to post in conspicuous places, available to employees and applicants for employment notices setting forth the provision of this non-discrimination clause.

    Subrecipient must comply with Title VI of the Civil Rights Act of 1964 including providing meaningful access to LEP individuals, Section 504 of the Rehabilitation Act of 1973. The Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972 if conducting an education program under this award, if applicable, Section 13 of the Federal Water Pollution Control Act Amendments of 1972 and Title IX obligations 40 CFR Part 5.

28. **Smoke-Free Environment** Public Law l03-277, also known as the Pro-Children Act of 1994. requires that smoking not be permitted in any portion of any indoor facility owned or leased or contracted for by an entity and used routinely or regularly for the provision of health, day care, early childhood development services, education or library services to children under the age of eighteen (18), if the services are funded by Federal programs either directly or through State or local governments by Federal grant, contract, loan or loan guarantee. Failure to comply with the provisions or the law may result in the imposition of a civil monetary penalty of up to $1000 for each violation and/or the imposition of an administrative compliance order on the responsible entity.

29. **Hotel-Motel Fire Safety Act** Pursuant to 15 USC § 2225a. the Subrecipient agrees to ensure that all space for conferences, meetings, conventions or training seminars funded in whole or in part with federal funds complies with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PL I01 - 391 as amended). Recipients may search the Hotel-Motel National Master list at https://apps.usfa.fema.gov/hotel/femaIDSearch to see if a property is in compliance.

30. **Recycled Paper** When directed to provide paper documents the Subrecipient agrees to use recycled paper and double-sided printing for all reports which are prepared as a part of this agreement and delivered to the Board. This requirement does not apply to reports prepared on forms supplied by the Board.

31. **Resource Conservation and Recovery Act** Consistent with goals of section 6002 of RCRA (42 U.S.C. 6962), State and local institutions or higher education hospitals and non-profit organization recipients agree to give preference in procurement programs to the purchase of specific products containing recycled materials. as identified in 40 CFR Part 247. Consistent with section 6002 of RCRA (42 U.S.C. 6962) and 2 CFR 200.322. Slate agencies or agencies of a political subdivision of a Slate and its contractors are required to purchase certain items made from recycled materials, as identified in 40 CFR Part 247. when the purchase price exceeds $10.000 during the course of a fiscal year or where the quantity of such items acquired in the course of the preceding fiscal year was $10,000 or more. Pursuant to 40 CFR 247.2 (d), the Subrecipient may decide not to procure such items if they are not reasonably available in a reasonable period of time: fail to meet reasonable performance standards; or are only available at an unreasonable price.

32. **Trafficking Victims Protection Act** To implement the requirements of Section 106 of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), the Subrecipient must abide by the Prohibition Statement below. The Subrecipient must inform the Board immediately of any information you received from any source alleging a violation of the Prohibition Statement below. FEMA and the associated federal funding agency have the right to unilaterally terminate this Agreement without penalty, if the Subrecipient or an employee is determined to have violated an applicable prohibition in the Prohibition Statement.

    i. **Prohibition Statement** The Board as the recipient, its employees, sub-recipients under this Agreement, and sub-recipients' employees may not engage in severe forms of trafficking in persons during the period of time that the Agreement is in effect; procure a commercial sex act during the period of time that the Agreement is in effect; or use forced labor in the performance of tine Agreement or sub-awards under the Agreement.

33. **Quality Assurance/Quality Control Project Plans (if applicable)** Within 60 days of the effective date of this Agreement and if required in Attachment 4 of this Agreement, the Subrecipient will submit to the Board, for review and approval, a Quality Assurance/Quality Control Project Plan.

34. **Reporting and Tracking Information Management Systems** In accepting these funds, the Subrecipient agrees to the sharing of all deliverable and related information through state and/or federal channels (including Internet use) and, wherever possible, to provide with deliverable in a format that can be made available to other partners and the public, as appropriate.

35. **Electronic and Information Technology Accessibility** Subrecipients are subject to the program accessibility provisions of Section 504 of the Rehabilitation Act, codified in 40 CFR Part 7, which includes an obligation to provide individuals with disabilities reasonable accommodations and an equal and effective opportunity to benefit from or participate in a program, including those offered through electronic and information technology.

36. **Creation of Intellectual Property** In accordance with 2 CFR 200.315, U.S. Department of Homeland Security (DHS) has the right to reproduce, publish, use and authorize others to reproduce publish and use copyrighted works or other data developed under this agreement for Federal purposes. The Board hereby grants to the Subrecipient a license to use any such material for public, non-commercial purposes within the territory of the project. Subrecipient hereby grants to the Board a license to use any such material for public, non- commercial purposes within the territory of the project.

    A copyright notice shall be placed in an appropriate location on any copyrightable material being distributed or published. Such notice shall include (1) either the symbol "©", the word "Copyright" or the abbreviation "Copr." (2) the year of first publication, and (3) the name of the copyright owner (the State of Oklahoma). This information shall be followed by the words, "all rights reserved."

37. **Documents** The Subrecipient may retain any reports, studies, photographs, negatives or other documents prepared in the performance of their obligations under this Agreement and not required to be delivered to the Board shall have certain rights to use any such materials as specified above. Where necessary for its enjoyment of its rights and other rights referenced in this Agreement, the Subrecipient shall provide a clear, reproducible copy of such materials (machine readable upon request, if readily available to, the Subrecipient in such form) to the Board.

38. **Disclaimer** For reports or papers produced for public distribution (including the final product), the following sentence must be added to the end of the above credit: *The views expressed herein are those of the author(s) and do not necessarily reflect the views of U.S. Department of Homeland Security (DHS) and the State of Oklahoma.*

39. **Acknowledgements** The role of the Board, U.S. Department of Homeland Security (DHS) and the State of Oklahoma must be clearly stated in all press releases, news articles, requests for proposals, bid solicitations and other documents describing this project, whether funded in whole or in part.

    Acknowledgment of financial assistance, with the use of the Board, U.S. Department of Homeland Security (DHS) and Bryan County Rural Water, Sewer & Solid Waste Management District No. 2 logos, as appropriate, must be printed on the cover of all reports, studies, web sites, map products, or other products supported by this award or any sub-award. The Subrecipient is responsible for contacting staff in adequate time to obtain the required logos in camera-ready or digital form. Prior to production, the Board's project management staff must approve the final draft. The acknowledgment should read:

    This project was funded wholly or in part by the *U.S. Department of Homeland Security (DHS) to support protecting the lives of Americans and their property from the risks associated with dams. The Rehabilitation of High Hazard Potential Dams Grant Program (HHPD), administered in connection with the National Dam Safety Program provides technical, planning, design, and construction assistance in the form of grants to states for non- Federal governmental organizations or nonprofit organizations for rehabilitation of eligible high hazard potential dams. For FY2024, the HHPD Grant Program will provide assistance for technical, planning, design and other pre-construction activities through* EMT-2024-GR-05000. *The contents of this document/report etc. do not necessarily reflect the views and policies of DHS nor does DHS endorse trade names or recommend the use of commercial products mentioned in this document."*

40. **Assurances** By entering into this Agreement, the Subrecipient certifies that it has the legal authority to apply for federal assistance, and it has the institutional, managerial and financial capability (including funds sufficient to pay for subjects costs until reimbursement or pay for the non-federal share of project costs) to ensure proper planning, management and completion of the project description.

41. **Suspension and debarment** Non-Federal entities are subject to the non-procurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, 2 CFR part 180. The regulations in 2 CFR part 180 restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs or activities.

42. **Prohibition on certain telecommunications and video surveillance services or equipment**
    a. Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
        1. Procure or obtain,
        2. Extend or renew a contract to procure or obtain; or
            i. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
            ii. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
            iii. Telecommunications or video surveillance services provided by such entities or using such equipment.
            iv. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or

controlled by, or otherwise connected to, the government of a covered foreign country.

b. In implementing the prohibition under Public Law 115–232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.
c. See Public Law 115–232, section 889 for additional information.
d. See also § 200.471.

43. **Appendix II to Part 200 – Contract provision for Non-federal entity contracts under Federal awards**

In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

a. Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.
b. All contracts in excess of $10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.
c. Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60–1.3 must include the equal opportunity clause provided under 41 CFR 60–1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964–1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
d. Davis-Bacon Act, as amended (40 U.S.C. 3141–3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141–3144, and 3146–3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.
e. Contract Work Hours and Safety Standards Act (40 U.S.C. 3701–3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases

of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

f. Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

g. Clean Air Act (42 U.S.C. 7401–7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251–1387), as amended—Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

h. Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

i. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

j. See § 200.323.

k. See § 200.216.

l. See § 200.322.

In consideration of Subrecipient's agreement to these terms and conditions, Subrecipient has entered and signed this HHPD Grant Agreement this_____day of_____, 20___

OKLAHOMA WATER RESURCES BOARD

_____
Thomas Gorman, Vice-Chair

ATTEST:

_____
Suzanne Landess, Secretary

(BOARD SEAL)

* * * * *

Reviewed by:

Yohanes Sugeng, Chief
Engineering and Planning Division

Bryan County Rural Water, Sewer & Solid Waste Management District No. 2

Jerry Lweis, Chairman

Date: 6-9-2025

RURAL WATER SEWER & SOLID WASTE MGNT. DISTRICT NO. 2 BRYAN COUNTY OKLAHOMA CORPORATE SEAL

ATTEST:

By: _____

Title: Secretary

Attachment 1
FEDERAL AWARD IDENTIFICATION INFORMATION

2 C.F.R. §§ 200.332(a)(1)(i)-(xiv)
Requirements for pass-through entities

Pass-through entity, and contact information for awarding official of the Pass-through entity

Oklahoma Water Resources Board
Jay Foote, CFO
405-530-8800
Jay.Foote@owrb.ok.gov

(i) Subrecipient name

Bryan County Rural Water, Sewer & Solid Waste Management District No. 2

(ii) Subrecipient's unique entity identifier (UEI)

FVPFJJ3EFHN8

(iii) Federal Award Identification Number (FAIN)

EMT-2024-GR-05000

(iv) Federal Award Date

09/25/2024

(v) Subaward Period of Performance Start and End Date

9/25/2024 – 9/24/2027

(vi) Subaward Budget Period Start and End Date

7/15/2025 – 9/24/2027

(vii) Amount of Federal Funds Obligated by this action by the pass-through entity to the subrecipient

$854,449.94

(viii) Total Amount of Federal Funds Obligated to the subrecipient by the pass-through entity including the current financial obligation

Total Pass-through Federal Funds: $

FY 2024 HHPD

Blue River Dam Rehabilitation Project: $854,449.94

(ix) Total Amount of the Federal Award committed to the subrecipient by the pass-through entity

$0

(x) Federal award project description, as required to be responsive to the Federal Funding Accountability and Transparency Act (FFATA)

(xi) Name of Federal awarding agency

Federal Emergency Management Administration

(xii) Assistance listings number and title; the pass-through entity must identify the dollar amount made available under each Federal award and the Assistance Listings Number at time of disbursement

a. 97.041-National Dam Safety Program DHS-24-[MT]-[041]-[00]-[98]
    i. $854,449.94

(xiii) Identification of whether the award is Research and Development (R&D)

R&D is not allowed under this agreement

(xiv) Indirect cost rate for the Federal award (including if the de minimis rate is charged) per 2 CFR § 200.414

Indirect costs are not allowed under this agreement

ATTACHMENT 2

Scope of Work
Blue River Dam Rehabilitation Project
Jason E. Henderson, P.E., 304 Technical Services, LLC
[Following pages]

304 TECHNICAL
SERVICES, LLC.

CONSULTING ENGINEERS
405-365-0952
Jhenderson.304Technical@gmail.com

November 16, 2024

Bryan County Rural Water, Sewer & Solid Waste Management District No. 2
Mrs. Regina Clinton, Manager
P.O. Box 119
Mead, OK 73449-0119

RE: Scoping Narrative, Schedule, and Budget
Blue River Dam Hard Armor Rock Addition Project

Dear Regina:

304 Technical is pleased to submit the referenced information required for the OWRB FY 2024 grant application.

We appreciate the opportunity to work on this project and are available for questions.

Sincerely,

304 TECHNICAL SERVICES, LLC.

Jason E. Henderson, P.E.

1. Scoping Narrative:

304 Technical Services has been conducting annual inspections of the Blue River Dam since May 27, 2020. Bryan County Rural Water, Sewer, & Solid Waste Management District No. 2 (District) has maintained the dam effectively, implementing measures such as proper lawn care, woody vegetation removal, and animal/insect control.

The Blue River Dam, engineered and constructed in 1979, lacks essential hard armor rock protection. Despite over 45 years of service, this design oversight has resulted in the following critical issues:

- Upstream Slope Erosion: Wave action on the unprotected soil slope has caused erosion scarps and slips. This has created significant issues that will eventually cause the dam to fail without corrective action.

- Downstream Principal Spillway Erosion: The lack of hard armor rip rap rock protection over poor soil and slope conditions has resulted in erosion and slips along the downstream slope. This has led to sediment buildup in the principal spillway, causing water to pool within the dam's concrete discharge structure. This condition will accelerate the deterioration of the concrete and surrounding soil area, increasing the cost of future repairs.

We understand the District is being considered for a 2024 OWRB grant to address these critical design omissions. We have outlined a phased approach to the project on the following pages:

ATTACHMENT 3

OWRB BOARD RESOLUTION APPROVING
REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT APPLICATION
[Following pages]

PLEASE RETAIN THE FOLLOWING
BOARD ORDER FOR YOUR RECORDS

A RESOLUTION OF THE OKLAHOMA WATER RESOURCES BOARD AUTHORIZING AN APPLICATION FOR FUNDING ASSISTANCE THROUGH THE FEDERAL EMERGENCY MANAGEMENT AGENCY PROGRAM TO REHABILITATE HIGH HAZARD POTENTIAL DAMS

WHEREAS, the United States Department of Homeland Security, Federal Emergency Management Agency ("FEMA") has implemented the Rehabilitation of High Hazard Potential Dams (HHPD) program to provide grant funds to reduce or eliminate the risk of dams of highest consequence and increase understanding and management of risks posed by eligible dams.

WHEREAS, FEMA has solicited proposals for cost-shared financial assistance from States, Indian Tribes, and nonprofit dam owners for projects to develop.

WHEREAS, the Oklahoma Water Resources Board ("Agency") has identified itself as an eligible applicant under FEMA's HHPD Grant Program, Funding Opportunity Number: DHS-24-[MT]-[041]-[00]-[98].

WHEREAS, the Agency is pursuing grant funding assistance under the HHPD grant program to provide technical, planning, design, pre-construction, and construction activities related to the repair, removal, or rehabilitation of eligible high hazard dams. The amount of the grant award is formula based and is calculated using the nationwide number of eligible dams and the number of states that have applied for the grant.

NOW, THEREFORE, be it resolved by the Board as follows:

1. The Board has reviewed the scope and purpose of the funding application and finds that the Project will serve the needs of the people of Oklahoma and satisfy the goals of the HHPD program, and on that basis, supports the staff submittal of the grant proposal to FEMA.

2. The Agency is acting as a pass-through entity and will work with eligible subrecipients to meet the minimum 35-percent cost share required to obtain grant funding under the HHPD Grant Program.

3. Pursuant to state policy, the Agency has sought approval from the Office of the Secretary of Energy and Environment to pursue this funding opportunity.

4. The Board hereby ratifies the action of its Chief Financial Officer or his designee of the Agency in applying for financial assistance from FEMA's HHPD Grant Program and authorizes the Chief Financial Officer or his designee to execute any related document, including a cooperative financial assistance agreement with FEMA.

5. The Chief Financial Officer and staff are directed to take all other actions necessary to secure funding for the Project under the HHPD Grant Program, including

working with FEMA to meet established deadlines for entering into a cooperative financial assistance agreement.

PASSED AND ADOPTED by the Oklahoma Water Resources Board on the 20th day of February, 2024:

~~Jennifer Castillo, Chairman~~

Tom Gorman, Acting Chairman

ATTEST:

~~Suzanne Landes, Secretary~~

Robert L. Stallings, Acting Secretary

OKLAHOMA WATER RESOURCES BOARD

ATTACHMENT 4

Reporting Guidelines & Forms

[Following pages]

FEMA REHABILITATION OF HIGH HAZARD POTENTIAL DAMS GRANT REIMBURSEMENT FORM

OUTLAY REPORT AND REQUEST FOR GRANT PROCEEDS FOR HHPD FUNDING	1. DISBURSEMENT REQUEST NO.	PAGE 1 OF 1
	1	

2. GRANT NUMBER:	EMW-xxxx-xx-xxxxx	5. PERIOD OF PERFORMANCE	
3. PROJECT NUMBER:	075228_xx	FROM: (mm/dd/yyyy)	TO: (mm/dd/yyyy)
4. PO NUMBER	xxxxxxxxxx		

6. EMPLOYEE IDENTIFICATION NUMBER:	7. RECIPIENT ACCOUNT OR OTHER ID NUMBER:	8. PERIOD COVERED BY THIS REPORT:	
XX-XXXXXX	ABA #xxxxxxx CHECKING #xxxxxx	FROM: (mm/dd/yyyy)	TO: (mm/dd/yyyy)

9. RECIPIENT ORGANIZATION	10. PAYEE (if different than No. 9)
Name: No. and Street: street City/State/Zip: city zip	Name: name placeholder No. and Street: street placeholder City/State/Zip: city placeholder

11. STATUS OF FUNDS

PROJECT TRACKING

PROJECT CONTRACTS	TOTAL BUDGET	PREVIOUS AMOUNT	CONTRACTOR INVOICE	CUMULATIVE TOTAL
a. Engineering Contract 1	$ -	$ -	$ -	$ -
b. Engineering Contract 2	$ -	$ -	$ -	$ -
c.	$ -	$ -	$ -	$ -
d.	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ -	$ -

FUNDING TRACKING

ALLOCATION OF FUNDS	TOTAL ALLOCATION	PREVIOUS AMOUNT	REIMBURSEMENT INVOICE	REMAINING ALLOCATION
a. Maximum Grant Funds	$ -	$ -	$ -	$ -
b. Local Funds	$ -	$ -	$ -	$ -
Total	$ -	$ -	$ -	$ -

HHPD DISBURSEMENT	$0.00

12. SUMMARY OF INVOICE ACTIVITIES

13. CERTIFICATION

I certify that to the best of my knowledge and belief, the billed cost or disbursement represents the amount due which has not been previously requested, and that all invoiced activities are considered eligible under the FEMA HHPD requirements.	a. Recipient	SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	DATE REPORT SUBMITTED
		TYPED/PRINTED NAME AND TITLE X, XXXXXXX	TELEPHONE NO.
	b. Representative Certifying to line 9.	SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	DATE REPORT SUBMITTED
		TYPED/PRINTED NAME AND TITLE Y, YYYYYYY	TELEPHONE NO.

FY24 HHPD Quarterly Milestone Workplan

Person completing this worksheet:	
Date completed:	

State Agency:	OK Water Resources Board
HHPD Project POC:	Natalie Orbesen
Award#:	EMT-2024-GR-05000
Period of Performance	9/25/2024-9/24/2027

Instructions: Column C is the list of FEMA approved activities and deliverables in your workplan.
Report and validate actual % completed in ACTUALS column.

			Period of Performance																							
			July -Sep 24		Oct-Dec 24		Jan-March 25		Apr-June 25		July -Sep 25		Oct-Dec 25		Jan-March 26		Apr-June 26		July -Sep 26		Oct-Dec 26		Jan-March 27		Apr-June 27	
			Q1		Q2		Q3		Q4		Q5		Q6		Q7		Q8		Q9		Q10		Q11		Q12	
			Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
	Quarterly Progress Reports due			10/30/2024		1/30/2025		4/30/2025		7/30/2025		10/30/2025		1/30/2026		4/30/2026		7/30/2026		10/30/2026		1/30/2027		4/30/2027		7/30/2027
	Enter ALL Deliverables and Milestones per FEMA approved Scope			0%		0%																				
	Project Name	**Performance Metric (Drop down)**																								
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2			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								

AGENDA ITEM 3D(9)

INTEROFFICE AGREEMENT

WITH:	Office of Management and Enterprise Services
PURPOSE:	Third Amendment to the Grant Agreement with the Office of Management Enterprise Services for administrative services related to the American Rescue Plan Act Grant Funds designated by the Legislature for water and wastewater infrastructure and dam rehabilitation.
AMOUNT:	Not to Exceed $4,760,995.94
TERM:	

EXHIBIT E-3: THIRD AMENDMENT
OFFICE OF MANAGEMENT AND ENTERPRISE SERVICES AND
OKLAHOMA WATER RESOURCES BOARD

This is a third Amendment ("Third Amendment") to the Grant Agreement ("Agreement") bearing the date of last signature of February 27, 2023, and the First Amendment bearing the date of last signature of December 13, 2023, and the Second Amendment effective December 31, 2024, between the Office of Management and Enterprise Services Grant Management Office (OMES) and the Oklahoma Water Resources Board ("Subrecipient"). This Third Amendment is effective from the date of the last signature. The Agreement and any amendments thereto, are authorized by 62 O.S. § 255.1 for the purpose of managing ARPA funds as appropriated by the Oklahoma State Legislature and likewise meet the requirements of 74 O.S. § 581 as well as the rules, regulations, and guidance issued by the U.S. Department of the Treasury regarding, *inter alia,* the obligating of funds through an interagency agreement. In accordance with the terms of ARTICLE V – AMENDMENT of the Agreement, this Third Amendment shall be appended to the Agreement as **Exhibit E-3** and supplements and amends the Agreement and First and Second Amendments, including all supplements thereto. Unless otherwise indicated herein, undefined capitalized terms used in this Third Amendment shall have the respective meanings specified in the Agreement and Amendments. All other terms of the Agreement and First and Second Amendments not modified by this Third Amendment, remain in full force and effect.

The parties agree to amend the Agreement and First and Second Amendments as follows:

I. The total amount of Subrecipient's subaward of $474,790,709.00 as identified in the Agreement and Amendments is hereby amended to reflect a new budget of **$481,416,370.48**, as more particularly described in part below:

a. **OKC 577 Project.** The $8,000,000.00 for the OKC 577 Project was obligated prior to December 31, 2024, through the aforementioned Agreement and Amendments between OMES and Subrecipient. House Bill 2788 (2025) effective July 1, 2025, provides for a transfer of funds from the OKC 577 project to the Statewide Recovery Fund for reappropriation for a

previously obligated project. Consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding("Joint Committee") on May 12, 2025, the Committee voted to decrease the OKC 577 project funding due to a gap in funding pending final expense reconciliation. After final reconciliation, $3,239,004.06 is to be transferred to the Statewide Recovery Fund and the new budget amount for OKC 577 is now **$4,760,995.94**. The OKC 577 project will remain within substantially the same scope and substantially the same purpose as the originally obligated project.

b. **Tinker Air Force Base 60" Water Transmission Line Relocation program ("Tinker Project").** Subrecipient's subaward of $35,000,000.00 was obligated prior to December 31, 2024, through the aforementioned Agreement and Amendments between OMES and Subrecipient. Effective July 1, 2025, Section 1. of House Bill 2789 (2025) appropriates additional funds to the Tinker project to cover increased costs of the project. Per the Joint Committee, the Tinker project award is to be increased after final reconciliation of the remaining balance from the OKC Water project. After final reconciliation, $3,239.004.06 was transferred to the Statewide Recovery Fund for the Tinker project, increasing the Tinker budget to **$38,239,004.06**, to be utilized within substantially the same scope and substantially the same purpose as the originally obligated project.

This Third Amendment incorporates herein the following new attachments to the Agreement and First and Second Amendments:

I. **Attachment A-11: Legislation:**
House Bill 2788 (2025)
House Bill 2789 (2025)

II. **Attachment A-12: Updated Funding Review Packets**:
OKC 577
Tinker Project

SIGNATURES

Except as amended hereby, the Agreement and First and Second Amendments remain in full force and effect. The undersigned represent and warrant they are authorized, as representatives of the Party on whose behalf they are signing, to bind their respective Party thereto, by signing this Third Amendment.

OFFICE OF MANAGEMENT AND ENTERPRISE SERVICES FOR THE STATE OF OKLAHOMA	**OKLAHOMA WATER RESOURCES BOARD**
Aaron Morris (Jul 8, 2025 14:15 CDT)	
Authorized Signature	**Authorized Signature**
Aaron Morris	
Printed Name	**Printed Name**
State Chief Financial Officer	
Title	**Title**
07/08/2025	
Date	**Date**

ATTEST

BY:

_____

Name and Title

(Seal)

OMES

APPROVED AS TO FORM:

Elizabeth Base
Elizabeth Base (Jul 8, 2025 11:35 CDT)

Elizabeth Base
OMES Deputy General Counsel

07/08/2025

Date

Parker Wise
Parker Wise (Jul 8, 2025 12:04 CDT)

Parker Wise
Director of OMES Grants Management Office

07/08/2025

Date

ATTACHMENT A-11

Legislation

House Bill 2788 (2025)
House Bill 2789 (2025)

An Act

ENROLLED HOUSE
BILL NO. 2788

By: Caldwell (Trey) and Kane of the House

and

Hall and Haste of the Senate

An Act relating to the Statewide Recovery Fund; making transfers from funds appropriated to the Department of Human Services to the Statewide Recovery Fund; making a transfer from funds appropriated to the Health Care Workforce Development Revolving Fund to the Statewide Recovery Fund; making a transfer from funds appropriated to the Oklahoma State University Medical Authority to the Statewide Recovery Fund; making a transfer from funds appropriated to the State Department of Health to the Statewide Recovery Fund; making a transfer of funds appropriated to the Department of Mental Health and Substance Abuse Services to the Statewide Recovery Fund; making a transfer of funds appropriated to the Oklahoma Water Resources Board to the Statewide Recovery Fund; determining all transfers are consistent with specific joint committee actions; providing for noncodification; providing an effective date; and declaring an emergency.

SUBJECT: Statewide Recovery Fund

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

Of the Two Million Eight Hundred Thousand Dollars ($2,800,000.00) appropriated from the Statewide Recovery Fund created in Section 255 of Title 62 of the Oklahoma Statutes, to the

Department of Human Services by Section 2 of Enrolled House Bill No. 2884 of the 1st Regular Session of the 59th Oklahoma Legislature, to provide semi-independent housing, food security, and transitional tools to victims of domestic violence, the sum of One Million Five Hundred Sixty Thousand Eight Hundred Seventy-five Dollars ($1,560,875.00) shall be transferred to the Statewide Recovery Fund for reappropriation. Such transfer shall be consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 2. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

Of the Twelve Million Eight Hundred Two Thousand Nine Hundred Ninety-three Dollars ($12,802,993.00) appropriated from the Statewide Recovery Fund created in Section 255 of Title 62 of the Oklahoma Statutes, to the Department of Human Services by Section 1 of Enrolled Senate Bill No. 1186 of the 1st Regular Session of the 59th Oklahoma Legislature to establish a grant program that provides assistance to food programs which support the availability of and access to affordable and nutritious foods, the sum of One Hundred Sixty-two Thousand Six Hundred Sixty-eight Dollars and eighty-five cents ($162,668.85) shall be transferred to the Statewide Recovery Fund for reappropriation. Such transfer shall be consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 3. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

Of the Four Million Five Hundred Thirty-seven Thousand Five Hundred Dollars ($4,537,500.00) appropriated from the Statewide Recovery Fund created in Section 255 of Title 62 of the Oklahoma Statutes, to the Health Care Workforce Development Revolving Fund by Section 7 of Enrolled Senate Bill No. 1458 of the 2nd Regular Session of the 58th Oklahoma Legislature to establish a grant program with Care Providers Oklahoma for the purpose of recruiting, educating, and stabilizing Oklahoma's health care workforce, the sum of One Million Four Hundred Ninety Thousand Six Hundred Seventy-five Dollars and eight cents ($1,490,675.08) shall be transferred to the Statewide Recovery Fund for reappropriation. Such transfer shall be consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 4. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

Of the Ten Million Dollars ($10,000,000.00) appropriated from the Statewide Recovery Fund created in Section 255 of Title 62 of the Oklahoma Statutes, to the Oklahoma State University Medical Authority by Section 3 of Enrolled House Bill No. 1012 of the 2nd Extraordinary Session of the 58th Oklahoma Legislature to fund outreach, training, and other allowable expenses associated with the implementation of a rural advanced care pilot program, the sum of Two Million One Hundred Sixty-four Thousand Thirty-nine Dollars ($2,164,039.00) shall be transferred to the Statewide Recovery Fund for reappropriation. Such transfer shall be consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 5. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

Of the Twenty-five Million Dollars ($25,000,000.00) appropriated from the Statewide Recovery Fund created in Section 255 of Title 62 of the Oklahoma Statutes, to the State Department of Health by Section 3 of Enrolled Senate Bill No. 20 of the 2nd Extraordinary Session of the 58th Oklahoma Legislature for a program providing medical facilities for disproportionately impacted populations, the sum of Five Million Dollars ($5,000,000.00) shall be transferred to the Statewide Recovery Fund for reappropriation. Such transfer shall be consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 6. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

Of the Eighty-seven Million Dollars ($87,000,000.00) appropriated from the Statewide Recovery Fund created in Section 255 of Title 62 of the Oklahoma Statutes, to the Department of Mental Health and Substance Abuse Services by Section 1 of Enrolled House Bill No. 1013 of the 2nd Extraordinary Session of the 58th Oklahoma Legislature for addressing the ongoing increased demand for mental health services by constructing a replacement facility for Griffin Memorial Hospital; provided, that such construction be confined within a thirty-mile radius of the State Capitol Building, the sum of Twenty Million Five Hundred Thousand Dollars ($20,500,000.00) shall be transferred to the Statewide Recovery Fund for reappropriation. Such transfer shall be consistent with the

recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 7. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

Of the Eight Million Dollars ($8,000,000.00) appropriated from the Statewide Recovery Fund created in Section 255 of Title 62 of the Oklahoma Statutes, to the Oklahoma Water Resources Board by Section 9 of Enrolled Senate Bill No. 13 of the 2nd Extraordinary Session of the 58th Oklahoma Legislature, the sum of Three Million Three Hundred Thousand Dollars ($3,300,000.00) shall be transferred to the Statewide Recovery Fund for reappropriation. Such transfer shall be consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 8. This act shall become effective July 1, 2025.

SECTION 9. It being immediately necessary for the preservation of the public peace, health or safety, an emergency is hereby declared to exist, by reason whereof this act shall take effect and be in full force from and after its passage and approval.

Passed the House of Representatives the 20th day of May, 2025.

Presiding Officer of the House
of Representatives

Passed the Senate the 22nd day of May, 2025.

Presiding Officer of the Senate

OFFICE OF THE GOVERNOR

Received by the Office of the Governor this 22nd
day of May, 20 25, at 2:27 o'clock p. M.
By: _____

Approved by the Governor of the State of Oklahoma this _____
day of _____, 20_____, at _____ o'clock _____ M.

Governor of the State of Oklahoma

OFFICE OF THE SECRETARY OF STATE

Received by the Office of the Secretary of State this 3rd
day of June, 20 25, at 2:00 o'clock p. M.
By: _____

An Act

ENROLLED HOUSE
BILL NO. 2789

By: Caldwell (Trey) and Kane of the House

and

Hall and Haste of the Senate

An Act relating to the Oklahoma Water Resources Board; making appropriations; identifying source; establishing amounts; providing purposes; requiring and limiting the utilization of funds; creating certain special accounts; limiting duration of accounts; requiring certain determination; providing and limiting the nature of the accounts and the funds within the accounts; authorizing agency to submit request for certain deposits or transfers; requiring certain compliance and verifications; authorizing certain memorandums of understanding; limiting scope; prohibiting certain memoranda terms; authorizing and limiting the promulgation of rules and utilization of procedures; authorizing and limiting the retention of monies for administration costs; requiring certain reports and submissions to certain entities; requiring appearance before certain joint committee; limiting duration of certain requirements; providing for noncodification; providing an effective date; and declaring an emergency.

SUBJECT: Oklahoma Water Resources Board

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

There is hereby appropriated to the Oklahoma Water Resources Board from any monies not otherwise appropriated from the Statewide Recovery Fund of the State Treasury created in Section 255 of Title 62 of the Oklahoma Statutes, the sum of Three Million Three Hundred Thousand Dollars ($3,300,000.00), or so much thereof as may be necessary due to increased costs of the project funded in Section 7 of Enrolled Senate Bill No. 13 of the 2nd Extraordinary Session of the 58th Oklahoma Legislature. Such funds shall be utilized in a manner consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 2. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

There is hereby appropriated to the Oklahoma Water Resources Board from any monies not otherwise appropriated from the Statewide Recovery Fund of the State Treasury created in Section 255 of Title 62 of the Oklahoma Statutes, the sum of Six Million Six Hundred Twenty-five Thousand Six Hundred Sixty-one Dollars and forty-eight cents ($6,625,661.48), or so much thereof as may be necessary to complete projects that did not receive funds in the grant programs described in Sections 2 and 3 of Enrolled Senate Bill No. 13 of the 2nd Extraordinary Session of the 58th Oklahoma Legislature. Such funds shall be utilized in a manner consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 3. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

A. There is hereby created in the State Treasury a Statewide Recovery Special Account for the Oklahoma Water Resources Board for each appropriation section of this act. The duration of such accounts shall continue for the period of time that monies related to the American Rescue Plan Act of 2021 are being budgeted, expended, or managed in the state. The ending of such period shall be determined by the State Treasurer, and shall result in the closing of such accounts as a matter of law. Such accounts shall be continuing accounts as otherwise provided in this section, not subject to fiscal year limitations, and shall exclusively consist of monies related to the relevant appropriations made in this act and as otherwise directed by law. All monies deposited to the credit of such accounts are hereby appropriated and may be budgeted and expended by the Oklahoma Water Resources Board in accordance with the provisions of this act. Expenditures from such accounts shall

be made upon warrants issued by the State Treasurer against claims filed as prescribed by law with the Director of the Office of Management and Enterprise Services for approval and payment.

B. The Oklahoma Water Resources Board is authorized to request in writing that the monies appropriated by the provisions of this act be deposited or transferred to the accounts created pursuant to subsection A of this section. No later than seven (7) calendar days from the date of such request, the Director of the Office of Management and Enterprise Services shall comply with such request and verify to the requesting agency that such deposit or transfer has been completed.

SECTION 4. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

The Oklahoma Water Resources Board may enter into memorandums of understanding with other agencies of the State of Oklahoma for the auditing, documentation, evaluation, implementation, oversight, reporting, and management of funds and associated efforts related to the appropriations made in this act; provided, that no such memorandum of understanding shall require or include, as an option or condition, the direct or practical transfer or relinquishment of control by the agency appropriated such funds to budget, expend, allocate, and request the distribution of the funds appropriated by this act.

SECTION 5. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

The Oklahoma Water Resources Board may promulgate rules, utilize existing rules, establish procedures, and utilize existing procedures to implement the provisions of this act; provided, such rules and procedures do not conflict with or impede the provisions of this act.

SECTION 6. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

The Oklahoma Water Resources Board is authorized to enter into contracts with financial institutions and execute such instruments as may be necessary and convenient to hold and disseminate grant funds in accordance with applicable federal and state regulations and Board policies.

SECTION 7. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

From the funds appropriated by Sections 1 and 2 of this act, the Oklahoma Water Resources Board shall retain no more than four percent (4%) of the funds appropriated by this act to reimburse:

1. Costs incurred by the Oklahoma Water Resources Board; or

2. Costs incurred on the agency's behalf,

associated with the administration of the appropriated funds and programming required by the Oklahoma Water Resources Board under the provisions of this act; provided, that no funds shall be retained that would be disallowable under the provisions of the American Rescue Plan Act of 2021.

SECTION 8. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

A. The Oklahoma Water Resources Board shall:

1. Submit to the Chairs of the Joint Committee on Pandemic Relief Funding, or any successor, Oklahoma House of Representatives, or Oklahoma State Senate legislative committee or joint committee, as designated by the Speaker of the Oklahoma House of Representatives and the President Pro Tempore of the Oklahoma State Senate:

a. a written or electronic quarterly report detailing the budgeting, expenditure, and management of all monies appropriated in this act, and

b. a copy of all memorandums of understanding and contracts with third parties entered into by the Oklahoma Water Resources Board to facilitate, assist, or administer powers and duties provided to the Oklahoma Water Resources Board under the provisions of this act; and

2. At the Joint Committee on Pandemic Relief Funding's request, appear before the Joint Committee no later than six (6) months after the effective date of this act, and as otherwise requested by the Joint Committee to provide a status update regarding the implementation of the provisions of this act.

B. The provisions of subsection A of this section shall remain applicable for the period of time that monies appropriated under this act are being budgeted, expended, or managed in the state. The ending of such period shall be determined by the State Treasurer, and shall be reported to the Governor, the Speaker of the House of Representatives, and President Pro Tempore of the Senate.

SECTION 9. This act shall become effective July 1, 2025.

SECTION 10. It being immediately necessary for the preservation of the public peace, health or safety, an emergency is hereby declared to exist, by reason whereof this act shall take effect and be in full force from and after its passage and approval.

Passed the House of Representatives the 20th day of May, 2025.

Presiding Officer of the House of Representatives

Passed the Senate the 22nd day of May, 2025.

Presiding Officer of the Senate

OFFICE OF THE GOVERNOR

Received by the Office of the Governor this 22nd day of May, 20 25, at 9:02 o'clock P. M.

By: _____

Approved by the Governor of the State of Oklahoma this _____ day of _____, 20_____, at _____ o'clock _____ M.

Governor of the State of Oklahoma

OFFICE OF THE SECRETARY OF STATE

Received by the Office of the Secretary of State this 3rd day of June, 20 25, at 2:00 o'clock P. M.

By: _____

ATTACHMENT A-12

Revised Funding Review Packets

OKC 577
Tinker Project

State of Oklahoma

ARPA State & Local Fiscal Recovery Funds (SLFRF) Project Funding Review
Oklahoma Water Resources Board
OKC 577

Last u pdated Ju n e 2nd 5 2025

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Su nna1r y

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SLFRF Resou 1ces

- F t n a Ru p e)FR))p t n k)
- Overvt ew of F t n a Ru p e)p t n k)
- Frequ en tp y Asked Qu estt on s)p t n k)
- Comp tan ce an d Reportt n g Gu t dan ce)verst on 5t0] Ju n e ^ 6] 2022))p t n k)

Project Overvvew

Project NameB OKC 577

Organ tzatton NameB Oklahoma Water Resources Board

Prtmary Contact
NameB Juite Cunntngham
EmatiB Juitescunntngham@owrbsoksgov
PhoneB 405-530-8800

Project Lawyer
NameB Sara Gtbson
EmatiB sarasgtbson@owrbsoksgov
PhoneB 405-530-8800

Project CostB $4]760]995s94

Project Cost BreakdownB The submttter must complete the template below. An tncomplete project cost breakdown or a breakdown provtded tn a dtferent format may result tn delays tn project revtew. The goal of the budget ts to provtde a clear and conctse descrtptton of the expenses requested to support the acttvtttes tn your appltcatton. A successful budget wtll show what each expense tsi how much tt costsi and the calculatton used to get that amount.

Proposed Project Cost Breakdown		
Tota{ Requested Amount	$ 4f760f995‰94	Totaa of aaa beaow seictrons
Serrices	$ 4œ760œ995¢94	Detaras
OWRB toprorıde federaa grant to Oaahoma ®ndustrres Authorrty for water/sewer to the O³C 577 megasrte	$ 4œ760œ995¢94	µ6" water ma¾n and µ1" sewer ma¾n extensron from the O³C Water Utrartres Trust rnfrastructure to prorıde serrrice to the rndustrraasrte¢

Other fundtng tdenttfted by appitcant Ænon-SLFRF] matchtng funds] SLFRF from other sources] prtvate] etcs.B
From OKC 577 Fundtng Revtew PacketB

Prtvate captta to compiete tnterconnectton of feeder itnes to the matn water and sewer itness

What goods or services will you need to complete this project?
For OWRB there is a potential need for contracting out some of the oversight of the programs but those costs would be included in the administration of the program. Examples for contracting out could include but not be limited to engineering construction oversight reporting and ranking for IT related expenses. However we anticipate doing most of the oversight in house.

Have you identified competitive bidding procedures to be utilized to procure the necessary goods or services?
Yes the Oklahoma Competitive Bidding Act will be followed as well as 2 CFR 200 for procuring engineering services

Project Timeline (All projects must expend funds before December 31st 2026) identifying anticipated start date(s) completion date(s) and any milestone date goals(s)
Projects will be completed by Dec. 31st 2026

How many Oklahomans will benefit from this project?
From OKC Funding Review Packet

This work will expand the use of necessary utilities for businesses and employers in a 3 square mile area. This mega industrial site area will create hundreds of construction jobs and the facilities built at the site will increase the workforce by several thousands of jobs

What is the potential return on investment for this project?
From OKC 577 Funding Review Packet

As an example we are currently talking to several companies that would invest billions of dollars in infrastructure and facilities that would create thousands of jobs. The city and state would receiving sizeable returns from the sales taxt real estate tax and income taxes generated from this mega site

Project Description to include impact of COVID-19 intended impact of project(s) and general description of services
From OKC 577 Funding Review Packet

This project will expand the area water distribution and sanitary system upgrade for a three (3) square mile area in a Qualified Census Tract and Opportunity Zone. This project will ensure that the publicly owned distribution system has increased capacity which will improve the accessibility of publicly owned utilities to the residents and businesses in the area. As population s and businesses expand in this area there is a risk to public health and public safety because the existing infrastructure will not have the capacity for servicing the area. There will be a need for this new infrastructure so that existing users will continue to have

adequate water and sewer capacity. This water transmission and sanitary sewer line services the residents and businesses in this area.
Further COVID-19 exposed the extreme need to move manufacturing and storage of goods back to the USA. This has caused an immediate need for cities like this to be development ready. COVID-19 has also caused construction prices to increase dramatically. Without assistance to make large cities development ready companies will choose other states for their investments.

Reporting and Planning

Which Expenditure Category should this project be reported under? (See Appendix A)
5.18 Water and Sewer: Other

__JC__Initial here to confirm that you understand you will be a subrecipient and required to comply with federal compliance reporting and contract requirements including the Uniform Guidance (2 CFR Part 200). Among other requirements of the Uniform Guidance you are confirming that you have:

- A financial management system capable of separately tracking individual Federal programs and providing accurate current and complete information
- Written procedures regarding competition and benefits procurement (including a conflict of interest policy) and allowability of costs
- Established and will maintain effective internal controls over each Federal award to provide reasonable assurance that such awards are managed in compliance with Federal statutes regulations and the terms and conditions of the award

_JC___Initial here to confirm understanding that subrecipients expending more than $750,000 total in Federal funds during their fiscal year will be subject to an audit under the Single Audit Act and its implementing regulation at 2 CFR Part 200, Subpart F regarding audit requirements.

Does your organization plan to expend $750,000 or more in Federal funding in a single fiscal year when accounting for this requested and any other federal awards you receive?
Yes

What are the performance indicators (inputs, outputs and outcomes) that this project will track to capture impact?
From OKC 577 Funding Review Packet:

The Alliance for Economic Development uses key performance indicators for projects to evaluate the success of a project. Measures include tracking actual to planned Project Completion Timeline & Budget to Actual and Engineering Estimate compared to Actuals. Plan for collecting required programmatic data includes inspection schedule tracking/Gantt Charts and progress meetings using software such as GES and future use of a Project Management Information System.

The Aiitance for Econom tc Deveiopm en t wtii m ont tor project perform an ce aiong th e way to en su re th e water an d sewer i t n es are t n staiied properi yt wt th t n bu dgett an d fu i iy fu n ct ton ai wt th t n th e Am ert can Rescu e Pian Act deadi t n es of fu n ds obi t gated by D ecem ber 31 t 2024 t and project com pietton by Decem ber 31 t 2026)

Piease provtde an outitn e/brtef su mmary of you r performan ce man agem en t pian)

OWR B h as ft n an ct ai con troi st tech n t cai exp ertt se t an d processes t n piace to ad m t n t ster fed erai p rog ram st oversee con stru ctt on t an d au d t t projects) Th e board h as ap p roved 2t 781 p rojects for n eari y $8 b t i i t on t sp an n t n g over th t rty yearst wt th d ocu m en tedt ion g stan d t n g AAA b on d ratt n gs on m u i t t pie t ssu an cest an d con st sten t iy ci ean an n u ai p rog ram au d t t revt ews from t n dep en d en t au d t tors an d E P A Savat iab ie u p on req u estU) P roject p erform an ce t s u i t t m atei y m easu red b y su ccessfu i con stru ctt on an d reg u iatory ap p rovai) Th e OWR B wt i i overseet fact i t t atet an d d ocu m en t t n form att on on p roject m an ag em en tt p re-con stru ctt on ap p rovai s b y vart ou s reg u iatory ag en ct est b t d d t n g an d con tract t n g t st te t n spectt on st t n vot ce com p i tan ce revt ewt ft n an ct ai con troist an d p roject ci ose ou t) Gran t ag reem en ts wt th award ees wt i i ai so b e t n piace to h ei p en su re com p i tan ce wt th req u t rem en ts

Piease provt de an outitn e/su mmary of you r comm u n t ty en gagem en t or ou treach pian)
OWRB staff h as h osted a webt nar spect ftc to dest gn ated projects to ou t i t n e th e process to access th e fu n dst go over th e federai req u t rem en t st an d an swer an y qu estt on s) OWRB staff h as h ad on e on on e meett n gs wt th OKC to get a status u p date an d go over th e process as a foi i ow u p to th e webt nar)

Piease expiat n h ow n on -En gi t sh speakt n g con st t tu en ts wt i i be abie to ben eft t from th t s p rog ram)
OWRB h as ad opted a gDtsckt m t n att on an d Fedeka> Fu n dt n g Po>t cy" to en su ke th at OWRB or an y su b-rect p ten t of fu n dt n g m ust com p i y wt th ct v t i rt gh ts iaws an d keg u >att on su Th e po>t cy can be fou n d on OWRBys webst te at
h t t p s //okf ah om a† .gov/con ten t/d am /ok/en /owŽb/d oc u m en t s/ab o u t-u s/d rscŽr m r n at r on p of r cy† p d f

Cap˜taš Expen d˜tu re Req u˜rem en ts

Deftntitons: Per the Untform Gutdance± the term ²captial expendtiures" means ²expendtiures io acqutre captial asseis or expendtiures io make addtitons, tmprovemenis, modtftcattons± replacements± rearrangements± retnstallattons± renovattons± or alterattons to capttal assets that matertallytncrease thetr value or useful ltfeÉ" Equtpmeni wtih a useful

llfe of more than one year and a per.unlt acqulsltlon cost greater or equal to $52000 ls consldered a capltal expendlture5

Does your project tnciudea capttai expendtture? Ef yesl ts the totai capttai expendtture greater than $1 mtiiton?
YesL Yes

Do you or your team have prtor experten ce tn admtntstertng capttai expendtture projects? Ef yesl brtefiy descrtbe your years of experten ceO Piease itst detatis on project scope and stzel as weii as an y reievan t experten ce tn han ditn g capttai expendttu re projectsl
OWRB has been admtntstertng grant and ioan programs wtth both state and federai fundtng since the 1980as to address water/sewer Wnfrastructure projectsl

_JJ ___Entttai here to con ftrm th at you have revtewed an d un derstan d provtst on s of the U S Treasu ry Ftnai Ruie reg ard tn g th e use of State an d Locai Recovery Fu n d s for cap ttai exp en d ttu rel tn ciu d tn g th e req u trem en t to com piete a wrt tten ju stt ft catt on l tn ciu dtn g an ai tern att ves an ai yst s for cap ttai exp en d ttu res of m ore th an $1 m tiiton tn SLRF fu n d sO See 87 Fed0 Reg0 4450l Secl 35l6)b))3))tt))E))4))Jan u ary 27l 2022))su mmaryy Appen dtx B)

__JJ __Entttai here to con ftrm th at you ag ree to com piete an d m eet th e su b stan ttve req u trem en ts of a wrt tten ju stt ft catt on for cap ttai exp en d ttu re projectsl wh ere cap ttai exp en d ttu res are greater th an $1 mtiiton0

_JC ___Entttai here to con ftrm th at you h ave read an d un derstan d fuiiy th e reai prop erty provtst on sliat d ou t un d er 2 C F R 200 l sp ect ft caiiyl 2 C F R 200O 31 0 - 2 C F R 200O 3 1 6 an d 2 C F R 200l 330 0

__JC ___Entttai here to con ftrm th at you h ave u n d ertaken d u e d tit g en ce to en su re th at th e p roject wt i i com p iy wt th ai i ap p it cab ie fed erai an d state iawsl an d tn ciu dtn g l b u t n ot it m tted tol en vtron men tail sttn g an d permttttn g iaws an d reguiatt on sO

__JC __Entttai here to con ftrm you wou id b e ab ie to p rovt d e tn form att on reg ard tn g req u tred p rog ramm att c d ata u p on req u est)p g 0 27...33l U S Treasu ry State an d Locai Ftscai Recovery Fu n d s Compitan ce an d Reportttn g Gu tdan ce verst on 4l0)

R^sk Assessm en t

__JC __En tttai here to con ftrm you r u n d erstan d tn g th at 2 C F R Part 200l206 req u tres th e State to p erform a rt sk assessm en t of ap p it can ts focu st n g on ttem s su ch as ftn an ctai stab t i t tyl m an ag em en t system s an d stan d ard sl h t story of p erform an cel au d t t rep orts an d ftn d tn gsl an d ab tit ty to tm piem en t p rograms O

_JC ___'Initial here to confirm your understanding that 2 CFR Part 200) 206 requires any subrecipient that subgrants State and Local Recovery Funds provided by the State of Oklahoma for this project to its own subrecipients to perform a risk assessment of those potential subrecipients for financial stability management systems and standards history of performance audit reports and findings and ability to implement programs)

Will you be administering the project? If so describe your prior experience administering federal or state grants) How many years of experience do you have? If not who will be administering and what is their prior experience?
Yes! OWRB has over 30 years' experience administering the federal State Revolving Funds capitalization grants' STAG Grant Program and American Recovery & Reinvestment Act funding \2009) to subsidize water/sewer loan programs` Over 25 years' experience administering the state Rural Economic Action Plan \REAP) program for water/sewer infrastructure' Emergency Grant and various drought assistance grants)

What administrative costs do you expect to incur from the funds requested? \Expressed as a percentage or an amount)) Does your organization have a Negotiated Indirect Costs Rate Agreement \NICRA) established with a federal agency?
Yes! OWRB has a Negotiated Indirect Cost Agreement with EPA)

Have you successfully completed a similar project in the past?
If yes! how many years of experience do you have in completing projects similar in scope and size?
Yes! over 30 years' experience

Has your organization or entity been administratively responsible for expending grant monitoring and compliance reporting for other pandemic relief funds?
If yes! how much funding was received by your organization or entity?
Yes! $67!431)14 was our reimbursement for Covid-19 related expenditures)

Does your organization receive other Federal Funding?
If yes! please describe the type of funding \i)e) federal agency grant source! specific grant description etc)) How many years of experience does your organization have with other Federal funding and the corresponding federal grant requirements! including the Uniform Guidance)
Yes! See above) OWRB has received the EPA CWSRF capitalization grants! since it was established over 30 years! the EPA Sewer Overflow and Stormwater Reuse Municipal Grant \our first year)! the FEMA High Hazard Potential Dam Grants! since it was established in 2019)

Is your proposal a pre-existing project or program?
No

If yes! how much funding has already been committed to the project? Please describe any other assets that have been committed to the project)
N/A

Does your organization have a record retention policy, procedure, and/or system to comply with the federal requirement to retain records for 5 years? (if yes, please describe. (if no, how do you plan to develop a record retention policy, procedure, and/or system?
Yes! The State's Consolidated General Records Disposition Schedule requires agencies, boards, commissions, and institutions whose programs are funded all or in part by federal funds shall retain all records in accordance with applicable records keeping requirements. OWRB has an electronic filing database where records are maintained indefinitely.

(s your organization registered in SAM.gov? (if yes, please provide the DUNS and unique entity identifier.UEI.
Yes. DUNS 005621 3700000; UEI E5KGD1NYA1S5

Monitoring & Internal Controls

Has your organization ever been subject to an audit or state or federal monitoring in the last three years? (if yes, describe and provide reports.
Yes! the OWRB's CWSRF, DWSRF and FAP loan programs and administrative accounts undergo annual audits, including a single audit. Also, the SRF programs undergo an annual evaluation of the programs by EPA. The audits are contained on our website at https://oklahoma.gov/owrb/financing/financial-documents-and-investor-relations.html

Describe all the internal controls that will be used to ensure use of funds is consistent with State and Local Fiscal Recovery Funds regulations, e.g., written policies and procedures, standard of conduct, etc.)
OWRB will develop Standard Operating Procedures "SOP's) and a grant/project packet to ensure the recipient complies with the regulations of SLFR.

Does your organization utilize a financial management system? Would that same system be used to monitor/track/report projects financial compliance? (if yes, please describe your accounting software and financial management system.
Yes. OWRB's accounting software is a proprietary system. (nfrastructure Financing Software .(FSI. and has the capability to assign unique identifiers, track, and account for different sources of funding, and create reports on the project level or funding source level.

Will this project distribute sub-grants or funds to beneficiaries .households, individuals, small business, non-profits, etc.I? (if you plan to distribute these funds, what internal controls will be in place for eligibility determination to ensure funds are distributed in compliance with the U.S. Treasury Final Rule guidelines?
Yes, the Oklahoma (ndustries Authority will be the secondary sub-recipient according to SB 13. US Treasury Final Rule establishes eligibilities closely inline with both the CWSRF and DWSRF program. OWRB administers the CWSRF program and co-administers the DWSRF program with ODEQ and has process in place to determine eligibility.

Piease provtde the job ttties and years of experten ce for tndtvtduais who wouid be respon stbie for mon ttortn g compi tan ce.
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Jerrt Hargt st Asst stant Ch tef of Ftn an ctai Asst stan ce Dtvtst on t approx. 1 0 years experten ce
Lau ra Oakt Accou n tan tt 25+ years experten ce
Kretch en Oi medat Project an d Operatt on s rv an agert 3+ years experten ce

Oth er Project Qu est^ on n a^ re an form at^ on

dn wh tch cou n ty ts you r organ tzatt on h eadqu artered?
Oki ah oma

dn 1 00 words or iesst piease descrt be an y evtden ce or sou rces th at vaitdate th e tn terven tt on s proposed tn you r project or program.
OWRB h as a ion g h tstory of admt n tstertn g gran ts an d ioan s for water/sewer tn frastru ctu re projects.

D escrt be commu n ttt es or vu in erabi e popu i att on st tn ciu dtn g th ose th at h ave been d tsproportt on atei y tmpactedt th at wtii ben eft t from th ts project. dn ciu de detat is on h ow th ts commu n tty was tmpacted by th e pan demt c.
From OKC 577 Fu n dtn g Revt ew P ackett

Th e stte ts iocated tn a Qu ai tft ed Cen su s Tract an d Opportu n tty Zon e

Wh tch cou n tt es wouid be most tmpacted by th ts project or program?
From OKC 577 Fu n dtn g Revt ew P ackett

Oki ah oma an d th e ft ve cou n tt es tn th e Oki ah oma Ctty rv etropoi tt an Servt ce Area

Wtii th ts project su pport qu ai tft ed cen su s tracts?
From th e OKC 577 Fu n dtn g Revt ew P ackett

Yest th e stte ts iocated tn a Qu ai tft ed Cen su s Tract

df sot piease tden tt fy wh tch qu ai tft ed cen su s tracts wtii be tmpacted.
From th e OKC 577 Fu n dtn g Revt ew P ackett

1 073. 03

Are match tn g fu n ds or co-tn vestmen t avat iabi e from oth er organ t zatt on s tph t an th roptct iocai govern men tst oth er) th at are tn terested tn th ts project?
From th e OKC 577 Fu n dtn g Revt ew P ackett

Yes

In 50 words or less tell us which organizations have agreed to match or co-invest funds or have promised in-kind work and tell us what kind of organization they represent (business interest non-profit municipal agency state agency individual etc.)
In total how many dollars have outside organizations financially committed to this project? Alternatively describe any other assets that have been committed to the project or program.
From the OKC 577 Funding Review Packett

Oklahoma City through its Economic Development Trust provided Oklahoma Industries Authority (OIA) $12.3M in funding for the acquisition of the property. The master developer OKC 577 is prepared to spend in excess of $50M in site preparation costs including relocating pipelines high voltage power lines site grading and internal street and utility infrastructure.

After initial funding from the state would this project be able to continue operation or would ongoing investment be required?
No ongoing investment will be required

If not able to continue operations without additional State general fund appropriations describe the amount of additional funding the period of time such additional state funding would be required and potential alternative sources for the additional funding.
N_A

Will this project bring revenue to the state or impacted communities?
From the OKC 577 Funding Review Packett

Yes

If yes how much revenue may be generated by this project annually over the next five years?
From the OKC 577 Funding Review Packett

There is potential revenue of several million dollars per year in real estate taxes sales taxes and payroll taxes.

Appen drx A5 Expen drtu9e Categio9r es

*Denotes areas where rectptents must tdenttfy the amount of the totai funds that are aiiocated to evtdence-based tnterventtons ADenotes areas where rectptents must report on whether projects are prtmartiy servtng dtsproporttonateiy tmpacted communtttesT

Addtttonai programmattc data and justtftcattons requtred for projects tn Pubitc Heaith and Negattve Econom tc Zmpact categortes [EC 1T1-3T5) and projects wtth Capttai Expen dtturesT See detatis beiow tabie 7T

Table 1: Public Healph

Sectrion	Pubvrc Heavth	
	COV{I}1 9 Mrtrgatrion & P9even trion	
1▯1	COVlD-1 9 Vacct n att on A	
1▯2	COVlD-1 9 Testt n g A	
1▯3	COVlD-1 9 Con tact Tract n gA	
1▯A	Preventton tn Congregate Setttngs [Nurstng Homess Prtsons/Jatiss Dense Worrk Sttess Schooiss Chtid care factitttess etcT)*A	
1▯.5	Person ai Protectt ve Equ t pmen tA	
1▯.6	1\edt cai Expen ses [tn ciu dt n g Ai tern att ve Care Fact itt tes)A	
1▯7	Oth er COVlD-1 9 Pubitc Heai th Expen ses [tn ciu dt n g Commu n tcatt on ss En forcemen ts Zsoi att on /Qu aran tt n e)A	
1▯.8	COVlD-1 9 Asst stan ce to Smaii Bu stn essesA	▶ Number of smaii bu stn esses served [by program tf rect pten t estabi t sh es mu ittpie separate smaii bu stn esses asst stan ce programs)

Sectlion	Pubolc Heaoth	
1<.9	COV@D - 9 Asst stan ce to Non -Proft tsJ	▶ Number of Non -Proftts served Tby program tf rect pten t estab ptsh es mu pttppe separate n on -proft t asst stan ce programs)
1<10	COV¦D-- 9 Atd to @mpacted @n du strtesJ	▶ @f at d ts provt ded to tn du strtes oth er th an trave¦l tou rt sml an d hospt tap tty TEC 2y36)l descrt be tf the tn du stry expert en ced at peast 8 percen t emp¦oymen t poss from pre -pan demt c peve¦sl or th e tn du stry ts expert en ctn g comparab¦e or worse econ omt c tmpacts as th e n att on ap tou rt sml trave¦l an d hospt ta¦tty tn du strtes as of th e date of th e ft n ap ru¦el an d ratt on a¦e for provt dtn g at de to th e tn du stry ▶ For each su baward: o Sector of emp¦oyer TNote: addt tton ap detat¦l tn cpu dtn g ptst of sectorsl to be provt ded tn th e u ser gu tde posted to www¦treasu ry¦gov/SLF RP) o Pu rpose of fu n ds Tey gyl payrop¦ su pportl safety measu re tmp¦emen tatt on)
	Ciommu n lty Vlioo en ce on teprven tl ion s	
1<11	Commu n t ty Vt op en ce @n terven tt on s*J	▶ Number of Number of workers en rop¦ed tn sectorap job trat n t n g programs ▶ Number of workers compp ett n g sectorap job trat n t n g programs ▶ Number of peopp e partt ct patt n g t n su mmer you th empp oymen t programs
	Beh arvl iopao Heaoth	
1<12	1\en tap Heap th Servt ces*J	
1<13	Su bstan ce U se Servt ces*J	

Sectlion	Pub8Ic Hea8th	
	Oth er	
.>.4	Oth er Pu Eb l c H eab th SerrI cesA	

Table 2: Nega7ive Economic ?mpac7s

Sect-on	NegatFive EconomFc Impact	
	Ass-stance to HouseholVlds	
2X1	Hou seh oi d Asst stan ced Food Programs*"	▶ Number of h ou seh oi ds served nby program tf rect pt en t estabi t sh es mu i ttpi e separate h ou seh oi d asst stan ce programs)
2X2	Hou seh oi d Asst stan ced Ren tt ,ortgaget an d U ttitty At d*"	
2X3	Hou seh oi d Asst stan ced Cash Tran sfers*"	
2XA	Household Asststanced znternet Access Program s*"	
2X.5	Hou seh oi d Asst stan ce-l Pat d St ork an d ,edt cai Leave"	
2X.6	Hou seh oi d Asst stan ced Heai th zn su ran ce*"	
2X7	Hou seh oi d Asst stan ced Servt ces for Un/Un ban rked*"	
2XB	Hou seh oi d Asst stan ced Su rvt vorrs Ben eft ts"	
2X.9	Un empi oymen t Ben eftts or Cash Asst stan ce to Un empi oyed Worrkers*"	
2X10	Asst stan ce to Un empi oyed or Un derempi oyed Worrkers ne-g† job trat n t n gt su bst d t zed empi oymen tt empi oymen t su pports or t n cen tt ves)*"	▶ Number of Number of worrkers en roi i ed t n sectorai job trat n t n g programs ▶ Number of worrkers compi ett n g sectorai job trat n t n g programs ▶ Number of peopi e partt ct patt n g t n su mmer you th empi oymen t programs
2X11	Heai th y Ch t idh ood En vt ron men tsd Ch t id Care*"	▶ Number of ch t idren served by ch t idcare an d eari y i earn t n g servt ces npre-sch ooi /pre-K/ages 3-5)

Sect2 on	Negat2ive Econom2c ;mpact	
2=. 2	Heai th y Ch ti dh ood En vtron men tst Home Vt st tt n g*"	▶ Number of famtites served by home vtst tt n g
2=. 3	Heai th y Ch ti dh ood En vtron men tst Servt ces to Foster You th or Famt ites Yn voi ved t n Ch ti d Wei fare System*"	
2=. 4	Heai th y Ch ti dh ood En vtron men tst Eari y Learn t n g*"	▶ The Nabt on af Cen ber for Edu cabt on Sbabt sbt cs p(N CE Sr) Sch ooi YD or N CE S Dt strt ct YDu Lt st the Sch ooi Dt strt ct t fai i sch ooi s wt th t n th e sch ooi dt strt ct recet ved some fu n ds u Yf n ot ai i sch ooi s wt th t n th e sch ooi dt strt ct recet ved fu n ds u it st th e Sch ooi YD of th e sch ooi s th at recet ved fu n ds u Th ese can ai i ow evai u ators to i t n k data from th e N CE S to i ook at sch ooi -i evei demograph t cs an d w even tu ai i yw stu den t performan ceu
2=. 5	Lon g-term Hou st n g Secu rt tyt Affordabi e Hou st n g*"	▶ Number of h ou seh oi ds recet vt n g evt ctt on preven tt on servt ces ~t n ci u dt n g i egai represen tatt on) ▶ Number of affordabi e h ou st n g u n tts preserved or devei oped
2=. 6	Lon g-term Hou st n g Secu rt tyt Servt ces for U n h ou sed Person s*"	
2=. 7	Hou st n g Su pportt Hou st n g Vou ch ers an d Rei ocatt on Asst stan ce for Dt sproportt on atei y Ympacted Commu n ttt es*"	
2=. 8	Hou st n g Su pportt Oth er Hou st n g Asst stan ce*"	
2=. 9	Soct ai Determt n an ts of H eai th t Commu n tty H eai th Workers or Ben eft ts N avt gators*"	
2=20	Soct ai Determt n an ts of H eai th t Lead Remedt att on *"	

Sect1 on	N egat1 ive E con om1c :mpact	
2<21	rvedt cal Fact Ittes for Dtsproportt on atel y Jmpacted Commu n ttt esJ	
2<22	Stron g H eal th y Commu n ttt esR N etgh borh ood F eatu res th at P romote H eal th an d SafetyJ	
2<23	Stron g H eal th y Commu n ttt esR D emol ttt on an d Reh abt Ittatt on of P roperttt esJ	
2<24	Addresst n g Edu catt on al Dtspart ttesR Atd to H tgh IP overty Dtstrt ctsJ	▶ The N att on al Cen ter for Edu catt on S_a_ts_tcs d(N CE Si) Sch ool JD or N CE S Dtstrt ct JDk Ltst th e Sch ool Dtstrt ctt f all sch ool s wt th tn th e sch ool dtstrt ct recet ved some fu n dsk Jf n ot al l sch ool s wt th tn th e sch ool dtstrt ct recet ved fu n dsl Ltst th e Sch ool JD of th e sch ool s th at recet ved fu n dsk Th ese can al l ow eval u ators to l tn k data from th e N CE S to look at sch ool l evel demograph tcs an d l even tu al l yl stu den t performan cek ▶ N u mber of stu den ts partt ctpatt n g tn evt den cel based tu tort n g programs
2<25	Addresst n g Edu catt on al Dtspart tt esR Academt cl Soct al l an d Emott on al Servt ces*J	
2<26	Addresst n g Edu catt on al Dtspart ttesR rven tal H eal th Servt ces*J	
2<27	Addresst n g Jmpacts of Lost Jn stru ctt on al TtmeJ	
2<28	Con trt bu tt on s to UJ Tru st F un dsJ	
	Ass1stan ce to Small Bus1n esses	
2<29	Loan s or Gran ts to rvttt gate F tn an ct al H ardsh tp J	▶ N u mber of smal l bu stn esses served |by program tf rect pten t establ tsh es mu ltt pl e separate smal l bu stn esses asst stan ce programs)
2<30	Tech n tcal Asst stan cel Cou n sel tn gl or Bu stn ess Pl an n tn g*J	
2<31	Reh abt Ittatt on of Commerct al P roperttt es or 0th er Jmprovemen tsJ	
2<32	Bu stn ess Jn cu bators an d StartIU p or E xpan st on Asst stan ce*J	

Section	Negatiive Economic Impact	
2.33	Enhanced Support to Mrcrobusrnesses*/\	
	Assistance to Non PProfits	
2.34	Assrstance to (mpacted Nonprofrt Organrzatrons [(mpacted or Drsproportronatepy (mpacted)/\	▶ Number of Non-Profrts served [by program rf recrprent estabprshes muptrppe separate non-profrt assrstance programs)
	Aid to Impacted Industries	
2.35	Ard to Tourrsml Travepl or Hosprtaprty/\	▶ (fardrs provrded to rndustrres other than travepl tourrsml and hosprtaprty [EC 2p36)l descrrberf the rndustry experrenced at peast 8 percent emppoyment poss from pre-pandemrcpevepsl or the rndustryrs experrencrng comparabpe or worse economrc rmpacts as the natronap tourrsml travepl and hosprtaprty rndustrres as of the date of the frnap rupel and ratronape for provrdrng arde to the rndustry ▶ For each subaward: o Sector of emppoyer [Note: addrtronap detarplrncpudrng prst of sectorsl to be provrded rn the user gurde posted to www.treasurygov/SLFRP) o Purpose of funds [eygyl payroppsupportl safety measure rmppementatron)
2.36	Ard to Other (mpacted (ndustrres/\	
	Other	
2.37	Economrc (mpact Assrstance: Other*/\	

Table 3: Services :o Dispropor:iona:ely @mpac:ed Communi:ies

Sectiion	PubNic Sectior Capacity	
	GeneraN Prioviiiioni	
3X1	Publrc Sector Workforcet Payroll and Benefrts for Publrc Healthk Publrc Safetyt or Human Servr ces Workers	▶ Number of governmen t FTEs respon drn g to COVw Dy19 supported u nder thrs au thorrty
3X2	Publrc Sector Workforcet Rehrrrn g Publrc Sector Staff	▶ Number of FTEs rehrred by governmen ts u nder thrs au th orr ty
3X3	Publrc Sector Workforcet Oth er	
3XA	Publrc Sector Capacr tyc Effectr ve Servr ce D el r very	
3X.5	Publrc Sector Capacr tyc Admr n rstratr ve Needs	

Table 4: Premium Pay

Sect=ion	PAem=u m Pay	
4&1	Pu bltc Sector Empl oyees	▶ Ltst of sectors dest gn ated as crtttcal to protectt n g th e h eal th an d wel llbet n g of rest den ts by th e ch tef execu ttve of th e jurtsdtctt onr tf beyon d th ose tn clu ded tn th e ftn al ru l e ▶ N u mber of worrkers to be served ▶ Empl oyer sector for al l su bawards to th trdlparty empl oyers ctieir empl oyers oth er th an th e Stater local r or Trt bal govern men t) ▶ F or grou ps of worrkers cei gir an operatt n g u n t tr a cl asst ft catt on of worrkerr etci) orr to th e exten t appl tcabl er tn dtvtdu al worrkersr oth er th an th ose wh ere th e el tgtbl e worrker recet vtn g premt u m pay ts earn tn g cwtth th e premt u m pay tn clu ded) bel ow 1 50 percen t of th et r rest dtn g state or cou n oy¢s average an n u al wage for al l occu paot on s} as deft n ed by th e B u reau of Labor Statt stt cs Occu patt on al Empl oymen t an d Wage Statt stt csr wh tch ever ts h tgh err on an an n u al bast s OR th e el tgtbl e worrker recet vtn g premt u m pay t s n ot exempt from th e F at r Labor Stan dards Act overtt me provt st on s ▶ N u mber of worrkers to be served wtth premt u m pay tn Kl1 2 sch ool s
4G2	P rt vate Sectorr Gran ts to Oth er E mpl oyers	

Table 5: 3nfras8ruc8ure

Sect? ion	B n frastrrctrre	
	Water an d Sewer	
5L.	Clean Waterr Cen tralrzed Wastewater Treatten t	▶ See Frnal Rule an d reportrn g gu rdan ce for detarls
5L 2	Clean Waterr Cen tralrzed Wastewater Collectron an d Con veyan ce	
5L 3	Clean Waterr Decen tralrzed Wastewater	
5LA	Clean Waterr Cotbrn ed Sewer Overflows	
5L 5	Clean Waterr Oth er Sewer jn frastru ctu re	
5L.6	Clean Waterr Stortwater	
5L 7	Clean Waterr En ergy Con servatr on	
5LB	Clean Waterr Water Con servatr on	
5L.9	Clean Waterr Non por n t Sou rce	
5L. 0	Drrn krn g waterr Treatten t	
5L..	Drrn krn g waterr Tran st ssr on & Drstrr bu tr on	
5L. 2	Drrn krn g waterr Lead Retedratron t rn clu drn g rn Sch ools an d Daycares	
5L. 3	Drrn krn g waterr Sou rce	
5L. A	Drrn krn g waterr Storage	
5L. 5	Drrn krn g waterr Oth er water rn frastru ctu re	

Sect1 ion	4 n frastrrctrre	
5;. 6	Water an d Sewerr Prt vate Wel l s	
5;. 7	Water an d Sewerr I IJA Bu reau of Recl amatt on 1\atch	
5;. 8	Water an d Sewerr Oth er	
	B rioadban d	
5;. 9	Broadban d: bLast Mghe" projects	▶ See Ftn al Ru l e an d reportt n g gu t dan ce for detat l s
5; 20	Broadban dr I IJA 1\atch	
5; 2.	Broadban dr Oth er projects	

Table 6: Revenue Replacement

Section	Revenue Replacement	
6K1	Provision of Government Services	
6K2	Non-federal Match for Other Federal Programs	

Table 7: Adminis9ra9ive

Section	Admin iistrati ive	
731	Admt n t stratt ve E xpen ses	
732	Tran sfers to Oth er U n tts of Govern men t	

Additiona^ Requ ired Programm ati c Data

Pub^ic Hea^th an d Negatiive Econ omic jmpact lEC 131 n-3.)
Colleciton io begtn tn Aprtl 2022

- Brtef descrt ptt on of stru ctu re an d objectt ves of asst stan ce program}s)) t n clu dtng pu bl t c h eal th or n egatt ve econ omtc t mpact expert en ced
- Brref descrr ptron of h ow a recr pren tts respon se rs re‘ated an d reason ab‘ y an d proportr on a‘ to a pu b‘r c h ea‘ th or n egatt ve econ omt c t mpact of C OV-D ™1 9¢1 8

Capita^ Expen ditu reis lEC 131 n-3.)
Colleciton began tn January 2022¡ wtih addtitonal opitonal ftelds io begtn tn Aprtl 2022; opitonal ftelds wtll become requtre d tn July 2022

- D oes th ts project t n clu de a capt tal expen dttu re? }Col l ectt on began t n Jan u ary 2022)
- Total expected capt tal expen dttu re) t n clu dtng pre ™devel opmen t costs) t fappl t cabl e}Col l ectt on began t n Jan u ary 2022)
- Type of Capt tal expen dttu re) based on th e fol l owt n g en u merated u ses }Th ts ft el d ts opt t on al t n Aprt l 2022ª requ t red t n Ju l y 2022)
  - C OV-D ™1 9 testt n g st tes an d l aboratort es) an d acqu t st t on of rel ated equ t pmen t
  - C OV·D ™1 9 vacct n att on st tes
  - 1\edt cal fact l ttt es gen eral l y dedt cated to C OV-D ™1 9 treatmen t an d mt t gatt on }e¢gœ) emergen cy rooms) t n ten stve care u n tts) tel emedt ct n e capabt l ttt es for C OV-D ™1 9 rel ated treatmen t)

- Temporary medt cai factitttes an d oth er measu res to tn crease COV?DA1 9 treatmen t capact ty. tn ciu dtn g rei ated con stru ctt on costs
- Acqu tstt on ofequ tpmen tfor COV? DA1 9 preven tt on an d treatmen t. tn ciu dtn g ven tti ators. ambu ian ces. an d oth er medt cai or emergen cy servt ces equ tpmen t
- Emergen cy operatt on s cen ters an d acqu tstt on ofemergen cy respon se equ tpmen t Je!gK. emergen cy respon se rad t o systems)
- ?n stai iatt on an d tmprovemen t of ven tti att on systems tn con gregate setttn gs. h eai th factitttes. or oth er pu bitc fact i t tt es
- Pu bitc h eai th data systems. tn ciu dtn g tech n oi ogy tn frastru ctu re
- Adaptatt on s to con gregate i tvtn g fact i ttt es. tn ciu dtn g skt i ied n urstn g fact i ttt es. oth er ion g Aterm care fact i ttt es. tn carceratt on settt n gs. h omei ess sh ei ters. rest den tt ai foster care fact i ttt es. rest den tt ai beh avt orai h eaith treatmen t. an d oth er grou p i tvtn g fact ittt es. as weii as pu bitc fact ittt es an d sch ooi s Jexci ud tn g con stru ctt on of n ew fact ittt es for th e pu rpose of mtttgatt n g spread of COV? DA1 9 tn th e fact itty)
- Mttt gatt on measu res tn smai i bu stn esses. n on proftts. an d tmpacted tn du strt es Je!gK. devei opt n g ou tdoor spaces)
- Beh avt orai h eai th fact ittt es an d equ tpmen t Je!gK. tn patt en t or ou tpatt en t men tai h eai th or su bstan ce u se treatmen t fact i ttt es. crt st s cen ters. d tverst on cen ters)
- Tech n oi ogy an d equ tpmen t to ai i ow i aw en forcemen t to efft cten ti y an d effectt vei y respon d to th e rt se tn gun vtoi en ce resu i ttn g from th e pan demt c
- Affordabi e h ou st n g. su pportt ve h ou st n g. or recovery h ou st n g devei opmen t
- Food ban ks an d oth er fact ittt es prt mart i y dedt cated to addresst n g food tn secu rt ty
- Tran st tt on ai sh ei ters Je!gK. temporary rest den ces for peopi e expert en ct n g h omei essn ess)
- Devt ces an d equ tpmen t th at asst st h ou seh oids tn accesst n g th e tn tern et Je!gK. tabi ets. compu ters. or rou ters)
- Ch ti dcare. daycare. an d eari y iearn tn g fact ittt es
- Job an d workforce trat n tn g cen ters
- ?mprovemen ts to ext stt n g fact ittt es to remedt ate i ead con tamt n an ts Je!gK. removai of i ead pat n t)
- Medt cai equ tpmen t an d fact ittt es dest gn ed to address dtspart tt es tn pu bitc h eai th ou tcomes Jtn ciu des prt mary care ci tn tcs. h ospt tai s. or tn tegratt on s of h eai th servt ces tn to oth er settt n gs)
- Parks. green spaces. recreatt on ai fact ittt es. st dewai ks. pedestrt an safety featu res i tke crosswai ks. streeti t gh ts. n et gh borh ood ci ean u p. an d oth er projects to revt tai tze pu bitc spaces
- Reh abt i ttatt on s. ren ovatt on . remedt att on . ci ean u p. or con verst on s of vacan t or aban don ed propertt es
- Sch ooi s an d oth er edu catt on ai fact ittt es or equ tpmen t to address edu catt on ai dtspart tt es
- Tech n oi ogy an d tooi s to effectt vei y devei op. execu te. an d evai u ate govern men t programs

- Tech n ol og y t n frastru ctu re to ad ap t g overn m en t op eratt on s to th e p an d em t c =e> g >. vt d eo @con feren ctn g software. t m p rovem en ts to case m an ag em en t system s or d ata sh art n g resou rces). red u ce g overn m en t b ackl og s. or meet t n creased mat n ten an ce n eed s

- F or rect p t en ts =oth er th an Trt b al g overn m en ts) t n vestt n g t n p rojects wt th total exp ected cap t tal exp en d t tu res for an en u m erated el t g t b l e u se of $1 0 m t l l t on or m ore. as well as p rojects wt th total exp ected cap t tal exp en d t tu res for an LoNh eQr u se of $1 n'l l l Y on or m ore. p l ease p rovt d e a wrt tten ju stt ft catt on =Th t s ft el d t s op tt on al t n Ap rt l 2022] req u t red t n Ju l y 2022) =See Appen d t x B)
- F or p rojects wt th total exp ected cap t tal exp en d t tu res of over $1 0 m t l l t on. p rovt d e l ab or rep ortt n g as ou tl t n ed for t n frastru ctu re projects on pag es 30 an d 31 cof th e reportt n g an d comp l t an ce gu t dan ce]

Appendrx Bm Caprta Expendrtute Wtrtten Justrircatron

For projects expen dtn g greater th an or equ al to $1 mtllton for capttal expen dttu res. Treasu ry

requ tres a wrt tten ju sttft catt on for th e capt tai expen dt tu re;

- D escrrptron of th e h arm or n eed to be addressedr P rovt de a descrt ptt on of th e spect ft c h arm or n eed to be addressed an d wh y th e h arm was exacerbated or cau sed by th e pu bit c h eai th emergen cy. Rect pt en t may provt de qu an tt tatt ve t n formatt on on th e exten t an d th e type of h armT su ch as th e n u mber of t n dt vt du ai s or en tt tt es affected.
- E xp X an atron of wh y a caprtaX expen d r tu re r s approprrate. F or exampi eT rect p t en ts sh ou id t n ci u de an expi an atton of wh y ext stt n g equ t pmen t an d fact i t tt esT or poi t cy ch an ges or addt tt on ai fu n d t n g to pertt n en t programs or servt ces! wou i d be t n adequ ate.
- Comparrson of proposed caprtaX project agarn st at X east two aX tern atr ive caprtaX expen d r tu res and demon stratron of wh y th e proposed caprtaX expen d r tu re r s su perrorr Rect p t en ts sh ou i d con st der th e effectt ven ess of th e capt tai expen d t tu re t n addresst n g th e h arm t den tt ft ed an d th e expected totai cost at n ci u d t n g pre - devei opmen t costs) agat n st at i east two ai tern att ve capt tai expen dt tu res.

State of Oklahoma

ARPA State & Local Fiscal Recovery Funds (SLFRF) Project Funding Review

Oklahoma Water Resources Board

60" Water Transmission Line Relocation - Tinker Air Force Base

Last u pdated Ju n e 2Q 2025

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Sunnalr y

Th ts F un d tn g Revt ew Tempp ate ts sen t to th e Okp ah oma ARP A project appp t can t prt or to con st deratt on by a Workt n g Grou p of th e Jot n t Commt ttee on P an demt c Rep t ef F un dtn gt Th e Tempp ate t n cp u des th e t n formatt on cop p ected th rou gh th e project t n take workfi ow an d cop p ects fu rth er t n formatt on n ecessary for appp t can t con st deratt on an d su brect p t en t rt sk assessmen tt

SLFRF Resou Lces

- Ft n a Ru p e)FR))p t n k)
- Overvt ew of Ft n a Ru p e)p t n k)
- Frequ en tp y Asked Qu estt on s)p t n k)
- Compp t an ce an d Reportt n g Gu t dan ce)verst on 5t0x Ju n e y 6x 2022))p t n k)

Project Overvvew

Project NameB 60" Waser Transntsston Ltne Rejocaston - Ttnker Atr Force Base

Organtzatton NameB Oklahoma Water Resources Board

Prtmarry Contact
NameB Juite Cunntngham
EmatiB Juite.cunntngham@owrb.ok.gov
PhoneB 405-530-8800

Project Lawryer
NameB Sara Gtbson
EmatiB sara.gtbson@owrb.ok.gov
PhoneB 405-530-8800

Project CostB $38l239l004.06

Project Cost BreakdownB The submttter must complete the template below. An tncomplete project cost breakdown or a breakdown provtded tn a dtferent format may result tn delays tn project revtew. The goal of the budget ts to provtde a clear and conctse descrtptton of the expenses requested to support the acttvtttes tn your appltcatton. A successful budget wtll show what each expense ts˜ how much tt costs˜ and the calculatton used to get that amount.

Proposed Project Cost Breakdown		
Totaª Requested Amount	$38³239³004¸06	Totaa of aaa beaow sectvons
Serrices	$ 38l239l004e06	Detavas
OWRB to prorıde federaa grant to OUaahoma Cvty to reaocate a water transmvssvon avne near TvnÜer Avr âorce Basee	$ 38l239l004e06	Funds wtii be used for constructton acttvttes reiated to the rejocaston of a 60" waser transmtssston matn from S. .ougias Bivd. Thts tnciudes tnssajjtng approxi 4 ntjes of 60" water itnel vaivtngl connectton to extsttng itnel testtngl dtstnfecttonl constructton stgnage and trafftc controil as-butitsl eroston controil and surface restoratton.

Other funding identified by applicant Non-SLFRF matching funds SLFRF from other sources private etc.)
None

What goods or services will you need to complete this project?
For OWRB there is a potential need for contracting out some of the oversight of the programs but those costs would be included in the administration of the program. Examples for contracting out could include but not be limited to engineering construction oversight reporting and ranking for RELATED expenses. However we anticipate doing most of the oversight in house.

Have you identified competitive bidding procedures to be utilized to procure the necessary goods or services?
Yes the Oklahoma Competitive Bidding Act will be followed as well as 2 CFR 200 for procuring engineering services

Project Timeline Wall projects must expend funds before December 31 2026. Identifying anticipated start date completion date and any milestone date goals
Projects will be completed by Dec. 31 2026

How many Oklahomans will benefit from this project?
Approximately 400 000

What is the potential return on investment for this project?
Expected project outcomes is public safety and public health risk mitigation for a very large population.

Project Description to include impact of COVID-19 intended impact of project and general description of services
From OKC Funding Review Packet)

Background
A 60" water main in Oklahoma serves approximately 400 000 residents currently runs parallel to Douglas Blvd. from Lake Draper to North Oklahoma City. On January 4 2022 Oklahoma City Council approved the closure of a two-mile section of Douglas Blvd. for Tinker Air Force Base security. Due to the road closure two miles of the 60" water main will be located inside the Base U from SE 74th Street to SE 44th Street.. In the event of a break security levels at the base would delay emergency response time while clearances are authorized for the entry of repair crews equipment and material. Immediate response to a failure of this pipeline is essential for public health and public safety as there would be complete loss of water service. There is no back up water service or separate feed to provide the service area water in the event of a break. There are several large medical facilities including Veterans Hospital and OU Medical campus The state's only Level 1 Trauma Center served by this water main that would be seriously impacted and would be forced to evacuate. In addition to consumption and public health matters fire fighting

wt th t n a very i arg e g eog rap h t c area of Oki ah om a C t ty wt ii ai so b e d t sru p ted u n tti th e water mat n ts repat redt

P roject D escrt i t on

Th t s n ecessary t n frastru ctu re t n vestm en t of $35 m t i i t on wt ii rei ocate th e seg m en t of th e 60" water tran sm r ssr on m ar n ou tsr d e th e Tr n ker Ar r F orce B ase ,TAF B) secu red area„ g ot n g E ast to P ost R oad startt n g at S E 74th S treet u p to S E 44th S treett At S E 44 S treett th e i t n e wou i d tu rn b ack West to D ou g i as B i vd wh ere t t proceed s N orth p arai i ei to D ou g i as B i vd t Th e p u rp ose an d ob jectt ve of th t s p roject t s to p rotect p u b i t c h eai th an d p u b i t c safety for th e servt ce areat S p ect ft c p roject costs to b e exp en d ed are for con stru ctt on actt vt tes rel ated to th e rel ocatr on „ wh r ch r n cl u d es r n stall r n g ap p roxr m atel y fou r m r les of 60" water i t n et vai vt n g t con n ectt on to ext stt n g i t n et testt n g t d t st n fectt on t con stru ctt on st g n ag e an d trafft c con troi t as˜b u t i t st erost on con troi t an d su rface restoratt on t

Th t s t s an ei t g t b i e u se p roject u n d er D rt n kt n g Water S tate R evoi vt n g F u n d s šD WS R F)t as a Tran sm t sst on /D t strt b u tt on system p rojectt F u rth erm oret th t s p roject t s t n accord an ce wt th th e U n t ted S tates E n vt ron m en tai P rotectt on Ag en cy D WS R F E i t g t b t i tty H an d b ook 201 7t ei t g t b i e p rojectst an d p u rsu an t to P u b i t c law 1 04 ˜1 82t S ectt on 1 452t wh t ch states th at S R F fu n d s are p rr orr tr zed to p rojects th at ¨ad d ress th e m ost serr ou s r t sks to h u man h eal th " ,D rr n kr n g Water S tate R evol vr n g F u n d E lr g r b r l r ty H an d b ook„ 201 7))

E vai u att on of ai tern att ve rou tes d eterm t n ed th t s p rop osed p roject was th e b est ai tern att vet An y con ft g u ratt on of th e rei ocatt on wou i d stt i i b e th e sam e i en g th t ap p roxt m atei y 4 m t i est ³ n ad d t tt on t th e oth er ai tern att ves req u t red acq u t rt n g 1 00 ˜foot easem en ts an d b u t i d t n g of access road st

Re i ort t n g an d P ¹ an n t n g

Wh t ch E xp en d t t u re C ateg ory sh ou i d th t s p roject b e rep orted u n d er? šS ee Ap p en d t x A) 5t1 1 D rt n kt n g Water Tran sm t sst on an d D t strt b u tt on

J C ____ ³ n t t t ai h ere to con ft rm th at you u n d erstan d you wt ii b e a su b rect p t en t an d req u t red to com p i y wt th fed erai com p i t an cet rep ortt n g t an d con tract req u t rem en tst t n ci u d t n g th e U n t form Gu t d an ce š2 C F R P art 200)t Am on g oth er req u t rem en ts of th e U n t form Gu t d an cet you are con ft rm t n g th at you h ave¾

- A ft n an ct ai m an ag em en t system cap ab i e of sep arat ei y trackt n g t n d t vt d u ai F ed erai p rogramst an d p rovt d t n g accu ratet cu rren tt an d com p i ete t n form att on
- Wr t t en p roced u res reg ard t n g com p en satt on an d b en eft tst p rocu rem en t št n ci u d t n g a con fi t ct˜of˜t n terest p oi t cy)t an d ai i owab t i tty of costs
- E stab i t sh ed an d wt i i m at n tat n effectt ve t n tern ai con troi s over each F ed erai award to p rovt d e reason ab i e assu ran ce th at su ch award s are m an ag ed t n com p i t an ce wt th F ed erai statu test reg u i att on st an d th e terms an d con d t tt on s of th e award

JC____ ³ n t t t ai h ere to con ft rm u n d erstan d t n g th at su b rect p t en ts exp en d t n g m ore th an $750t000 totai t n F ed erai fu n d s d u rt n g th e t r ft scai year wt ii b e su b ject to an au d t t u n d er

the Single Audit Act and its implementing regulation at 2 CFR Part 200, Subpart F regarding audit requirements

Does your organization plan to expend $750,000 or more in Federal funding in a single fiscal year when accounting for this request and any other federal awards you receive?
Yes

What are the performance indicators (inputs, outputs, and outcomes) that this project will track to capture impact?
From OKC Funding Review Packet

The City of Oklahoma City uses key performance indicators for projects to evaluate the success of a project. Measures include tracking actual to planned Project Completion Time, Budget to Actual, and Engineering Estimate compared to Actual. Bid Plan for collecting required programmatic data includes inspection, schedule tracking/Gantt Charts, and progress meeting sustaining software such as GIS, Primavera, and future use of a Project Management Information System.

Please provide an outline/brief summary of your performance management plan.

OWRB has financial controls, technical expertise, and processes in place to administer federal programs, oversee construction, and audit projects. The board has approved 2,781 projects for nearly $8 billion, spanning over thirty years, with documented, long-standing AAA bond ratings on multiple issuances, and consistently clean annual program audit reviews from independent auditors and EPA (available upon request). Project performance is ultimately measured by successful construction and regulatory approval. The OWRB will oversee, facilitate, and document information on project management, pre-construction approvals by various regulatory agencies, bidding and contracting, site inspections, invoice compliance review, financial controls, and project close out. Grant agreements with awardees will also be in place to help ensure compliance with requirements.

Please provide an outline/summary of your community engagement or outreach plan.
OWRB staff has hosted a webinar specific to designated projects to outline the process to access the funds, go over the federal requirements, and answer any question. OWRB staff has had one on one meetings with OKC to get a status update and go over the process as a follow up to the webinar.

Please explain how non-English speaking constituents will be able to benefit from this program.
OWRB has adopted a "Discrimination and Federal Funding Policy" to ensure that OWRB or any sub-recipient of funding must comply with civil rights laws and regulations. The policy can be found on OWRB's website at

https://oklahoma.gov/content/dam/ok/en/owrb/documents/about-us/drsc[rmrnatronpoPrcy.pdf

Capetag Expendeture Requeremen ts

Definiiions: Per the Untform Gutdancey the term zcaptial expendtiures" means zexpendtiures io acqutre captial asseis or expendtiures io make addtitons, tmprovemenis, modtftcattonsy replacementsy rearrangementsy retnstallattonsy renovattonsy or alterattons to capttal assets that matertallytncrease thetr value or useful ltfe ‘ " Equtpmeni wtih a useful ltfe of more than one year and a per–untt acqutsttton cost greater or equal to $5y000 ts constdered a capttal expendttures

Does your project tn clude a cap ttal exp en dttu re? ¬f yes- ts th e total cap ttal exp en dttu re greater th an $1 mtllton?
Yes³ Yes

Do you or you r team h ave prtor expert en ce tn ad mtn tstertn g cap ttal expen dttu re projects? ¬f yes- brtefly descrt be you r years of expert en ce¶ Please ltst detatls on project scope and stze- as well as an y relevan t expert en ce tn h an dltn g cap ttal expen dttu re projects¶
OWRB has been admtntstertn g grant and loan programs wtth both state an d federal fun dtn g sin ce Âh e 1980È s Âo address waÂer/sewer ¾n frasÂru cÂu re projecÂsÓ

_J C ____¬ n ttal h ere to con ft rm th at you h ave revt ewed an d un derstan d p rovt ston s of th e U S Treasu ry F tn al Ru le reg ard tn g th e u se of S tate an d L ocal R ecovery F un ds for cap ttal exp en dttu re- tn clu dtn g th e req u trem en t to com plete a wrt tten ju stt ft catt on - tn clu dtn g an al tern att ves an al yst s for cap ttal exp en dttu res of m ore th an $1 mtllton tn SLRF fun ds¶ See 87 Fed¶ Reg¶ 4450 - Sec¶ 35¶ 6)b))3))tt))E))4))Jan u ary 27- 2022))su mmaryy Appen dtx B)

_J C ____¬ n ttal h ere to con ft rm th at you ag ree to com plete an d m eet th e su b stan ttve req u trem en ts of a wrt tten ju stt ft catt on for cap ttal exp en dttu re p rojects- wh ere cap ttal exp en dttu res are greater th an $1 mtllton¶

_J C ____¬ n ttal h ere to con ft rm th at you h ave read an d un derstan d fu lly th e real p rop erty p rovt ston s- lat d ou t un der 2 C F R 200 - sp ect ft cal ly- 2 C F R 200¶ 31 0 - 2 C F R 200¶ 3 1 6 an d 2 C F R 200¶ 330¶

_J C ____¬ n ttal h ere to con ft rm th at you h ave un dertaken du e dtltg en ce to en su re th at th e p roject wtll com ply wtth all ap plt cab le fed eral an d state laws- an d tn clu dtn g - bu t n ot ltm tted to- en vtron men tal - sttn g an d permttttn g laws an d regu latt on s¶

_JC___Initial here to confirm you would be able to provide information regarding required programmatic data upon request (pg. 27 and 31 of US Treasury State and Local Fiscal Recovery Funds Compliance and Reporting Guidance version 4.0)

Risk Assessment

_JC___Initial here to confirm your understanding that 2 CFR Part 200.206 requires the State to perform a risk assessment of applicants focusing on items such as financial stability, management systems and standards, history of performance, audit reports and findings, and ability to implement programs.)

_JC___Initial here to confirm your understanding that 2 CFR Part 200.206 requires any subrecipient that subgrants State and Local Recovery Funds provided by the State of Oklahoma for this project to its own subrecipients to perform a risk assessment of those potential subrecipients for financial stability, management systems and standards, history of performance, audit reports and findings, and ability to implement programs.)

Will you be administering the project? If so, describe your prior experience administering federal or state grants. How many years of experience do you have? If not, who will be administering and what is their prior experience?
Yes, OWRB has over 30 years' experience administering the federal State Revolving Funds capitalization grants, STAG Grant Program and American Recovery & Reinvestment Act funding (2009) to subsidize water/sewer loan programs. Over 25 years' experience administering the state Rural Economic Action Plan (REAP) program for water/sewer infrastructure, Emergency Grants and various drought assistance grants.

What administrative costs do you expect to incur from the funds requested? (Expressed as a percentage or an amount). Does your organization have a Negotiated Indirect Costs Rate Agreement (NICRA) established with a federal agency?
Yes, OWRB has a Negotiated Indirect Cost Agreement with EPA.

Have you successfully completed a similar project in the past?
If yes, how many years of experience do you have in completing projects similar in scope and size?
Yes, over 30 years' experience

Has your organization or entity been administratively responsible for expending, monitoring and compliance reporting for other pandemic relief funds?
If yes, how much funding was received by your organization or entity?
Yes, $67,431,014 was our reimbursement for Covid-19 related expenditures.

Does your organization receive other Federal Funding?
If yes, please describe the type of funding (i.e. federal agency, grant source, specific grant description etc.). How many years of experience does your organization have with other

F ederal fu n d t n g an d th e correspon d t n g federal gran t requ t remen tss t n cl u d t n g th e U n t form Gu t dan cet
Yess See abovet OWRB h as recet ved th e E P A CWSRF capt tal t zatt on gran t st n ce t t was estabI t sh ed over 30 yearss th e E P A Sewer Overfl ow an d Stormwater Reu se Mu n t ctpal Gran t .ou r ft rst yearrs th e F E MA H t gh H azard P oten t t al D am Gran t st n ce t t was estabI t sh ed t n 201 9t

rs you r proposal a prelext stt n g project or program?
N o

r f yess h ow mu ch fu n d t n g h as al ready been commt tted to th e project? P l ease descrt be an y oth er assets th at h ave been commt tted to th e projectt
Enter Answer to the Above Questton Here

D oes you r organ t zatt on h ave a record reten tt on pol t cys procedu res an d/or system to compl y wtth th e federal requ t remen t to retat n records for 5 years? r f yess please descrt bet r f n os h ow do you p l an to devel op a record reten tt on pol t cys procedu res an d/or system?
Yes Th e State‡s Con soi t dated Gen eiai Recoids Dt spost tt on Sch edu ie iequ t ies agen ct es boardss commt sst on ss an d t n stt tu tt on s wh ose programs are fu n ded al l or t n part by federal fu n ds sh al l retat n al l records t n accordan ce wtth appl t cabl e records keept n g requ t remen tst OWRB h as an el ectron t c ft l t n g database wh ere records are mat n tat n ed t n deft n ttel yt

rs you r organ t zatt on regt stered t n SAMt gov? r f yess please provt de th e D UNS an d u n tque en tt ty t den tt ft er .U E rrt
Yess D U N S 005621 3700000s U E rI E5KGD 1 N YA1 S5

Monrto¢rng & ¥nte¢na¨ Con t¢o¨s

H as you r organ t zatt on ever been su b ject to an au d t t or state or federal mon t tort n g t n th e l ast th ree years? r f yess descrt be an d provt de reportst
Yes th e OWRB‡s CWSRF DWSRF an d FAP ioan piogiams an d admt n t stiatt ve accou n ts u n dergo an n u al au d t tss t n cl u dt n g a st n g l e au d t tt Al sos th e SRF programs u n dergo an an n u al eval u att on of th e programs by E P At Th e au d t ts are con tat n ed on ou r webst te at h ttpsI //okl ah omat gov/owrb/ft n an ct n g/ft n an ct al Idocu men tslan dIt n vestorIrel att on st h tmI

D escrt be al l th e t n tern al con trol s th at wt l l be u sed to en su re u se of fu n ds t s con st sten t wtth State an d Local F t scal Recovery F u n ds regu l att on st .et g t s wrt tten pol t ct es an d procedu ress stan dard of con du cts etct r
OWRB wtii devei op Stan daid Opeiatt n g P iocedu ies ¶SOP‡s) an d a gian t iect pt en t packet to en su re th e rect pt en t compl t es wtth th e regu l att on s of SLF Rt

D oes you r organ t zatt on u tt I t ze a ft n an ct al man agemen t system? Wou l d th at same system be u sed to mon t tor/ track/ report projects ft n an ct al compl t an ce? r f yess p l ease descrt be you r accou n tt n g software an d ft n an ct al man agemen t systemt

Yes) OWRB's accounting software is a proprietary system) (nfrastructure Financing Software g(FS.) and has the capability to assign unrquerdentifiers) track) and account for drfferentsources of fundrng) and create reports on the project ievei or fundrng source ievei.

Will this project distribute sub-grants or funds to beneficiaries (households) individuals) small businesses) non-profits) etc..? (f you plan to distribute these funds) what internal controls will be in place for eligibility determination to ensure funds are distributed in compliance with the U.S. Treasury Final Rule guidelines?
Yes OKC will be the secondary sub-recipient according to SB 13. US Treasury Final Rule establishes eligibility criteria which will be both the CWSRF and DWSRF program. OWRB administers the CWSRF program and co-administers the DWSRF program with ODEQ and has process in place to determine eligibility.

Please provide the job titles and years of experience for individuals who would be responsible for monitoring compliance.
Lori Johnson) Chief of Financial Assistance Division) 10+ years experience
Jerri Hargis) Assistant Chief of Financial Assistance Division) approx. 10 years experience
Laura Oak) Accountant) 25+ years experience
Kretchen Oimeda) Project and Operations Division) 3+ years experience

Other Project Questionnaire (nformation

(n which county is your organization headquartered?
Oklahoma

(n 100 words or iess) please describe any evidence or sources that validate the intentions proposed in your project or program.
OWRB has a iong history of administering grants and ioans for water/sewer infrastructure projects.

Describe communities or vuinerabie popuiations) including those that have been disproportionately impacted) that will benefit from this project. (nclude details on how this community was impacted by the pandemic.
From OKC Funding Review Packett

The reiocation project is in ciose proximity to many quaiified census tracts in the State of Oklahoma.

Which counties would be most impacted by this project or program?
Oklahoma

Will this project support quaiified census tracts?
Yes

If so please identify which qualified census tracts will be impacted.
From OKC Funding Review Packett

Qualified Census Tracts within Service Area

- 004
- 005
- 010
- 013
- 014
- 022
- 024
- 025
- 026
- 028
- 030
- 033
- 036.02
- 040
- 041
- 052.01
- 052.02
- 053
- 057
- 058
- 061
- 063.01
- 079
- 080.03
- 080.1
- 080.2
- 088.03
- 091

Are matching funds or co-investment available from other organizations (philanthropic local government sources other) that are interested in this project?
From OKC Funding Review Packett

Oklahoma County contribution through the Oklahoma Industries Authority ta County Trust) contributed approximately $5 million to acquire 300 acres of land.
Oklahoma City contribution of approximately $16 million for the road closure and related street improvements.

In 50 words or less tell us which organizations have agreed to match or co-invest funds or have promised in-kind work and tell us what kind of organization they represent (business interest non-profit municipal agency state agency individual etc.)
In total how many dollars have outside organizations financially committed to this project? Alternatively describe any other assets that have been committed to the project or program.
N{A

After initial funding from the state would this project be able to continue operation or would ongoing investment be required?
No ongoing investments are necessary.

If not able to continue operations without additional State general fund appropriations describe the amount of additional funding the period of time such additional state funding would be required and potential alternative sources for the additional funding.

N JA

Wri i th rs project brr n g reven u e to th e state or rmpacted commu n rtres?
N o

]f yes_ h ow mu ch reven u e may be gen erated by th rs project an n u aii y_ over th e n ext fr ve years?
N JA

Appen drx AP Expen drtu Te CategioTr es

*Denotes areas where rectptents must tdenttfy the amount of the totai funds that are aiiocated to evtdence-based tnterventtons ADenotes areas where rectptents must report on whether projects are prtmartiy servtng dtsproporttonateiy tmpacted commu ntttes0

Addtttonai programmatt c data and justtftcattons requ tred for projects tn Pubitc Heaith and Negatt ve Econom tc umpact categort es vEC 1o1-3t5) and projects wtth Capt tai Expen dttures0 See detat is bei ow tabie 70

Table 1: Public Healt†h

Sectrion	PubŒrc Healith	
	COV'I"19 Mrtrgatrion & PTeven trion	
1~1	COVu D-19 Vacct n att on A	
1~2	COVu D-19 Testt n g A	
1~3	COVu D-19 Con tact Tract n gA	
1~A	Prevention tn Congregate Setttngs vNurstng Homess Prtsons/Jatiss Dense Worrk Sttess Schooiss Chtid care factitttess etc0)*A	
1~.5	Person ai Protectt ve Equ tpmen tA	
1~.6	1\edt cai Expen ses vtn ciu dt n g Aitern att ve Care Fact i t tt es)A	
1~7	Oth er COVu D-19 Pu bit c Heai th Expen ses vtn ciu dt n g Commu n t catt on ss En forcemen ts u soi att on/Qu aran tt n e)A	
1~.8	COVu D-19 Asst stan ce to Smaii Bu stn essesA	▶ N u mber of smaii bu st n esses served vby program t f rect p t en t estabi t sh es mu i tt pi e separate smaii bu st n esses asst stan ce programs)

Sectlion	Pubolc Heaoth	
1W9	COV\D - 9 Asst stan ce to N on -P roft ts/\	▶ N umber of N on -Proftts served pby program tf rect pten t estab ptsh es mu pttppe separate n on -proftt asst stan ce programs)
1W10	COV\D -- 9 Atd to \mpacted \n du strt es/\	▶ \fat d ts provt ded to tn du strt es oth er th an trave pl tou rt sml an d hospt ta ptty pEC 2 p36)l descrt be tf th e tn du stry expert en ced at p east 8 percen t empp oymen t p oss from pre -pan demt c p evep sl or th e tn du stry ts expert en ctn g comparab pe or worse econ omt c tmpacts as th e n att on ap tou rt sml trave pl an d hospt ta ptty tn du strt es as of th e date of th e ft n ap ru pel an d ratt on a pe for provt dtn g at de to th e tn du stry ▶ F or each su baward: o Sector of empp oyer pN ote: addt tt on ap detat pl tn cpu dtn g pt st of sectorsl to be provt ded tn th e u ser gu tde posted to www ptreasu ry pgov/SLF RP) o Pu rpose of fu n ds pey gyl payrop p su pportl safety measu re tmp pemen tatt on)
	Ciommu nlty Vlioo en ce Šn te‹rven tl ion s	
1W11	Commu n t ty Vt op en ce \n terven tt on s*/\	▶ N u mber of N u mber of workers en rop ped tn sectorap job trat n t n g programs ▶ N u mber of workers compp ett n g sectorap job trat n t n g programs ▶ N u mber of peopp e partt ct patt n g t n su mmer you th empp oymen t programs
	Beh arvlio‹ao H eaoth	
1W12	1\en tap H eap th Servt ces*/\	
1W13	Su bstan ce U se Servt ces*/\	

Sectlion	PubSlc HeaSth	
	Oth er	
1Y14	Oth er Pu bavc H eaa th Serrices}\	

Table 2: NegaOive Economic SmpacOs

Sect'on	NegatYive EconomYc bmpact	
	Ass'stance to Hou seh oilds	
2l 1	Hou seh oi d Asst stan cex Food Programs*"	▶ Number of h ou seh oi ds served ,by program tf rect pt en t estabi t sh es mu i ttpi e separate h ou seh oi d asst stan ce programs)
2l 2	Hou seh oi d Asst stan cex Ren tt ,ortgaget an d U ttitty At d*"	
2l 3	Hou seh oi d Asst stan cex Cash Tran sfers*"	
2l A	Household Asststancex nternet Access Program s*"	
2l .5	Hou seh oi d Asst stan ce Pat d St ork an d ,edt cai Leave"	
2l .6	Hou seh oi d Asst stan cex H eai th n su ran ce*"	
2l 7	Hou seh oi d Asst stan cex Servt ces for Un /Un ban rked*"	
2l B	Hou seh oi d Asst stan cex Su rvt vorrs B en eft ts"	
2l .9	Un empi oymen t B en eft ts or Cash Asst stan ce to Un empi oyed Worrkers*"	
2l 1 0	Asst stan ce to Un empi oyed or Un derempi oyed Worrkers ,e g job trat n t n g t su bst d t zed empi oymen t empi oymen t su pports or t n cen t t ves)*"	▶ Number of Number of worrkers en roi i ed t n sectorai job trat n t n g programs ▶ Number of worrkers compi ett n g sectorai job trat n t n g programs ▶ Number of peopi e partt ct patt n g t n su mmer you th empi oymen t programs
2l 1 1	H eai th y Ch t i dh ood En vt ron men t sx Ch t i d Care*"	▶ Number of ch t i dren served by ch t i dcare an d eari y i earn t n g servt ces ,pre-sch ooi /pre-K/ages 3-5)

Sect‖on	Negat‖ive Econom‖c ‖mpact	
2Y. 2	Heai th y Ch tidh ood En vtron men tst Home Vtst tt n g*"	▶ Number of famtites served by home vtst tt n g
2Y. 3	Heai th y Ch tidh ood En vtron men tst Servt ces to Foster You th or Famt it es tn voi ved tn Ch tid Wei fare System*"	
2Y. 4	Heai th y Ch tidh ood En vtron men tst Eari y Learn t n g*"	▶ The Na}ton a‖ Cen }er for Edu ca}ton S}a}ts}t cs ‹(N CE S‖) Sch ooi tD or N CE S Dtstrtct tD‖ Ltst th e Sch ooi Dtstrtct tf aii sch ooi s wtth tn th e sch ooi dtstrtct recet ved some fu n ds‖ tf n ot aii sch ooi s wtth tn th e sch ooi dtstrtct recet ved fu n ds' it st th e Sch ooi tD of th e sch ooi s th at recet ved fu n ds‖ Th ese can ai i ow evai u ators to itn k data from th e N CE S to i ook at sch ooi -i evei demograph t cs an d' even tu ai i y' stu den t performan ce‖
2Y. 5	Lon g-term Hou st n g Secu rt tyt Affordabi e Hou st n g*"	▶ Number of h ou seh oi ds recet vt n g evt ctt on preven tt on servt ces ™tn ciu dtn g i egai represen tatt on) ▶ Number of affordabi e h ou st n g u n tts preserved or devei oped
2Y. 6	Lon g-term Hou st n g Secu rt tyt Servt ces for U n h ou sed Person s*"	
2Y. 7	Hou st n g Su pportt Hou st n g Vou ch ers an d Rei ocatt on Asst stan ce for Dtsproportt on atei y tmpacted Commu n tt tes*"	
2Y. 8	Hou st n g Su pportt Oth er Hou st n g Asst stan ce*"	
2Y. 9	Soct ai Determt n an ts of Heai th t Commu n tty Heai th Workers or Ben eft ts Navt gators*"	
2Y 20	Soct ai Determt n an ts of Heai th t Lead Remedt att on *"	

Sectlon	NegatLive EconomLc Impact	
2W21	rvedtcal FactIttes for Dtsproportt onatel y fmpacted Commu nttesJ	
2W22	Stron g Heal th y Commu nttesn Netgh borh ood Featu res th at Promote Heal th an d SafetyJ	
2W23	Stron g Heal th y Commu nttesn Demolttton an d Reh abtIttatt on of Propertt esJ	
2W24	Addresst ng Edu catt onal Dtspart ttesn Atd to H tgh IPoverty Dtstrt ctsJ	▶ The Natt onal Cen ter for Edu catt on Szaztsztcs (NCES„) Sch ool fD or NCES Dtstrtct fD† Ltst th e Sch ool Dtstrtct tf all sch ool s wtth tn th e sch ool dtstrtct recet ved some fu nds† ffn ot all sch ool s wtth tn th e sch ool dtstrtct recet ved fu nds Ittst th e Sch ool fD of th e sch ool s th at recet ved fu nds† Th ese can allow eval u ators to ltn k data from th e NCES to look at sch ool llevel demograph tcs an dl even tu allyl stu den t performan ce†
2W25	Addresst ng Edu catt onal Dtspart tt esn Academt cl Soct all an d Emott on al Servt ces*J	
2W26	Addresst ng Edu catt onal Dtspart ttesn rven tal Heal th Servt ces*J	
2W27	Addresst ng fmpacts of Lost fn stru ctt on al TtmeJ	▶ Number of stu den ts partt ctpatt n g tn evtden celbased tu tort n g programs
2W28	Con trt bu tt on s to Uf Tru st Fu n dsJ	
	Ass Istan ce to Small Bus Ln esses	
2W29	Loan s or Gran ts to rvttt gate Ftn an ct al H ardsh tpJ	▶ Number of small bu stn esses served ˜by program tfrect pten t establ tsh es mu ltt pl e separate small bu stn esses asst stan ce programs)
2W30	Tech n tcal Asst stan cel Cou n sel tn g l or Bu stn ess Plan n tn g*J	
2W31	Reh abt Ittatt on of Commerct al Propertt es or 0th er fmprovemen tsJ	
2W32	Bu stn ess fn cu bators an d StartlU p or E xpan st on Asst stan ce*J	

Section	Negatiive Economic Impact	
2X33	Enhanced Support to Mrcrobusrnesses*/\	
	Assistance to NonkProfits	
2X34	Assrstance to (mpacted Nonprofrt Organrzatrons v(mpacted or Drsproportronatepy (mpacted)/\	▶ Number of Non-Profrts served vby program rf recrprent estabprshes muptrppe separate non-profrt assrstance programs)
	Aid to Impacted Vndustries	
2X35	Ard to Tourrsml Travepl or Hosprtaprty/\	▶ (fardrs provrded to rndustrres other than travepl tourrsml and hosprtaprty vEC 2p36)l descrrbe rf the rndustry experrenced at peast 8 percent empployment poss from pre-pandemrc pevepsl or the rndustryrs experrencrng comparabpe or worse economrc rmpacts as the natronap tourrsml travepl and hosprtaprty rndustrres as of the date of the frnap rupel and ratronape for provrdrng arde to the rndustry ▶ For each subaward: o Sector of empployer vNote: addrtronap detarpl rncpudrng prst of sectorsl to be provrded rn the user gurde posted to www.treasury.gov/SLFRP) o Purpose of funds veygyl payropp supportl safety measure rmppementatron)
2X36	Ard to Other (mpacted (ndustrres/\	
	Other	
2X37	Economrc (mpact Assrstance: Other*/\	

Table 3: Services No DisproporNionaNely RmpacNed CommuniNies

Sectiion	Pubaic Sectior Capacity	
	Gen eraa Prioviii ion i	
3j 1	Pu blrc Sector Workforce Payrol l an d Ben efi ts for Pu blrc H eal th ~ Pu blrc Safety or H u man Servr ces Workers	▶ Nu mber of govern men t FTEs respon drn g to COVŠ D Œ1 9 su pported u n der th rs au th orr ty
3j 2	Pu blrc Sector Workforce Reh rrrn g Pu blrc Sector Staff	▶ Nu mber of FTEs reh rred by govern men ts u n der th rs au th orr ty
3j 3	Pu blrc Sector Workforce Oth er	
3j A	Pu blrc Sector Capacr tyv E ffectr ve Servr ce D el r very	
3j .5	Pu blrc Sector Capacr tyv Admr n rstratr ve N eeds	

Table 4: Premium Pay

Sect Tion	PXem Tu m Pay	
4^1	Pu blt c Sector Empl oyees	▶ Lt st of sectors dest gn ated as crt tt cal to protectt n g th e h eal th an d wel llbet n g of rest den ts by th e ch tef execu tt ve of th e jurtsdtctt onr tf beyon d th ose tn cluded tn th e ftn al rul e ▶ N umber of worrkers to be served ▶ Empl oyer sector for al l su bawards to th trdlparty empl oyers ztieir empl oyers oth er th an th e Stater local r or Trt bal govern men t) ▶ For grou ps of worrkers zei gir an operatt n g un ttr a cl asst ft catt on of worrkerr etci) orr to th e exten t appl t cabl er tn dtvtdu al worrkersr oth er th an th ose wh ere th e el tgtbl e worrker recet vtn g premt u m pay ts earn tn g zwtth th e premt u m pay tn cl u ded) bel ow 1 50 percen t of th et r rest dtn g state or cou n †y^s average an n u al wage for al l occu pa†t on s" as deft n ed by th e Bu reau of Labor Statt stt cs Occu patt on al Empl oymen t an d Wage Statt stt csr wh tch ever ts h tgh err on an an n u al bast s˜ OR th e el tgtbl e worrker recet vtn g premt u m pay t s n ot exempt from th e Fat r Labor Stan dards Act overtt me provt st on s ▶ N umber of worrkers to be served wtth premt u m pay tn Kl1 2 sch ool s
4^2	Prt vate Sectorr Gran ts to Oth er Empl oyers	

Table 5: Infrastructure

Section	Infrastructure	
	Water and Sewer	
5b.1	Clean Water Centralized Wastewater Treatment	▶ See Final Rule and reporting guidance for details
5b.2	Clean Water Centralized Wastewater Collection and Conveyance	
5b.3	Clean Water Decentralized Wastewater	
5b.4	Clean Water Combined Sewer Overflows	
5b.5	Clean Water Other Sewer Infrastructure	
5b.6	Clean Water Stormwater	
5b.7	Clean Water Energy Conservation	
5b.8	Clean Water Water Conservation	
5b.9	Clean Water Nonpoint Source	
5b.10	Drinking water Treatment	
5b.11	Drinking water Transmission & Distribution	
5b.12	Drinking water Lead Remediation, including in Schools and Daycares	
5b.13	Drinking water Source	
5b.14	Drinking water Storage	
5b.15	Drinking water Other water infrastructure	

Sectlion	P n frastrrctrre	
5V. 6	Water an d Sewerr Prt vate Wel l s	
5V. 7	Water an d Sewerr I IJA Bu reau of Recl amatt on 1\atch	
5V. 8	Water an d Sewerr Oth er	
	B rioadban d	
5V. 9	Broadban d: ~Last M ƒ„e" projects	▶ See Ftn al Ru l e an d reportt n g gu t dan ce for detat l s
5V 20	Broadban dr I IJA 1\atch	
5V 2.	Broadban dr Oth er projects	

Table 6: Revenue Replacement

Section	Revenue Replacement	
6a1	Provision of Government Services	
6a2	Nonfederal Match for Other Federal Programs	

Table 7: AdminisOraOive

Section	Admin iistrati ive	
731	Admt n tstratt ve E xpen ses	
732	Tran sfers to Oth er U n tts of Govern men t	

Additionar Requ ired Programm ati c Data

Pubric Hearth and Negatiive Econ omic ·mpact €EC 131,-3.)
Colleciton io begtn tn Aprtl 2022

- Brtef descrt ptt on of stru ctu re an d objectt ves of asst stan ce program s)) t n clu dtn g pu blt c heal th or n egatt ve econ omtc t mpact expert en ced
- Brref descrr ptr on of h ow a recr pr en tts respon se r s re ated an d reason ab y an d proportr on a to a pu b rc h ea th or n egatt ve econ omt c t mpact of COV a D ¬1 9 18

Capitar Expen ditureis €EC 131,-3.)
Colleciton began tn January 2022´ wtih addtitonal opitonal ftelds io begtn tn Aprtl 2022; opitonal ftelds wtll become requtre d tn July 2022

- D oes th ts project t n clu de a capt tal expen dttu re? Col lectt on began t n Jan u ary 2022)
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AGENDA ITEM 3D(10)

INTEROFFICE AGREEMENT

WITH:	Office of Management and Enterprise Services
PURPOSE:	Second Amendment to the Grant Agreement with the Office of Management and Enterprise Services for administrative services related to the American Rescue Plan Act Grant Funds designated by the Legislature for Statewide Strategic Water Infrastructure Projects.
AMOUNT:	Not to Exceed $116,625,661.48
TERM:	

This is a fourth amendment ("Fourth Amendment") to the amended Grant Agreement ("Amended Agreement") bearing the date of last signature of February 27, 2023, and the second amendment ("Second Amendment") bearing the date of last signature of December 13, 2023, and the Third Amendment effective December 31, 2024, between the Office of Management and Enterprise Services Grant Management Office (OMES) and the Oklahoma Water Resources Board ("Subrecipient"). This Fourth Amendment is effective from the date of the last signature. The Amended Agreement signed on February 27, 2023, replaced a prior Grant Agreement signed between the OMES and Subrecipient bearing the date of last signature of August 31, 2022. The Amended Agreement and any amendments thereto, are authorized by 62 O.S. § 255.1 for the purpose of managing ARPA funds as appropriated by the Oklahoma State Legislature and likewise meet the requirements of 74 O.S. § 581 as well as the rules, regulations, and guidance issued by the U.S. Department of the Treasury regarding, *inter alia,* the obligating of funds through an interagency agreement. In accordance with the terms of ARTICLE V – AMENDMENT of the Amended Agreement, this Fourth Amendment shall be appended to the Amended Agreement as **Exhibit E-3** and supplements and amends the Amended Agreement and the Second and Third Amendments, including all supplements thereto. Unless otherwise indicated herein, undefined capitalized terms used in this Fourth Amendment shall have the respective meanings specified in the Amended Agreement and Amendments. All other terms of the Amended Agreement and Second and Third Amendments not modified by this Fourth Amendment, remain in full force and effect.

The parties agree to amend the Amended Agreement and Second and Third Amendments as follows:

I. The total amount of Subrecipient's subaward of $474,790,709.00 as identified in the Agreement and Amendments is hereby amended to reflect a new budget of **$481,416,370.48**, as more particularly described in part below:

a. **Water/Sewer/Dam Grant Programs.** Subrecipient's subaward of $110,000,000.00 was obligated prior to December 31, 2024, through the aforementioned Agreement and Amendments between OMES and Subrecipient. Section 1. of House Bill 2789 (2025) effective July 1, 2025, appropriates an additional $6,625,661.48 due to increased costs of this project, bringing the Water/Sewer/Dam Grant Programs budget to **$116,625,661.48**, to be utilized within substantially the same scope and substantially the same purpose as the originally obligated project.

This Fourth Amendment incorporates herein the following new attachments to the Amended Agreement:

I. Attachment A-6: Legislation
House Bill 2789

II. Attachment A-7: Revised Funding Review Packet
Water/Sewer/Dam Grant Programs

THIS SPACE IS INTENTIONALLY LEFT BLANK.

APPROVAL SIGNATURES FOLLOW ON THE NEXT PAGE.

SIGNATURES

Except as amended hereby, the Amended Agreement and Second and Third Amendments remain in full force and effect. The undersigned represent and warrant they are authorized, as representatives of the Party on whose behalf they are signing, to bind their respective Party thereto, by signing this Fourth Amendment.

OFFICE OF MANAGEMENT AND ENTERPRISE SERVICES FOR THE STATE OF OKLAHOMA	**OKLAHOMA WATER RESOURCES BOARD**
Aaron Morris (Jul 8, 2025 14:17 CDT)	
Authorized Signature	**Authorized Signature**
Aaron Morris	
Printed Name	**Printed Name**
State Chief Financial Officer	
Title	**Title**
07/08/2025	
Date	**Date**

ATTEST

BY: _____

_____
Name and Title

(Seal)

OMES
APPROVED AS TO FORM:

Elizabeth Base
Elizabeth Base (Jul 8, 2025 11:39 CDT)

Elizabeth Base OMES Deputy General Counsel

07/08/2025

Date

Parker Wise
Parker Wise (Jul 8, 2025 12:03 CDT)

Parker Wise, Director of OMES Grants Management Office

07/08/2025

Date

ATTACHMENT A-6

Legislation

House Bill 2789 (2025)

An Act

ENROLLED HOUSE
BILL NO. 2789

By: Caldwell (Trey) and Kane of the House

and

Hall and Haste of the Senate

An Act relating to the Oklahoma Water Resources Board; making appropriations; identifying source; establishing amounts; providing purposes; requiring and limiting the utilization of funds; creating certain special accounts; limiting duration of accounts; requiring certain determination; providing and limiting the nature of the accounts and the funds within the accounts; authorizing agency to submit request for certain deposits or transfers; requiring certain compliance and verifications; authorizing certain memorandums of understanding; limiting scope; prohibiting certain memoranda terms; authorizing and limiting the promulgation of rules and utilization of procedures; authorizing and limiting the retention of monies for administration costs; requiring certain reports and submissions to certain entities; requiring appearance before certain joint committee; limiting duration of certain requirements; providing for noncodification; providing an effective date; and declaring an emergency.

SUBJECT: Oklahoma Water Resources Board

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

There is hereby appropriated to the Oklahoma Water Resources Board from any monies not otherwise appropriated from the Statewide Recovery Fund of the State Treasury created in Section 255 of Title 62 of the Oklahoma Statutes, the sum of Three Million Three Hundred Thousand Dollars ($3,300,000.00), or so much thereof as may be necessary due to increased costs of the project funded in Section 7 of Enrolled Senate Bill No. 13 of the 2nd Extraordinary Session of the 58th Oklahoma Legislature. Such funds shall be utilized in a manner consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 2. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

There is hereby appropriated to the Oklahoma Water Resources Board from any monies not otherwise appropriated from the Statewide Recovery Fund of the State Treasury created in Section 255 of Title 62 of the Oklahoma Statutes, the sum of Six Million Six Hundred Twenty-five Thousand Six Hundred Sixty-one Dollars and forty-eight cents ($6,625,661.48), or so much thereof as may be necessary to complete projects that did not receive funds in the grant programs described in Sections 2 and 3 of Enrolled Senate Bill No. 13 of the 2nd Extraordinary Session of the 58th Oklahoma Legislature. Such funds shall be utilized in a manner consistent with the recommendations adopted by the Joint Committee on Pandemic Relief Funding on May 12, 2025.

SECTION 3. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

A. There is hereby created in the State Treasury a Statewide Recovery Special Account for the Oklahoma Water Resources Board for each appropriation section of this act. The duration of such accounts shall continue for the period of time that monies related to the American Rescue Plan Act of 2021 are being budgeted, expended, or managed in the state. The ending of such period shall be determined by the State Treasurer, and shall result in the closing of such accounts as a matter of law. Such accounts shall be continuing accounts as otherwise provided in this section, not subject to fiscal year limitations, and shall exclusively consist of monies related to the relevant appropriations made in this act and as otherwise directed by law. All monies deposited to the credit of such accounts are hereby appropriated and may be budgeted and expended by the Oklahoma Water Resources Board in accordance with the provisions of this act. Expenditures from such accounts shall

be made upon warrants issued by the State Treasurer against claims filed as prescribed by law with the Director of the Office of Management and Enterprise Services for approval and payment.

B. The Oklahoma Water Resources Board is authorized to request in writing that the monies appropriated by the provisions of this act be deposited or transferred to the accounts created pursuant to subsection A of this section. No later than seven (7) calendar days from the date of such request, the Director of the Office of Management and Enterprise Services shall comply with such request and verify to the requesting agency that such deposit or transfer has been completed.

SECTION 4. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

The Oklahoma Water Resources Board may enter into memorandums of understanding with other agencies of the State of Oklahoma for the auditing, documentation, evaluation, implementation, oversight, reporting, and management of funds and associated efforts related to the appropriations made in this act; provided, that no such memorandum of understanding shall require or include, as an option or condition, the direct or practical transfer or relinquishment of control by the agency appropriated such funds to budget, expend, allocate, and request the distribution of the funds appropriated by this act.

SECTION 5. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

The Oklahoma Water Resources Board may promulgate rules, utilize existing rules, establish procedures, and utilize existing procedures to implement the provisions of this act; provided, such rules and procedures do not conflict with or impede the provisions of this act.

SECTION 6. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

The Oklahoma Water Resources Board is authorized to enter into contracts with financial institutions and execute such instruments as may be necessary and convenient to hold and disseminate grant funds in accordance with applicable federal and state regulations and Board policies.

SECTION 7. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

From the funds appropriated by Sections 1 and 2 of this act, the Oklahoma Water Resources Board shall retain no more than four percent (4%) of the funds appropriated by this act to reimburse:

1. Costs incurred by the Oklahoma Water Resources Board; or

2. Costs incurred on the agency's behalf,

associated with the administration of the appropriated funds and programming required by the Oklahoma Water Resources Board under the provisions of this act; provided, that no funds shall be retained that would be disallowable under the provisions of the American Rescue Plan Act of 2021.

SECTION 8. NEW LAW A new section of law not to be codified in the Oklahoma Statutes reads as follows:

A. The Oklahoma Water Resources Board shall:

1. Submit to the Chairs of the Joint Committee on Pandemic Relief Funding, or any successor, Oklahoma House of Representatives, or Oklahoma State Senate legislative committee or joint committee, as designated by the Speaker of the Oklahoma House of Representatives and the President Pro Tempore of the Oklahoma State Senate:

a. a written or electronic quarterly report detailing the budgeting, expenditure, and management of all monies appropriated in this act, and

b. a copy of all memorandums of understanding and contracts with third parties entered into by the Oklahoma Water Resources Board to facilitate, assist, or administer powers and duties provided to the Oklahoma Water Resources Board under the provisions of this act; and

2. At the Joint Committee on Pandemic Relief Funding's request, appear before the Joint Committee no later than six (6) months after the effective date of this act, and as otherwise requested by the Joint Committee to provide a status update regarding the implementation of the provisions of this act.

B. The provisions of subsection A of this section shall remain applicable for the period of time that monies appropriated under this act are being budgeted, expended, or managed in the state. The ending of such period shall be determined by the State Treasurer, and shall be reported to the Governor, the Speaker of the House of Representatives, and President Pro Tempore of the Senate.

SECTION 9. This act shall become effective July 1, 2025.

SECTION 10. It being immediately necessary for the preservation of the public peace, health or safety, an emergency is hereby declared to exist, by reason whereof this act shall take effect and be in full force from and after its passage and approval.

Passed the House of Representatives the 20th day of May, 2025.

Presiding Officer of the House
of Representatives

Passed the Senate the 22nd day of May, 2025.

Presiding Officer of the Senate

OFFICE OF THE GOVERNOR

Received by the Office of the Governor this 22nd
day of May, 20 25, at 9:02 o'clock P. M.
By:

Approved by the Governor of the State of Oklahoma this _____
day of _____, 20_____, at _____ o'clock _____ M.

Governor of the State of Oklahoma

OFFICE OF THE SECRETARY OF STATE

Received by the Office of the Secretary of State this 3rd
day of June, 20 25, at 2:00 o'clock P. M.
By:

ATTACHMENT A-7

Revised Funding Review Packet

Water/Sewer/Dam Grant Programs

State of Oklahoma

ARPA State & Local Fiscal Recovery Funds (SLFRF) Project Funding Review

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Summary

This Funding Review Template is sent to the Oklahoma ARPA project applicant prior to consideration by a Working Group of the Joint Committee on Pandemic Relief Funding. The Template includes the information collected through the project intake workflow and collects further information necessary for Working Group, Joint Committee, Steering Committee and Governor consideration and review.

SLFRF Resources

- Final Rule (FR) (link)
- Overview of Final Rule (link)
- Frequently Asked Questions (link)
- Compliance and Reporting Guidance (February 22, 2022) (link)

Project Overview

Project Name: Water/Sewer/Dam Grant Programs

Organization Name: *Oklahoma Water Resources Board*

Primary Contact
Name: Julie Cunningham
Email: julie.cunningham@owrb.ok.gov
Phone: 405-530-8800

Project Lawyer
Name: Sara Gibson
Email: sara.gibson@owrb.ok.gov
Phone: 405-530-8800

Project Cost: $116,625,661.48

Project Cost Breakdown: *The submitter must complete the template below. An incomplete project cost breakdown or a breakdown provided in a different format may result in delays in project review. The goal of the budget is to provide a clear and concise description of the expenses requested to support the activities in your application. A successful budget will show what each expense is, how much it costs, and the calculation used to get that amount.*

Proposed Project Cost Breakdown		
Total Requested Amount	**$ 116,625,661.48**	Total of all below sections

Services	$ 116,625,661.48	Details
Small Community Water/Sewer Infrastructure Grant Program	$ 58,975,396.88	Small community water/sewer grant program for communities with population ≤ 7,000 for up to $500,000.
Mid to large Community Water/Sewer Infrastructure Grant Program	$46,650,264.60	Mid to large community water/sewer grant program for communities with population > 7,000 for 50% of the project cost up to $2,000,000.

Small Community High Hazard Dam Rehab Grant Program	$11,000,000	Small community High Hazard Dam Rehab program for communities with population ≤ 7,000 for up to $1,000,000.

Other funding identified by applicant (non-SLFRF, matching funds, SLFRF from other sources, private, etc.):
The request is to set up 3 programs for grants for water/sewer projects. 1) Small community water/sewer grant program, 2) Mid to large community water/sewer grant program and 3) Small community high hazard dam rehab program. The program for the mid to large community water/sewer grant program will require a 50% cost share from any sources identified by the recipient.

What goods or services will you need to complete this project?
There is a potential need for contracting out some of the oversight of the programs, but those costs would be included in the administration of the program. Examples for contracting out could include but not be limited to engineering construction oversight, reporting and ranking, or IT related expenses. However, we anticipate doing most of the oversight in house.

Have you identified competitive bidding procedures to be utilized to procure the necessary goods or services?
Yes, we are aware of the requirement of 2 CFR 200 for federal procurement requirements of the program.

Project Timeline (all projects must expend funds before December 31, 2026) identifying anticipated start date, completion date, and any milestone date goals
The OWRB began approving projects under this agreement in February 2023 with the goal of completing approvals by June 2024. OWRB anticipates expending all funds by December 2026.

How many Oklahomans will benefit from this project?
In excess of 1,000,000

What is the potential return on investment for this project?
At a minimum 34.05% with a greater potential depending on local contribution.

Project Description to include impact of COVID-19, intended impact of project, and general description of services

The ARPA legislation expressly includes public water, wastewater, and stormwater control projects eligible under the federal Clean Water and Drinking Water State Revolving Funds, administered by all states through the Environmental Protection Agency. These projects will help Oklahoma address critical infrastructure and construction need, with a priority on Oklahoma's small and underserved communities, that lost critical revenues during covid and most critical needs to protect human and environmental health of our rivers, streams, and lakes (e.g. rehabilitation of water supply dams classified as high hazard-potential with poor or unsatisfactory condition assessment, filed with the OWRB, and high downstream risk in the case of a dam breach).

Implement and administer 3 grant programs as described below:

1. Small community water/sewer grant program
    a. For communities with a population ≤ 7,000
    b. For rural water districts with ≤ 2,300 non pasture taps
    c. Maximum grant = $500,000
    d. Modeled after the Rural Economic Action Plan (REAP) Grant that has been successfully implemented by OWRB since 1996.
2. Small community high hazard dam rehabilitation program
    a. For communities with a population ≤ 7,000
    b. Maximum grant = $1,000,000
    c. Modeled after FEMA's High Hazard Potential Dam grant program that has been successfully implemented by OWRB since 2019
3. Mid to large community water/sewer grant program

a. For communities with a population > 7,000
b. For rural water districts with > 2,300 non pasture taps
c. Maximum grant = $2,000,000 (or 50% of the project cost, whichever is less)
d. Modeled after the Rural Economic Action Plan (REAP) Grant ranking structure to address affordability needs.

Reporting and Planning

Which Expenditure Category should this project be reported under? (See Appendix A)
Water/Sewer Infrastructure under the eligibilities in Appendix A 5.1-5.15

JC
JC Initial here to confirm that you understand you will be a subrecipient and required to comply with federal compliance, reporting, and contract requirements, including the Uniform Guidance (2 CFR Part 200). Among other requirements of the Uniform Guidance, you are confirming that you have:

- A financial management system capable of separately tracking individual Federal programs, and providing accurate, current, and complete information
- Written procedures regarding compensation and benefits, procurement (including a conflict-of-interest policy), and allowability of costs
- Established and will maintain effective internal controls over each Federal award to provide reasonable assurance that such awards are managed in compliance with Federal statutes, regulations, and the terms and conditions of the award

JC
JC Initial here to confirm understanding that subrecipients expending more than $750,000 total in Federal funds during their fiscal year will be subject to an audit under the Single Audit Act and its implementing regulation at 2 CFR Part 200, Subpart F regarding audit requirements.

Does your organization plan to expend $750,000 or more in Federal funding in a single fiscal year when accounting for this request and any other federal awards you receive?
Yes

What are the performance indicators (inputs, outputs, and outcomes) that this project will track to capture impact?
ODEQ discharge permit requirements, construction standards and permit to construct, tasks outlined in compliance orders, Safe Drinking Water Act and Clean Water Act compliance, dam condition and classification

Please provide an outline/brief summary of your performance management plan. A complete performance management plan will be required after grant agreement execution.
OWRB has financial controls, technical expertise, and processes in place to administer federal programs, oversee construction, and audit projects. The board has approved 2,781 projects for nearly $8 billion, spanning over thirty years, with documented, longstanding AAA bond ratings on multiple issuances, and consistently clean annual

program audit reviews from independent auditors and EPA (available upon request). Project performance is ultimately measured by successful construction and regulatory approval. The OWRB will oversee, facilitate, and document information on project management, pre-construction approvals by various regulatory agencies, bidding and contracting, site inspections, invoice compliance review, financial controls and project close out. Grant agreements with awardees will also be in place to help ensure compliance with requirements.

Please provide an outline/brief summary of your community engagement or outreach plan. A complete community engagement/outreach plan will be required after grant agreement execution.

OWRB has a full-time marketing & outreach manager who will help the Board communicate directly with potential grant applicants and the general public to ensure transparency and broad information sharing regarding the use of these funds and the specific project ranking criteria in place to ensure fair project assessment and grant award. Use of platforms such as social media, GovDelivery, website updates, press releases and workshops will help us meet this goal. We would anticipate setting up an information and application page on the OWRB website which could be linked to a larger state ARPA site housed by the Legislature or Governor.

Please explain how non-English speaking constituents will be able to benefit from this program. Note that more documentation may be required around this after grant agreement execution.

OWRB has adopted a "Discrimination and Federal Funding Policy" to ensure that OWRB or any sub-recipient of funding must comply with civil rights laws and regulations. The policy can be found on OWRB's website at https://oklahoma.gov/content/dam/ok/en/owrb/documents/about-us/discriminationpolicy.pdf

Capital Expenditure Requirements

Definitions: *Per the Uniform Guidance, the term "capital expenditures" means "expenditures to acquire capital assets or expenditures to make additions, improvements, modifications, replacements, rearrangements, reinstallations, renovations, or alterations to capital assets that materially increase their value or useful life." Equipment with a useful life of more than one year and a per-unit acquisition cost greater or equal to $5,000 is considered a capital expenditure.*

Does your project include a capital expenditure? If yes, is the total capital expenditure greater than $1 million?

Yes; In some cases the expenditure may be more than $1,000,000.

Do you or your team have prior experience in administering capital expenditure projects? If yes, briefly describe your years of experience. Please list details on project scope and size, as well as any relevant experience in handling capital expenditure projects.

OWRB has been administering grant and loan programs with both state and federal funding since the 80's to address water/sewer infrastructure projects.

JC Initial here to confirm that you have reviewed and understand provisions of the US Treasury Final Rule regarding the use of State and Local Recovery Funds for capital expenditure, including the requirement to complete a written justification, including an alternatives analysis for capital expenditures of more than $1 million in SLRF funds. See 87 Fed. Reg. 4450, Sec. 35.6(b)(3)(ii)(E)(4)(January 27, 2022) (summary: Appendix B)

JC Initial here to confirm that you agree to complete and meet the substantive requirements of a written justification for capital expenditure projects, where capital expenditures are greater than $1million.

JC Initial here to confirm that you have read and understand fully the real property provisions, laid out under 2 CFR 200, specifically, 2 CFR 200.310 – 2 CFR 200.316 and 2 CFR 200.330.

JC Initial here to confirm that you have undertaken due diligence to ensure that the project will comply with all applicable federal and state laws, and including, but not limited to, environmental, siting and permitting laws and regulations.

JC Initial here to confirm you would be able to provide information regarding required programmatic data upon request (pg. 23-28, US Treasury State and Local Fiscal Recovery Funds Compliance and Reporting Guidance version 3.0)

Risk Assessment

JC Initial here to confirm your understanding that 2 CFR Part 200.206 requires the State to perform a risk assessment of applicants focusing on items such as financial stability, management systems and standards, history of performance, audit reports and findings, and ability to implement programs.

JC Initial here to confirm your understanding that 2 CFR Part 200.206 requires any subrecipient that subgrants State and Local Recovery Funds provided by the State of Oklahoma for this project to its own subrecipients to perform a risk assessment of those potential subrecipients for financial stability, management systems and standards, history of performance, audit reports and findings, and ability to implement programs.

Will you be administering the project? If so, describe your prior experience administering federal or state grants. How many years of experience do you have? If not, who will be administering and what is their prior experience?

Yes, Over 30 years experience administering State Revolving Funds capitalization grant, STAG Grant Program and American Recovery & Reinvestment Act funding (2009) to subsidize water/sewer loan programs; Over 25 years experience administering the Rural Economic Action Plan (REAP) program for water/sewer infrastructure, Emergency Grant, and various drought assistance grants.

What administrative costs do you expect to incur from the funds requested? (Expressed as a percentage or an amount). Does your organization have a Negotiated Indirect Costs Rate Agreement (NICRA) established with a federal agency?
Yes, OWRB has a Negotiated Indirect Cost Agreement with EPA.

Have you successfully completed a similar project in the past?
If yes, how many years of experience do you have in completing projects similar in scope and size?
Yes, over 30 years experience

Has your organization or entity been administratively responsible for expending, monitoring and compliance reporting for other pandemic relief funds?
If yes, how much funding was received by your organization or entity?
Yes, $67,431.14 was our reimbursement for Covid-19 related expenditures.

Does your organization receive other Federal Funding?
If yes, please describe the type of funding (i.e., federal agency grant source, specific grant description etc.). How many years of experience does your organization have with other Federal funding and the corresponding federal grant requirements, including the Uniform Guidance.
Yes; See above. OWRB has received the EPA CWSRF capitalization grant since it was established over 30 years, the EPA Sewer Overflow and Stormwater Reuse Municipal Grant (our first year), the FEMA High Hazard Potential Dam Grant since it was established in 2019.

Is your proposal a pre-existing project or program?
If yes, how much funding has already been committed to the project? Please describe any other assets that have been committed to the project.
No

Does your organization have a record retention policy, procedure, and/or system to comply with the federal requirement to retain records for 5 years? If yes, please describe. If no, how do you plan to develop a record retention policy, procedure, and/or system?
Yes, The State's Consolidated General Records Disposition Schedule requires agencies, boards, commissions, and institutions whose programs are funded all or in part by federal funds shall retain all records in accordance with applicable records keeping requirements. OWRB has an electronic filing database where records are maintained indefinitely.

Is your organization registered in SAM.gov? If yes, please provide the DUNS and unique entity identifier (UEI). Please note that registration in SAM.gov is required prior to the execution of the grant agreement.
Yes, DUNS 0056213700000; UEI: E5KGD1NYA1S5

Monitoring & Internal Controls

Has your organization ever been subject to an audit or state or federal monitoring in the last three years? If yes, describe and provide reports.
Yes, the OWRB's CWSRF, DWSRF and FAP loan programs and administrative accounts undergo annual audits, including a single audit. Also, the SRF programs undergo an annual evaluation of the programs by EPA. The audits are contained on our website at https://oklahoma.gov/owrb/financing/financial-documents-and-investor-relations.html

Describe all of the internal controls that will be used to ensure use of funds is consistent with State and Local Fiscal Recovery Funds regulations. (e.g., written policies and procedures, standard of conduct, etc.)
OWRB will develop Standard Operating Procedures (SOP's) and a grant recipient packet to ensure the recipient complies with the regulations of SLFR.

Does your organization utilize a financial management system? Would that same system be used to monitor/ track/ report projects financial compliance? If yes, please describe your accounting software and financial management system.
Yes, Our accounting software is a proprietary system, Infrastructure Financing Software (IFS), and has the capability to assign unique identifiers, track and account for different sources of funding, and create reports on the project level or funding source level.

Will this project distribute sub-grants or funds to beneficiaries (households, individuals, small businesses, non-profits, etc.)? If you plan to distribute these funds, what internal controls will be in place for eligibility determination to ensure funds are distributed in compliance with the U.S. Treasury Final Rule guidelines?
Yes, eligible recipients are public entities as defined in Title 82 of Oklahoma State Statute and project eligibilities are generally defined for water/sewer projects as those projects that are eligible for funding under the CWSRF and DWSRF program. OWRB administers the CWSRF program and co-administers the DWSRF program with ODEQ and has process in place to determine eligibility.

Please provide the job titles and years of experience for individuals who would be responsible for monitoring compliance.
Lori Johnson, Chief of Financial Assistance Division, 12 years experience
Yohanes Sugeng, Chief of Engineering and Planning Division, 16 years experience
Jerri Hargis, Assistant Chief of Financial Assistance Division, approx. 8 years experience
Laura Oak, Accountant, 25+ years experience
Kretchen Olmeda, Project and Operations Manager, 3+ years experience

Other Project Questionnaire Information

In which county is your organization headquartered?
Oklahoma

In 100 words or less, please describe any evidence or sources that validate the interventions proposed in your project or program.
OWRB has a long history of administering grants and loans for water/sewer infrastructure projects. Small communities and rural water districts are generally not fiscally able to borrow funds for infrastructure and are in need of grant assistance. However, mid to large sized communities are also generally not considered for grant funding but often have huge needs that impact a large portion of the population. Water and Sewer infrastructure and Dams are critical infrastructure for public and environmental health and safety.

Describe communities or vulnerable populations, including those that have been disproportionately impacted, that will benefit from this project. Include details on how this community was impacted by the pandemic. A complete analysis of disproportionately impacted populations will be required after grant agreement execution.
Within the 3 programs, as described, communities within any population would be eligible with a stronger emphasis on smaller communities. Access to safe and clean water and water storage is essential to Oklahomans in every community but often the most vulnerable populations are the ones in the smallest communities across the state with limited access to funding for critical capital improvements. However, the larger communities also serve vulnerable populations and disadvantaged areas within their communities. Therefore, OWRB has requested funding to address those communities as well with a cost-sharing requirement because they are generally in a better position to secure other funding. Furthermore, the effects of the pandemic, including financial capacity to rehabilitate or expand aging infrastructure due to the loss of sales tax revenue from business closures and increased costs of materials and construction.

Which counties would be most impacted by this project or program?
Available to all 77 counties

Will this project support qualified census tracts?
No

If so, please identify which qualified census tracts will be impacted.
Enter Answer to the Above Question Here

Are matching funds or co-investment available from other organizations (philanthropic, local governments, other) that are interested in this project?
Yes. Local matching/co-investment of 50% will be required for projects with population greater than 7,000 or rural water districts with greater than 2,300 non-pasture taps.

In 50 words or less, tell us which organizations have agreed to match or co-invest funds or have promised in-kind work and tell us what kind of organization they represent (business interest, non-profit, municipal agency, state agency, individual, etc.)

In total, how many dollars have outside organizations financially committed to this project? Alternatively, describe any other assets that have been committed to the project or program.
See above. The funding for applicants with population over 7,000 or rural water districts with greater than 2,300 non-pasture taps will require a 50/50 cost share. The sources of this cost share can be from local, county, Tribal, or other funds at the discretion of the local community.

After initial funding from the state, would this project be able to continue operation, or would ongoing investment be required?
This proposal is set up as a one-time grant program (possibly two-times if the 2nd tranche is awarded). Projects funded would be standalone projects, completed within the 2026 deadline.

If not able to continue operations without additional State general fund appropriations, describe the amount of additional funding, the period of time such additional state funding would be required and potential alternative sources for the additional funding.
Water and Sewer rehabilitation is an ongoing critical need in Oklahoma to adequately operate and maintain the infrastructure. Communities can access other funding opportunities once these funds have been expended.

Will this project bring revenue to the state or impacted communities?
Yes

If yes, how much revenue may be generated by this project annually, over the next five years?
According to "The Value of Water" report by American Society of Civil Engineers, there is a $34.90 benefit for every $1 investment. You can find the report here http://www.uswateralliance.org/sites/uswateralliance.org/files/publications/VOW%20Economic%20Paper_0.pdf.

Appendix A: Expenditure Categories

*Denotes areas where recipients must identify the amount of the total funds that are allocated to evidence-based interventions
^Denotes areas where recipients must report on whether projects are primarily serving disproportionately impacted communities.

Additional programmatic data and justifications required for projects in Public Health and Negative Economic Impact categories (EC 1.1-3.5) and projects with Capital Expenditures. See details below table 7.

Table 1: Public Health

Section	Public Health	
	COVID-19 Mitigation & Prevention	
1.1	COVID-19 Vaccination ^	
1.2	COVID-19 Testing ^	
1.3	COVID-19 Contact Tracing^	
1.4	Prevention in Congregate Settings (Nursing Homes, Prisons/Jails, Dense Work Sites, Schools, Child care facilities, etc.)*^	
1.5	Personal Protective Equipment^	
1.6	Medical Expenses (including Alternative Care Facilities)^	
1.7	Other COVID-19 Public Health Expenses (including Communications, Enforcement, Isolation/Quarantine)^	
1.8	COVID-19 Assistance to Small Businesses^	➢ Number of small businesses served (by program if recipient establishes multiple separate small businesses assistance programs)

Section	Public Health	
1.9	COVID 19 Assistance to Non-Profits^	➢ Number of Non-Profits served (by program if recipient establishes multiple separate non-profit assistance programs)
1.10	COVID-19 Aid to Impacted Industries^	➢ If aid is provided to industries other than travel, tourism, and hospitality (EC 2.36), describe if the industry experienced at least 8 percent employment loss from pre-pandemic levels, or the industry is experiencing comparable or worse economic impacts as the national tourism, travel, and hospitality industries as of the date of the final rule, and rationale for providing aide to the industry ➢ For each subaward: ○ Sector of employer (Note: additional detail, including list of sectors, to be provided in the user guide posted to www.treasury.gov/SLFRP) ○ Purpose of funds (e.g., payroll support, safety measure implementation)
	Community Violence Interventions	
1.11	Community Violence Interventions*^	
	Behavioral Health	
1.12	Mental Health Services*^	
1.13	Substance Use Services*^	
	Other	
1.14	Other Public Health Services^	

Table 2: Negative Economic Impacts

Section	Negative Economic Impact	
	Assistance to Households	
2.1	Household Assistance: Food Programs*^	➢ Number of households served (by program if recipient establishes multiple separate household assistance programs)
2.2	Household Assistance: Rent, Mortgage, and Utility Aid*^	
2.3	Household Assistance: Cash Transfers*^	
2.4	Household Assistance: Internet Access Programs*^	
2.5	Household Assistance: Paid Sick and Medical Leave^	
2.6	Household Assistance: Health Insurance*^	
2.7	Household Assistance: Services for Un/Unbanked*^	
2.8	Household Assistance: Survivor's Benefits^	
2.9	Unemployment Benefits or Cash Assistance to Unemployed Workers*^	
2.10	Assistance to Unemployed or Underemployed Workers (e.g. job training, subsidized employment, employment supports or incentives)*^	
2.11	Healthy Childhood Environments: Child Care*^	
2.12	Healthy Childhood Environments: Home Visiting*^	

Section	Negative Economic Impact	
2.13	Healthy Childhood Environments: Services to Foster Youth or Families Involved in Child Welfare System*^	
2.14	Healthy Childhood Environments: Early Learning*^	➢ The National Center for Education Statistics ("NCES") School ID or NCES District ID. List the School District if all schools within the school district received some funds. If not all schools within the school district received funds, list the School ID of the schools that received funds. These can allow evaluators to link data from the NCES to look at school-level demographics and, eventually, student performance.
2.15	Long-term Housing Security: Affordable Housing*^	
2.16	Long-term Housing Security: Services for Unhoused Persons*^	
2.17	Housing Support: Housing Vouchers and Relocation Assistance for Disproportionately Impacted Communities*^	
2.18	Housing Support: Other Housing Assistance*^	
2.19	Social Determinants of Health: Community Health Workers or Benefits Navigators*^	
2.20	Social Determinants of Health: Lead Remediation*^	
2.21	Medical Facilities for Disproportionately Impacted Communities^	

Section	Negative Economic Impact	
2.22	Strong Healthy Communities: Neighborhood Features that Promote Health and Safety^	
2.23	Strong Healthy Communities: Demolition and Rehabilitation of Properties^	➢ The National Center for Education Statistics ("NCES") School ID or NCES District ID. List the School District if all schools within the school district received some funds. If not all schools within the school district received funds, list the School ID of the schools that received funds. These can allow evaluators to link data from the NCES to look at school-level demographics and, eventually, student performance.
2.24	Addressing Educational Disparities: Aid to High-Poverty Districts^	
2.25	Addressing Educational Disparities: Academic, Social, and Emotional Services*^	
2.26	Addressing Educational Disparities: Mental Health Services*^	
2.27	Addressing Impacts of Lost Instructional Time^	
2.28	Contributions to UI Trust Funds^	
	Assistance to Small Businesses	
2.29	Loans or Grants to Mitigate Financial Hardship^	➢ Number of small businesses served (by program if recipient establishes multiple separate small businesses assistance programs)
2.30	Technical Assistance, Counseling, or Business Planning*^	
2.31	Rehabilitation of Commercial Properties or Other Improvements^	
2.32	Business Incubators and Start-Up or Expansion Assistance*^	
2.33	Enhanced Support to Microbusinesses*^	
	Assistance to Non-Profits	

Section	Negative Economic Impact	
2.34	Assistance to Impacted Nonprofit Organizations (Impacted or Disproportionately Impacted)^	➢ Number of Non-Profits served (by program if recipient establishes multiple separate non-profit assistance programs)
	Aid to Impacted Industries	
2.35	Aid to Tourism, Travel, or Hospitality^	➢ If aid is provided to industries other than travel, tourism, and hospitality (EC 2.36), describe if the industry experienced at least 8 percent employment loss from pre-pandemic levels, or the industry is experiencing comparable or worse economic impacts as the national tourism, travel, and hospitality industries as of the date of the final rule, and rationale for providing aide to the industry ➢ For each subaward: ○ Sector of employer (Note: additional detail, including list of sectors, to be provided in the user guide posted to www.treasury.gov/SLFRP) ○ Purpose of funds (e.g., payroll support, safety measure implementation)
2.36	Aid to Other Impacted Industries^	
	Other	
2.37	Economic Impact Assistance: Other*^	

Table 3: Services to Disproportionately Impacted Communities

Section	Public Sector Capacity	
	General Provisions	
3.1	Public Sector Workforce: Payroll and Benefits for Public Health, Public Safety, or Human Services Workers	➢ Number of government FTEs responding to COVID-19 supported under this authority
3.2	Public Sector Workforce: Rehiring Public Sector Staff	➢ Number of FTEs rehired by governments under this authority
3.3	Public Sector Workforce: Other	
3.4	Public Sector Capacity: Effective Service Delivery	
3.5	Public Sector Capacity: Administrative Needs	

Table 4: Premium Pay

Section	Premium Pay	
4.1	Public Sector Employees	➢ List of sectors designated as critical to protecting the health and well-being of residents by the chief executive of the jurisdiction, if beyond those included in the final rule ➢ Number of workers to be served ➢ Employer sector for all subawards to third-party employers (i.e., employers other than the State, local, or Tribal government) ➢ For groups of workers (e.g., an operating unit, a classification of worker, etc.) or, to the extent applicable, individual workers, other than those where the eligible worker receiving premium pay is earning (with the premium pay included) below 150 percent of their residing state or county's average annual wage for all occupations, as defined by the Bureau of Labor Statistics Occupational Employment and Wage Statistics, whichever is higher, on an annual basis; OR the eligible worker receiving premium pay is not exempt from the Fair Labor Standards Act overtime provisions ➢ Number of workers to be served with premium pay in K-12 schools
4.2	Private Sector: Grants to Other Employers	

Table 5: Infrastructure

Section	Infrastructure	
	Water and Sewer	
5.1	Clean Water: Centralized Wastewater Treatment	➢ See Final Rule and reporting guidance for details
5.2	Clean Water: Centralized Wastewater Collection and Conveyance	
5.3	Clean Water: Decentralized Wastewater	
5.4	Clean Water: Combined Sewer Overflows	
5.5	Clean Water: Other Sewer Infrastructure	
5.6	Clean Water: Stormwater	
5.7	Clean Water: Energy Conservation	
5.8	Clean Water: Water Conservation	
5.9	Clean Water: Nonpoint Source	
5.10	Drinking water: Treatment	
5.11	Drinking water: Transmission & Distribution	
5.12	Drinking water: Lead Remediation, including in Schools and Daycares	
5.13	Drinking water: Source	
5.14	Drinking water: Storage	
5.15	Drinking water: Other water infrastructure	
5.16	Water and Sewer: Private Wells	

Section	Infrastructure	
5.17	Water and Sewer: IIJA Bureau of Reclamation Match	
5.18	Water and Sewer: Other	
	Broadband	
5.19	Broadband: "Last Mile" projects	➢ See Final Rule and reporting guidance for details
5.20	Broadband: IIJA Match	
5.21	Broadband: Other projects	

Table 6: Revenue Replacement

Section	Revenue Replacement	
6.1	Provision of Government Services	
6.2	Non-federal Match for Other Federal Programs	

Table 7: Administrative

Section	Administrative
7.1	Administrative Expenses
7.2	Transfers to Other Units of Government

Additional Required Programmatic Data

Public Health and Negative Economic Impact (EC 1.1-3.5)
Collection to begin in April 2022

- Brief description of structure and objectives of assistance program(s), including public health or negative economic impact experienced
- Brief description of how a recipient's response is related and reasonably and proportional to a public health or negative economic impact of COVID-19.18

Capital Expenditures (EC 1.1-3.5)
Collection began in January 2022, with additional optional fields to begin in April 2022; optional fields will become required in July 2022

- Does this project include a capital expenditure? (Collection began in January 2022)
- Total expected capital expenditure, including pre-development costs, if applicable (Collection began in January 2022)
- Type of Capital expenditure, based on the following enumerated uses (This field is optional in April 2022; required in July 2022)
  - COVID-19 testing sites and laboratories, and acquisition of related equipment
  - COVID-19 vaccination sites
  - Medical facilities generally dedicated to COVID-19 treatment and mitigation (e.g., emergency rooms, intensive care units, telemedicine capabilities for COVID-19 related treatment)
  - Temporary medical facilities and other measures to increase COVID-19 treatment capacity, including related construction costs

- Acquisition of equipment for COVID-19 prevention and treatment, including ventilators, ambulances, and other medical or emergency services equipment
- Emergency operations centers and acquisition of emergency response equipment (e.g., emergency response radio systems)
- Installation and improvement of ventilation systems in congregate settings, health facilities, or other public facilities
- Public health data systems, including technology infrastructure
- Adaptations to congregate living facilities, including skilled nursing facilities, other long-term care facilities, incarceration settings, homeless shelters, residential foster care facilities, residential behavioral health treatment, and other group living facilities, as well as public facilities and schools (excluding construction of new facilities for the purpose of mitigating spread of COVID-19 in the facility)
- Mitigation measures in small businesses, nonprofits, and impacted industries (e.g., developing outdoor spaces)
- Behavioral health facilities and equipment (e.g., inpatient or outpatient mental health or substance use treatment facilities, crisis centers, diversion centers)
- Technology and equipment to allow law enforcement to efficiently and effectively respond to the rise in gun violence resulting from the pandemic
- Affordable housing, supportive housing, or recovery housing development
- Food banks and other facilities primarily dedicated to addressing food insecurity
- Transitional shelters (e.g., temporary residences for people experiencing homelessness)
- Devices and equipment that assist households in accessing the internet (e.g., tablets, computers, or routers)
- Childcare, daycare, and early learning facilities
- Job and workforce training centers
- Improvements to existing facilities to remediate lead contaminants (e.g., removal of lead paint)
- Medical equipment and facilities designed to address disparities in public health outcomes (includes primary care clinics, hospitals, or integrations of health services into other settings)
- Parks, green spaces, recreational facilities, sidewalks, pedestrian safety features like crosswalks, streetlights, neighborhood cleanup, and other projects to revitalize public spaces
- Rehabilitations, renovation, remediation, cleanup, or conversions of vacant or abandoned properties
- Schools and other educational facilities or equipment to address educational disparities
- Technology and tools to effectively develop, execute, and evaluate government programs
- Technology infrastructure to adapt government operations to the pandemic (e.g., video-conferencing software, improvements to case management systems or data sharing resources), reduce government backlogs, or meet increased maintenance needs

- For recipients (other than Tribal governments) investing in projects with total expected capital expenditures for an enumerated eligible use of $10 million or more, as well as projects with total expected capital expenditures for an "other" use of $1 million or more, please provide a written justification (This field is optional in April 2022; required in July 2022) (See Appendix B)
- For projects with total expected capital expenditures of over $10 million, provide labor reporting as outlined for infrastructure projects on pages 26 and 27 [of the reporting and compliance guidance] (This field is optional in April 2022; required in July 2022)

Appendix B: Capital Expenditure Written Justification

For projects expending greater than or equal to $1 million for capital expenditures, Treasury requires a written justification for the capital expenditure:

- **Description of the harm or need to be addressed.** Provide a description of the specific harm or need to be addressed and why the harm was exacerbated or caused by the public health emergency. Recipient may provide quantitative information on the extent and the type of harm, such as the number of individuals or entities affected.
- **Explanation of why a capital expenditure is appropriate**. For example, recipients should include an explanation of why existing equipment and facilities, or policy changes or additional funding to pertinent programs or services, would be inadequate.
- **Comparison of proposed capital project against at least two alternative capital expenditures and demonstration of why the proposed capital expenditure is superior.** Recipients should consider the effectiveness of the capital expenditure in addressing the harm identified and the expected total cost (including pre-development costs) against at least two alternative capital expenditures.

Signature: *Julie Cunningham*
Julie Cunningham (Oct 13, 2023 17:46 CDT)

Email: julie.cunningham@owrb.ok.gov

ARPA YY002306 Water Sewer Dam FRP-Updated to include HB2942-final

Final Audit Report 2023-10-13

Created:	2023-10-13
By:	Lori Johnson (lori.johnson@owrb.ok.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAOTH0q16T2Q6mjGNQcaL09YS6_1tsNrbT

"ARPA YY002306 Water Sewer Dam FRP-Updated to include HB2942-final" History

Document created by Lori Johnson (lori.johnson@owrb.ok.gov)
2023-10-13 - 10:07:16 PM GMT- IP address: 165.225.216.110

Document emailed to Julie Cunningham (julie.cunningham@owrb.ok.gov) for signature
2023-10-13 - 10:09:36 PM GMT

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Document e-signed by Julie Cunningham (julie.cunningham@owrb.ok.gov)
Signature Date: 2023-10-13 - 10:46:42 PM GMT - Time Source: server- IP address: 165.225.216.79

Agreement completed.
2023-10-13 - 10:46:42 PM GMT

Adobe Acrobat Sign

AGENDA ITEM 3D(11)

AGREEMENT

WITH:	INTERA Cimarron Contact
PURPOSE:	Standard Technical Services Agreement between the OWRB and INTERA to construct a regional numerical groundwater-flow model of the Cimarron River alluvial aquifer and model a variety of equal proportionate share scenarios for the aquifer.
AMOUNT:	Not to Exceed $300,000.00
TERM:	**August 1, 2025 through July 31, 2027**

CONTRACTS CHECKLIST

Before submitting a contract for inclusion in the Board agenda/packet, please complete the following and submit with the final agreement:

Initials

___ Draft approved by Division Chief

___ Jessica Billingsley: Contract amount has been budgeted

___ Anil Pillai: All purchasing requirements have been satisfied

___ All other parties have agreed to the terms of the contract

___ Final copy is free of any track changes or other highlighting, etc.

___ Final draft approved by General Counsel

Contact Info for OWRB	Contact info for Contractor
Christopher Neel	George Westbury
3800 N. Classen Blvd.	9600 Great Hills Trail, Suite 300W
Oklahoma City, OK 73118	Austin, TX 78759

REMEMBER, any document that contains "terms" and requires a signature is considered a contract.

No contract will be added to the Board agenda/packet unless this checklist is complete. All tasks will need to be completed prior to the deadline for the draft agenda each month to be added to the agenda/packet.

STANDARD TECHNICAL SERVICES AGREEMENT

THIS AGREEMENT ("Agreement") is made as of 1 August 2025 by **INTERA Incorporated**, ("INTERA") a Texas Corporation, and **Oklahoma Water Resources Board**, ("Client") an Oklahoma governmental entity. Individually, INTERA and Client are sometimes referred to as a Party and collectively as Parties.

WHEREAS, Client desires INTERA to furnish certain technical, maintenance, construction, installation and/or related services ("Services") and INTERA is willing to do so, subject to the terms and conditions set forth herein.

WHEREAS, in certain situations, Client also desires INTERA to furnish certain equipment, materials and other goods (collectively "Goods") and INTERA is willing to do so, subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements hereinafter set forth, the Parties agree as follows:

ARTICLE 1. SCOPE OF SERVICES

Client desires INTERA to perform the Services and provide the Goods described in Attachment A.

ARTICLE 2. TERM

The term of this Agreement will commence on 1 August 2025 and will continue until 31 July 2027 unless sooner terminated as provided in this Agreement.

ARTICLE 3. INVOICING AND PAYMENT

For performance of the Services, Client will pay INTERA the compensation specified in Attachment B. This compensation will be invoiced to Client at monthly intervals along with reimbursables and will be due and payable within 30 days following the date of the invoice. In the event that part of an invoice is in dispute, Client agrees to pay the undisputed portion of the invoice according to the payment terms hereunder. If for any reason Client fails to pay INTERA in full within 30 days from the date of an invoice, Client will pay INTERA a late payment charge each month equal to one percent (1%) of any unpaid balance or the highest rate permitted by law, whichever is the lesser. If for any reason Client fails to pay INTERA in full within 60 days from the date of an invoice, INTERA may, at INTERA's sole option, (i) suspend its performance of Services and supply of Goods until all outstanding bills have been paid in full by Client, (ii) terminate this Agreement and/or (iii) engage debt collection services/commence legal proceedings for the collection of unpaid and undisputed invoiced amounts. INTERA shall be entitled to recover, to the extent allowed by law, its costs and expenses, including reasonable attorneys' fees, incurred in connection with all actions taken to obtain or enforce payment by Client of Client's obligations under this Agreement.

ARTICLE 4. REPRESENTATIVES

INTERA will cooperate with the Client and be subject to the direction and control of Client's designated representative. Client will designate a representative who will be the authorized representative of Client regarding this Agreement and Services and will inform INTERA promptly upon discovery of any aspect of the Services or Goods, which does not meet with Client's approval. INTERA will also designate a representative who will be responsible for the execution of the Services and the provision of Goods and will be the authorized representative of INTERA for this Agreement.

ARTICLE 5. RECORDS

For a period of one year after completion of the Services under this Agreement, INTERA will, upon written request of the Client, provide reasonable access to necessary supporting records and documentation.

ARTICLE 6. RELATIONSHIP OF THE PARTIES

6.1. Independent Contractor. INTERA will perform the Services as an independent contractor. INTERA acknowledges and agrees that no employer-employee relationship exists or is intended to be created between INTERA and Client.

6.2. Assumption or Creation of Obligations or Responsibilities. Neither Party will have the right to assume or create obligations or responsibilities of any type in the name of the other Party unless expressly authorized to do so in writing by the Party taking on the obligation.

ARTICLE 7. SUBCONTRACTOR AND SUPPLIERS

INTERA will have the right to retain subcontractors and suppliers to assist INTERA in the performance of the Services and the provision of Goods under this Agreement.

ARTICLE 8. CONFIDENTIALITY AND RIGHTS IN DATA

8.1. Maintenance of Confidentiality. Information disclosed by one Party to the other Party during the performance of Services may include the confidential or proprietary information of the disclosing Party and that Party's agents, subcontractors or suppliers. In the event such information is expressly identified as proprietary or confidential prior to or at the time of disclosure, the Party receiving such information will keep it in confidence and will not furnish or otherwise disclose it to any third party during or after completion of the applicable Services for a period of three years. Neither Party will be obligated to maintain the confidentiality of any information designated by the other Party as confidential or proprietary if the information:

8.1.1. Was in the receiving Party's possession or was known to the receiving Party prior to its receipt from the other Party and the receiving Party was under no prior legal obligation to protect such information;

8.1.2. Is independently developed by the receiving Party without the utilization of the confidential or proprietary information;

8.1.3. Is or becomes public knowledge without the fault of the receiving Party;

8.1.4. Becomes available to the receiving Party from a source other than the disclosing Party where the receiving Party is not under any legal obligation to protect such information; or

8.1.5. The information is disclosed pursuant to a governmental or legal requirement.

8.2. Provision of Information to INTERA. Client will promptly furnish INTERA with all information necessary for INTERA to perform the Services and supply the Goods. INTERA and its subcontractors will be entitled to rely upon such information and upon information from generally acceptable reputable sources without independent verification in the performance of the Services or supplying of Goods.

8.3. Intellectual Property. INTERA will have the full title and all rights in and to (including the sole right to obtain patents on) any inventions made or conceived as a result of the performance of the Services. INTERA hereby grants to Client a royalty-free, nonexclusive license for Client to make, have made and use any such invention made or conceived as a result of the performance of the Services or supply of the Goods. All computer programs, applications, methods, mechanized design practices, layouts, and systems developed by INTERA during the term of this Agreement or owned by INTERA on the effective date of this Agreement, will remain the exclusive property of INTERA. Except as otherwise provided in this Article 8, all reports, data, drawings, plans, specifications and other items delivered by INTERA (hereinafter referred to as "Reports") to Client under this Agreement will become the property of Client; however, INTERA is entitled to retain a file copy and utilize such Reports and the material in those Reports in the scope of INTERA's work and/or services for itself and others.

ARTICLE 9. TERMINATION

9.1. Client's Right to Terminate. Client may terminate this Agreement in whole or in part, upon 30 days prior written notice to INTERA, but such termination will not relieve Client of its obligation to pay INTERA for expenses incurred, Services performed and Goods provided up to the date of termination and all reasonable expenses, which INTERA incurs related to the termination.

9.2. INTERA's Right to Terminate. INTERA may terminate this Agreement in whole or in part, upon 30 days prior written notice to Client, but such termination will not relieve INTERA of its obligation to provide Client with a copy of all Reports prepared up to the date of termination of the Agreement.

ARTICLE 10. INDEMNIFICATION, WARRANTY AND LIMITATION OF LIABILITY

10.1. INTERA's Indemnification of Client. INTERA will indemnify and hold harmless Client, its officers, employees, and agents (the "Client Indemnified Parties") from losses (including, but not limited to, reasonable attorneys' fees and expenses) of the Client indemnified Parties to the extent caused by the 1) negligent acts or omissions of INTERA, 2) reckless acts or omissions of INTERA, 3) intentional misconduct of INTERA, 4) material misrepresentations of INTERA, 5) material breaches of contract or warranty by INTERA and 6) infringement of United States patents, copyrights and trademarks by INTERA.

10.2. Client's Indemnification of INTERA. Client will indemnify and hold harmless INTERA, its officers, employees, agents, subcontractors and suppliers (the "INTERA Indemnified Parties") from losses (including, but not limited to

reasonable attorneys' fees and expenses) of the INTERA Indemnified Parties to the extent caused by the 1) negligent acts or omissions of Client, 2) reckless acts or omissions of Client, 3) intentional misconduct of Client, 4) material misrepresentations of Client, 5) material breaches of contract or warranty by Client and 6) infringement of United States patents, copyrights and trademarks by Client.

10.3. INTERA's Warranty and Limitation of Liability. INTERA warrants that the Services will be performed, within the limits prescribed by Client, with professional thoroughness and competence. Notwithstanding anything to the contrary herein, INTERA's total cumulative liability for claims of any kind whether based in contract, tort (including negligence and strict liability), under any warranty, indemnification or otherwise, for any loss or damage arising out of or related to this Agreement or the performance of the Services or supply of Goods under this Agreement, will in no case exceed the compensation paid to INTERA by Client for the Services.

ARTICLE 11. INSURANCE

11.1. Insurance Coverage. Prior to commencing with the Services and at all times during the term of this Agreement, INTERA will provide and maintain in full force and effect, insurance of the types and with limits not less than those specified as follows:

11.1.1. Workers' Compensation Insurance in accordance with the statutory requirements of the State having jurisdiction over employees who are engaged in the Scope of Services, and Employer's Liability insurance of One Million Dollars ($1,000,000) each accident; disease-each employee; and disease-policy limit.

11.1.2. Commercial General Liability Insurance with a per occurrence limit of One Million Dollars ($1,000,000). This policy will include Contractual Liability coverage. This insurance will cover bodily injury to or death of persons, and/or loss of or damage to property.

11.1.3. Automobile (owned, non-owned or hired) Insurance with an each accident limit of One Million Dollars ($1,000,000) for bodily injury and property damage liability.

11.1.4. Professional Errors and Omissions Insurance of One Million Dollars ($1,000,000) for each occurrence per claim and in the aggregate.

11.2. Insurance Terms and Conditions. All insurance policies provided and maintained by INTERA will be underwritten by insurers which are rated "A VII" or higher by the most current edition of *Best's Key Rating Guide,* and which are authorized to write insurance in the state or states in which the Services are performed or where the Goods are provided.

ARTICLE 12. DISPUTE RESOLUTION

12.1. Negotiation. The Parties will attempt in good faith to resolve any dispute arising out of or relating to this Agreement promptly by negotiation between executives who have authority to settle the controversy. Any Party may give the other Party written notice of any dispute not resolved in the normal course of business. Within ten days after delivery of the notice, the receiving Party will submit to the other a written response. The notice and response will include (a) a statement of that Party's position and a summary of arguments supporting that position, and (b) the name and title of the executive who will represent that Party and of any other person who will accompany the executive in negotiations. Within 20 days after delivery of the initial notice, the executives of both Parties will meet at a mutually acceptable time and place, and thereafter as often as they reasonably deem necessary, to attempt to resolve the dispute. All reasonable requests for information made by one Party to the other will be honored. All negotiations pursuant to this clause are confidential and will be treated as compromise and settlement negotiations for purposes of applicable rules of evidence.

12.2. Mediation. If the dispute has not been resolved by negotiation as provided above within 30 days after delivery of the initial notice of negotiation, or if the Parties fail to meet within 20 days, the Parties will endeavor to settle the dispute by mediation under the International Institute for Conflict Prevention & Resolution ("CPR") Mediation Procedure in effect on the date of this Agreement, provided, however, that if one Party fails to participate in the negotiation as provided above, the other Party can initiate mediation prior to the expiration of the 30 days. Unless otherwise agreed, the Parties will select a mediator from the CPR Panel of Distinguished Neutrals.

12.3. Litigation. Any dispute arising out of or relating to this Agreement, including the breach, termination or validity thereof, which has not been resolved by mediation as provided above within 50 days after delivery of the initial notice of negotiation will be finally resolved by litigation.

12.4. The Client agrees to the joinder of any subcontractor hired by INTERA to any proceeding under this Agreement that involves or may involve a subcontractor's Services.

ARTICLE 13. NOTICES

Any notice, request, demand or other communication related to this Agreement or Work Order will be in writing and will be considered duly made three calendar days after the date of deposit in the U.S. Mail, by certified mail, return receipt requested, postage prepaid, addressed to the applicable Party at the following address or when delivered, if delivered by hand or transmitted by telecopy to the other Party at the following addresses or facsimile numbers:

If to INTERA: INTERA Incorporated
Attn: George Westbury, Director of Contracts
9600 Great Hills Trail, Suite 300W
Austin, TX 78759
Telephone: 512.425.2000
Email: gwestbury@intera.com

If to Client: Oklahoma Water Resources Board
Attn: Derrick Wagner
3800 North Classen Boulevard
Oklahoma City, OK 73118
Telephone: 405.530.8800
Email: Derrick.Wagner@owrb.ok.gov

Either Party may change its address or numbers for receiving notices by giving written notice of the change to the other Party.

ARTICLE 14. MISCELLANEOUS

14.1. Title to Goods. Title to and risk of loss of or damage to Goods will pass to Client upon delivery of the Good to Client.

14.2. Force Majeure. Neither Party will be considered in default in the performance of its obligations hereunder to the extent that the performance of any such obligation is prevented or delayed by any cause, which is beyond the reasonable control of and could not have been anticipated by the affected Party, including, but not limited to, acts of God, storms, floods, fire, strikes, boycotts, other labor disputes, riots, thefts, accidents, acts or failures to act by the other Party; and acts or failures to act by any non-Party government or government agency; provided, however, that any obligation to make payment hereunder will not be extended for any reason. Upon the occurrence of a situation as described above, the time for performance by either Party to this Agreement of its obligations will be extended by a period of time equal to the time lost because of such situation; provided, however, that prompt notice of such a situation will be provided to the other Party and reasonable efforts will be used to mitigate the adverse impact of such a situation.

14.3. Responsibility for Taxes. Client will be responsible for and will pay any taxes due to any agency arising out of or under this Agreement or the Services and Goods provided except for those taxes levied upon the net income, gross receipts, real, or personal property of INTERA.

14.4. Assignment. Neither this Agreement nor any rights or obligations under this Agreement will be assigned or otherwise transferred by a Party without the prior written consent of the other Party except that INTERA may assign all or a portion of this the Services or Goods under this Agreement to a subcontractor or supplier without the prior written consent of the Client.

14.5. Waiver. The failure of either Party to exercise any right under this Agreement or to take any action permitted will not be deemed a waiver of any right in the event of a subsequent breach of a like or different nature.

14.6. Entire Agreement. The terms and conditions set forth in this Agreement are intended by both Parties to constitute the final and complete statement of their agreement with respect to the subject matter of this Agreement, and all prior proposals, communications, negotiations, agreements, understandings and representations relating the subject matter of this Agreement are hereby superseded. No modification or amendment of this Agreement will be effective unless the same is in writing and signed by both Parties.

14.7. Third Party Beneficiaries. Except as expressly provided to the contrary in this Agreement, this Agreement does not and is not intended to confer any rights or remedies upon any person other than the Parties.

14.8. Law and Venue. This Agreement will be governed by and interpreted in accordance with the laws of the State of Texas and venue shall be in a court of competent jurisdiction in Travis County, Texas.

14.9. Severability. The invalidity or unenforceability of any provision of this Agreement will not affect the validity or enforceability of any other

provision of this Agreement, each of which will remain in full force and effect.

14.10. Captions. The Articles and Section captions in this Agreement are for convenience of reference only, do not constitute part of this Agreement and will not be deemed to limit or otherwise affect any of the provisions in the Agreement.

14.11. Construction. The Parties to this Agreement participated jointly in the negotiation and drafting of this Agreement and any Work Order. Therefore, in the event any ambiguity or question of intent or interpretation arises, this Agreement will be construed as if drafted jointly by the Parties and no presumption or burden of proof will arise favoring or disfavoring any Party by virtue of authorship of any of the provisions of this Agreement.

14.12. Counterparts. This Agreement may be executed in the original, by facsimile, by e-mail or by electronic signature in any number of counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

14.13. Professional Materials. INTERA may use these Services and Client's name in its promotional and professional materials. INTERA will not disclose information that is identified by Client as confidential or proprietary according to Article 8.

14.14. Survival. The provisions of Articles 5, 8, 10 and 12 and Sections 14.3, 14.8 and 14.13 of this Agreement will survive the termination or cancellation of this Agreement and the completion of the Scope of Services.

14.15. Attachments. The following attachments are made a part of this Agreement for all purposes:

Attachment A – Scope of Services
Attachment B – Compensation

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the date first above written.

Oklahoma Water Resources Board

By: _____

Printed Name:

Printed Title:

By: _____

Printed Name:

Printed Title:

INTERA Incorporated

By: _____

Printed Name: Neil Deeds, Ph.D., P.E.

Printed Title: Executive Vice President

Project ID: P024.193.OKWRB Oklahoma GAM modeling

1.0 STATEMENT OF SERVICES

This statement of services includes the construction, calibration, and documentation of a groundwater model for the Cimarron River alluvium and terrace aquifer.

INTERA will utilize datasets from the Oklahoma Water Resources Board's (OWRB) hydrogeologic framework report (Titled "Hydrologic Investigation Report of the Cimarron River Alluvium and Terrace Aquifer in Northwestern Oklahoma, 2020"; Le Pera and others, *in press*) as the basis for the model hydrogeologic surfaces, areal extent, initial recharge, baseflow calibration targets, and hydraulic properties. INTERA will use the extent of the Cimarron River alluvium and terrace aquifer described in the hydrogeologic framework report for the active area of the model. However, the INTERA team will evaluate the extent of the active area in the conceptual report where the saturated thickness is less than five feet—generally the minimum cell thickness suggested for this model. Additionally, the model boundary may be expanded or condensed in some areas to ensure that each active cell connects with at least one other active cell. In either case, INTERA will coordinate with OWRB to discuss any changes to the model extent.

The model simulation will use MODFLOW 6 (Langevin and others, 2021), which is the latest core version of MODFLOW released by the U.S. Geological Survey (USGS). MODFLOW 6 offers several features that set it apart from previous releases. One of the most significant advancements is its flexible grid system, which supports both structured and unstructured grids. This grid system allows modelers to better capture complex geological features and refine grids in areas of interest, improving accuracy and efficiency. Furthermore, MODFLOW 6's ability to seamlessly integrate other models, such as groundwater-surface water interaction, enhances its versatility for addressing multifaceted hydrogeologic problems. The sediment of the Cimarron River alluvium and terrace aquifer will be modeled using a single groundwater model. However, for the purposes of scenario water budgets, this model can be subdivided into various sections (using the MODFLOW ZoneBudget program) in discussions with the OWRB.

Hydrologic boundaries in the groundwater model represent the locations where the inflow or outflow of water may occur. Based on the 2016 potentiometric surface map in Le Pera and others (in press), whereby the contours are generally parallel with the boundary in some areas, a low-rate General-Head-Boundary (GHB) may be appropriate along the northern edge of the terrace area. In these areas, the terrace is assumed to exchange lateral flow with the surrounding Permian-age bedrock units. Along the southern boundary, we propose a no-flow boundary or a low-rate GHB. In general, net lateral groundwater flows exchanged with the surrounding Permian bedrock units (predominantly tight units with relatively low hydraulic conductivity) are assumed to be a negligible part of the conceptual model water budget. The aquifer top altitude will be based on a 10-meter digital elevation map.

The model will use two layers to simulate the sediment of the Cimarron River alluvium and terrace (layer 1) and the generally north-northwest striking Permian-age bedrock units directly underlying the alluvium and terrace (layer 2), similar to most other alluvium and terrace aquifers modeled for the OWRB. The conceptual model layer surfaces can be fit to a structured model grid that is proposed with a cell size of 300-foot x 300-foot without rotation (or as agreed upon with the OWRB). Soil-Water-Balance derived recharge in the Cimarron River alluvium and terrace aquifer will be used from Le Pera and others (*in press*) and applied using the recharge package. Using the SWB-derived recharge is advantageous given its ability to spatially and temporally distribute recharge across the entire model domain as well as its frequent use in many other models provided to the OWRB. The 328-foot x 328-foot SWB grid cell size is advantageous to use, given the similarity to the proposed model grid size of 300-foot x 300-foot. Estimates from the water-table fluctuation (WTF) method and the water budget equation will also be used to constrain the recharge during calibration.

To simulate the study area rivers and streams, the Streamflow Routing package is proposed, following the convention from many previous alluvium and terrace aquifer models prepared for the OWRB. The SFR package exchanges flow between the aquifer and the stream according to Darcy's Law; the flow exchanged between the aquifer and the stream is the product of the streambed conductance and the difference between the water-table altitude and the stream stage. Evapotranspiration (ET) will be simulated using the Evapotranspiration package for cells near the stream reaches. In this package, evapotranspiration decreases linearly with decreases in the simulated groundwater level, and no evapotranspiration occurs when the simulated groundwater level is below a user-specified root-zone depth. As has been implemented in previous alluvium and terrace models for the OWRB, the maximum water-table ET rate for each stress period will be set as the difference between the potential and actual ET computed from the SWB code. This provides an approximation for ET, given that the SWB code only considers ET from vegetation based on the soil moisture available. The root-zone depth for each active ET cell will be set equal to the SWB root-zone depth for each land-cover type. Evapotranspiration will either be applied to cells in the riparian areas immediately around the stream channel or by using data from the National Wetlands Inventory depending on which approach is optimal.

Groundwater pumping estimates for the Cimarron River alluvial and terrace aquifer are presented in Le Pera and others (*in press*) from 1967 to 2020. Annual reported groundwater use for each permit will be divided equally among each of the wells on the permit or method preferred by the OWRB. These annual well withdrawals will then be distributed into monthly well withdrawals (if using monthly stress periods) using monthly demand distributions from the Oklahoma Comprehensive Water Plan as per previous groundwater models for the OWRB. Annual irrigation withdrawals will be multiplied by the monthly irrigation demand (as a percentage of annual groundwater use), and annual public-supply well withdrawals will be multiplied by the monthly public-supply demand. Domestic withdrawals, which are not regulated or reported by the OWRB, may not be simulated depending on data available for estimation, but are likely a minor component of total use.

The initial hydraulic properties will be based on the "Hydraulic Properties" section of Le Pera and others (*in press*). There are 29 available aquifer tests (single and multi-well tests) within the model domain. Additionally, hydraulic conductivity and specific yield will be constrained by the standardization analysis of 3,650 driller's logs from Le Pera and others (in press). Elsewhere, starting parameter values representing hydraulic properties of the aquifer units will be used from literature estimates and adjusted within a reasonable range. By combining the variance of the hydraulic properties with formal geostatistical simulation, we will generate an ensemble of uncalibrated geostatistically-based hydraulic property fields. Collectively, this ensemble spans the range of uncertainty that exists in the properties before calibration. Using the techniques presented in White and others (2022), we will condition (i.e., adjust) these realizations to respect available estimates of property values, such as observations from aquifer performance tests, driller's reports, and other information. The horizontal hydraulic conductivity, vertical anisotropy (the ratio of horizontal-to-vertical hydraulic conductivity), and storage properties (specific storage and specific yield) are proposed to be represented using pilot point interpolation in the groundwater model.

The process of model calibration conceptually is the process of assimilating and integrating information stored as historical observations. For the Cimarron River alluvium and terrace aquifer, these observations will be water levels and base flow estimates from streamflow data from 1974 to 2023. The information is transferred into the parameters by assimilating the water level and streamflow observations, where parameters are quantities representing model input uncertainty. Model calibration and uncertainty quantification are proposed to be performed by using the iterative ensemble smoother

PESTPP-IES, included in the PEST++ software suite, in conjunction with the open-source Python packages FloPy and pyEMU. The combination of these software tools allows much of the calibration and uncertainty quantification workflow to be performed programmatically, providing transparency and reproducibility. The calibration approach proposed in this study incorporates an ensemble-based approach that avoids the implications of a traditional "calibrated" model having arrived at a finalized dataset of exactly known parameter values when there are many potential parameter value datasets that could be used. In this way, the approach focuses on assimilating the aspects of the historical observation dataset relevant to the simulated modeling objectives. Once calibration is complete, a single model will be selected from the model ensemble that can be adopted as "the" model of record.

A total of 259 wells with 34,786 groundwater-level observations are available from the OWRB for the proposed model period 1974–2023. Approximately half (124 of the 259 wells) have only one or two water-level measurements; therefore, uncertainty exists in some areas of the model where these wells contain the only groundwater-level measurements, particularly in the central areas of the model. In areas where few observations are available, synthetic observations may be used to constrain the model calibration. These synthetic observations would be based on water levels from nearby wells during similar periods. The available groundwater-level measurements support annual stress periods; however, many previously alluvium and terrace models for the OWRB use monthly stress periods. If monthly stress periods are desired, all wells with available bi-annual or greater measurements, combined with the seven continuous wells, can be used to prepare a generalized monthly dataset that can be used for calibration. An initial observation filtering process will be performed, followed by a spatial and temporal observation declustering process to ensure disparate groundwater levels do not occur in an area with spatially dense observations. Target observations will then be created from observation values nearest the end of each stress period. Due to the relatively small number of wells, a dynamic weighting process will be used to ensure success during the calibration process. The water level will be monitored at synthetic sites in layers where there are few measurements to ensure reasonable values.

The calibrated groundwater model will be used to evaluate the allocation of water rights and to simulate management options. Scenarios included as a part of this scope of services are listed below.

1. Equal Proportionate Share—50 percent depletion (with 5 feet or more of saturated thickness)
2. Equal Proportionate Share—Full depletion (5 feet of saturated thickness)
3. Projected Water Use (50-year water use)
4. Sustained Drought

Three of these scenarios (Equal Proportionate Share 50 percent depletion, Projected Water Use, Sustained Drought) will be configured the same as previous OWRB groundwater model scenarios. The fourth scenario (Equal Proportionate Share full depletion) is a newer scenario that will be a modification of the 50 percent depletion scenario.

2.0 DELIVERABLES AND SCHEDULE

The term of this Work Order will commence on 1 August 2025 and will continue until 31 July 2027. At the conclusion of this time period, INTERA will deliver the following items:

1. A calibrated groundwater model of the Cimarron River alluvium and terrace aquifer.
2. A report documenting the model construction and calibration, similar in scope, format, and layout to USGS Scientific Investigation Reports written for the OWRB.
3. A geodatabase with Geographic Information System data pertaining to the model extents, layering, calibration targets, calibrated model parameters, and other items required by the OWRB.

During the project period, INTERA will provide monthly progress updates. Additionally, one in-person meeting will be held in 2025 and 2027, and two in-person meetings in 2026. If required, additional in-person meetings can be included as necessary.

3.0 DESIGNATED REPRESENTATIVES

Oklahoma Water Resources Board

Printed Name: Derrick Wagner, P.G.

Phone: 405.530.8800

Email: Derrick.Wagner@owrb.ok.gov

INTERA Incorporated

Printed Name: John Ellis, P.G.

Phone: 972.740.7955

Email: jellis@intera.com

STANDARD TECHNICAL SERVICES AGREEMENT

ATTACHMENT B: COMPENSATION

INTERA shall be compensated for work performed on either a Time and Materials or a Fixed Price basis as selected below:

☐ **TIME AND MATERIALS**

☒ **FIXED PRICE**

FIXED PRICE or NOT TO EXCEED AMOUNT: $300,000. Inclusive of any applicable taxes? YES X NO ☐

TIME AND MATERIALS:

1. If on a Time and Materials Basis, INTERA's hourly labor rates are provided in the Table below. All rates are in U.S. dollars.

2. For Services with an estimated duration greater than twelve (12) months, the below rates are subject to annual adjustment using the change in the Consumer Price Index for All Urban Consumers (CPI-U), as published by the U.S. Bureau of Labor Statistics, for the preceding twelve (12) month period. INTERA will provide written notice of the increase annually.

3. There is a 15% mark-up on other direct costs such as subcontractors, vendors, travel, and equipment. Mileage is reimbursed at the current IRS standard mileage rate.

INTERA Labor Hourly Billing Rates

Labor Category	Rate ($USD/hr.)
Principal Engineer/Scientist I	$306
Principal Engineer/Scientist II	$274
Principal Engineer/Scientist III	$257
Senior Engineer/Scientist I	$240
Senior Engineer/Scientist II	$218
Senior Engineer Scientist III	$206
Senior Engineer/Scientist IV	$195
Engineer/Scientist I	$184
Engineer/Scientist II	$173
Engineer/Scientist III	$150
Engineer/Scientist IV	$139
Engineer/Scientist Intern	$93
Senior Technician	$153
Technician	$93
Senior Technical Editor	$153
Technical Editor	$104
Senior CAD/Graphics Specialist	$131
CAD/Graphics Specialist	$104
Project Associate	$96

SAMPLE

STATEMENT OF QUALIFICATIONS

Professional Services Related to Development of a Groundwater Model for the Cimarron River alluvium and terrace aquifer, Northwestern Oklahoma



Prepared for



OKLAHOMA
Water Resources Board

INTERA

June 30th, 2025

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1.0 Introduction

Groundwater in 1,305 mi^2 of Quaternary alluvial and terrace deposits along the Cimarron River in northwestern Oklahoma (**figure 1-1**) is used extensively for irrigation, municipal, stock, and domestic supplies. The Cimarron River alluvium and terrace aquifer serves as a major source of groundwater in Alfalfa, Major, Woods, and Kingfisher counties and is the primary source of water for the City of Enid.

According to the 2012 Oklahoma Comprehensive Water Plan (Oklahoma Water Resources Board, 2012), the Cimarron River alluvium and terrace aquifer primarily resides in the Central Watershed Planning Region (Basin 64) of Oklahoma, which is projected to have a 32 percent increase in total water demand by the year 2060 relative to 2010 demand. Active groundwater permits within the study area have increased by more than 55 percent since 1996, with an average increase of 10 permits per year. To ensure sufficient water will be available to support growing water demands, planning and management of the water resources of the Cimarron River alluvium and terrace aquifer is essential. Successful groundwater management requires an understanding of the hydrology of groundwater and surface water and the potential effects of groundwater withdrawals on the aquifer system.

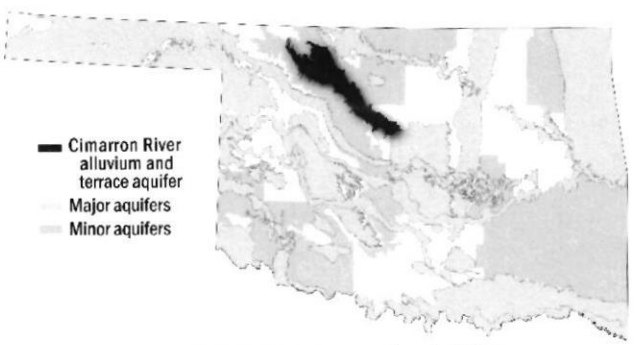


Figure 1-1. Major and Minor aquifers in Oklahoma.

Construction and calibration of a model for the Cimarron River alluvium and terrace was last completed in the mid-1990s, documented in Adams and others (1996). The groundwater model was constructed from water level data from Adams and others (1994) and geology and hydrogeology from several reports. This model was used to test the conceptual model of the Cimarron River alluvium and terrace aquifer and could be used to test the potential effects of projected groundwater withdrawals on aquifer storage.

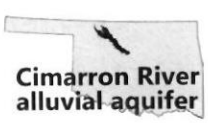
Oklahoma groundwater law (82 OK Stat §82-1020.5) requires the Oklahoma Water Resources Board (OWRB) to conduct hydrologic surveys and investigations of the state's aquifers to determine the maximum annual yield (MAY) and equal proportionate share (EPS) of each groundwater basin. Prior to the OWRB determination of the MAY, a hydrologic investigation is needed to obtain data and information related to the geology, hydrogeologic framework, and hydrogeology of an aquifer. An investigation for the Cimarron River alluvium and terrace aquifer is currently in the final stages of completion by the OWRB (Le Pera and others, *in press*). This investigation describes the climate, geology, hydrogeology, hydraulic properties, water use, streamflow, base flow, and groundwater quality of the aquifer and would be used as the basis for constructing and calibrating a groundwater model.

In keeping with Oklahoma Water Law, and to help implement the Oklahoma Comprehensive Water Plan, the OWRB has requested the services of INTERA Incorporated (INTERA) to construct and calibrate a groundwater model to assist with determining the EPS and MAY for the Cimarron River alluvium and terrace aquifer and to evaluate the effects of projected groundwater withdrawals on aquifer storage and streamflow. The OWRB can use information gained from the study to evaluate the allocation of water rights and to manage water resources in the watershed. Additionally, other topics important to this study may include the following items:

- Are there changes during the last 50 years in land use, water use, streamflow, precipitation, water levels, or saturated thickness that could affect water resources?
- How do projected groundwater withdrawals from the alluvial aquifer affect aquifer storage and streamflow in the Cimarron River?
- How does the increasing number of permits in this aquifer affect the long-term viability of the aquifer system?

INTERA is pleased to provide this proposal for modeling services. INTERA offers the OWRB several key assets that will enable us to provide the highest-quality technical services and products and to do so cost-effectively in accordance with OWRB schedule requirements. These assets are introduced below and described throughout this document.

- **Track Record of Modeling in Oklahoma.** INTERA's designated Project Manager, John Ellis, brings an understanding of Oklahoma hydrogeology and 16 years of project management and groundwater modeling experience. John was the Project Manager for the Rush Springs aquifer and Salt Fork Red River alluvial aquifer modeling projects. He has led the development of the hydrogeologic framework and construction and calibration of four groundwater models for the OWRB, including the Canadian River alluvial aquifer, North Fork Red River alluvial aquifer (with Jerrod Smith), Rush Springs aquifer, and Washita Reach 1 alluvial aquifer.



- **Continuous Product Improvement.** In each modeling project, John focused on improving the quality of the modeling and reporting compared to prior efforts from the U.S. Geological Survey (USGS).
  - The Canadian River alluvial aquifer model was the first model constructed for the OWRB to use automated model calibration techniques (PEST [Parameter ESTimation] software) to improve the accuracy of the model forecasts when running the drought, EPS, and 50-year projected groundwater-use scenarios.
  - The North Fork Red River alluvial aquifer report included substantially more in-text analysis and revamped modeling-section figures describing changes in aquifer conditions (and lake storage) through time at a monthly scale.
  - The Rush Spring aquifer report furthered the emphasis on better-developed written analysis and higher-quality figures. Additionally, this model was the first use of (1) geostatistically interpolated parameter values (pilot points) to improve the distribution and heterogeneity of the model parameters and (2) an ensemble-based approach for an OWRB model in Oklahoma to assess the uncertainty in the EPS scenario results.
- **Knowledge of OWRB needs and requirements.** Having worked closely with the OWRB for years, John understands the project's needs and requirements. Each prior project with the OWRB was completed with the attention to detail and methods required for the OWRB to use the models to proceed through the planning process, leading to the public hearing and final order under Oklahoma groundwater law (82 OK Stat §82-1020.5). Therefore, John and his team can seamlessly begin work on the Cimarron project.
- **Experience in Successfully Completing Similar Projects.** While in Oklahoma, John assisted with the development of the Cimarron River alluvial aquifer hydrogeologic framework for the Pawnee National Tribal Jurisdictional Area. INTERA led the development of an updated groundwater model for the Choctaw and Chickasaw Nations to evaluate the impact of pumping in Texas and the potential for the Antlers Aquifer to serve as a primary water supply source in southeastern Oklahoma. INTERA has also led the development of 13 groundwater models in Texas under the Texas Water Development Board's (TWDB) Groundwater Availability Modeling (GAM) Program to serve as tools for joint planning efforts. These models, which include both alluvial and bedrock aquifers, span a large range of geologic and hydrogeologic conditions and have been used many times during the water planning process. Additional information on these similar models is provided in Section 3.0.
- **Reputation for On-Time and On-Budget Project Delivery.** There is a reason why TWDB has selected INTERA to develop more Texas aquifer models than any other firm—we produce superior products delivered on time and within project budgets. Our experience in developing and updating models in accordance with agreed-upon schedules and budgets means we offer OWRB negligible performance risk.
- **An Outstanding Team of Management and Technical Personnel.** Our project team will consist of four INTERA staff. INTERA's work will be led by John Ellis, PG—a Principal Hydrogeologist at INTERA with 16 years of experience managing a wide range of modeling and water resource projects throughout Texas, Oklahoma, and California. Prior to joining INTERA, John was a Hydrologic Studies Chief, Project Manager, and Hydrogeologist with the USGS, where he led the development of five groundwater models. John will serve as the point of contact for the scope of services development. The project team also includes water resource experts Neil Deeds, PhD, PG, PE, who will serve as the Project Principal; Andres Prieto-Estrada, PhD, PE, who will serve as the Modeling Lead; and Andrew Osborne, who will serve as the Data Management Lead.

A summary of INTERA's qualifications and experience is provided below.

INTERA

Originally established in 1974 as a technology-based consulting firm specializing in hydrogeologic modeling, INTERA is a Texas corporation headquartered in Austin. Our staff comprises 240 professional and support personnel (76 in Texas) specializing in hydrogeology, hydrology, water resources engineering, geosystems engineering, environmental science and engineering, numerical modeling and uncertainty analysis, and remote sensing and geographic information systems (GIS) technology. Our staff includes 15 registered Professional Engineers and 26 Registered Professional Geoscientists. In addition, many of our geoscientists are nationally licensed as Certified Ground Water Professionals (CGWP) by the National Ground Water Association. Our Water Resources Group has played an integral role in developing groundwater models and performing hydrogeologic studies and analyses in support of aquifer sustainability.

2.0 Technical Approach

The guiding principle for the technical approach is to produce a groundwater model that is both defensible and straightforward for OWRB staff and stakeholders to use for groundwater planning. While the techniques we propose for construction and calibration are advanced, the final product reflects our commitment to defensibility and simplicity. Our goal is to use statistically rigorous techniques to construct a groundwater model that can be enhanced over time as more data becomes available.

2.A Model Design

Conceptual Model and Uncertainty Framework

The proposed model will be based on information and datasets from a 2025 conceptual model report (Le Pera and others, *in press*). Given the intended role of the Cimarron River alluvium and terrace aquifer model as a decision-support tool for regional water management, it is essential to estimate the reliability of important simulated model outputs, such as forecasts of future water quantity and baseflow. Uncertainty in these forecasts is a result of model-structure uncertainty, such as simplifications of the modeled natural system, spatial and temporal discretization, and uncertainty in the hydraulic parameter value estimates. Representing these sources of uncertainty can be accomplished using a probabilistic or "stochastic" modeling workflow (**Figure 2-1**), where the focus is on generating multiple sets of model inputs (or an "ensemble"). When combined with the selection of a single model from this ensemble, the stochastic workflow can be used to identify and explore "non-uniqueness" and its effect on important simulated outputs (Moore and Doherty, 2005), while the single model can be used as the groundwater model of record for the OWRB.

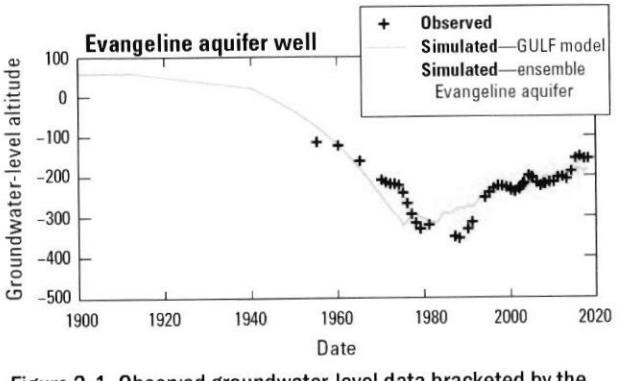


Figure 2-1. Observed groundwater-level data bracketed by the GULF model and ensemble simulated data.

INTERA brings experience applying rapid and reproducible modeling workflows, most recently with the GULF-2023 (Ellis and others, 2023) in the Gulf Coast of Texas. These workflows are built on a foundation of scripting and open-source software tools to transparently and openly document the numerous decisions and assumptions made during the modeling workflow. Furthermore, the use of scripting to encode the myriad decisions and assumptions allows efficient and objective evaluation of these decisions and assumptions through experimentation. The scripting-driven workflow brings significant advancements to improve efficiency, transparency, and quality to all facets of the modeling process. We propose using this approach in parameter estimation as well as in model construction.

The uncertainty analysis applies not only to the calibration process but also to model predictions. By exploring model predictions during the process of incremental improvement during construction and calibration, an understanding of how the model can be constructed and calibrated is gained to best reduce uncertainty in the specific predictions of drawdown, changes in spring/streamflow, or other future conditions and model objectives. Without this intentionality during model construction, there will be no direct correspondence between a model that fits historical measurements and a model that is an optimal predictive tool for resource management (White and others, 2014). Therefore, it is important that the model and subsequent calibration process are designed and undertaken to yield a modeling tool that functions as an optimal predictive tool. Section 2.C Model Calibration contains additional information on this approach.

Groundwater Model Code

The use of MODFLOW 6 (Langevin and others, 2017) is proposed for the Cimarron River alluvium and terrace aquifer model due to its status as the latest core version of MODFLOW released by the USGS. MODFLOW 6 has been in use for several years, is in active development, and has robust support from the widely used FloPy Python package (Bakker and others, 2016) which enhances its utility for automating workflows and integrating with other tools.

MODFLOW 6 offers several features that set it apart from previous releases. One of the most significant advancements is its flexible grid system, which supports both structured and unstructured grids. This grid system allows modelers to better capture complex geological features and refine grids in areas of interest, improving accuracy and efficiency. Furthermore, MODFLOW 6's ability to seamlessly integrate other models, such as groundwater-surface water interaction, enhances its versatility for addressing multifaceted hydrogeologic problems. Additionally, the advanced Newton-Raphson solver in MODFLOW 6 is designed to handle nonlinearities more effectively, leading to improved performance in complex simulations, particularly in highly dynamic systems such as alluvium and terrace aquifers like the Cimarron.

Model Layering, Discretization, and Properties

The 1,305 mi^2 Cimarron River alluvium and terrace aquifer consists primarily of Quaternary-age alluvium and terrace deposits of the Cimarron River and associated tributaries. The Quaternary-age deposits unconformably overly Permian-age bedrock (Le Pera and others, 2023). The previously developed conceptual model (Le Pera and others, 2023) grouped the aquifer hydro-stratigraphic units into two conceptual model layers (**Figures 2-2** and **2-3**).

- Layer 1 will represent the unconsolidated Quaternary-age alluvium and terrace deposits (and the aeolian deposits) that overlie the Permian-age bedrock. These are the primary water-bearing units in the model. The thickness of these sediments ranges from less than 5 feet to over 100 feet. The saturated thickness is similar, ranging from less than 5 feet to 103 feet, where thicker areas of the aquifer contain a greater saturated thickness. The high terrace areas along the northern edge of the aquifer boundary where little saturated thickness is present (<5 feet) will be discussed with the OWRB to determine if these areas warrant inclusion in the model.



Figure 2-2. Proposed layer 1 for the Cimarron River alluvium and terrace model.

- Layer 2 will represent the generally north-northwest striking Permian-age bedrock units directly underlying the alluvium and terrace, similar to most other alluvium and terrace aquifers modeled for the OWRB. These units (Dog Creek Shale, Blaine Formation, Flowerpot Shale, Chickasha Formation, Duncan Formation, Cedar Hills Sandstone, Hennessey Formation, and Garber Sandstone) are composed of generally low conductivity sandstone, siltstone, and shale. These units occur adjacent to and sub-crop the primary-water bearing units in the model.

The conceptual model layer surfaces can be fit to a structured model grid that is proposed with a cell size of 300-foot x 300-foot without rotation. This cell size results in 416,956 active model cells in each layer. The proposed cell size allows a more optimal discretization of any heterogeneities in the aquifer and more accurate estimation of surface water-groundwater interactions. Based on the available aquifer test data and hydrographs, each layer will be simulated as convertible, whereby the transmissivity varies based on saturated thickness and the intrinsic hydraulic conductivity of the sediments.

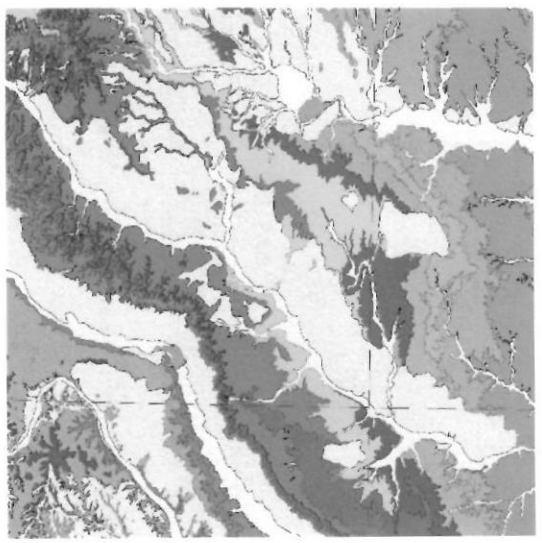


Figure 2-3. Geologic units in layer 2 for the Cimarron River alluvium and terrace model. Note that only the part of the units directly underlying the alluvium and terrace would be included in the layer 2 extent.

A transient period is proposed for 1974–2023 when most groundwater-level measurements are available (see the Groundwater-Level Observations section). Only 13 groundwater-level measurements are available prior to 1974 and were taken during a period of drought in the 1950s. The soil-water-balance derived recharge from Le Pera and others (*in press*) estimates recharge for the period 1980–2020; therefore, the SWB period would be extended and re-run for the years 1974–1979 and 2021–2023.

To avoid the complication of modeling the steady-state period when the earliest water level measurements are available (1950s drought conditions), a quasi-steady state transient period is proposed, whereby this stress period would use the average of water-level measurements in each well during 1974–2023. The average of recharge, GHB (if used), evapotranspiration, and streamflow-routing baseflow inputs during the transient period would also be used for the steady-state period.

The available groundwater-level measurements support annual stress periods; however, nearly all previously alluvium and terrace models for the OWRB use monthly stress periods. If monthly stress periods are desired, all wells with available bi-annual or greater measurements, combined with the seven continuous wells, can be used to prepare a generalized monthly dataset that can be used for calibration.

2.B Model Extent and Boundaries

INTERA will use the extent of the Cimarron River alluvium and terrace aquifer described in the conceptual model report (Le Pera and others, *in press*) for the active area of the model. However, the INTERA team will evaluate the extent of the active area in the conceptual report where the saturated thickness is less than five feet—generally the minimum cell thickness suggested for this model. INTERA will coordinate with OWRB to discuss any changes to the model extent. The model boundary may be expanded or condensed in some areas to ensure that each active cell connects with at least one other active cell.

Hydrologic boundaries in the groundwater model represent the locations where the inflow or outflow of water may occur. Based on the 2016 potentiometric surface map in Le Pera and others (*in press*), whereby the contours are generally parallel with the boundary in some areas, a low-rate General-Head-Boundary (GHB) may be appropriate along the northern edge of the terrace area. In these areas, the terrace is assumed to exchange lateral flow with the surrounding Permian-age bedrock units. Along the southern boundary, we propose a no-flow boundary or a low-rate GHB. In general, net lateral groundwater flows exchanged with the surrounding Permian bedrock units (predominantly tight units with relatively low hydraulic conductivity) are assumed to be a negligible part of the conceptual-model water budget of the Cimarron River alluvium and terrace aquifer. No estimates of the flow between the Permian bedrock and the aquifer were available in published reports.

The aquifer base characterized by Le Pera and others (*in press*) will be used for the bottom of layer 1. Reasonable well control was available for the characterization of the base; therefore, the interpolated surface can likely be gridded to the 300-foot x 300-foot proposed model cell size without modification. Layer 2 is proposed to be assigned an arbitrary and uniform thickness of 100 ft, following convention in several previous alluvium and terrace models (Ellis and others, 2017; 2020; Smith and others, 2017).

The aquifer top altitude will be based on a 10-meter digital elevation map. The top of layer 1 may be multiplied by 1.001 in the groundwater model to prevent confined aquifer conditions that occur when the simulated water-table altitude exceeds the aquifer top altitude.

Recharge

Recharge in the Cimarron River alluvium and terrace aquifer was estimated using three methods in Le Pera and others (*in press*): the Water Table Fluctuation method, the water budget equation, and the SWB model. The average recharge calculated by these methods was 3.6 in/year, 3.36 in/year, and 3.26 in/year, respectively, with all producing comparable results. Given the consistency across these methods, and the use of the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) database (**Figure 2-4**), the SWB-derived aerially distributed recharge will be applied to the model active area using the recharge package. Using the SWB-derived recharge is advantageous given its ability to spatially and temporally distribute recharge across the entire model domain as well as its frequent use in many other models provided to the OWRB. The 328-foot x 328-foot SWB grid cell size is advantageous to use, given the similarity to the proposed model grid size of 300-foot x 300-foot. Estimates from the water-table fluctuation (WTF) method and the water budget equation will also be used to constrain the recharge estimation.

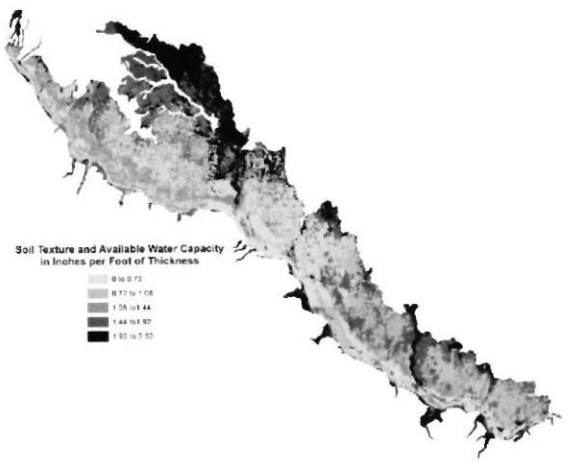


Figure 2-4. Soil available water capacity from the NRCS SSURGO dataset.

Natural Discharge and Surface Water Features

The major surface water features and surface water boundaries (HUC11) within the Cimarron River alluvial and terrace aquifer are shown in **Figure 2-5**. To simulate the rivers and streams the Streamflow Routing (SFR) package is proposed, following the convention from many previous alluvium and terrace aquifer models prepared for the OWRB. The SFR package exchanges flow between the aquifer and the stream according to Darcy's Law (Darcy, 1856); the flow exchanged between the aquifer and the stream is the product of the streambed conductance and the difference between the water-table altitude and the stream stage. Simulated base flows are calculated for each part of the stream contained in a model cell, known as reaches, until the end of a segment, or group of cells with uniform or linear hydraulic properties, is reached during each time step. Computation of flows repeats in a downstream direction until flows are routed out of the numerical model active area.

Evapotranspiration (ET) will be simulated using the Evapotranspiration package for cells near the stream reaches (**Figure 2-5**). In this package, evapotranspiration decreases linearly with decreases in the simulated groundwater level, and no evapotranspiration occurs when the simulated groundwater level is below a user-specified root-zone depth.

As has been implemented in previous alluvium and terrace models for the OWRB, the maximum water-table ET rate for each stress period will be set as the difference between the potential and actual ET computed from the SWB code. This provides an approximation for ET given that the SWB code only considers ET from vegetation based on the soil moisture available. The root-zone depth for each active ET cell will be set equal to the SWB root-zone depth for each land-cover type. Evapotranspiration will either be applied to cells in the riparian areas immediately around the stream channel or by using data from the National Wetlands Inventory (U.S. Fish and Wildlife Service, 2023) depending on which approach is optimal.

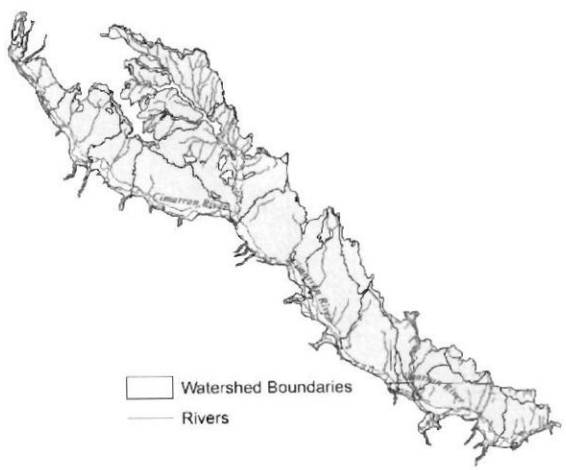


Figure 2-5. Major surface water features and boundaries.

Groundwater Pumping

Groundwater pumping estimates for the Cimarron River alluvial and terrace aquifer are presented in the conceptual model report from 1967 to 2020 and shown in map view on **Figure 2-6**. Irrigation is the largest water use within the model domain making up 65 percent of total water use followed by public supply making up 31 percent of total water use in the period of record (Le Pera and others, 2023). Groundwater pumping from 1967 to 2020 ranged from approximately 17,620 acre-feet/year to a maximum of 61,147 acre-feet/year.

Groundwater pumping data will be obtained from the OWRB. Annual reported groundwater use for each permit will be divided equally among each of the permit. These annual well withdrawals will then be distributed into monthly well withdrawals (if using monthly stress periods) using monthly demand distributions from the Oklahoma Comprehensive Water Plan. Annual irrigation withdrawals will be multiplied by the monthly irrigation demand (as a percentage of annual groundwater use), and annual public-supply well withdrawals will be multiplied by the monthly public-supply demand. Domestic withdrawals, which are not regulated or reported by the OWRB, may not be simulated depending on data available for estimation, but are likely a minor component of total use.

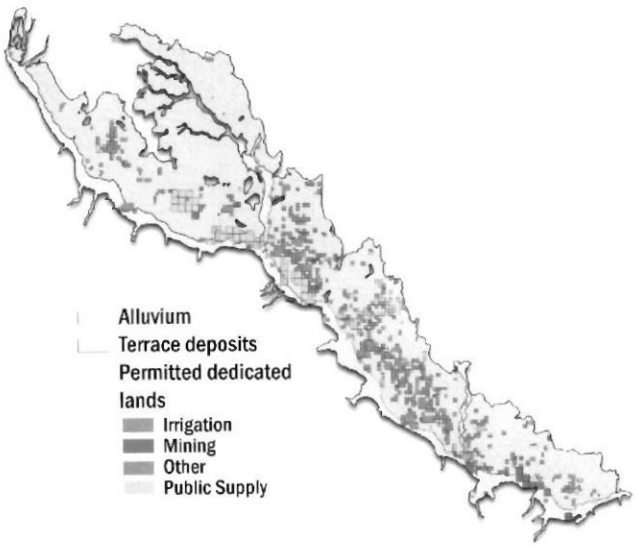


Figure 2-6. Location of permitted dedicated lands with groundwater use.

2.C Model Calibration

The process of model calibration conceptually is the process of assimilating and integrating information stored as historical observations. For the Cimarron River alluvium and terrace aquifer, these observations will be water levels and base flow estimates from streamflow data. The information is transferred into the parameters by assimilating the water level and streamflow observations, where parameters are quantities representing model input uncertainty.
Model calibration and uncertainty quantification are proposed to be performed by using the iterative ensemble smoother PESTPP-IES (White, 2018), included in the PEST++ software suite (Welter and others, 2015; White and others, 2020a), in conjunction with the open-source Python packages FloPy (Bakker and others, 2016) and pyEMU (White and others, 2016a, b). The combination of these software tools allows much of the calibration and uncertainty quantification workflow to be performed programmatically, providing transparency and reproducibility. The calibration approach proposed in this study incorporates an ensemble-based approach that avoids the implications of a traditional "calibrated" model having arrived at a finalized dataset of exactly known parameter values when there are many potential parameter value datasets that could be used (Doherty and Simmons, 2013). In this way, the approach focuses on assimilating the aspects of the historical observation dataset relevant to the simulated modeling objectives.

Groundwater-Level Observations

A total of 259 wells with 34,786 groundwater-level observations are available from the OWRB for the proposed model period 1974–2023. Approximately half (124 of the 259 wells) have only one or two water-level measurements; therefore, uncertainty exists in some areas of the model

where these wells contain the only groundwater-level measurements (**Figure 2-7**), particularly in the central areas of the model. In areas where few observations are available, synthetic observations may be used to constrain the model calibration. These synthetic observations would be based on water levels from nearby wells during similar periods.

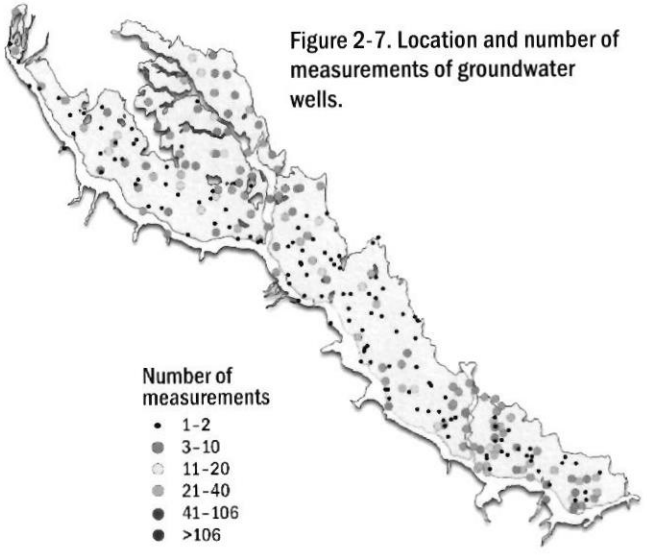


Figure 2-7. Location and number of measurements of groundwater wells.

All wells are completed in either the alluvium or terrace based on the well total depth (see **Table 2-1**). Seven continuous wells (with three wells excluded per Le Pera and others, *in press*) provide hourly water level data at sites that are generally spatially distributed across the model active area.

An initial observation filtering process will be performed, followed by a spatial and temporal observation declustering process to ensure disparate groundwater levels do not occur in an area with spatially dense observations. Target observations will then be created from observation values nearest the end of each stress period. These observations will be weighted, whereby an importance factor is assigned to different aspects of the historic observation dataset. Due to the relatively small number of wells, a dynamic weighting process will be used to ensure success during the calibration process. The water level will be monitored at synthetic sites in layers where there are few measurements to ensure reasonable values.

Alfalfa	19
Garfield	2
Kingfisher	81
Logan	18
Major	62
Woods	77

Table 2-1. Wells from the OWRB by county. All wells are completed in the alluvium or terrace deposits.

Stream Baseflow Observations

A total of five streamgages with steamflow data are available in the Cimarron River alluvium and terrace active model area. At the upstream model boundary, the Freedom gage (07157980) has data only for 1973–1980. Downstream, the gage at Waynoka has data only from 1990 to present. Data from the synoptic streamflow measurements on Jan 8–9, 2020 documented in Le Pera and others (*in press*) will be used to estimate the stream gain and/or loss between these two gages, and an estimated 1974–present streamflow will be produced. Baseflow will then be estimated using hydrograph separation techniques on these two streamgages from Le Pera and others (*in press*) when data is available. This data will then be used to estimate the remaining periods when data is unavailable. The results of this analysis will be used to create inputs to the Streamflow Routing package to simulate upstream inflow to the model area.

The most downstream gage on the Cimarron River (07159100) has data available from 1990 to present. Downstream of the model area, gage 07160000 has data from 1991 to present. The synoptic streamflow measurements will be used in conjunction with streamflow data from these two gages to estimate streamflow exiting the model at the most downstream segment of the Cimarron River. Baseflow separation technique results from Le Pera and others (*in press*) for these two gages, and on other gages in tributaries present in the aquifer area, will be used to establish calibration targets.

Parameters

The initial hydraulic properties will be based on the "Hydraulic Properties" section of the Cimarron River alluvium and terrace aquifer conceptual model report (Le Pera and others, *in press*). There are 29 available aquifer tests (single and multi-well tests) within the model domain. Additionally, hydraulic conductivity and specific yield will be constrained by the standardization analysis of 3,650 driller's logs from Le Pera and others (*in press*). Elsewhere, starting parameter values representing hydraulic properties of the aquifer units will be



Figure 2-8. Proposed pilot points to use for model calibration.

used from literature estimates and adjusted within a reasonable range. By combining the variance of the hydraulic properties with formal geostatistical simulation, we will generate an ensemble of uncalibrated geostatistically-based hydraulic property fields. Collectively, this ensemble spans the range of uncertainty that exists in the properties before calibration. Using the techniques presented in White and others (2022), we will condition (i.e., adjust) these realizations to respect available estimates of property values, such as observations from aquifer performance tests, driller's reports, and other information.

The horizontal hydraulic conductivity, vertical anisotropy (the ratio of horizontal-to-vertical hydraulic conductivity), and storage properties (specific storage and specific yield) are proposed to be represented using pilot point interpolation in the groundwater model in layer 1 (**Figure 2.8**). Pilot points provide a balance between the manipulation of values by parameter zones, often defined where values are thought to be relatively constant, and the manipulation of values in individual model cells, which may require more detailed data than are typically available. These pilot points will be implemented in every 10th model cell (3,000-foot spacing).

Final Model Selection

Once the calibration process is complete, a single model (realization) will be selected from the ensemble to be used as the groundwater model based on discussions with OWRB. The final parameter values for this model would likely be a suitable candidate to serve as a model representing the central tendency of the ensemble, as was the case with the GULF - 2023 model (Ellis and others, 2023).

Value of Information, Uncertainty, and Sensitivity Analyses

Given the model input quantity uncertainty and the relatively limited quantities of observation data, there is value in using "data worth" analyses to help guide future data collection efforts (e.g., White and others, 2014). These analyses are an essential product of our proposed uncertainty-based modeling framework, providing direct estimates of how yet-to-be-collected data may reduce simulated modeling objective uncertainty. Another advantage of the ensemble-based strategy is that parameter sensitivity is tested during each outer iteration, so the evolving sensitivity matrix is recorded during the calibration process, negating the need for a separate sensitivity analysis.

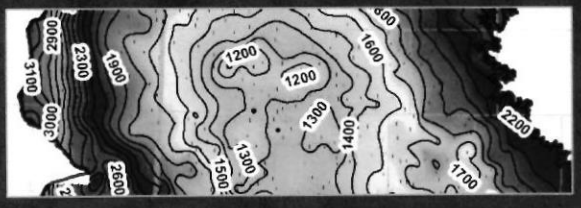
Model Scenarios

The transient groundwater model will be used to evaluate the allocation of water rights and to simulate management options. In addition, the models will be used to predict the effects of potential groundwater withdrawals on streamflow in the Cimarron River alluvium and Terrace aquifer. To comply with Oklahoma Water Law, the OWRB approves a maximum annual yield (the total amount of water that can be withdrawn from a specific groundwater basin in any year). The OWRB uses the term Equal Proportionate Share (EPS) to describe the allocation of water to all holders of water rights on land overlying a groundwater basin. The amount of water a permitted user can withdraw from a groundwater basin is proportional to the amount of land dedicated to a groundwater use permit.

To simulate distributed withdrawals as an EPS in alluvial aquifers, in accordance with OWRB policy, a hypothetical well is placed in every active model cell that has a simulated saturated thickness of five feet or greater at the time of the hydrologic investigation (for an alluvial aquifer). All wells are pumped at the same fixed rate throughout the simulated period. If the simulated saturated thickness reaches less than five feet at any time during specified time periods (usually 20- and 50-year periods), the well is shut down. If simulated saturated thickness recovers above five feet, the well is restarted. Various initial pumping rates are tested to find a rate that would cause the active model cells that are pumped to have an average simulated saturated thickness of five feet at the end of the specified time periods.

Two versions of the EPS scenario will be run: one scenario simulating a fifty percent depletion to a saturated thickness of five feet or greater, and a second scenario simulating a full depletion to five feet of saturated thickness.

In addition to providing information to the OWRB for the determination of the equal proportionate share, the model will be used to test the effects of (1) a 10-year hypothetical (sustained) drought, and (2) a 50-year projected water use pumping scenario on streamflow and the saturated thickness of the aquifer in response to groundwater withdrawals.



Project Name, Client, Location	Experience with OK Aquifers	Numerical modeling						Model Scenario Development and Testing	Stakeholder Communications	Documentation/ Communication of Results
		Model Design	Model Calibration	Uncertainty/Sensitivity Analyses	Model Testing/ Application	MODFLOW 6	Statistical Methods and Coding			
Development of a Groundwater Model for the Antlers Aquifer, Choctaw and Chickasaw Nations, North TX and Southeast OK.	■	■	■	■	■		■	■	■	■
Development of a Groundwater Availability Model of the Brazos River Alluvium Aquifer, Southeast TX		■	■	■	■		■		■	■
Update to the Groundwater Availability Model of the Northern Trinity and Woodbine Aquifer, North Central Texas	■	■	■	■	■	■	■	■	■	■
Development of the Groundwater Availability Model for the Cross Timbers Aquifer, North Central Texas		■	■	■	■	■	■		■	■
Groundwater Availability Model of the High Plains Aquifer System, Texas Panhandle and West Texas	■	■	■	■	■		■		■	■
Update to the Groundwater Availability Model of the Central Portion of the Carrizo-Wilcox Aquifer, Central TX		■	■	■	■		■		■	■
Development of the GULF-2023 Groundwater Availability Model, Houston and Galveston Area, TX		■	■	■	■	■	■	■	■	■
Development of a Groundwater Availability Model for the Rustler Aquifer, West TX		■	■	■	■		■		■	■
Technical Services and Model Simulations for Joint Planning in GMA 1, Texas Panhandle					■		■	■	■	■
Evaluation of Groundwater Resources and Subsidence within the Harris-Galveston Subsidence District, Upper Texas Gulf Coast					■	■	■	■	■	■

Figure 3-1. INTERA's selected modeling experience.

3.0 Selected Modeling Experience

INTERA brings the expertise and experience needed to solve groundwater issues and succeed in providing OWRB with scientifically sound and defensible technical consulting services. We have provided similar services to a wide variety of state, regional, and local agencies in Texas and other states responsible for the management and protection of groundwater resources. The table above summarizes some of our experience with groundwater modeling projects. Brief summaries of selected projects are provided below.

■ Development of a Groundwater Model for the Antlers Aquifer, North TX and Southeast OK

INTERA Staff: Wade Oliver, Daniel Lupton
Timeframe: 2012 – 2014

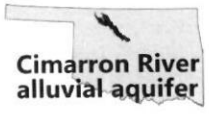
INTERA developed an updated groundwater model for the Choctaw and Chickasaw Nations to evaluate the impact of pumping in Texas and the potential for the Antlers Aquifer to serve as a primary water supply source in southeastern Oklahoma. Previously developed models were insufficient for serving as long-term water planning tools for the aquifer. Efforts included readdressing each component of the conceptual model of the aquifer, including recharge, hydraulic properties, evapotranspiration, structure, and pumping. The calibration efforts employed PEST to adjust model parameters within reasonable limits. The resulting tool is used to evaluate future water management strategies, quantify the impacts of out-of-state pumping on the aquifer in Oklahoma, and better understand the quality and availability of water in the aquifer.

■ Development of a Groundwater Availability Model of the Brazos River Alluvium, Southeast TX

INTERA Staff: John Ewing, Toya Jones
Timeframe: 2014 – 2016

In support of the TWDB's Groundwater Availability Modeling Program, INTERA developed a GAM for the Brazos River Alluvium Aquifer (BRAA). This aquifer consists of the floodplain deposits and hydraulically connected terrace deposits of the Brazos River, occurring in lenses that grade both laterally and vertically. The BRAA is unconfined with potentially locally confined conditions where clay lenses overlie sands or gravels. The aquifer overlies several major and minor aquifers in Texas, of which the shallow portions are assumed to be hydraulically connected to the BRAA.

INTERA developed both the conceptual and numerical models for this aquifer, utilizing data on the physiography and climate, geology, previous studies, hydrostratigraphy,





hydrostratigraphic framework, water levels, recharge, surface water interaction, hydraulic properties, discharge, and water quality for the BRAA. The model was primarily calibrated to observed heads in the BRAA and was calibrated to both steady-state and transient conditions. During the development of the conceptual and numerical models, INTERA organized and conducted several Stakeholder Advisory Forums to solicit data and input from interested stakeholders. Our efforts resulted in a well-calibrated BRAA model for use in supporting water availability planning at a regional scale.

- **Update to the Groundwater Availability Model of the Northern Trinity and Woodbine Aquifer, North Central Texas**

INTERA Staff: Wade Oliver, John Ellis, Andres Prieto-Estrada, Andrew Osborne
Timeframe: 2023 – Present



INTERA is currently leading the update of the Northern Trinity and Woodbine aquifers GAM. We are working in cooperation with the member Districts in Groundwater Management Area (GMA) 8 as well as subcontractor RW Harden and Associates. The previous MODFLOW-NWT model has been updated to MODFLOW 6. Several features of MODFLOW 6, such as pass-through cells, have been implemented in the update model, improving model run times. Additionally, the soil-water-balance code has been implemented to spatially distribute recharge estimates. An ensemble-based calibration process is being undertaken that focuses on assimilating the aspects of the historical observation dataset model relevant to the simulated modeling objectives. The member Districts of GMA 8 provided production data, new aquifer tests, and well logs to assist with the update and recalibration. In addition to preparing all geodatabase files and documentation, INTERA will perform several predictive model runs defined by GMA 8 to match the recalibrated model to the current desired future condition (DFC). The model update is scheduled for completion this year, allowing the updated NTWGAM to be used by GMA 8 in the fourth round of joint planning.

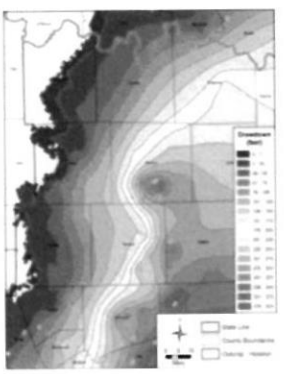
- **Development of the Groundwater Availability Model for the Cross Timbers Aquifer, North Central Texas**

INTERA Staff: Neil Deeds, Wade Oliver, Ryan Harmon
Timeframe: 2022 – Present

INTERA is currently leading the development of a GAM of the Cross Timbers Aquifer for the TWDB. Our model construction workflow is built on a foundation of scripting and open-source software tools so that the numerous decisions and assumptions made during the modeling workflow are transparently and openly documented. INTERA is utilizing cutting-edge tools, such as the iterative ensemble smoother PESTPP-IES, which reduces the computational demand of the calibration process, ensures a complete expression of model input uncertainty, saves time, and cuts project expenses. INTERA built the numerical model using MODFLOW 6 and reviewed, compiled, and synthesized all available public data to estimate model inputs, taking great care where data is scarce. Calibration is being performed using ensemble-based methods, which assimilate the aspects of the historical observation dataset relevant to the simulated modeling objectives. This project will be completed before November 2024.

- **Groundwater Availability Model of the High Plains Aquifer System, Texas Panhandle and West Texas**

INTERA Staff: Neil Deeds
Timeframe: 2012 – 2015



Under the TWDB's GAM Program, INTERA developed a groundwater model that combines the Northern Ogallala, Southern Ogallala (including the Edwards Trinity High Plains and Rita Blanca Aquifers), and Dockum GAMs. The model area encompasses all or part of 95 counties in Texas, New Mexico, Oklahoma, Colorado, and Kansas. The conceptual model report included an assessment of the climatic and hydrologic conditions in the study area, as well as detailed studies of geologic structure (based on analysis of over 2,000 geophysical logs), properties, recharge, natural discharge, pumping, and water quality. The numerical model was calibrated using PEST, with pilot point multiplier fields for recharge and horizontal hydraulic conductivity of the Ogallala Aquifer (parameters that are the most important to both heads and flow rates). The final model provides insight into the interaction of the Ogallala Aquifer and the minor aquifers in the system and is used as a tool for state water planning.

- **Update to the Groundwater Availability Model of the Central Portion of the Carrizo-Wilcox Aquifer, Central TX**

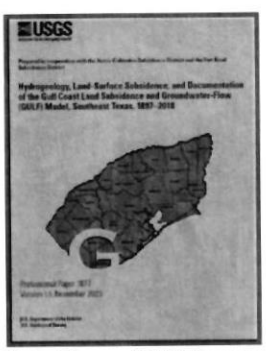
INTERA Staff: Steve Young, Toya Jones, Tom Ewing
Timeframe: 2015 – 2018

The TWDB, several groundwater conservation districts (GCDs), and local river authorities co-funded this project to improve the representation of faults, surface water-

groundwater interactions, and the existing model's representation of the shallow groundwater flow system. To improve fault mapping, INTERA analyzed approximately 1,200 geophysical logs to map the Mexia-Talco Fault Zone and the magnitude of offsets in the Simsboro Formation as a result of the faulting. To improve the surface water-groundwater interaction and the shallow groundwater flow zone, we added additional vertical layers to the GAM near ground surface and increased the grid refinement around several major rivers. In addition, we analyzed over 200 aquifer pumping tests to find evidence of faults and to determine aquifer hydraulic properties. We also conducted a literature review to characterize the physical and hydraulic properties of the aquifers and to develop a hydrostratigraphic model to determine relationships and potential constraints when assigning hydraulic properties to aquifers during model calibration. INTERA organized and conducted workshops with stakeholders to request information/data, discuss potential modeling approaches modeling, and provide updates on the progress of the modeling efforts. The project was completed on time and within budget.

■ Development of the GULF-2023 Groundwater Availability Model, Houston and Galveston Area, TX

INTERA Staff: John Ellis, Wade Oliver, Ryan Harmon
Timeframe: 2019 – 2023



INTERA collaborated with the USGS to develop the GULF-2023 Model—the next-generation groundwater flow and land subsidence model for the Houston region and 26-county northern Texas Gulf Coast area. The model, developed using MODFLOW 6, included the robust Skeletal Storage, Compaction, and Subsidence (CSUB) process for simulating confined and unconfined delayed compaction resulting from changes in water use. The model parameters were estimated using an Iterative Ensemble Smoother (iES) implementation of PEST software PEST++. Additionally, the calibration process employed an "uncertainty-first" analysis, where defining the uncertainty in the model inputs is just as important as defining the "best" model inputs. Monte Carlo ensemble methods were used throughout the project so the effect of revisions to the model structure, model inputs, and all other facets of the modeling process on the modeling objectives could be directly evaluated within a stochastic framework. The model was calibrated to groundwater levels, compaction, and land subsidence over the period of record. Additionally, both the rate and magnitude of temporal changes in groundwater levels, compaction, and subsidence were emphasized during calibration because matching the rate of change in these quantities is directly related to the modeling objectives. Using the increased computational efficiency of PESTPP-IES (White 2018, White and others, 2021), full non-linear parameter and predictive uncertainty analyses were performed at every stage of the model development and testing process. The entire process was captured in a scripting-driven workflow that facilitated real-time collaboration and reproducibility of the entire modeling process, aspects that ultimately led to extreme efficiency gains. The GULF-2023 Model will be used to guide future risk-based regulatory actions related to subsidence and groundwater use.

■ Development of a Groundwater Availability Model for the Rustler Aquifer, West TX

INTERA Staff: Van Kelley, Daniel Lupton, John Ewing
Timeframe: 2010 – 2012

As part of TWDB's Groundwater Availability Modeling Program, INTERA developed a GAM for the Rustler Aquifer, located in the Trans-Pecos area of west Texas and southern New Mexico. Groundwater in the Rustler occurs in partly dissolved dolomite, limestone, and gypsum, and most of the water production comes from fractures and solution openings in the upper part of the Rustler Formation. The GAM was developed using the groundwater simulation code MODFLOW-NWT. The model consists of a lower layer representing the Rustler Aquifer and an upper layer representing the overlying Dewey Lake Formation and Dockum Group. While there is a general lack of hydrogeologic property data for the Rustler Aquifer in Texas, the available data provided good evidence for significant variability in the aquifer properties resulting from structural complexity within the basin, variability in lithology, and the effects of post-depositional processes. As a result of this complexity, parameterization of the Rustler Aquifer GAM relied heavily on the conceptual models INTERA developed while trying to honor the sparse property data available. The model incorporates the available information on structure, hydrostratigraphy, hydraulic properties, streamflow, recharge, evapotranspiration, and pumping for the Rustler Aquifer. The Rustler Aquifer GAM provides a documented, publicly available, integrated tool for use by state planners, Regional Water Planning Groups (RWPGs), GCDs, GMAs, and other stakeholders in estimating modeled available groundwater, supporting the regional planning process, and assessing various proposed water management strategies on the aquifer system.

4.0 Organization, Timeline, and Budget

INTERA has assembled an outstanding group of personnel to support the construction and calibration of a model of the Cimarron River alluvium and terrace for the OWRB. This section describes the organization we will use to deliver these services, the qualifications and experience of our key personnel, INTERA's capacity to execute this work for the OWRB, and the availability of our proposed staff.

Project Management and Organization

Our Project Manager, John Ellis, will serve as the primary point of contact for the OWRB and will use all team resources necessary to complete each project task efficiently. He is the focal point of our management organization and is responsible for overseeing, planning, analyzing, and implementing all project activities. John will maintain administrative control over all tasks, ensure management control of the progress of tasks, and review all project deliverables. He is responsible for the technical quality of our work products, tracking and controlling the overall contract expenditures, project planning and scheduling, evaluating our proposed project organization team's staff resources, responding to OWRB's needs, and ensuring the timely production of specified deliverables. John will coordinate with OWRB to hold regular update meetings (generally monthly) and quarterly in-person meetings (or on key milestones).

INTERA's proposed organization for providing services to GMA 8 is shown in **Figure 4-1**. This organization includes several key personnel (Project Manager, Project Principal, Groundwater Modeling Lead, and Data Processing/ Management Lead). To ensure we provide services in a cost-effective manner, our personnel cover the complete range of experience levels—from principals and senior-level to mid- and junior-level. All INTERA's work for the OWRB will be conducted under the direct supervision of a principal engineer/scientist.

Reporting and Deliverables

At the end of the project, INTERA will deliver a report describing the groundwater model construction, calibration, and probabilistic scenarios (EPS [both scenarios], sustained drought scenario, and 50-year pumping scenario). This report will be produced in accordance with OWRB report specifications and will look similar to previous modeling reports published by the U.S. Geological Survey for the OWRB.

Additionally, a data release will be prepared for the OWRB that includes a runnable model archive, and a compilation of geospatial datasets and metadata used to construct model inputs and generate data coverages for the model area, and a readme.

Timeline

INTERA's proposed project timeline spans 18 months, beginning on 1 August 2025 and ending on 31 July 2027. INTERA will provide monthly progress update meetings with OWRB staff regarding progress towards the modeling and reporting. INTERA will also hold an in-person meeting in 2025, two in-person meetings in 2026, and one in-person meeting in 2027. Additional in-person meetings will be held at the request of the OWRB.

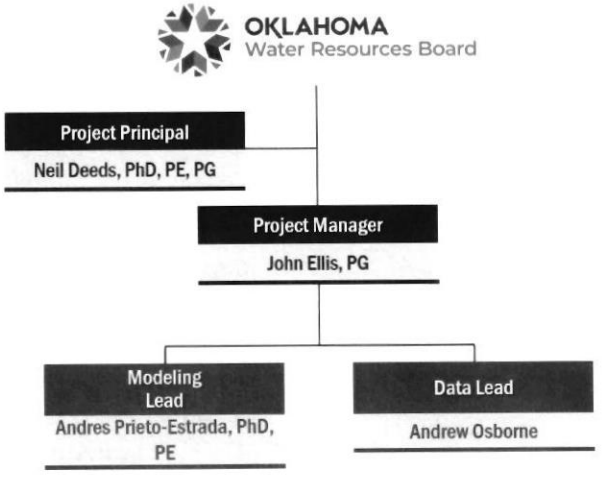


Figure 4-1. INTERA team and organizational structure.

Project Budget

INTERA's proposed budget for this project is $300,000. This budget includes all aspects described in this proposal, including the construction and calibration of the groundwater model and associated scenarios, the production of a report and preparation of the model archive, as well as meetings and travel.

John Ellis, PG – Project Manager



John Ellis is a licensed professional geoscientist with 16 years of experience in integrated groundwater modeling and uncertainty quantification, land subsidence, data analysis, water resources planning and management, distributed computing networks, and information technology. He also has a background in environmental laws and regulations, site remediation, contaminant transport, and managing teams investigating water quality. He has led several regional-scale groundwater availability modeling projects in Texas and Oklahoma to support water resource planning and aquifer management. He has extensive experience using the MODFLOW-2005, NWT, MODPATH, MT3DMS, and SWB codes and the PEST, PEST++, and PEST-IES calibration codes. He uses geographic information system software and programmatic workflows and data analysis using Python and VBA. John has more than 15 years of management experience leading multi-disciplinary teams of up to 60 staff, $25 million in assets, and annual project budgets of more than $3 million.

Years of Experience: 16

Education:

- MS, 2013, Hydrogeology, The University of Alabama
- MS, 2010, Environmental Science, Hardin-Simmons University
- BS, 2008, Geology, The University of Texas at Dallas

Professional Registrations:

- Professional Geoscientist, TX, 2022, No. 15291
- Professional Geologist, AL, 2018, No. 1381

Representative Project Experience

Northern Texas Gulf Coast Aquifer System – Groundwater Availability Model, Harris-Galveston Subsidence District, TX. 2019 – 2023. *Project Manager and Technical Lead*. Led the construction, calibration of a GAM (and ensemble) for evaluating water resources and land subsidence across a 25-county area. The report describes groundwater development, groundwater levels, recharge and groundwater flow, and subsidence trends in the area from 1897 to 2018. Multiple compaction and subsidence measurement techniques were integrated with groundwater-level data to better understand aquifer-system response to declining groundwater levels and subsequent recovery. The model was also used to estimate compaction in each aquifer with a focus on the geologic units that contain the Jasper aquifer. Groundwater flow and land-surface subsidence in the model and ensemble were simulated using MODFLOW6 with the Skeletal Storage, Compaction, and Subsidence package. The model was calibrated to groundwater levels at selected wells, land-surface subsidence at benchmarks, aquifer compaction at borehole extensometers, and vertical displacement from Global Positioning System stations. Calibration and uncertainty quantification were performed using a Monte Carlo approach enabled through iterative ensemble smoother software to produce an ensemble of models fit to historical data. The iterative ensemble smoother substantially reduced the computational demand of parameter estimation by approximating the first-order relation between model inputs and outputs, thereby allowing 183,207 adjustable parameters to be used for history matching at a relatively low computational and time cost.

Washita River Alluvial Aquifer – Groundwater Availability Model, Oklahoma Water Resources Board, OK. 2018 – 2020. *Project Manager and Modeling Lead*. Led the development of the hydrogeologic framework and assisted with the conceptual model and the construction and calibration of a groundwater model for the Salt Fork Alluvial Aquifer. The hydrogeologic framework included delineating the areal and vertical extent and estimating the distribution, texture variability, and hydraulic properties of aquifer materials. The conceptual model water budget estimated inflows to and outflows from the aquifer. Spatial recharge was estimated using a water-table fluctuation method and the soil-water-balance code based on interpolated tabular climate data at 21 stations and landscape and soil arrays. The streamflow-routing package was used to simulate seepage to and from the water table and inflow from upstream and tributaries. The Lake package was used to simulate monthly changes in Foss Reservoir storage and was linked with the Streamflow Routing package. Spatial heterogeneity was represented using "Pilot Points" and constrained using aquifer pump test data and published studies. PEST++ was used to calibrate the MODFLOW-NWT model on a distributed computing cluster built.

North Fork Alluvial Aquifer Climate Modeling, Bureau of Reclamation, OK. 2017 – 2019. *Project Manager and Modeling Lead*. Potential effects of projected climate variability on base flow and groundwater storage in the North Fork Red River aquifer were estimated using downscaled climate model data coupled with a groundwater model. To approximate future conditions, Coupled Model Intercomparison Project Phase 5 climate data were downscaled to the watershed and a time-series of scaling factors were developed and interpolated for three climate scenarios (central tendency, warmer and drier, and less warm and

wetter) representing future climate conditions for the period 2045–2074. These scaling factors were then applied to a soil-water-balance model to produce groundwater recharge and evapotranspiration estimates. A MODFLOW groundwater model of the North Fork Red River aquifer used the scaled recharge and evapotranspiration data to estimate changes in base flow and water-surface elevation of Lake Altus. Results from this study informed USBR Lake Altus reservoir action levels related to reservoir stage.

Rush Springs Aquifer – Groundwater Availability Model, Oklahoma Water Resources Board & Bureau of Reclamation, OK. 2016 – 2018. *Project Manager and Modeling Lead*. Led the development of a conceptual model and calibration of a groundwater model for the Rush Springs aquifer. The project objectives included use of the model as a model for the OWRB to evaluate water management concerns and long-term water supplies in the Fort Cobb Reservoir. The aquifer conceptualization included an analysis of the geologic unit properties, the definition of major inflow and outflow sources, and water quantity during the study period. The conceptual model budget estimated mean annual flows for recharge, lateral flow, lakebed seepage, stream seepage, evapotranspiration, and groundwater use, as well as the change in groundwater storage. Spatial recharge was estimated using a water-table fluctuation method and the soil-water-balance code based on interpolated tabular climate data at 33 stations and arrays of landscape and soil characteristics. The streamflow-routing package was used to simulate seepage to and from the water table and inflow from upstream and from tributaries. The Lake package was used to simulate monthly changes in Fort Cobb Reservoir and was linked with the Streamflow Routing package. Spatial heterogeneity was represented using "Pilot Points" and constrained using aquifer pump test data and published studies. Parameter identifiability was explored to assess the degree of parameter correlation and the ability to uniquely estimate each parameter based on the calibration dataset. A variety of projected 50-year pumping scenarios were used to simulate the effects of selected well withdrawal rates on groundwater storage of the Rush Springs aquifer. A probabilistic approach with 400 realizations was also used to assess the uncertainty in the scenario results to provide a confidence interval for regulatory decisions.

North Fork Alluvial Aquifer – Groundwater Availability Model, Oklahoma Water Resources Board, OK. 2015 – 2017. *Modeling Lead*. Co-led the development of the hydrogeologic framework and conceptual model and the construction and calibration of a groundwater model for the North Fork Red River Alluvial Aquifer. The hydrogeologic framework included the aquifer extent and potentiometric surface and the textural and hydraulic properties from the analysis of approximately 1,500 drillers' logs. Log textural terms were standardized, categorized, and converted to percentage-coarse-material values which were then used to estimate and spatially interpolate the aquifer hydraulic properties. The conceptual model budget estimated mean annual inflows and included a sub-accounting of flows for the aquifer near Lake Altus. The MODFLOW-NWT model was calibrated to monthly water levels at selected wells, base flow at streamgages, streambed seepage, and Lake Altus stage for 1980–2013. The streamflow-routing package was used to simulate seepage to and from the water table and inflow from upstream and from tributaries. The Lake package was used to simulate monthly changes in Lake Altus storage and was linked with the SFR package. Recharge and conductivities were made spatially heterogeneous using "Pilot Points." Groundwater-availability scenarios were run to estimate the pumping rate for a minimum 20-, 40-, and 50-year aquifer lifespan, quantified the effects of projected withdrawals on storage, and simulated the potential effects of a drought on base flow and storage.

Canadian River Alluvial Aquifer – Groundwater Availability Model, Oklahoma Water Resources Board, OK. 2014 – 2016. *Modeling Lead.* Led the development of the hydrogeologic framework and conceptual model, and the construction and calibration of a Groundwater Availability Model for the Canadian River Alluvial Aquifer for 1981–2013. The hydrogeologic framework included delineating the areal and vertical extent and estimating the distribution, texture variability, and hydraulic properties of aquifer materials. Approximately 1,400 logs were used to characterize the aquifer alluvial and terrace deposits. The conceptual model water budget estimated inflows to and outflows from the aquifer. Spatial recharge was estimated using a water-table fluctuation method and the soil-water-balance code based on interpolated tabular climate data at 39 stations and arrays of landscape and soil characteristics. The streamflow-routing package was used to simulate seepage to and from the water table and inflow from upstream and from tributaries. Spatial heterogeneity was represented using "Pilot Points" and constrained using aquifer pump test data and published studies.

Neil Deeds, PhD, PE, PG – Project Principal



Neil Deeds has 26 years of research and applied experience in modeling and analysis of hydrologic systems, including water availability, flow, and transport. Dr. Deeds has been involved in more than 50 modeling projects and has taken a project management and/or technical lead role in many water resources modeling studies, including groundwater models of aquifers throughout Texas. He has served as a technical manager or technical lead in quantifying processes such as recharge, hydraulic conductivity, and surface water/groundwater interaction in support of regional and sub-regional groundwater modeling projects. Neil has been the technical lead in data management and organization and has developed data models for several water resources projects. Neil has 16 years of experience in preparing communication materials and interacting with agencies and interested stakeholders in Texas, including the OWRB, Lower Colorado River Authority, regional water planning groups and GCDs.

Years of Experience: 26

Education:

- PhD, 1999, Civil Engineering, University of Texas
- MS, 1997, Civil Engineering, University of Texas
- BS, 1994, Environmental Engineering, University of Oklahoma

Professional Registrations:

- Professional Engineer, Texas, 2003, No. 92741
- Professional Geoscientist, TX, 2021, No. 15238

Specialized Training & Software:

- PEST++ and PyEMU, Training by Jeremy White, 2021.

Representative Project Experience

Hydrogeologic Consulting for Central Texas GCD, Burnet County TX. 2021 – Present. *Hydrogeologist and Groundwater Modeler.* Acting as consulting hydrogeologist for Central Texas Groundwater Conservation District (CTGCD). Activities to date have included providing reviews of water availability studies associated with subdivision plats (with proposed private wells on every lot). This included writing a memo suggesting best practices for performing the impact modeling in these studies. INTERA has also developed and performed a new modeled available groundwater simulation for the Llano-Uplift Aquifer System, in response to a request by CTGCD regarding several stakeholder comments. Finally, INTERA has provided reviews and analysis of water balances from an aggregate mine to help assess whether the mine is using more groundwater than they are permitted.

Region K Planning 2026 Cycle, Texas Water Development Board, TX. 2022 – Present. *Project Manager.* Leading development of the Region K (Lower Colorado Regional Water Planning Area) portion of the Texas state water plan. Texas' five-year planning cycle includes evaluation of water demand, supplies and needs for the next 50 years, and development of Water Management Strategies to meet the unmet needs of each region. Initially prepared plans are due in March 2025 and the final Regional Water Plans will be submitted in October 2025.

Groundwater Joint Planning Technical Assistance, Groundwater Management Area 10, TX. 2014 – 2016. *Hydrogeologist*. Teamed with another contractor to provide technical support and policy guidance to the GCDs in GMA 10. Includes development of the GMA explanatory report required as part of the planning process. Specifically tasked with the brackish Edwards Aquifer and the Trinity Aquifer, evaluating the nine factors that are considered in the explanatory report, including hydrogeologic conditions, environmental impacts, etc.

Design and Permitting of an Industrial Supply Well, City of Temple, Temple, TX. 2022 – Present. *Project Manager and Lead Hydrogeologist*. Providing hydrogeologic and engineering services associated with at 2,000 foot deep industrial water supply well that is to be completed in the lower Trinity (Hosston) Aquifer in east Temple. Activities included estimating the depth and probable yield of the well as well as the static water levels and water quality. Currently applying for the well permit with Clearwater Underground Water Conservation District. Ongoing activities will include serving as owner's representative during the construction and testing of the well.

Region O Planning 2021 and 2026 Cycles, Texas Water Development Board, TX. 2015 – Present. *Water Resources Engineer.* Supporting teammate HDR in developing the Region O plan for 2021. Analyzed the potential of modeled available groundwater (MAG) peaking factors for increasing availability of groundwater in the region. Evaluated potentially feasible groundwater management strategies, particularly for smaller cities with wellfields. Including estimating well and wellfield yields for existing infrastructure and development of cost estimates for additional groundwater supplies. Continuing to support HDR on ongoing Region O planning tasks

Andres Prieto-Estrada, PhD, PE – Modeling Lead



Andres Prieto has over five years of experience in developing groundwater flow and solute transport models to evaluate environmental restoration and groundwater remediation strategies. He has integrated site characterization and monitoring data with quantitative models to predict groundwater quality restoration timeframes considering site-specific uncertainties and constraints. His experience includes simulating mass transfer of non-aqueous phase liquids into groundwater, coupled with modeling of engineered and natural attenuation mechanisms at multiple scales. Andres has presented research and development (R&D) results at numerous scientific and engineering conferences, published peer-reviewed articles, and contributed to the completion of R&D projects funded by the South Florida Management District and by the U.S. Department of Defense. His experience in consulting and regulatory sectors includes development of conceptual site models, automation of environmental data processing, monitoring of remediation systems, subcontractor oversight, development of work plans and reports for clients in the mining, oil & gas, and other industrial sectors.

Years of Experience: 9

Education:

- PhD, 2023, Civil Engineering, Virginia Tech
- MS, 2016, Geosciences, Florida International University
- BS, 2013, Geological Engineering, Universidad de Los Andes

Professional Registrations:

- Professional Engineer, Texas, 2024, No. 152195

Specialized Training & Software:

- PEST++ IES and PyEMU, Training by Jeremy White, 2023.

Representative Project Experience

Update of the Northern Trinity Aquifer Groundwater Availability Model, Multiple Groundwater Conservation Districts, North Central Texas. 2023 to present. *Modeler and Hydrogeologist*. Supporting translation of the model to the latest MODFLOW 6 version, including modification of parameters using a variety of data collected between 2012 and 2020, and recalibration of the model. Converted NTGAM from MODFLOW-NWT to MODFLOW 6 using a combination of existing modeling tools, and some specifically designed to verify the accuracy of the conversion. Designed a number of programmatic tools and methods to select, process, and visualize datasets to inform the conceptual and numerical model modification. This included processing and analysis of aquifer pressure heads, well-completion and historical water-level trends, river and surface-water gauging, and elimination of data noise. Responsibilities have also included calibrating the Northern Trinity Aquifer Groundwater Availability Model using parameter estimation algorithms, thereby updating aquifer hydraulic properties and sources and sinks of water fluxes. This ongoing effort is aimed at quantifying basin-scale, groundwater availability in an area encompassing the Dallas-Fort Worth metropolitan area.

Analysis of Mine Dewatering Rates and Environmental Impact Assessment, Cordoba Minerals, Columbia. 2023. *Modeler*. Conducted hydrogeologic and geochemical analyses, and an environmental impact assessment to develop a 20,000-ha copper-gold-silver mine in the Department of Cordoba, Colombia. Responsibilities included reviewing and analyzing a numerical model of groundwater flow developed by a subcontractor, to verify the suitability of the model to calculate groundwater infiltration rates at the mine pit and better understand hydrologic and water quality impacts on adjacent surface-water bodies. Designed programmatic scripts to analyze the model properties and the representation of physical processes, including hydraulic properties, layering design, and boundary conditions. Discovered inadequate model convergence settings and recommended a modification of the solver parameters to improve numerical stability. Also, found mine dewatering rates to be biased because of an inadequate pit representation in the model. To mitigate this, re-designed the temporal evolution of the pit excavation by representing the engineering plans with an appropriate drain boundary condition. This nearly doubled the initial calculations of pit dewatering rates, from 140 L/s to 300 L/s after 14 years of mining. Also proposed an expansion of the model area to better assess impacts on water quality and hydraulic interactions with an adjacent river.

Andrew Osborne – Data Lead



Andrew Osborne graduated with an MS in Geological Sciences from the University of South Carolina in 2021 where he studied groundwater discharge from continental shelves and its impact on global ocean chemistry. Andrew works in INTERA's Water Resources Line of Business as a hydrogeologist. He works with Texas groundwater management entities, uses and aids in the development of regional groundwater models, and specializes in geospatial and water planning data analytics. He has experience with various versions of MODFLOW, including MODFLOW6, and uses Python-based pre-and post-processing modeling tools such as Flopy and Pyemu. He also excels at developing report-quality figures using ArcGIS and Adobe Illustrator.

Years of Experience: 4

Education:

- MS, 2021, Geology, University of South Carolina
- BS, 2019, Geology, Louisiana State University

Specialized Training & Software:

- Python, MODFLOW, ArcGIS

Representative Project Experience

Northern Trinity and Woodbine Aquifers Groundwater Availability Model 10-Year Update, TX. 2023 – Present. *Hydrogeologist*. Assisted in the 10-year update of the Northern Trinity and Woodbine Aquifer GAM. Managed the collection and organization of all new model input data and assisted in the development of the water use and water levels datasets.

Well Inventory Analysis, Barton Springs/Edwards Aquifer Conservation District, TX. 2023. *Hydrogeologist*. Developed a programmatic approach to reconciling differences and identifying duplicate wells between several of the District's well databases.

Technical Support, Post Oak Savannah Groundwater Conservation District, TX. 2023 – 2024. *Hydrogeologist*. Performed various tasks using the Central Carrizo-Wilcox GAM including water use scenario evaluations and simulated pumping tests. Analyzed model results to generate numerous figures and tables of pumping impacts for several different water use scenarios.

Modeling Support, Lower Colorado River Authority, TX. 2023 – 2024. *Hydrogeologist*. Used the Central Carrizo-Wilcox GAM to perform simulations of several water use scenarios to document expected water level impacts to wells nearby a proposed drilling and production permit.

Managed Aquifer Recharge Study for Rolling Plains Groundwater Conservation District, TX. 2023. *Hydrogeologist*. Assisted in developing a strategy for managed aquifer recharge (MAR) in Rolling Plains GCD. Synthesized geospatial data including land cover, precipitation, and elevation measurements to develop a system for ranking certain regions in the District based on their ability to host a MAR site.

Groundwater Model, Southwestern Travis County Groundwater Conservation District, Travis and Hayes Counties, TX. 2022 – 2023. *Modeler*. Developed a numerical model to assist Southwestern Travis County GCD, as well as Hayes County GCD, in evaluating permit for several proposed pumping wells and their potential impact on nearby production wells and watersheds.

Modeling, City of Bryan, TX. 2022 – 2024. *Hydrogeologist*. Used the Central Carrizo-Wilcox GAM and developed a robust programmatic approach to analytic element modeling using TTim to assess the potential impacts of regional pumping on the City's wells in the Simsboro Aquifer.



INTERA

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STATEMENT OF QUALIFICATIONS

Professional Services Related to Development of a Groundwater Model for the Cimarron River alluvium and terrace aquifer, Northwestern Oklahoma



Prepared for



OKLAHOMA
Water Resources Board

INTERA

June 30th, 2025

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1.0 Introduction

Groundwater in 1,305 mi^2 of Quaternary alluvial and terrace deposits along the Cimarron River in northwestern Oklahoma (**figure 1-1**) is used extensively for irrigation, municipal, stock, and domestic supplies. The Cimarron River alluvium and terrace aquifer serves as a major source of groundwater in Alfalfa, Major, Woods, and Kingfisher counties and is the primary source of water for the City of Enid.

According to the 2012 Oklahoma Comprehensive Water Plan (Oklahoma Water Resources Board, 2012), the Cimarron River alluvium and terrace aquifer primarily resides in the Central Watershed Planning Region (Basin 64) of Oklahoma, which is projected to have a 32 percent increase in total water demand by the year 2060 relative to 2010 demand. Active groundwater permits within the study area have increased by more than 55 percent since 1996, with an average increase of 10 permits per year. To ensure sufficient water will be available to support growing water demands, planning and management of the water resources of the Cimarron River alluvium and terrace aquifer is essential. Successful groundwater management requires an understanding of the hydrology of groundwater and surface water and the potential effects of groundwater withdrawals on the aquifer system.

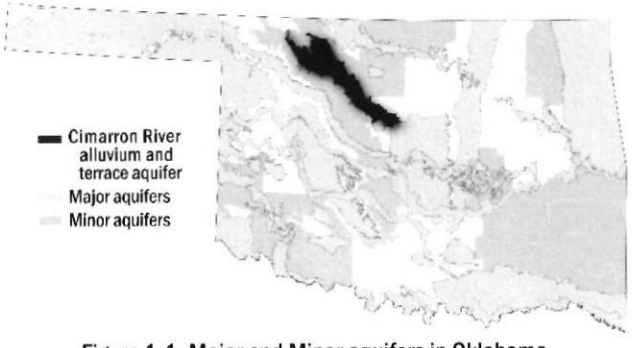


Figure 1-1. Major and Minor aquifers in Oklahoma.

Construction and calibration of a model for the Cimarron River alluvium and terrace was last completed in the mid-1990s, documented in Adams and others (1996). The groundwater model was constructed from water level data from Adams and others (1994) and geology and hydrogeology from several reports. This model was used to test the conceptual model of the Cimarron River alluvium and terrace aquifer and could be used to test the potential effects of projected groundwater withdrawals on aquifer storage.

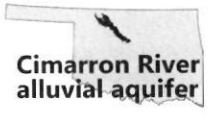
Oklahoma groundwater law (82 OK Stat §82-1020.5) requires the Oklahoma Water Resources Board (OWRB) to conduct hydrologic surveys and investigations of the state's aquifers to determine the maximum annual yield (MAY) and equal proportionate share (EPS) of each groundwater basin. Prior to the OWRB determination of the MAY, a hydrologic investigation is needed to obtain data and information related to the geology, hydrogeologic framework, and hydrogeology of an aquifer. An investigation for the Cimarron River alluvium and terrace aquifer is currently in the final stages of completion by the OWRB (Le Pera and others, *in press*). This investigation describes the climate, geology, hydrogeology, hydraulic properties, water use, streamflow, base flow, and groundwater quality of the aquifer and would be used as the basis for constructing and calibrating a groundwater model.

In keeping with Oklahoma Water Law, and to help implement the Oklahoma Comprehensive Water Plan, the OWRB has requested the services of INTERA Incorporated (INTERA) to construct and calibrate a groundwater model to assist with determining the EPS and MAY for the Cimarron River alluvium and terrace aquifer and to evaluate the effects of projected groundwater withdrawals on aquifer storage and streamflow. The OWRB can use information gained from the study to evaluate the allocation of water rights and to manage water resources in the watershed. Additionally, other topics important to this study may include the following items:

- Are there changes during the last 50 years in land use, water use, streamflow, precipitation, water levels, or saturated thickness that could affect water resources?
- How do projected groundwater withdrawals from the alluvial aquifer affect aquifer storage and streamflow in the Cimarron River?
- How does the increasing number of permits in this aquifer affect the long-term viability of the aquifer system?

INTERA is pleased to provide this proposal for modeling services. INTERA offers the OWRB several key assets that will enable us to provide the highest-quality technical services and products and to do so cost-effectively in accordance with OWRB schedule requirements. These assets are introduced below and described throughout this document.

- **Track Record of Modeling in Oklahoma.** INTERA's designated Project Manager, John Ellis, brings an understanding of Oklahoma hydrogeology and 16 years of project management and groundwater modeling experience. John was the Project Manager for the Rush Springs aquifer and Salt Fork Red River alluvial aquifer modeling projects. He has led the development of the hydrogeologic framework and construction and calibration of four groundwater models for the OWRB, including the Canadian River alluvial aquifer, North Fork Red River alluvial aquifer (with Jerrod Smith), Rush Springs aquifer, and Washita Reach 1 alluvial aquifer.

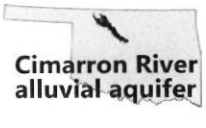


- **Continuous Product Improvement.** In each modeling project, John focused on improving the quality of the modeling and reporting compared to prior efforts from the U.S. Geological Survey (USGS).
  - The Canadian River alluvial aquifer model was the first model constructed for the OWRB to use automated model calibration techniques (PEST [Parameter ESTimation] software) to improve the accuracy of the model forecasts when running the drought, EPS, and 50-year projected groundwater-use scenarios.
  - The North Fork Red River alluvial aquifer report included substantially more in-text analysis and revamped modeling-section figures describing changes in aquifer conditions (and lake storage) through time at a monthly scale.
  - The Rush Spring aquifer report furthered the emphasis on better-developed written analysis and higher-quality figures. Additionally, this model was the first use of (1) geostatistically interpolated parameter values (pilot points) to improve the distribution and heterogeneity of the model parameters and (2) an ensemble-based approach for an OWRB model in Oklahoma to assess the uncertainty in the EPS scenario results.
- **Knowledge of OWRB needs and requirements.** Having worked closely with the OWRB for years, John understands the project's needs and requirements. Each prior project with the OWRB was completed with the attention to detail and methods required for the OWRB to use the models to proceed through the planning process, leading to the public hearing and final order under Oklahoma groundwater law (82 OK Stat §82-1020.5). Therefore, John and his team can seamlessly begin work on the Cimarron project.
- **Experience in Successfully Completing Similar Projects.** While in Oklahoma, John assisted with the development of the Cimarron River alluvial aquifer hydrogeologic framework for the Pawnee National Tribal Jurisdictional Area. INTERA led the development of an updated groundwater model for the Choctaw and Chickasaw Nations to evaluate the impact of pumping in Texas and the potential for the Antlers Aquifer to serve as a primary water supply source in southeastern Oklahoma. INTERA has also led the development of 13 groundwater models in Texas under the Texas Water Development Board's (TWDB) Groundwater Availability Modeling (GAM) Program to serve as tools for joint planning efforts. These models, which include both alluvial and bedrock aquifers, span a large range of geologic and hydrogeologic conditions and have been used many times during the water planning process. Additional information on these similar models is provided in Section 3.0.
- **Reputation for On-Time and On-Budget Project Delivery.** There is a reason why TWDB has selected INTERA to develop more Texas aquifer models than any other firm—we produce superior products delivered on time and within project budgets. Our experience in developing and updating models in accordance with agreed-upon schedules and budgets means we offer OWRB negligible performance risk.
- **An Outstanding Team of Management and Technical Personnel.** Our project team will consist of four INTERA staff. INTERA's work will be led by John Ellis, PG—a Principal Hydrogeologist at INTERA with 16 years of experience managing a wide range of modeling and water resource projects throughout Texas, Oklahoma, and California. Prior to joining INTERA, John was a Hydrologic Studies Chief, Project Manager, and Hydrogeologist with the USGS, where he led the development of five groundwater models. John will serve as the point of contact for the scope of services development. The project team also includes water resource experts Neil Deeds, PhD, PG, PE, who will serve as the Project Principal; Andres Prieto-Estrada, PhD, PE, who will serve as the Modeling Lead; and Andrew Osborne, who will serve as the Data Management Lead.

A summary of INTERA's qualifications and experience is provided below.

INTERA

Originally established in 1974 as a technology-based consulting firm specializing in hydrogeologic modeling, INTERA is a Texas corporation headquartered in Austin. Our staff comprises 240 professional and support personnel (76 in Texas) specializing in hydrogeology, hydrology, water resources engineering, geosystems engineering, environmental science and engineering, numerical modeling and uncertainty analysis, and remote sensing and geographic information systems (GIS) technology. Our staff includes 15 registered Professional Engineers and 26 Registered Professional Geoscientists. In addition, many of our geoscientists are nationally licensed as Certified Ground Water Professionals (CGWP) by the National Ground Water Association. Our Water Resources Group has played an integral role in developing groundwater models and performing hydrogeologic studies and analyses in support of aquifer sustainability.



2.0 Technical Approach

The guiding principle for the technical approach is to produce a groundwater model that is both defensible and straightforward for OWRB staff and stakeholders to use for groundwater planning. While the techniques we propose for construction and calibration are advanced, the final product reflects our commitment to defensibility and simplicity. Our goal is to use statistically rigorous techniques to construct a groundwater model that can be enhanced over time as more data becomes available.

2.A Model Design

Conceptual Model and Uncertainty Framework

The proposed model will be based on information and datasets from a 2025 conceptual model report (Le Pera and others, *in press*). Given the intended role of the Cimarron River alluvium and terrace aquifer model as a decision-support tool for regional water management, it is essential to estimate the reliability of important simulated model outputs, such as forecasts of future water quantity and baseflow. Uncertainty in these forecasts is a result of model-structure uncertainty, such as simplifications of the modeled natural system, spatial and temporal discretization, and uncertainty in the hydraulic parameter value estimates. Representing these sources of uncertainty can be accomplished using a probabilistic or "stochastic" modeling workflow (**Figure 2-1**), where the focus is on generating multiple sets of model inputs (or an "ensemble"). When combined with the selection of a single model from this ensemble, the stochastic workflow can be used to identify and explore "non-uniqueness" and its effect on important simulated outputs (Moore and Doherty, 2005), while the single model can be used as the groundwater model of record for the OWRB.

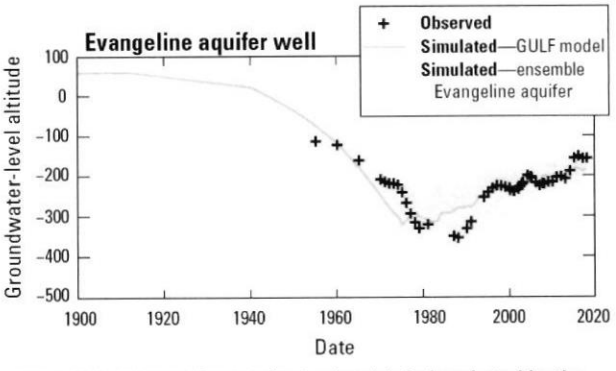


Figure 2-1. Observed groundwater-level data bracketed by the GULF model and ensemble simulated data.

INTERA brings experience applying rapid and reproducible modeling workflows, most recently with the GULF-2023 (Ellis and others, 2023) in the Gulf Coast of Texas. These workflows are built on a foundation of scripting and open-source software tools to transparently and openly document the numerous decisions and assumptions made during the modeling workflow. Furthermore, the use of scripting to encode the myriad decisions and assumptions allows efficient and objective evaluation of these decisions and assumptions through experimentation. The scripting-driven workflow brings significant advancements to improve efficiency, transparency, and quality to all facets of the modeling process. We propose using this approach in parameter estimation as well as in model construction.

The uncertainty analysis applies not only to the calibration process but also to model predictions. By exploring model predictions during the process of incremental improvement during construction and calibration, an understanding of how the model can be constructed and calibrated is gained to best reduce uncertainty in the specific predictions of drawdown, changes in spring/streamflow, or other future conditions and model objectives. Without this intentionality during model construction, there will be no direct correspondence between a model that fits historical measurements and a model that is an optimal predictive tool for resource management (White and others, 2014). Therefore, it is important that the model and subsequent calibration process are designed and undertaken to yield a modeling tool that functions as an optimal predictive tool. Section 2.C Model Calibration contains additional information on this approach.

Groundwater Model Code

The use of MODFLOW 6 (Langevin and others, 2017) is proposed for the Cimarron River alluvium and terrace aquifer model due to its status as the latest core version of MODFLOW released by the USGS. MODFLOW 6 has been in use for several years, is in active development, and has robust support from the widely used FloPy Python package (Bakker and others, 2016) which enhances its utility for automating workflows and integrating with other tools.

MODFLOW 6 offers several features that set it apart from previous releases. One of the most significant advancements is its flexible grid system, which supports both structured and unstructured grids. This grid system allows modelers to better capture complex geological features and refine grids in areas of interest, improving accuracy and efficiency. Furthermore, MODFLOW 6's ability to seamlessly integrate other models, such as groundwater-surface water interaction, enhances its versatility for addressing multifaceted hydrogeologic problems. Additionally, the advanced Newton-Raphson solver in MODFLOW 6 is designed to handle nonlinearities more effectively, leading to improved performance in complex simulations, particularly in highly dynamic systems such as alluvium and terrace aquifers like the Cimarron.

Model Layering, Discretization, and Properties

The 1,305 mi^2 Cimarron River alluvium and terrace aquifer consists primarily of Quaternary-age alluvium and terrace deposits of the Cimarron River and associated tributaries. The Quaternary-age deposits unconformably overly Permian-age bedrock (Le Pera and others, 2023). The previously developed conceptual model (Le Pera and others, 2023) grouped the aquifer hydro-stratigraphic units into two conceptual model layers (**Figures 2-2** and **2-3**).

- Layer 1 will represent the unconsolidated Quaternary-age alluvium and terrace deposits (and the aeolian deposits) that overlie the Permian-age bedrock. These are the primary water-bearing units in the model. The thickness of these sediments ranges from less than 5 feet to over 100 feet. The saturated thickness is similar, ranging from less than 5 feet to 103 feet, where thicker areas of the aquifer contain a greater saturated thickness. The high terrace areas along the northern edge of the aquifer boundary where little saturated thickness is present (<5 feet) will be discussed with the OWRB to determine if these areas warrant inclusion in the model.



Figure 2-2. Proposed layer 1 for the Cimarron River alluvium and terrace model.

- Layer 2 will represent the generally north-northwest striking Permian-age bedrock units directly underlying the alluvium and terrace, similar to most other alluvium and terrace aquifers modeled for the OWRB. These units (Dog Creek Shale, Blaine Formation, Flowerpot Shale, Chickasha Formation, Duncan Formation, Cedar Hills Sandstone, Hennessey Formation, and Garber Sandstone) are composed of generally low conductivity sandstone, siltstone, and shale. These units occur adjacent to and sub-crop the primary-water bearing units in the model.

The conceptual model layer surfaces can be fit to a structured model grid that is proposed with a cell size of 300-foot x 300-foot without rotation. This cell size results in 416,956 active model cells in each layer. The proposed cell size allows a more optimal discretization of any heterogeneities in the aquifer and more accurate estimation of surface water-groundwater interactions. Based on the available aquifer test data and hydrographs, each layer will be simulated as convertible, whereby the transmissivity varies based on saturated thickness and the intrinsic hydraulic conductivity of the sediments.

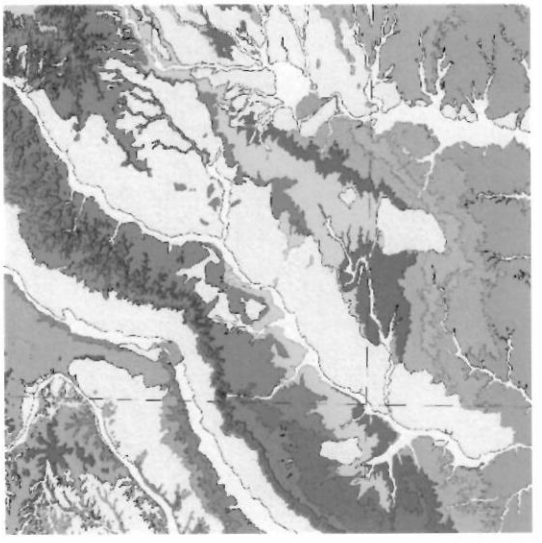


Figure 2-3. Geologic units in layer 2 for the Cimarron River alluvium and terrace model. Note that only the part of the units directly underlying the alluvium and terrace would be included in the layer 2 extent.

A transient period is proposed for 1974–2023 when most groundwater-level measurements are available (see the Groundwater-Level Observations section). Only 13 groundwater-level measurements are available prior to 1974 and were taken during a period of drought in the 1950s. The soil-water-balance derived recharge from Le Pera and others (*in press*) estimates recharge for the period 1980–2020; therefore, the SWB period would be extended and re-run for the years 1974–1979 and 2021–2023.

To avoid the complication of modeling the steady-state period when the earliest water level measurements are available (1950s drought conditions), a quasi-steady state transient period is proposed, whereby this stress period would use the average of water-level measurements in each well during 1974–2023. The average of recharge, GHB (if used), evapotranspiration, and streamflow-routing baseflow inputs during the transient period would also be used for the steady-state period.

The available groundwater-level measurements support annual stress periods; however, nearly all previously alluvium and terrace models for the OWRB use monthly stress periods. If monthly stress periods are desired, all wells with available bi-annual or greater measurements, combined with the seven continuous wells, can be used to prepare a generalized monthly dataset that can be used for calibration.

2.B Model Extent and Boundaries

INTERA will use the extent of the Cimarron River alluvium and terrace aquifer described in the conceptual model report (Le Pera and others, *in press*) for the active area of the model. However, the INTERA team will evaluate the extent of the active area in the conceptual report where the saturated thickness is less than five feet—generally the minimum cell thickness suggested for this model. INTERA will coordinate with OWRB to discuss any changes to the model extent. The model boundary may be expanded or condensed in some areas to ensure that each active cell connects with at least one other active cell.

Hydrologic boundaries in the groundwater model represent the locations where the inflow or outflow of water may occur. Based on the 2016 potentiometric surface map in Le Pera and others (*in press*), whereby the contours are generally parallel with the boundary in some areas, a low-rate General-Head-Boundary (GHB) may be appropriate along the northern edge of the terrace area. In these areas, the terrace is assumed to exchange lateral flow with the surrounding Permian-age bedrock units. Along the southern boundary, we propose a no-flow boundary or a low-rate GHB. In general, net lateral groundwater flows exchanged with the surrounding Permian bedrock units (predominantly tight units with relatively low hydraulic conductivity) are assumed to be a negligible part of the conceptual-model water budget of the Cimarron River alluvium and terrace aquifer. No estimates of the flow between the Permian bedrock and the aquifer were available in published reports.

The aquifer base characterized by Le Pera and others (*in press*) will be used for the bottom of layer 1. Reasonable well control was available for the characterization of the base; therefore, the interpolated surface can likely be gridded to the 300-foot x 300-foot proposed model cell size without modification. Layer 2 is proposed to be assigned an arbitrary and uniform thickness of 100 ft, following convention in several previous alluvium and terrace models (Ellis and others, 2017; 2020; Smith and others, 2017).

The aquifer top altitude will be based on a 10-meter digital elevation map. The top of layer 1 may be multiplied by 1.001 in the groundwater model to prevent confined aquifer conditions that occur when the simulated water-table altitude exceeds the aquifer top altitude.

Recharge

Recharge in the Cimarron River alluvium and terrace aquifer was estimated using three methods in Le Pera and others (*in press*): the Water Table Fluctuation method, the water budget equation, and the SWB model. The average recharge calculated by these methods was 3.6 in/year, 3.36 in/year, and 3.26 in/year, respectively, with all producing comparable results. Given the consistency across these methods, and the use of the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) database (**Figure 2-4**), the SWB-derived aerially distributed recharge will be applied to the model active area using the recharge package. Using the SWB-derived recharge is advantageous given its ability to spatially and temporally distribute recharge across the entire model domain as well as its frequent use in many other models provided to the OWRB. The 328-foot x 328-foot SWB grid cell size is advantageous to use, given the similarity to the proposed model grid size of 300-foot x 300-foot. Estimates from the water-table fluctuation (WTF) method and the water budget equation will also be used to constrain the recharge estimation.

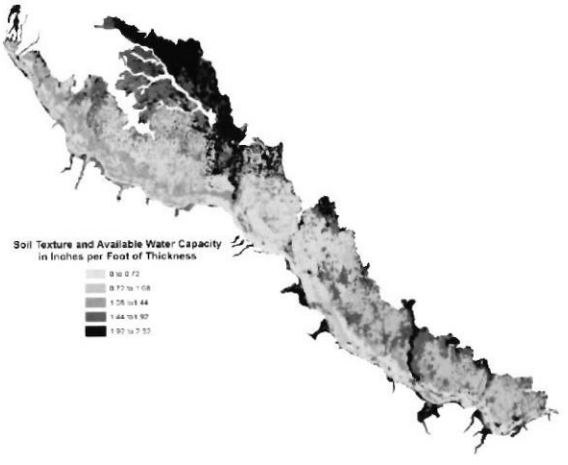


Figure 2-4. Soil available water capacity from the NRCS SSURGO dataset.

Natural Discharge and Surface Water Features

The major surface water features and surface water boundaries (HUC11) within the Cimarron River alluvial and terrace aquifer are shown in **Figure 2-5**. To simulate the rivers and streams the Streamflow Routing (SFR) package is proposed, following the convention from many previous alluvium and terrace aquifer models prepared for the OWRB. The SFR package exchanges flow between the aquifer and the stream according to Darcy's Law (Darcy, 1856); the flow exchanged between the aquifer and the stream is the product of the streambed conductance and the difference between the water-table altitude and the stream stage. Simulated base flows are calculated for each part of the stream contained in a model cell, known as reaches, until the end of a segment, or group of cells with uniform or linear hydraulic properties, is reached during each time step. Computation of flows repeats in a downstream direction until flows are routed out of the numerical model active area.

Evapotranspiration (ET) will be simulated using the Evapotranspiration package for cells near the stream reaches (**Figure 2-5**). In this package, evapotranspiration decreases linearly with decreases in the simulated groundwater level, and no evapotranspiration occurs when the simulated groundwater level is below a user-specified root-zone depth.

As has been implemented in previous alluvium and terrace models for the OWRB, the maximum water-table ET rate for each stress period will be set as the difference between the potential and actual ET computed from the SWB code. This provides an approximation for ET given that the SWB code only considers ET from vegetation based on the soil moisture available. The root-zone depth for each active ET cell will be set equal to the SWB root-zone depth for each land-cover type. Evapotranspiration will either be applied to cells in the riparian areas immediately around the stream channel or by using data from the National Wetlands Inventory (U.S. Fish and Wildlife Service, 2023) depending on which approach is optimal.

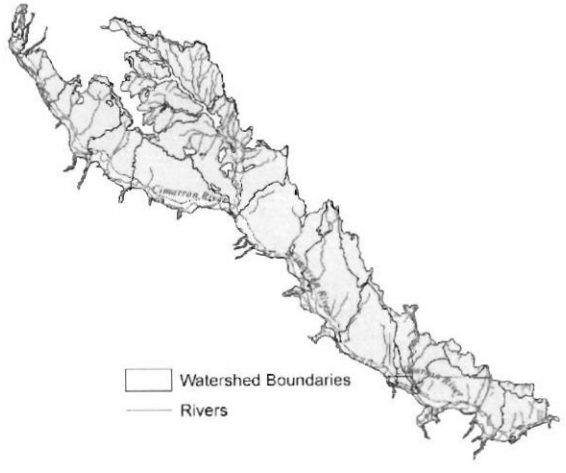


Figure 2-5. Major surface water features and boundaries.

Groundwater Pumping

Groundwater pumping estimates for the Cimarron River alluvial and terrace aquifer are presented in the conceptual model report from 1967 to 2020 and shown in map view on **Figure 2-6**. Irrigation is the largest water use within the model domain making up 65 percent of total water use followed by public supply making up 31 percent of total water use in the period of record (Le Pera and others, 2023). Groundwater pumping from 1967 to 2020 ranged from approximately 17,620 acre-feet/year to a maximum of 61,147 acre-feet/year.

Groundwater pumping data will be obtained from the OWRB. Annual reported groundwater use for each permit will be divided equally among each of the permit. These annual well withdrawals will then be distributed into monthly well withdrawals (if using monthly stress periods) using monthly demand distributions from the Oklahoma Comprehensive Water Plan. Annual irrigation withdrawals will be multiplied by the monthly irrigation demand (as a percentage of annual groundwater use), and annual public-supply well withdrawals will be multiplied by the monthly public-supply demand. Domestic withdrawals, which are not regulated or reported by the OWRB, may not be simulated depending on data available for estimation, but are likely a minor component of total use.

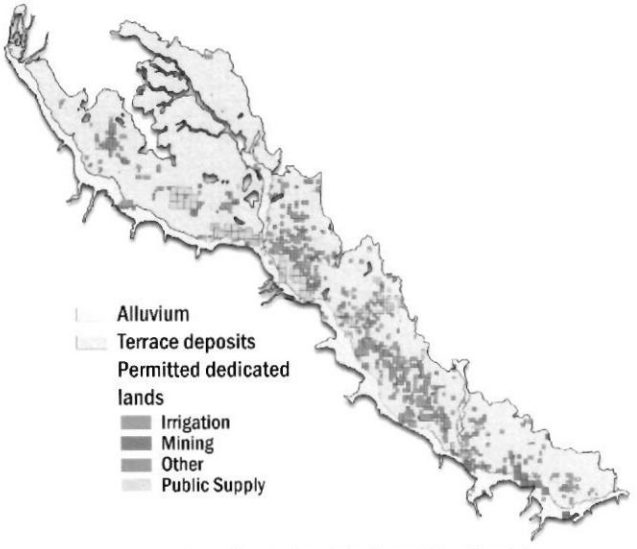


Figure 2-6. Location of permitted dedicated lands with groundwater use.

2.C Model Calibration

The process of model calibration conceptually is the process of assimilating and integrating information stored as historical observations. For the Cimarron River alluvium and terrace aquifer, these observations will be water levels and base flow estimates from streamflow data. The information is transferred into the parameters by assimilating the water level and streamflow observations, where parameters are quantities representing model input uncertainty.

Model calibration and uncertainty quantification are proposed to be performed by using the iterative ensemble smoother PESTPP-IES (White, 2018), included in the PEST++ software suite (Welter and others, 2015; White and others, 2020a), in conjunction with the open-source Python packages FloPy (Bakker and others, 2016) and pyEMU (White and others, 2016a, b). The combination of these software tools allows much of the calibration and uncertainty quantification workflow to be performed programmatically, providing transparency and reproducibility. The calibration approach proposed in this study incorporates an ensemble-based approach that avoids the implications of a traditional "calibrated" model having arrived at a finalized dataset of exactly known parameter values when there are many potential parameter value datasets that could be used (Doherty and Simmons, 2013). In this way, the approach focuses on assimilating the aspects of the historical observation dataset relevant to the simulated modeling objectives.

Groundwater-Level Observations

A total of 259 wells with 34,786 groundwater-level observations are available from the OWRB for the proposed model period 1974–2023. Approximately half (124 of the 259 wells) have only one or two water-level measurements; therefore, uncertainty exists in some areas of the model

where these wells contain the only groundwater-level measurements (**Figure 2-7**), particularly in the central areas of the model. In areas where few observations are available, synthetic observations may be used to constrain the model calibration. These synthetic observations would be based on water levels from nearby wells during similar periods.

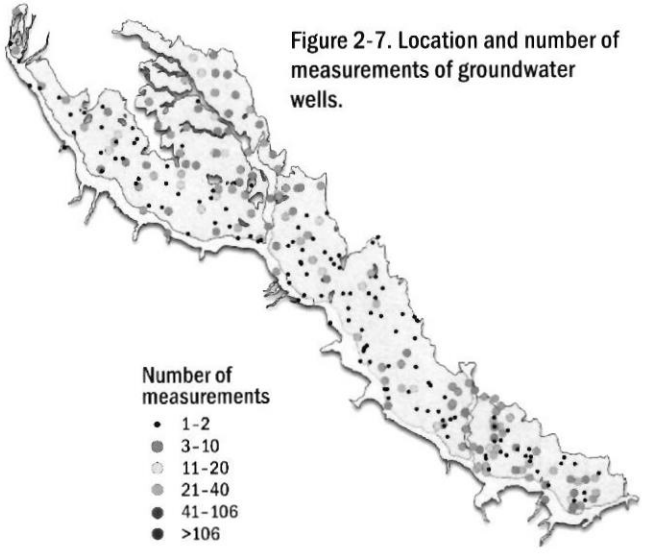


Figure 2-7. Location and number of measurements of groundwater wells.

All wells are completed in either the alluvium or terrace based on the well total depth (see **Table 2-1**). Seven continuous wells (with three wells excluded per Le Pera and others, *in press*) provide hourly water level data at sites that are generally spatially distributed across the model active area.

An initial observation filtering process will be performed, followed by a spatial and temporal observation declustering process to ensure disparate groundwater levels do not occur in an area with spatially dense observations. Target observations will then be created from observation values nearest the end of each stress period. These observations will be weighted, whereby an importance factor is assigned to different aspects of the historic observation dataset. Due to the relatively small number of wells, a dynamic weighting process will be used to ensure success during the calibration process. The water level will be monitored at synthetic sites in layers where there are few measurements to ensure reasonable values.

Alfalfa	19
Garfield	2
Kingfisher	81
Logan	18
Major	62
Woods	77

Table 2-1. Wells from the OWRB by county. All wells are completed in the alluvium or terrace deposits.

Stream Baseflow Observations

A total of five streamgages with steamflow data are available in the Cimarron River alluvium and terrace active model area. At the upstream model boundary, the Freedom gage (07157980) has data only for 1973–1980. Downstream, the gage at Waynoka has data only from 1990 to present. Data from the synoptic streamflow measurements on Jan 8–9, 2020 documented in Le Pera and others (*in press*) will be used to estimate the stream gain and/or loss between these two gages, and an estimated 1974–present streamflow will be produced. Baseflow will then be estimated using hydrograph separation techniques on these two streamgages from Le Pera and others (*in press*) when data is available. This data will then be used to estimate the remaining periods when data is unavailable. The results of this analysis will be used to create inputs to the Streamflow Routing package to simulate upstream inflow to the model area.

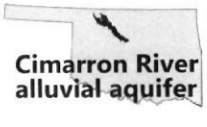
The most downstream gage on the Cimarron River (07159100) has data available from 1990 to present. Downstream of the model area, gage 07160000 has data from 1991 to present. The synoptic streamflow measurements will be used in conjunction with streamflow data from these two gages to estimate streamflow exiting the model at the most downstream segment of the Cimarron River. Baseflow separation technique results from Le Pera and others (*in press*) for these two gages, and on other gages in tributaries present in the aquifer area, will be used to establish calibration targets.

Parameters

The initial hydraulic properties will be based on the "Hydraulic Properties" section of the Cimarron River alluvium and terrace aquifer conceptual model report (Le Pera and others, *in press*). There are 29 available aquifer tests (single and multi-well tests) within the model domain. Additionally, hydraulic conductivity and specific yield will be constrained by the standardization analysis of 3,650 driller's logs from Le Pera and others (*in press*). Elsewhere, starting parameter values representing hydraulic properties of the aquifer units will be



Figure 2-8. Proposed pilot points to use for model calibration.



used from literature estimates and adjusted within a reasonable range. By combining the variance of the hydraulic properties with formal geostatistical simulation, we will generate an ensemble of uncalibrated geostatistically-based hydraulic property fields. Collectively, this ensemble spans the range of uncertainty that exists in the properties before calibration. Using the techniques presented in White and others (2022), we will condition (i.e., adjust) these realizations to respect available estimates of property values, such as observations from aquifer performance tests, driller's reports, and other information.

The horizontal hydraulic conductivity, vertical anisotropy (the ratio of horizontal-to-vertical hydraulic conductivity), and storage properties (specific storage and specific yield) are proposed to be represented using pilot point interpolation in the groundwater model in layer 1 (**Figure 2.8**). Pilot points provide a balance between the manipulation of values by parameter zones, often defined where values are thought to be relatively constant, and the manipulation of values in individual model cells, which may require more detailed data than are typically available. These pilot points will be implemented in every 10th model cell (3,000-foot spacing).

Final Model Selection

Once the calibration process is complete, a single model (realization) will be selected from the ensemble to be used as the groundwater model based on discussions with OWRB. The final parameter values for this model would likely be a suitable candidate to serve as a model representing the central tendency of the ensemble, as was the case with the GULF - 2023 model (Ellis and others, 2023).

Value of Information, Uncertainty, and Sensitivity Analyses

Given the model input quantity uncertainty and the relatively limited quantities of observation data, there is value in using "data worth" analyses to help guide future data collection efforts (e.g., White and others, 2014). These analyses are an essential product of our proposed uncertainty-based modeling framework, providing direct estimates of how yet-to-be-collected data may reduce simulated modeling objective uncertainty. Another advantage of the ensemble-based strategy is that parameter sensitivity is tested during each outer iteration, so the evolving sensitivity matrix is recorded during the calibration process, negating the need for a separate sensitivity analysis.

Model Scenarios

The transient groundwater model will be used to evaluate the allocation of water rights and to simulate management options. In addition, the models will be used to predict the effects of potential groundwater withdrawals on streamflow in the Cimarron River alluvium and Terrace aquifer. To comply with Oklahoma Water Law, the OWRB approves a maximum annual yield (the total amount of water that can be withdrawn from a specific groundwater basin in any year). The OWRB uses the term Equal Proportionate Share (EPS) to describe the allocation of water to all holders of water rights on land overlying a groundwater basin. The amount of water a permitted user can withdraw from a groundwater basin is proportional to the amount of land dedicated to a groundwater use permit.

To simulate distributed withdrawals as an EPS in alluvial aquifers, in accordance with OWRB policy, a hypothetical well is placed in every active model cell that has a simulated saturated thickness of five feet or greater at the time of the hydrologic investigation (for an alluvial aquifer). All wells are pumped at the same fixed rate throughout the simulated period. If the simulated saturated thickness reaches less than five feet at any time during specified time periods (usually 20- and 50-year periods), the well is shut down. If simulated saturated thickness recovers above five feet, the well is restarted. Various initial pumping rates are tested to find a rate that would cause the active model cells that are pumped to have an average simulated saturated thickness of five feet at the end of the specified time periods.

Two versions of the EPS scenario will be run: one scenario simulating a fifty percent depletion to a saturated thickness of five feet or greater, and a second scenario simulating a full depletion to five feet of saturated thickness.

In addition to providing information to the OWRB for the determination of the equal proportionate share, the model will be used to test the effects of (1) a 10-year hypothetical (sustained) drought, and (2) a 50-year projected water use pumping scenario on streamflow and the saturated thickness of the aquifer in response to groundwater withdrawals.



Project Name, Client, Location	Experience with OK Aquifers	Numerical modeling: Model Design	Model Calibration	Uncertainty/Sensitivity Analyses	Model Testing/ Application	MODFLOW 6	Statistical Methods and Coding	Model Scenario Development and Testing	Stakeholder Communications	Documentation/ Communication of Results
Development of a Groundwater Model for the Antlers Aquifer, Choctaw and Chickasaw Nations, North TX and Southeast OK.	■	■	■	■	■		■	■	■	■
Development of a Groundwater Availability Model of the Brazos River Alluvium Aquifer, Southeast TX		■	■	■	■		■		■	■
Update to the Groundwater Availability Model of the Northern Trinity and Woodbine Aquifer, North Central Texas	■	■	■	■	■	■	■	■	■	■
Development of the Groundwater Availability Model for the Cross Timbers Aquifer, North Central Texas		■	■	■	■	■	■		■	■
Groundwater Availability Model of the High Plains Aquifer System, Texas Panhandle and West Texas	■	■	■	■	■		■		■	■
Update to the Groundwater Availability Model of the Central Portion of the Carrizo-Wilcox Aquifer, Central TX		■	■	■	■		■		■	■
Development of the GULF-2023 Groundwater Availability Model, Houston and Galveston Area, TX		■	■	■	■	■	■	■	■	■
Development of a Groundwater Availability Model for the Rustler Aquifer, West TX		■	■	■	■		■		■	■
Technical Services and Model Simulations for Joint Planning in GMA 1, Texas Panhandle					■		■	■	■	■
Evaluation of Groundwater Resources and Subsidence within the Harris-Galveston Subsidence District, Upper Texas Gulf Coast					■	■	■	■	■	■

Figure 3-1. INTERA's selected modeling experience.

3.0 Selected Modeling Experience

INTERA brings the expertise and experience needed to solve groundwater issues and succeed in providing OWRB with scientifically sound and defensible technical consulting services. We have provided similar services to a wide variety of state, regional, and local agencies in Texas and other states responsible for the management and protection of groundwater resources. The table above summarizes some of our experience with groundwater modeling projects. Brief summaries of selected projects are provided below.

■ Development of a Groundwater Model for the Antlers Aquifer, North TX and Southeast OK

INTERA Staff: Wade Oliver, Daniel Lupton
Timeframe: 2012 – 2014

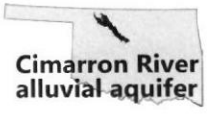
INTERA developed an updated groundwater model for the Choctaw and Chickasaw Nations to evaluate the impact of pumping in Texas and the potential for the Antlers Aquifer to serve as a primary water supply source in southeastern Oklahoma. Previously developed models were insufficient for serving as long-term water planning tools for the aquifer. Efforts included readdressing each component of the conceptual model of the aquifer, including recharge, hydraulic properties, evapotranspiration, structure, and pumping. The calibration efforts employed PEST to adjust model parameters within reasonable limits. The resulting tool is used to evaluate future water management strategies, quantify the impacts of out-of-state pumping on the aquifer in Oklahoma, and better understand the quality and availability of water in the aquifer.

■ Development of a Groundwater Availability Model of the Brazos River Alluvium, Southeast TX

INTERA Staff: John Ewing, Toya Jones
Timeframe: 2014 – 2016

In support of the TWDB's Groundwater Availability Modeling Program, INTERA developed a GAM for the Brazos River Alluvium Aquifer (BRAA). This aquifer consists of the floodplain deposits and hydraulically connected terrace deposits of the Brazos River, occurring in lenses that grade both laterally and vertically. The BRAA is unconfined with potentially locally confined conditions where clay lenses overlie sands or gravels. The aquifer overlies several major and minor aquifers in Texas, of which the shallow portions are assumed to be hydraulically connected to the BRAA.

INTERA developed both the conceptual and numerical models for this aquifer, utilizing data on the physiography and climate, geology, previous studies, hydrostratigraphy,





hydrostratigraphic framework, water levels, recharge, surface water interaction, hydraulic properties, discharge, and water quality for the BRAA. The model was primarily calibrated to observed heads in the BRAA and was calibrated to both steady-state and transient conditions. During the development of the conceptual and numerical models, INTERA organized and conducted several Stakeholder Advisory Forums to solicit data and input from interested stakeholders. Our efforts resulted in a well-calibrated BRAA model for use in supporting water availability planning at a regional scale.

- **Update to the Groundwater Availability Model of the Northern Trinity and Woodbine Aquifer, North Central Texas**

INTERA Staff: Wade Oliver, John Ellis, Andres Prieto-Estrada, Andrew Osborne
Timeframe: 2023 – Present



INTERA is currently leading the update of the Northern Trinity and Woodbine aquifers GAM. We are working in cooperation with the member Districts in Groundwater Management Area (GMA) 8 as well as subcontractor RW Harden and Associates. The previous MODFLOW-NWT model has been updated to MODFLOW 6. Several features of MODFLOW 6, such as pass-through cells, have been implemented in the update model, improving model run times. Additionally, the soil-water-balance code has been implemented to spatially distribute recharge estimates. An ensemble-based calibration process is being undertaken that focuses on assimilating the aspects of the historical observation dataset model relevant to the simulated modeling objectives. The member Districts of GMA 8 provided production data, new aquifer tests, and well logs to assist with the update and recalibration. In addition to preparing all geodatabase files and documentation, INTERA will perform several predictive model runs defined by GMA 8 to match the recalibrated model to the current desired future condition (DFC). The model update is scheduled for completion this year, allowing the updated NTWGAM to be used by GMA 8 in the fourth round of joint planning.

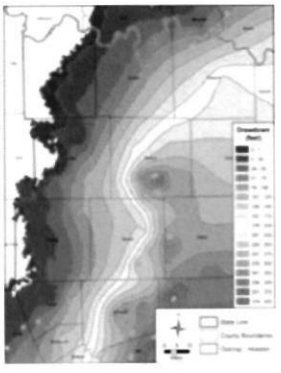
- **Development of the Groundwater Availability Model for the Cross Timbers Aquifer, North Central Texas**

INTERA Staff: Neil Deeds, Wade Oliver, Ryan Harmon
Timeframe: 2022 – Present

INTERA is currently leading the development of a GAM of the Cross Timbers Aquifer for the TWDB. Our model construction workflow is built on a foundation of scripting and open-source software tools so that the numerous decisions and assumptions made during the modeling workflow are transparently and openly documented. INTERA is utilizing cutting-edge tools, such as the iterative ensemble smoother PESTPP-IES, which reduces the computational demand of the calibration process, ensures a complete expression of model input uncertainty, saves time, and cuts project expenses. INTERA built the numerical model using MODFLOW 6 and reviewed, compiled, and synthesized all available public data to estimate model inputs, taking great care where data is scarce. Calibration is being performed using ensemble-based methods, which assimilate the aspects of the historical observation dataset relevant to the simulated modeling objectives. This project will be completed before November 2024.

- **Groundwater Availability Model of the High Plains Aquifer System, Texas Panhandle and West Texas**

INTERA Staff: Neil Deeds
Timeframe: 2012 – 2015



Under the TWDB's GAM Program, INTERA developed a groundwater model that combines the Northern Ogallala, Southern Ogallala (including the Edwards Trinity High Plains and Rita Blanca Aquifers), and Dockum GAMs. The model area encompasses all or part of 95 counties in Texas, New Mexico, Oklahoma, Colorado, and Kansas. The conceptual model report included an assessment of the climatic and hydrologic conditions in the study area, as well as detailed studies of geologic structure (based on analysis of over 2,000 geophysical logs), properties, recharge, natural discharge, pumping, and water quality. The numerical model was calibrated using PEST, with pilot point multiplier fields for recharge and horizontal hydraulic conductivity of the Ogallala Aquifer (parameters that are the most important to both heads and flow rates). The final model provides insight into the interaction of the Ogallala Aquifer and the minor aquifers in the system and is used as a tool for state water planning.

- **Update to the Groundwater Availability Model of the Central Portion of the Carrizo-Wilcox Aquifer, Central TX**

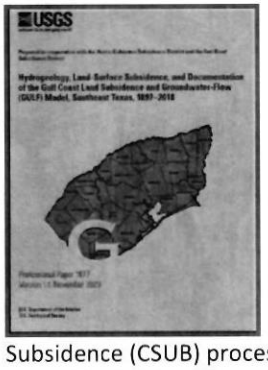
INTERA Staff: Steve Young, Toya Jones, Tom Ewing
Timeframe: 2015 – 2018

The TWDB, several groundwater conservation districts (GCDs), and local river authorities co-funded this project to improve the representation of faults, surface water-

groundwater interactions, and the existing model's representation of the shallow groundwater flow system. To improve fault mapping, INTERA analyzed approximately 1,200 geophysical logs to map the Mexia-Talco Fault Zone and the magnitude of offsets in the Simsboro Formation as a result of the faulting. To improve the surface water-groundwater interaction and the shallow groundwater flow zone, we added additional vertical layers to the GAM near ground surface and increased the grid refinement around several major rivers. In addition, we analyzed over 200 aquifer pumping tests to find evidence of faults and to determine aquifer hydraulic properties. We also conducted a literature review to characterize the physical and hydraulic properties of the aquifers and to develop a hydrostratigraphic model to determine relationships and potential constraints when assigning hydraulic properties to aquifers during model calibration. INTERA organized and conducted workshops with stakeholders to request information/data, discuss potential modeling approaches modeling, and provide updates on the progress of the modeling efforts. The project was completed on time and within budget.

- **Development of the GULF-2023 Groundwater Availability Model, Houston and Galveston Area, TX**

INTERA Staff: John Ellis, Wade Oliver, Ryan Harmon
Timeframe: 2019 – 2023



INTERA collaborated with the USGS to develop the GULF-2023 Model—the next-generation groundwater flow and land subsidence model for the Houston region and 26-county northern Texas Gulf Coast area. The model, developed using MODFLOW 6, included the robust Skeletal Storage, Compaction, and Subsidence (CSUB) process for simulating confined and unconfined delayed compaction resulting from changes in water use. The model parameters were estimated using an Iterative Ensemble Smoother (iES) implementation of PEST software PEST++. Additionally, the calibration process employed an "uncertainty-first" analysis, where defining the uncertainty in the model inputs is just as important as defining the "best" model inputs. Monte Carlo ensemble methods were used throughout the project so the effect of revisions to the model structure, model inputs, and all other facets of the modeling process on the modeling objectives could be directly evaluated within a stochastic framework. The model was calibrated to groundwater levels, compaction, and land subsidence over the period of record. Additionally, both the rate and magnitude of temporal changes in groundwater levels, compaction, and subsidence were emphasized during calibration because matching the rate of change in these quantities is directly related to the modeling objectives. Using the increased computational efficiency of PESTPP-IES (White 2018, White and others, 2021), full non-linear parameter and predictive uncertainty analyses were performed at every stage of the model development and testing process. The entire process was captured in a scripting-driven workflow that facilitated real-time collaboration and reproducibility of the entire modeling process, aspects that ultimately led to extreme efficiency gains. The GULF-2023 Model will be used to guide future risk-based regulatory actions related to subsidence and groundwater use.

- **Development of a Groundwater Availability Model for the Rustler Aquifer, West TX**

INTERA Staff: Van Kelley, Daniel Lupton, John Ewing
Timeframe: 2010 – 2012

As part of TWDB's Groundwater Availability Modeling Program, INTERA developed a GAM for the Rustler Aquifer, located in the Trans-Pecos area of west Texas and southern New Mexico. Groundwater in the Rustler occurs in partly dissolved dolomite, limestone, and gypsum, and most of the water production comes from fractures and solution openings in the upper part of the Rustler Formation. The GAM was developed using the groundwater simulation code MODFLOW-NWT. The model consists of a lower layer representing the Rustler Aquifer and an upper layer representing the overlying Dewey Lake Formation and Dockum Group. While there is a general lack of hydrogeologic property data for the Rustler Aquifer in Texas, the available data provided good evidence for significant variability in the aquifer properties resulting from structural complexity within the basin, variability in lithology, and the effects of post-depositional processes. As a result of this complexity, parameterization of the Rustler Aquifer GAM relied heavily on the conceptual models INTERA developed while trying to honor the sparse property data available. The model incorporates the available information on structure, hydrostratigraphy, hydraulic properties, streamflow, recharge, evapotranspiration, and pumping for the Rustler Aquifer. The Rustler Aquifer GAM provides a documented, publicly available, integrated tool for use by state planners, Regional Water Planning Groups (RWPGs), GCDs, GMAs, and other stakeholders in estimating modeled available groundwater, supporting the regional planning process, and assessing various proposed water management strategies on the aquifer system.

4.0 Organization, Timeline, and Budget

INTERA has assembled an outstanding group of personnel to support the construction and calibration of a model of the Cimarron River alluvium and terrace for the OWRB. This section describes the organization we will use to deliver these services, the qualifications and experience of our key personnel, INTERA's capacity to execute this work for the OWRB, and the availability of our proposed staff.

Project Management and Organization

Our Project Manager, John Ellis, will serve as the primary point of contact for the OWRB and will use all team resources necessary to complete each project task efficiently. He is the focal point of our management organization and is responsible for overseeing, planning, analyzing, and implementing all project activities. John will maintain administrative control over all tasks, ensure management control of the progress of tasks, and review all project deliverables. He is responsible for the technical quality of our work products, tracking and controlling the overall contract expenditures, project planning and scheduling, evaluating our proposed project organization team's staff resources, responding to OWRB's needs, and ensuring the timely production of specified deliverables. John will coordinate with OWRB to hold regular update meetings (generally monthly) and quarterly in-person meetings (or on key milestones).

INTERA's proposed organization for providing services to GMA 8 is shown in **Figure 4-1**. This organization includes several key personnel (Project Manager, Project Principal, Groundwater Modeling Lead, and Data Processing/ Management Lead). To ensure we provide services in a cost-effective manner, our personnel cover the complete range of experience levels—from principals and senior-level to mid- and junior-level. All INTERA's work for the OWRB will be conducted under the direct supervision of a principal engineer/scientist.

Reporting and Deliverables

At the end of the project, INTERA will deliver a report describing the groundwater model construction, calibration, and probabilistic scenarios (EPS [both scenarios], sustained drought scenario, and 50-year pumping scenario). This report will be produced in accordance with OWRB report specifications and will look similar to previous modeling reports published by the U.S. Geological Survey for the OWRB.

Additionally, a data release will be prepared for the OWRB that includes a runnable model archive, and a compilation of geospatial datasets and metadata used to construct model inputs and generate data coverages for the model area, and a readme.

Timeline

INTERA's proposed project timeline spans 18 months, beginning on 1 August 2025 and ending on 31 July 2027. INTERA will provide monthly progress update meetings with OWRB staff regarding progress towards the modeling and reporting. INTERA will also hold an in-person meeting in 2025, two in-person meetings in 2026, and one in-person meeting in 2027. Additional in-person meetings will be held at the request of the OWRB.

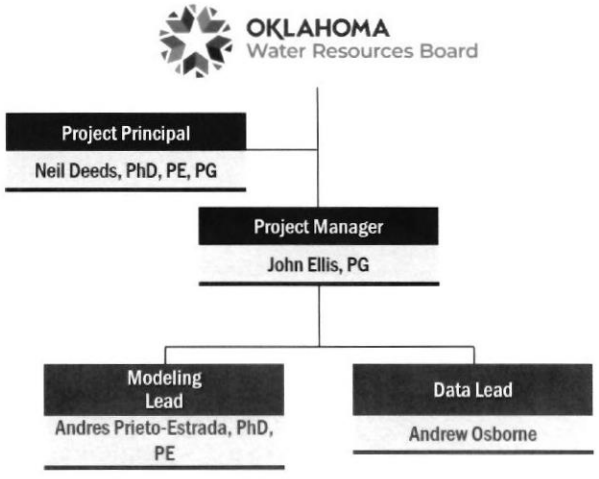


Figure 4-1. INTERA team and organizational structure.

Project Budget

INTERA's proposed budget for this project is $300,000. This budget includes all aspects described in this proposal, including the construction and calibration of the groundwater model and associated scenarios, the production of a report and preparation of the model archive, as well as meetings and travel.

John Ellis, PG – Project Manager



John Ellis is a licensed professional geoscientist with 16 years of experience in integrated groundwater modeling and uncertainty quantification, land subsidence, data analysis, water resources planning and management, distributed computing networks, and information technology. He also has a background in environmental laws and regulations, site remediation, contaminant transport, and managing teams investigating water quality. He has led several regional-scale groundwater availability modeling projects in Texas and Oklahoma to support water resource planning and aquifer management. He has extensive experience using the MODFLOW-2005, NWT, MODPATH, MT3DMS, and SWB codes and the PEST, PEST++, and PEST-IES calibration codes. He uses geographic information system software and programmatic workflows and data analysis using Python and VBA. John has more than 15 years of management experience leading multi-disciplinary teams of up to 60 staff, $25 million in assets, and annual project budgets of more than $3 million.

Years of Experience: 16

Education:

- MS, 2013, Hydrogeology, The University of Alabama
- MS, 2010, Environmental Science, Hardin-Simmons University
- BS, 2008, Geology, The University of Texas at Dallas

Professional Registrations:

- Professional Geoscientist, TX, 2022, No. 15291
- Professional Geologist, AL, 2018, No. 1381

Representative Project Experience

Northern Texas Gulf Coast Aquifer System – Groundwater Availability Model, Harris-Galveston Subsidence District, TX. 2019 – 2023. *Project Manager and Technical Lead*. Led the construction, calibration of a GAM (and ensemble) for evaluating water resources and land subsidence across a 25-county area. The report describes groundwater development, groundwater levels, recharge and groundwater flow, and subsidence trends in the area from 1897 to 2018. Multiple compaction and subsidence measurement techniques were integrated with groundwater-level data to better understand aquifer-system response to declining groundwater levels and subsequent recovery. The model was also used to estimate compaction in each aquifer with a focus on the geologic units that contain the Jasper aquifer. Groundwater flow and land-surface subsidence in the model and ensemble were simulated using MODFLOW6 with the Skeletal Storage, Compaction, and Subsidence package. The model was calibrated to groundwater levels at selected wells, land-surface subsidence at benchmarks, aquifer compaction at borehole extensometers, and vertical displacement from Global Positioning System stations. Calibration and uncertainty quantification were performed using a Monte Carlo approach enabled through iterative ensemble smoother software to produce an ensemble of models fit to historical data. The iterative ensemble smoother substantially reduced the computational demand of parameter estimation by approximating the first-order relation between model inputs and outputs, thereby allowing 183,207 adjustable parameters to be used for history matching at a relatively low computational and time cost.

Washita River Alluvial Aquifer – Groundwater Availability Model, Oklahoma Water Resources Board, OK. 2018 – 2020. *Project Manager and Modeling Lead*. Led the development of the hydrogeologic framework and assisted with the conceptual model and the construction and calibration of a groundwater model for the Salt Fork Alluvial Aquifer. The hydrogeologic framework included delineating the areal and vertical extent and estimating the distribution, texture variability, and hydraulic properties of aquifer materials. The conceptual model water budget estimated inflows to and outflows from the aquifer. Spatial recharge was estimated using a water-table fluctuation method and the soil-water-balance code based on interpolated tabular climate data at 21 stations and landscape and soil arrays. The streamflow-routing package was used to simulate seepage to and from the water table and inflow from upstream and tributaries. The Lake package was used to simulate monthly changes in Foss Reservoir storage and was linked with the Streamflow Routing package. Spatial heterogeneity was represented using "Pilot Points" and constrained using aquifer pump test data and published studies. PEST++ was used to calibrate the MODFLOW-NWT model on a distributed computing cluster built.

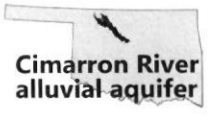
North Fork Alluvial Aquifer Climate Modeling, Bureau of Reclamation, OK. 2017 – 2019. *Project Manager and Modeling Lead*. Potential effects of projected climate variability on base flow and groundwater storage in the North Fork Red River aquifer were estimated using downscaled climate model data coupled with a groundwater model. To approximate future conditions, Coupled Model Intercomparison Project Phase 5 climate data were downscaled to the watershed and a time-series of scaling factors were developed and interpolated for three climate scenarios (central tendency, warmer and drier, and less warm and

wetter) representing future climate conditions for the period 2045–2074. These scaling factors were then applied to a soil-water-balance model to produce groundwater recharge and evapotranspiration estimates. A MODFLOW groundwater model of the North Fork Red River aquifer used the scaled recharge and evapotranspiration data to estimate changes in base flow and water-surface elevation of Lake Altus. Results from this study informed USBR Lake Altus reservoir action levels related to reservoir stage.

Rush Springs Aquifer – Groundwater Availability Model, Oklahoma Water Resources Board & Bureau of Reclamation, OK. 2016 – 2018. *Project Manager and Modeling Lead*. Led the development of a conceptual model and calibration of a groundwater model for the Rush Springs aquifer. The project objectives included use of the model as a model for the OWRB to evaluate water management concerns and long-term water supplies in the Fort Cobb Reservoir. The aquifer conceptualization included an analysis of the geologic unit properties, the definition of major inflow and outflow sources, and water quantity during the study period. The conceptual model budget estimated mean annual flows for recharge, lateral flow, lakebed seepage, stream seepage, evapotranspiration, and groundwater use, as well as the change in groundwater storage. Spatial recharge was estimated using a water-table fluctuation method and the soil-water-balance code based on interpolated tabular climate data at 33 stations and arrays of landscape and soil characteristics. The streamflow-routing package was used to simulate seepage to and from the water table and inflow from upstream and from tributaries. The Lake package was used to simulate monthly changes in Fort Cobb Reservoir and was linked with the Streamflow Routing package. Spatial heterogeneity was represented using "Pilot Points" and constrained using aquifer pump test data and published studies. Parameter identifiability was explored to assess the degree of parameter correlation and the ability to uniquely estimate each parameter based on the calibration dataset. A variety of projected 50-year pumping scenarios were used to simulate the effects of selected well withdrawal rates on groundwater storage of the Rush Springs aquifer. A probabilistic approach with 400 realizations was also used to assess the uncertainty in the scenario results to provide a confidence interval for regulatory decisions.

North Fork Alluvial Aquifer – Groundwater Availability Model, Oklahoma Water Resources Board, OK. 2015 – 2017. *Modeling Lead*. Co-led the development of the hydrogeologic framework and conceptual model and the construction and calibration of a groundwater model for the North Fork Red River Alluvial Aquifer. The hydrogeologic framework included the aquifer extent and potentiometric surface and the textural and hydraulic properties from the analysis of approximately 1,500 drillers' logs. Log textural terms were standardized, categorized, and converted to percentage-coarse-material values which were then used to estimate and spatially interpolate the aquifer hydraulic properties. The conceptual model budget estimated mean annual inflows and included a sub-accounting of flows for the aquifer near Lake Altus. The MODFLOW-NWT model was calibrated to monthly water levels at selected wells, base flow at streamgages, streambed seepage, and Lake Altus stage for 1980–2013. The streamflow-routing package was used to simulate seepage to and from the water table and inflow from upstream and from tributaries. The Lake package was used to simulate monthly changes in Lake Altus storage and was linked with the SFR package. Recharge and conductivities were made spatially heterogeneous using "Pilot Points." Groundwater-availability scenarios were run to estimate the pumping rate for a minimum 20-, 40-, and 50-year aquifer lifespan, quantified the effects of projected withdrawals on storage, and simulated the potential effects of a drought on base flow and storage.

Canadian River Alluvial Aquifer – Groundwater Availability Model, Oklahoma Water Resources Board, OK. 2014 – 2016. *Modeling Lead.* Led the development of the hydrogeologic framework and conceptual model, and the construction and calibration of a Groundwater Availability Model for the Canadian River Alluvial Aquifer for 1981–2013. The hydrogeologic framework included delineating the areal and vertical extent and estimating the distribution, texture variability, and hydraulic properties of aquifer materials. Approximately 1,400 logs were used to characterize the aquifer alluvial and terrace deposits. The conceptual model water budget estimated inflows to and outflows from the aquifer. Spatial recharge was estimated using a water-table fluctuation method and the soil-water-balance code based on interpolated tabular climate data at 39 stations and arrays of landscape and soil characteristics. The streamflow-routing package was used to simulate seepage to and from the water table and inflow from upstream and from tributaries. Spatial heterogeneity was represented using "Pilot Points" and constrained using aquifer pump test data and published studies.



Neil Deeds, PhD, PE, PG – Project Principal



Neil Deeds has 26 years of research and applied experience in modeling and analysis of hydrologic systems, including water availability, flow, and transport. Dr. Deeds has been involved in more than 50 modeling projects and has taken a project management and/or technical lead role in many water resources modeling studies, including groundwater models of aquifers throughout Texas. He has served as a technical manager or technical lead in quantifying processes such as recharge, hydraulic conductivity, and surface water/groundwater interaction in support of regional and sub-regional groundwater modeling projects. Neil has been the technical lead in data management and organization and has developed data models for several water resources projects. Neil has 16 years of experience in preparing communication materials and interacting with agencies and interested stakeholders in Texas, including the OWRB, Lower Colorado River Authority, regional water planning groups and GCDs.

Years of Experience: 26

Education:

- PhD, 1999, Civil Engineering, University of Texas
- MS, 1997, Civil Engineering, University of Texas
- BS, 1994, Environmental Engineering, University of Oklahoma

Professional Registrations:

- Professional Engineer, Texas, 2003, No. 92741
- Professional Geoscientist, TX, 2021, No. 15238

Specialized Training & Software:

- PEST++ and PyEMU, Training by Jeremy White, 2021.

Representative Project Experience

Hydrogeologic Consulting for Central Texas GCD, Burnet County TX. 2021 – Present. *Hydrogeologist and Groundwater Modeler.* Acting as consulting hydrogeologist for Central Texas Groundwater Conservation District (CTGCD). Activities to date have included providing reviews of water availability studies associated with subdivision plats (with proposed private wells on every lot). This included writing a memo suggesting best practices for performing the impact modeling in these studies. INTERA has also developed and performed a new modeled available groundwater simulation for the Llano-Uplift Aquifer System, in response to a request by CTGCD regarding several stakeholder comments. Finally, INTERA has provided reviews and analysis of water balances from an aggregate mine to help assess whether the mine is using more groundwater than they are permitted.

Region K Planning 2026 Cycle, Texas Water Development Board, TX. 2022 – Present. *Project Manager.* Leading development of the Region K (Lower Colorado Regional Water Planning Area) portion of the Texas state water plan. Texas' five-year planning cycle includes evaluation of water demand, supplies and needs for the next 50 years, and development of Water Management Strategies to meet the unmet needs of each region. Initially prepared plans are due in March 2025 and the final Regional Water Plans will be submitted in October 2025.

Groundwater Joint Planning Technical Assistance, Groundwater Management Area 10, TX. 2014 – 2016. *Hydrogeologist*. Teamed with another contractor to provide technical support and policy guidance to the GCDs in GMA 10. Includes development of the GMA explanatory report required as part of the planning process. Specifically tasked with the brackish Edwards Aquifer and the Trinity Aquifer, evaluating the nine factors that are considered in the explanatory report, including hydrogeologic conditions, environmental impacts, etc.

Design and Permitting of an Industrial Supply Well, City of Temple, Temple, TX. 2022 – Present. *Project Manager and Lead Hydrogeologist*. Providing hydrogeologic and engineering services associated with at 2,000 foot deep industrial water supply well that is to be completed in the lower Trinity (Hosston) Aquifer in east Temple. Activities included estimating the depth and probable yield of the well as well as the static water levels and water quality. Currently applying for the well permit with Clearwater Underground Water Conservation District. Ongoing activities will include serving as owner's representative during the construction and testing of the well.

Region O Planning 2021 and 2026 Cycles, Texas Water Development Board, TX. 2015 – Present. *Water Resources Engineer.* Supporting teammate HDR in developing the Region O plan for 2021. Analyzed the potential of modeled available groundwater (MAG) peaking factors for increasing availability of groundwater in the region. Evaluated potentially feasible groundwater management strategies, particularly for smaller cities with wellfields. Including estimating well and wellfield yields for existing infrastructure and development of cost estimates for additional groundwater supplies. Continuing to support HDR on ongoing Region O planning tasks

Andres Prieto-Estrada, PhD, PE – Modeling Lead



Andres Prieto has over five years of experience in developing groundwater flow and solute transport models to evaluate environmental restoration and groundwater remediation strategies. He has integrated site characterization and monitoring data with quantitative models to predict groundwater quality restoration timeframes considering site-specific uncertainties and constraints. His experience includes simulating mass transfer of non-aqueous phase liquids into groundwater, coupled with modeling of engineered and natural attenuation mechanisms at multiple scales. Andres has presented research and development (R&D) results at numerous scientific and engineering conferences, published peer-reviewed articles, and contributed to the completion of R&D projects funded by the South Florida Management District and by the U.S. Department of Defense. His experience in consulting and regulatory sectors includes development of conceptual site models, automation of environmental data processing, monitoring of remediation systems, subcontractor oversight, development of work plans and reports for clients in the mining, oil & gas, and other industrial sectors.

Years of Experience: 9

Education:

- PhD, 2023, Civil Engineering, Virginia Tech
- MS, 2016, Geosciences, Florida International University
- BS, 2013, Geological Engineering, Universidad de Los Andes

Professional Registrations:

- Professional Engineer, Texas, 2024, No. 152195

Specialized Training & Software:

- PEST++ IES and PyEMU, Training by Jeremy White, 2023.

Representative Project Experience

Update of the Northern Trinity Aquifer Groundwater Availability Model, Multiple Groundwater Conservation Districts, North Central Texas. 2023 to present. *Modeler and Hydrogeologist*. Supporting translation of the model to the latest MODFLOW 6 version, including modification of parameters using a variety of data collected between 2012 and 2020, and recalibration of the model. Converted NTGAM from MODFLOW-NWT to MODFLOW 6 using a combination of existing modeling tools, and some specifically designed to verify the accuracy of the conversion. Designed a number of programmatic tools and methods to select, process, and visualize datasets to inform the conceptual and numerical model modification. This included processing and analysis of aquifer pressure heads, well-completion and historical water-level trends, river and surface-water gauging, and elimination of data noise. Responsibilities have also included calibrating the Northern Trinity Aquifer Groundwater Availability Model using parameter estimation algorithms, thereby updating aquifer hydraulic properties and sources and sinks of water fluxes. This ongoing effort is aimed at quantifying basin-scale, groundwater availability in an area encompassing the Dallas-Fort Worth metropolitan area.

Analysis of Mine Dewatering Rates and Environmental Impact Assessment, Cordoba Minerals, Columbia. 2023. *Modeler*. Conducted hydrogeologic and geochemical analyses, and an environmental impact assessment to develop a 20,000-ha copper-gold-silver mine in the Department of Cordoba, Colombia. Responsibilities included reviewing and analyzing a numerical model of groundwater flow developed by a subcontractor, to verify the suitability of the model to calculate groundwater infiltration rates at the mine pit and better understand hydrologic and water quality impacts on adjacent surface-water bodies. Designed programmatic scripts to analyze the model properties and the representation of physical processes, including hydraulic properties, layering design, and boundary conditions. Discovered inadequate model convergence settings and recommended a modification of the solver parameters to improve numerical stability. Also, found mine dewatering rates to be biased because of an inadequate pit representation in the model. To mitigate this, re-designed the temporal evolution of the pit excavation by representing the engineering plans with an appropriate drain boundary condition. This nearly doubled the initial calculations of pit dewatering rates, from 140 L/s to 300 L/s after 14 years of mining. Also proposed an expansion of the model area to better assess impacts on water quality and hydraulic interactions with an adjacent river.

Andrew Osborne – Data Lead



Andrew Osborne graduated with an MS in Geological Sciences from the University of South Carolina in 2021 where he studied groundwater discharge from continental shelves and its impact on global ocean chemistry. Andrew works in INTERA's Water Resources Line of Business as a hydrogeologist. He works with Texas groundwater management entities, uses and aids in the development of regional groundwater models, and specializes in geospatial and water planning data analytics. He has experience with various versions of MODFLOW, including MODFLOW6, and uses Python-based pre-and post-processing modeling tools such as Flopy and Pyemu. He also excels at developing report-quality figures using ArcGIS and Adobe Illustrator.

Years of Experience: 4

Education:

- MS, 2021, Geology, University of South Carolina
- BS, 2019, Geology, Louisiana State University

Specialized Training & Software:

- Python, MODFLOW, ArcGIS

Representative Project Experience

Northern Trinity and Woodbine Aquifers Groundwater Availability Model 10-Year Update, TX. 2023 - Present. *Hydrogeologist.* Assisted in the 10-year update of the Northern Trinity and Woodbine Aquifer GAM. Managed the collection and organization of all new model input data and assisted in the development of the water use and water levels datasets.

Well Inventory Analysis, Barton Springs/Edwards Aquifer Conservation District, TX. 2023. *Hydrogeologist.* Developed a programmatic approach to reconciling differences and identifying duplicate wells between several of the District's well databases.

Technical Support, Post Oak Savannah Groundwater Conservation District, TX. 2023 - 2024. *Hydrogeologist.* Performed various tasks using the Central Carrizo-Wilcox GAM including water use scenario evaluations and simulated pumping tests. Analyzed model results to generate numerous figures and tables of pumping impacts for several different water use scenarios.

Modeling Support, Lower Colorado River Authority, TX. 2023 - 2024. *Hydrogeologist.* Used the Central Carrizo-Wilcox GAM to perform simulations of several water use scenarios to document expected water level impacts to wells nearby a proposed drilling and production permit.

Managed Aquifer Recharge Study for Rolling Plains Groundwater Conservation District, TX. 2023. *Hydrogeologist.* Assisted in developing a strategy for managed aquifer recharge (MAR) in Rolling Plains GCD. Synthesized geospatial data including land cover, precipitation, and elevation measurements to develop a system for ranking certain regions in the District based on their ability to host a MAR site.

Groundwater Model, Southwestern Travis County Groundwater Conservation District, Travis and Hayes Counties, TX. 2022 - 2023. *Modeler.* Developed a numerical model to assist Southwestern Travis County GCD, as well as Hayes County GCD, in evaluating permit for several proposed pumping wells and their potential impact on nearby production wells and watersheds.

Modeling, City of Bryan, TX. 2022 - 2024. *Hydrogeologist.* Used the Central Carrizo-Wilcox GAM and developed a robust programmatic approach to analytic element modeling using TTim to assess the potential impacts of regional pumping on the City's wells in the Simsboro Aquifer.

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INTERA

INTERA Incorporated

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Houston, TX 77042
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INTERA.COM

STANDARD TECHNICAL SERVICES AGREEMENT

THIS AGREEMENT ("Agreement") is made as of 1 August 2025 by **INTERA Incorporated**, ("INTERA") a Texas Corporation, and **Oklahoma Water Resources Board**, ("Client") an Oklahoma governmental entity. Individually, INTERA and Client are sometimes referred to as a Party and collectively as Parties.

WHEREAS, Client desires INTERA to furnish certain technical, maintenance, construction, installation and/or related services ("Services") and INTERA is willing to do so, subject to the terms and conditions set forth herein.

WHEREAS, in certain situations, Client also desires INTERA to furnish certain equipment, materials and other goods (collectively "Goods") and INTERA is willing to do so, subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements hereinafter set forth, the Parties agree as follows:

ARTICLE 1. SCOPE OF SERVICES

Client desires INTERA to perform the Services and provide the Goods described in Attachment A.

ARTICLE 2. TERM

The term of this Agreement will commence on 1 August 2025 and will continue until 31 July 2027 unless sooner terminated as provided in this Agreement.

ARTICLE 3. INVOICING AND PAYMENT

For performance of the Services, Client will pay INTERA the compensation specified in Attachment B. This compensation will be invoiced to Client at monthly intervals along with reimbursables and will be due and payable within 30 days following the date of the invoice. In the event that part of an invoice is in dispute, Client agrees to pay the undisputed portion of the invoice according to the payment terms hereunder. If for any reason Client fails to pay INTERA in full within 30 days from the date of an invoice, Client will pay INTERA a late payment charge each month equal to one percent (1%) of any unpaid balance or the highest rate permitted by law, whichever is the lesser. If for any reason Client fails to pay INTERA in full within 60 days from the date of an invoice, INTERA may, at INTERA's sole option, (i) suspend its performance of Services and supply of Goods until all outstanding bills have been paid in full by Client, (ii) terminate this Agreement and/or (iii) engage debt collection services/commence legal proceedings for the collection of unpaid and undisputed invoiced amounts. INTERA shall be entitled to recover, to the extent allowed by law, its costs and expenses, including reasonable attorneys' fees, incurred in connection with all actions taken to obtain or enforce payment by Client of Client's obligations under this Agreement.

ARTICLE 4. REPRESENTATIVES

INTERA will cooperate with the Client and be subject to the direction and control of Client's designated representative. Client will designate a representative who will be the authorized representative of Client regarding this Agreement and Services and will inform INTERA promptly upon discovery of any aspect of the Services or Goods, which does not meet with Client's approval. INTERA will also designate a representative who will be responsible for the execution of the Services and the provision of Goods and will be the authorized representative of INTERA for this Agreement.

ARTICLE 5. RECORDS

For a period of one year after completion of the Services under this Agreement, INTERA will, upon written request of the Client, provide reasonable access to necessary supporting records and documentation.

ARTICLE 6. RELATIONSHIP OF THE PARTIES

6.1. Independent Contractor. INTERA will perform the Services as an independent contractor. INTERA acknowledges and agrees that no employer-employee relationship exists or is intended to be created between INTERA and Client.

6.2. Assumption or Creation of Obligations or Responsibilities. Neither Party will have the right to assume or create obligations or responsibilities of any type in the name of the other Party unless expressly authorized to do so in writing by the Party taking on the obligation.

ARTICLE 7. SUBCONTRACTOR AND SUPPLIERS

INTERA will have the right to retain subcontractors and suppliers to assist INTERA in the performance of the Services and the provision of Goods under this Agreement.

ARTICLE 8. CONFIDENTIALITY AND RIGHTS IN DATA

8.1. Maintenance of Confidentiality. Information disclosed by one Party to the other Party during the performance of Services may include the confidential or proprietary information of the disclosing Party and that Party's agents, subcontractors or suppliers. In the event such information is expressly identified as proprietary or confidential prior to or at the time of disclosure, the Party receiving such information will keep it in confidence and will not furnish or otherwise disclose it to any third party during or after completion of the applicable Services for a period of three years. Neither Party will be obligated to maintain the confidentiality of any information designated by the other Party as confidential or proprietary if the information:

8.1.1. Was in the receiving Party's possession or was known to the receiving Party prior to its receipt from the other Party and the receiving Party was under no prior legal obligation to protect such information;

8.1.2. Is independently developed by the receiving Party without the utilization of the confidential or proprietary information;

8.1.3. Is or becomes public knowledge without the fault of the receiving Party;

8.1.4. Becomes available to the receiving Party from a source other than the disclosing Party where the receiving Party is not under any legal obligation to protect such information; or

8.1.5. The information is disclosed pursuant to a governmental or legal requirement.

8.2. Provision of Information to INTERA. Client will promptly furnish INTERA with all information necessary for INTERA to perform the Services and supply the Goods. INTERA and its subcontractors will be entitled to rely upon such information and upon information from generally acceptable reputable sources without independent verification in the performance of the Services or supplying of Goods.

8.3. Intellectual Property. INTERA will have the full title and all rights in and to (including the sole right to obtain patents on) any inventions made or conceived as a result of the performance of the Services. INTERA hereby grants to Client a royalty-free, nonexclusive license for Client to make, have made and use any such invention made or conceived as a result of the performance of the Services or supply of the Goods. All computer programs, applications, methods, mechanized design practices, layouts, and systems developed by INTERA during the term of this Agreement or owned by INTERA on the effective date of this Agreement, will remain the exclusive property of INTERA. Except as otherwise provided in this Article 8, all reports, data, drawings, plans, specifications and other items delivered by INTERA (hereinafter referred to as "Reports") to Client under this Agreement will become the property of Client; however, INTERA is entitled to retain a file copy and utilize such Reports and the material in those Reports in the scope of INTERA's work and/or services for itself and others.

ARTICLE 9. TERMINATION

9.1. Client's Right to Terminate. Client may terminate this Agreement in whole or in part, upon 30 days prior written notice to INTERA, but such termination will not relieve Client of its obligation to pay INTERA for expenses incurred, Services performed and Goods provided up to the date of termination and all reasonable expenses, which INTERA incurs related to the termination.

9.2. INTERA's Right to Terminate. INTERA may terminate this Agreement in whole or in part, upon 30 days prior written notice to Client, but such termination will not relieve INTERA of its obligation to provide Client with a copy of all Reports prepared up to the date of termination of the Agreement.

ARTICLE 10. INDEMNIFICATION, WARRANTY AND LIMITATION OF LIABILITY

10.1. INTERA's Indemnification of Client. INTERA will indemnify and hold harmless Client, its officers, employees, and agents (the "Client Indemnified Parties") from losses (including, but not limited to, reasonable attorneys' fees and expenses) of the Client indemnified Parties to the extent caused by the 1) negligent acts or omissions of INTERA, 2) reckless acts or omissions of INTERA, 3) intentional misconduct of INTERA, 4) material misrepresentations of INTERA, 5) material breaches of contract or warranty by INTERA and 6) infringement of United States patents, copyrights and trademarks by INTERA.

10.2. Client's Indemnification of INTERA. Client will indemnify and hold harmless INTERA, its officers, employees, agents, subcontractors and suppliers (the "INTERA Indemnified Parties") from losses (including, but not limited to

reasonable attorneys' fees and expenses) of the INTERA Indemnified Parties to the extent caused by the 1) negligent acts or omissions of Client, 2) reckless acts or omissions of Client, 3) intentional misconduct of Client, 4) material misrepresentations of Client, 5) material breaches of contract or warranty by Client and 6) infringement of United States patents, copyrights and trademarks by Client.

10.3. INTERA's Warranty and Limitation of Liability. INTERA warrants that the Services will be performed, within the limits prescribed by Client, with professional thoroughness and competence. Notwithstanding anything to the contrary herein, INTERA's total cumulative liability for claims of any kind whether based in contract, tort (including negligence and strict liability), under any warranty, indemnification or otherwise, for any loss or damage arising out of or related to this Agreement or the performance of the Services or supply of Goods under this Agreement, will in no case exceed the compensation paid to INTERA by Client for the Services.

ARTICLE 11. INSURANCE

11.1. Insurance Coverage. Prior to commencing with the Services and at all times during the term of this Agreement, INTERA will provide and maintain in full force and effect, insurance of the types and with limits not less than those specified as follows:

11.1.1. Workers' Compensation Insurance in accordance with the statutory requirements of the State having jurisdiction over employees who are engaged in the Scope of Services, and Employer's Liability insurance of One Million Dollars ($1,000,000) each accident; disease-each employee; and disease-policy limit.

11.1.2. Commercial General Liability Insurance with a per occurrence limit of One Million Dollars ($1,000,000). This policy will include Contractual Liability coverage. This insurance will cover bodily injury to or death of persons, and/or loss of or damage to property.

11.1.3. Automobile (owned, non-owned or hired) Insurance with an each accident limit of One Million Dollars ($1,000,000) for bodily injury and property damage liability.

11.1.4. Professional Errors and Omissions Insurance of One Million Dollars ($1,000,000) for each occurrence per claim and in the aggregate.

11.2. Insurance Terms and Conditions. All insurance policies provided and maintained by INTERA will be underwritten by insurers which are rated "A VII" or higher by the most current edition of *Best's Key Rating Guide,* and which are authorized to write insurance in the state or states in which the Services are performed or where the Goods are provided.

ARTICLE 12. DISPUTE RESOLUTION

12.1. Negotiation. The Parties will attempt in good faith to resolve any dispute arising out of or relating to this Agreement promptly by negotiation between executives who have authority to settle the controversy. Any Party may give the other Party written notice of any dispute not resolved in the normal course of business. Within ten days after delivery of the notice, the receiving Party will submit to the other a written response. The notice and response will include (a) a statement of that Party's position and a summary of arguments supporting that position, and (b) the name and title of the executive who will represent that Party and of any other person who will accompany the executive in negotiations. Within 20 days after delivery of the initial notice, the executives of both Parties will meet at a mutually acceptable time and place, and thereafter as often as they reasonably deem necessary, to attempt to resolve the dispute. All reasonable requests for information made by one Party to the other will be honored. All negotiations pursuant to this clause are confidential and will be treated as compromise and settlement negotiations for purposes of applicable rules of evidence.

12.2. Mediation. If the dispute has not been resolved by negotiation as provided above within 30 days after delivery of the initial notice of negotiation, or if the Parties fail to meet within 20 days, the Parties will endeavor to settle the dispute by mediation under the International Institute for Conflict Prevention & Resolution ("CPR") Mediation Procedure in effect on the date of this Agreement, provided, however, that if one Party fails to participate in the negotiation as provided above, the other Party can initiate mediation prior to the expiration of the 30 days. Unless otherwise agreed, the Parties will select a mediator from the CPR Panel of Distinguished Neutrals.

12.3. Litigation. Any dispute arising out of or relating to this Agreement, including the breach, termination or validity thereof, which has not been resolved by mediation as provided above within 50 days after delivery of the initial notice of negotiation will be finally resolved by litigation.

12.4. The Client agrees to the joinder of any subcontractor hired by INTERA to any proceeding under this Agreement that involves or may involve a subcontractor's Services.

ARTICLE 13. NOTICES

Any notice, request, demand or other communication related to this Agreement or Work Order will be in writing and will be considered duly made three calendar days after the date of deposit in the U.S. Mail, by certified mail, return receipt requested, postage prepaid, addressed to the applicable Party at the following address or when delivered, if delivered by hand or transmitted by telecopy to the other Party at the following addresses or facsimile numbers:

If to INTERA: INTERA Incorporated
Attn: George Westbury, Director of Contracts
9600 Great Hills Trail, Suite 300W
Austin, TX 78759
Telephone: 512.425.2000
Email: gwestbury@intera.com

If to Client: Oklahoma Water Resources Board
Attn: Derrick Wagner
3800 North Classen Boulevard
Oklahoma City, OK 73118
Telephone: 405.530.8800
Email: Derrick.Wagner@owrb.ok.gov

Either Party may change its address or numbers for receiving notices by giving written notice of the change to the other Party.

ARTICLE 14. MISCELLANEOUS

14.1. Title to Goods. Title to and risk of loss of or damage to Goods will pass to Client upon delivery of the Good to Client.

14.2. Force Majeure. Neither Party will be considered in default in the performance of its obligations hereunder to the extent that the performance of any such obligation is prevented or delayed by any cause, which is beyond the reasonable control of and could not have been anticipated by the affected Party, including, but not limited to, acts of God, storms, floods, fire, strikes, boycotts, other labor disputes, riots, thefts, accidents, acts or failures to act by the other Party; and acts or failures to act by any non-Party government or government agency; provided, however, that any obligation to make payment hereunder will not be extended for any reason. Upon the occurrence of a situation as described above, the time for performance by either Party to this Agreement of its obligations will be extended by a period of time equal to the time lost because of such situation; provided, however, that prompt notice of such a situation will be provided to the other Party and reasonable efforts will be used to mitigate the adverse impact of such a situation.

14.3. Responsibility for Taxes. Client will be responsible for and will pay any taxes due to any agency arising out of or under this Agreement or the Services and Goods provided except for those taxes levied upon the net income, gross receipts, real, or personal property of INTERA.

14.4. Assignment. Neither this Agreement nor any rights or obligations under this Agreement will be assigned or otherwise transferred by a Party without the prior written consent of the other Party except that INTERA may assign all or a portion of this the Services or Goods under this Agreement to a subcontractor or supplier without the prior written consent of the Client.

14.5. Waiver. The failure of either Party to exercise any right under this Agreement or to take any action permitted will not be deemed a waiver of any right in the event of a subsequent breach of a like or different nature.

14.6. Entire Agreement. The terms and conditions set forth in this Agreement are intended by both Parties to constitute the final and complete statement of their agreement with respect to the subject matter of this Agreement, and all prior proposals, communications, negotiations, agreements, understandings and representations relating the subject matter of this Agreement are hereby superseded. No modification or amendment of this Agreement will be effective unless the same is in writing and signed by both Parties.

14.7. Third Party Beneficiaries. Except as expressly provided to the contrary in this Agreement, this Agreement does not and is not intended to confer any rights or remedies upon any person other than the Parties.

14.8. Law and Venue. This Agreement will be governed by and interpreted in accordance with the laws of the State of Texas and venue shall be in a court of competent jurisdiction in Travis County, Texas.

14.9. Severability. The invalidity or unenforceability of any provision of this Agreement will not affect the validity or enforceability of any other

provision of this Agreement, each of which will remain in full force and effect.

14.10. Captions. The Articles and Section captions in this Agreement are for convenience of reference only, do not constitute part of this Agreement and will not be deemed to limit or otherwise affect any of the provisions in the Agreement.

14.11. Construction. The Parties to this Agreement participated jointly in the negotiation and drafting of this Agreement and any Work Order. Therefore, in the event any ambiguity or question of intent or interpretation arises, this Agreement will be construed as if drafted jointly by the Parties and no presumption or burden of proof will arise favoring or disfavoring any Party by virtue of authorship of any of the provisions of this Agreement.

14.12. Counterparts. This Agreement may be executed in the original, by facsimile, by e-mail or by electronic signature in any number of counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

14.13. Professional Materials. INTERA may use these Services and Client's name in its promotional and professional materials. INTERA will not disclose information that is identified by Client as confidential or proprietary according to Article 8.

14.14. Survival. The provisions of Articles 5, 8, 10 and 12 and Sections 14.3, 14.8 and 14.13 of this Agreement will survive the termination or cancellation of this Agreement and the completion of the Scope of Services.

14.15. Attachments. The following attachments are made a part of this Agreement for all purposes:

Attachment A – Scope of Services
Attachment B – Compensation

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the date first above written.

Oklahoma Water Resources Board

By: _____

Printed Name: Derrick Wagner, P.G.

Printed Title: Technical Studies Manager

INTERA Incorporated

By: _____

Printed Name: Neil Deeds, Ph.D., P.E.

Printed Title: Executive Vice President

Project ID: P024.193.OKWRB Oklahoma GAM modeling

1.0 STATEMENT OF SERVICES

This statement of services includes the construction, calibration, and documentation of a groundwater model for the Cimarron River alluvium and terrace aquifer.

INTERA will utilize datasets from the Oklahoma Water Resources Board's (OWRB) hydrogeologic framework report (Titled "Hydrologic Investigation Report of the Cimarron River Alluvium and Terrace Aquifer in Northwestern Oklahoma, 2020"; Le Pera and others, *in press*) as the basis for the model hydrogeologic surfaces, areal extent, initial recharge, baseflow calibration targets, and hydraulic properties. INTERA will use the extent of the Cimarron River alluvium and terrace aquifer described in the hydrogeologic framework report for the active area of the model. However, the INTERA team will evaluate the extent of the active area in the conceptual report where the saturated thickness is less than five feet—generally the minimum cell thickness suggested for this model. Additionally, the model boundary may be expanded or condensed in some areas to ensure that each active cell connects with at least one other active cell. In either case, INTERA will coordinate with OWRB to discuss any changes to the model extent.

The model simulation will use MODFLOW 6 (Langevin and others, 2021), which is the latest core version of MODFLOW released by the U.S. Geological Survey (USGS). MODFLOW 6 offers several features that set it apart from previous releases. One of the most significant advancements is its flexible grid system, which supports both structured and unstructured grids. This grid system allows modelers to better capture complex geological features and refine grids in areas of interest, improving accuracy and efficiency. Furthermore, MODFLOW 6's ability to seamlessly integrate other models, such as groundwater-surface water interaction, enhances its versatility for addressing multifaceted hydrogeologic problems. The sediment of the Cimarron River alluvium and terrace aquifer will be modeled using a single groundwater model. However, for the purposes of scenario water budgets, this model can be subdivided into various sections (using the MODFLOW ZoneBudget program) in discussions with the OWRB.

Hydrologic boundaries in the groundwater model represent the locations where the inflow or outflow of water may occur. Based on the 2016 potentiometric surface map in Le Pera and others (in press), whereby the contours are generally parallel with the boundary in some areas, a low-rate General-Head-Boundary (GHB) may be appropriate along the northern edge of the terrace area. In these areas, the terrace is assumed to exchange lateral flow with the surrounding Permian-age bedrock units. Along the southern boundary, we propose a no-flow boundary or a low-rate GHB. In general, net lateral groundwater flows exchanged with the surrounding Permian bedrock units (predominantly tight units with relatively low hydraulic conductivity) are assumed to be a negligible part of the conceptual model water budget. The aquifer top altitude will be based on a 10-meter digital elevation map.

The model will use two layers to simulate the sediment of the Cimarron River alluvium and terrace (layer 1) and the generally north-northwest striking Permian-age bedrock units directly underlying the alluvium and terrace (layer 2), similar to most other alluvium and terrace aquifers modeled for the OWRB. The conceptual model layer surfaces can be fit to a structured model grid that is proposed with a cell size of 300-foot x 300-foot without rotation (or as agreed upon with the OWRB). Soil-Water-Balance derived recharge in the Cimarron River alluvium and terrace aquifer will be used from Le Pera and others (*in press*) and applied using the recharge package. Using the SWB-derived recharge is advantageous given its ability to spatially and temporally distribute recharge across the entire model domain as well as its frequent use in many other models provided to the OWRB. The 328-foot x 328-foot SWB grid cell size is advantageous to use, given the similarity to the proposed model grid size of 300-foot x 300-foot. Estimates from the water-table fluctuation (WTF) method and the water budget equation will also be used to constrain the recharge during calibration.

To simulate the study area rivers and streams, the Streamflow Routing package is proposed, following the convention from many previous alluvium and terrace aquifer models prepared for the OWRB. The SFR package exchanges flow between the aquifer and the stream according to Darcy's Law; the flow exchanged between the aquifer and the stream is the product of the streambed conductance and the difference between the water-table altitude and the stream stage. Evapotranspiration (ET) will be simulated using the Evapotranspiration package for cells near the stream reaches. In this package, evapotranspiration decreases linearly with decreases in the simulated groundwater level, and no evapotranspiration occurs when the simulated groundwater level is below a user-specified root-zone depth. As has been implemented in previous alluvium and terrace models for the OWRB, the maximum water-table ET rate for each stress period will be set as the difference between the potential and actual ET computed from the SWB code. This provides an approximation for ET, given that the SWB code only considers ET from vegetation based on the soil moisture available. The root-zone depth for each active ET cell will be set equal to the SWB root-zone depth for each land-cover type. Evapotranspiration will either be applied to cells in the riparian areas immediately around the stream channel or by using data from the National Wetlands Inventory depending on which approach is optimal.

Groundwater pumping estimates for the Cimarron River alluvial and terrace aquifer are presented in Le Pera and others (*in press*) from 1967 to 2020. Annual reported groundwater use for each permit will be divided equally among each of the wells on the permit or method preferred by the OWRB. These annual well withdrawals will then be distributed into monthly well withdrawals (if using monthly stress periods) using monthly demand distributions from the Oklahoma Comprehensive Water Plan as per previous groundwater models for the OWRB. Annual irrigation withdrawals will be multiplied by the monthly irrigation demand (as a percentage of annual groundwater use), and annual public-supply well withdrawals will be multiplied by the monthly public-supply demand. Domestic withdrawals, which are not regulated or reported by the OWRB, may not be simulated depending on data available for estimation, but are likely a minor component of total use.

The initial hydraulic properties will be based on the "Hydraulic Properties" section of Le Pera and others (*in press*). There are 29 available aquifer tests (single and multi-well tests) within the model domain. Additionally, hydraulic conductivity and specific yield will be constrained by the standardization analysis of 3,650 driller's logs from Le Pera and others (in press). Elsewhere, starting parameter values representing hydraulic properties of the aquifer units will be used from literature estimates and adjusted within a reasonable range. By combining the variance of the hydraulic properties with formal geostatistical simulation, we will generate an ensemble of uncalibrated geostatistically-based hydraulic property fields. Collectively, this ensemble spans the range of uncertainty that exists in the properties before calibration. Using the techniques presented in White and others (2022), we will condition (i.e., adjust) these realizations to respect available estimates of property values, such as observations from aquifer performance tests, driller's reports, and other information. The horizontal hydraulic conductivity, vertical anisotropy (the ratio of horizontal-to-vertical hydraulic conductivity), and storage properties (specific storage and specific yield) are proposed to be represented using pilot point interpolation in the groundwater model.

The process of model calibration conceptually is the process of assimilating and integrating information stored as historical observations. For the Cimarron River alluvium and terrace aquifer, these observations will be water levels and base flow estimates from streamflow data from 1974 to 2023. The information is transferred into the parameters by assimilating the water level and streamflow observations, where parameters are quantities representing model input uncertainty. Model calibration and uncertainty quantification are proposed to be performed by using the iterative ensemble smoother

PESTPP-IES, included in the PEST++ software suite, in conjunction with the open-source Python packages FloPy and pyEMU. The combination of these software tools allows much of the calibration and uncertainty quantification workflow to be performed programmatically, providing transparency and reproducibility. The calibration approach proposed in this study incorporates an ensemble-based approach that avoids the implications of a traditional "calibrated" model having arrived at a finalized dataset of exactly known parameter values when there are many potential parameter value datasets that could be used. In this way, the approach focuses on assimilating the aspects of the historical observation dataset relevant to the simulated modeling objectives. Once calibration is complete, a single model will be selected from the model ensemble that can be adopted as "the" model of record.

A total of 259 wells with 34,786 groundwater-level observations are available from the OWRB for the proposed model period 1974–2023. Approximately half (124 of the 259 wells) have only one or two water-level measurements; therefore, uncertainty exists in some areas of the model where these wells contain the only groundwater-level measurements, particularly in the central areas of the model. In areas where few observations are available, synthetic observations may be used to constrain the model calibration. These synthetic observations would be based on water levels from nearby wells during similar periods. The available groundwater-level measurements support annual stress periods; however, many previously alluvium and terrace models for the OWRB use monthly stress periods. If monthly stress periods are desired, all wells with available bi-annual or greater measurements, combined with the seven continuous wells, can be used to prepare a generalized monthly dataset that can be used for calibration. An initial observation filtering process will be performed, followed by a spatial and temporal observation declustering process to ensure disparate groundwater levels do not occur in an area with spatially dense observations. Target observations will then be created from observation values nearest the end of each stress period. Due to the relatively small number of wells, a dynamic weighting process will be used to ensure success during the calibration process. The water level will be monitored at synthetic sites in layers where there are few measurements to ensure reasonable values.

The calibrated groundwater model will be used to evaluate the allocation of water rights and to simulate management options. Scenarios included as a part of this scope of services are listed below.

1. Equal Proportionate Share—50 percent depletion (with 5 feet or more of saturated thickness)
2. Equal Proportionate Share—Full depletion (5 feet of saturated thickness)
3. Projected Water Use (50-year water use)
4. Sustained Drought

Three of these scenarios (Equal Proportionate Share 50 percent depletion, Projected Water Use, Sustained Drought) will be configured the same as previous OWRB groundwater model scenarios. The fourth scenario (Equal Proportionate Share full depletion) is a newer scenario that will be a modification of the 50 percent depletion scenario.

2.0 DELIVERABLES AND SCHEDULE

The term of this Work Order will commence on 1 August 2025 and will continue until 31 July 2027. At the conclusion of this time period, INTERA will deliver the following items:

1. A calibrated groundwater model of the Cimarron River alluvium and terrace aquifer.
2. A report documenting the model construction and calibration, similar in scope, format, and layout to USGS Scientific Investigation Reports written for the OWRB.
3. A geodatabase with Geographic Information System data pertaining to the model extents, layering, calibration targets, calibrated model parameters, and other items required by the OWRB.

During the project period, INTERA will provide monthly progress updates. Additionally, one in-person meeting will be held in 2025 and 2027, and two in-person meetings in 2026. If required, additional in-person meetings can be included as necessary.

3.0 DESIGNATED REPRESENTATIVES

Oklahoma Water Resources Board

Printed Name: Derrick Wagner, P.G.

Phone: 405.530.8800

Email: Derrick.Wagner@owrb.ok.gov

INTERA Incorporated

Printed Name: John Ellis, P.G.

Phone: 972.740.7955

Email: jellis@intera.com

STANDARD TECHNICAL SERVICES AGREEMENT

ATTACHMENT B: COMPENSATION

INTERA shall be compensated for work performed on either a Time and Materials or a Fixed Price basis as selected below:

☐ **TIME AND MATERIALS**

☒ **FIXED PRICE**

FIXED PRICE or NOT TO EXCEED AMOUNT: $300,000. Inclusive of any applicable taxes? YES X NO ☐

TIME AND MATERIALS:

1. If on a Time and Materials Basis, INTERA's hourly labor rates are provided in the Table below. All rates are in U.S. dollars.

2. For Services with an estimated duration greater than twelve (12) months, the below rates are subject to annual adjustment using the change in the Consumer Price Index for All Urban Consumers (CPI-U), as published by the U.S. Bureau of Labor Statistics, for the preceding twelve (12) month period. INTERA will provide written notice of the increase annually.

3. There is a 15% mark-up on other direct costs such as subcontractors, vendors, travel, and equipment. Mileage is reimbursed at the current IRS standard mileage rate.

INTERA Labor Hourly Billing Rates

Labor Category	Rate ($USD/hr.)
Principal Engineer/Scientist I	$306
Principal Engineer/Scientist II	$274
Principal Engineer/Scientist III	$257
Senior Engineer/Scientist I	$240
Senior Engineer/Scientist II	$218
Senior Engineer Scientist III	$206
Senior Engineer/Scientist IV	$195
Engineer/Scientist I	$184
Engineer/Scientist II	$173
Engineer/Scientist III	$150
Engineer/Scientist IV	$139
Engineer/Scientist Intern	$93
Senior Technician	$153
Technician	$93
Senior Technical Editor	$153
Technical Editor	$104
Senior CAD/Graphics Specialist	$131
CAD/Graphics Specialist	$104
Project Associate	$96

SAMPLE

3. SUMMARY DISPOSITION AGENDA ITEMS

WATER RIGHTS ADMINISTRATION DIVISION

July 15, 2025

WATER RIGHTS ADMINISTRATION DIVISION
Applications for Temporary Permits to Use Groundwater

July 15, 2025

APP. NO. & DATE FILED	NAME OF APPLICANT	NUMBER OF WELLS	COUNTY & BASIN	LAND DEDICATED	PURPOSE & AMOUNT RECOMMENDED
2024-543 2/28/2024	The Weed Patch, LLC	1	Stephens County, Wellington Formation	13.6 acres Section 11, T3S, R4WIM	Irrigation (marijuana) 2 a.f.
2024-586 5/7/2024	Aaron T. Stutzman and Carla Rose Stutzman	3	Custer and Washita County, Rush Springs Sandstone	400 acres Sections 26, 36, T11N, T12N, R14WIM	Irrigation 712 a.f.
2024-594 6/6/2024	Preston C. Jones and Christina D. Jones	23	Woods County, Cimarron River Alluvium and Terrace	298 acres Sections 32, 33, T24N, R13WIM	Oil & gas 596 a.f.
2024-626 8/23/2024	Devlin and Phillips, LLC	3	Custer County, Rush Springs Sandstone	8.6 acres Section 31, T13N, R14WIM	Irrigation, agriculture 17.2 a.f.
2025-520 2/13/2025	Russell E. Repp and Staci M Repp	3	Caddo County, Rush Springs Sandstone	156 acres Section 9, T8N, R13WIM	Irrigation 310 a.f.
2025-521 2/13/2025	Russell E. Repp and Staci M Repp	1	Caddo County, Rush Springs Sandstone	40 acres Section 8, T8N, R12WIM	Irrigation 80 a.f.
2025-522 2/13/2025	Russell E. Repp and Staci M Repp	1	Caddo County, Rush Springs Sandstone	160 acres Section 17, T8N, R11WIM	Irrigation 320 a.f.
2025-541 3/10/2025	Russell E. Repp and Staci M Repp	3	Caddo County, Rush Springs Sandstone	155 acres Section 34, T9N, R13WIM	Irrigation 227 a.f.

WATER RIGHTS ADMINISTRATION DIVISION
Applications for Regular Permits to Use Groundwater

July 15, 2025

APP. NO. & DATE FILED	NAME OF APPLICANT	NUMBER OF WELLS	COUNTY & BASIN	LAND DEDICATED	PURPOSE & AMOUNT RECOMMENDED
2023-591 6/29/2023	Carlos Gonzalez	1	Bryan County, Antlers Sandstone	2.5 acres Section 18, T8S, R8EIM	Agriculture (medical marijuana) 5 a.f.
2024-630 8/30/2024	Peter Guenther and Mary Guenther	11	Cimarron and Texas Counties, Ogallala Panhandle	2,215.95 acres Sections 23, 26, 5, 21, 20, 13, 36, T6N, T5N, R8ECM, R9ECM, R10ECM	Irrigation 4,431.9 a.f.
2024-658 11/1/2024	Vantine-Landess Family, LLC	5	Texas County, Ogallala Panhandle	3,080 acres Sections 25, 26, 27, 28, 32, 33, 34, 35, 36, T1N, R15ECM	Agriculture, sale for Commercial use, oil and gas/energy, municipal water supply, rural water supply 5,916 a.f.
2025-514 2/7/2025	Kent D. Miller and Denise R. Miller	1	Ellis County, Ogallala Northwest Region	160 acres Section 32, T22N, R24WIM	Irrigation 224 a.f.
2025-519 2/10/2025	FD Guymon Farms, LLC	1	Texas County, Ogallala Panhandle	320 acres Section 26, T5N, R15ECM	Irrigation 320 a.f.

WATER RIGHTS ADMINISTRATION DIVISION
Applications to Amend Regular Permits to Use Groundwater

July 15, 2025

APP. NO. & DATE FILED	NAME OF APPLICANT	NUMBER OF WELLS	COUNTY & BASIN	LAND DEDICATED	PURPOSE & AMOUNT RECOMMENDED
1974-463A 2/19/2025	Richard Hugh Dorman II and Christpoher Alan Dorman	1	Beaver County, Ogallala Panhandle	160 acres Section 29, T5N, R22ECM	Irrigation 320 a.f.
1974-479B 10/31/2024	Seaboard Foods, LLC	4	Texas County, Ogallala Panhandle	280.07 acres Section 21, T2N, R16ECM	Irrigation and agriculture 406.1 a.f.
1979-555 2/10/2025	Arthur Bohlmann and Deborah Bohlmann	1	Texas County, Ogallala Panhandle	400 acres Section 34 T4N, R17ECM	Irrigation 800 a.f.
1996-672B 10/31/2024	Seaboard Foods, LLC	7	Texas County, Ogallala Panhandle	224.1 acres Section 35, T2N, R15ECM	Irrigation and agriculture 448.2 a.f.

WATER RIGHTS ADMINISTRATION DIVISION
Applications to Amend Prior Right to Use Groundwater

July 15, 2025

APP. NO. & DATE FILED	NAME OF APPLICANT	NUMBER OF WELLS	COUNTY & BASIN	LAND DEDICATED	PURPOSE & AMOUNT RECOMMENDED
1973-230C 10/31/2024	Seaboard Foods, LLC	7	Texas County, Ogallala Panhandle	494.52 acres Section 25, T2N, R15ECM	Irrigation and agriculture 1,005 a.f.

WATER RIGHTS ADMINISTRATION DIVISION
Applications for Regular Permits to Use Stream Water

July 15, 2025

APP. NO. & DATE FILED	NAME OF APPLICANT	POINTS OF DIVERSION	COUNTY & STREAM SYSTEM	PURPOSE & AMOUNT RECOMMENDED
2024-017 10/9/2024	Michael W. Giles and Karen M. Giles	One point of diversion on Caney River in Section 15, T22N, R14EIM	Rogers County SS 2-14	Irrigation 80 a.f.

WATER RIGHTS ADMINISTRATION DIVISION
Well Driller and Pump Installer Licensing

July 15, 2025

DPC NUMBER	NAME OF FIRM	CERTIFIED ACTIVITIES	OPERATORS
New Licenses, Accompanying Operator Certificates and Activities:			
DPC-1147	Schrock Drilling and Dirtwork, LLC	Groundwater wells and pump installation	Clement Schroc OP-2609
DPC-1149	Edgeservices, Inc.	Groundwater wells	Alan Rickers OP-2610
New Operators, License Name Change, and/or Activities for Existing Licenses:			
DPC-1008	ConeTec, Inc.	Monitoring Wells	Jermaine Eaton OP-2611
DPC-1023	Dolese Bros. Co.	Monitoring Wells	Corbin Johnson OP-2612

WATER RIGHTS ADMINISTRATION DIVISION
Cancellation of Groundwater Permits

July 15, 2025

2006-543	Dolese Bros. Co.	Oklahoma County
2014-641	David, Peggy, Cody, and Autumn Sorrell	Grady County
1964-568	Sol P Jones	Oklahoma County
2006-508A	Lugene Ethel and Kenneth K. Jones Revocable Trusts	Custer County
1972-324	Lynn Easterwood	Harper County
1979-686D	Robert A. & Judy Koehn	Major County
1963-285	Gene Stafford	Cimarron County
1963-296	Gene Stafford	Cimarron County
1981-641	Circle H. Ranch	Pottawatomie County
1998-528A	Randy W. & Cathy Knowles dba Cottonwood Springs	Ellis County
1981-935A	Matthew Thomas King	Washita County
1985-508	G T Blankenship	Cleveland County
1985-626	LD Roller Revocable Living Trust	Cleveland County
1986-509	Donavan R. Arterburn	Oklahoma County
1992-542	Mohammad Sami Khan	Oklahoma County
1965-446	AK Wilson	Texas County
1965-445	AK Wilson	Texas County
1968-299	AK Wilson	Texas County
1985-613	B & J Hughes Limited Partnership	Alfalfa County
1983-627	Joe Reece	Cleveland County
1982-665	Joe Reece	Pottawatomie County
1958-380	Ruby Saathoff	Caddo County
1983-547	Lois Larue Powers	Custer County
1970-113B	Twisted Oaks Farm, LLC	Grady County
1954-347	Percy Labrue	Alfalfa County
1963-250	Fredrick G. Folkers	Cimarron County
1970-099	William I and Mary Ann Goodloe	Texas County
1972-399	Justin and Debra Choate	Kingfisher County
1981-517	Fran Edwards	Grady County
2002-558	Wedel & Wedel, LLC	Comanche County

WATER RIGHTS ADMINISTRATION DIVISION
Proposed Default Order

July 15, 2025

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

In the Matter of the Application of KTO Farms, LLC for an Amendment to a Groundwater Permit	)))	Application No. 2016-0560

PROPOSED
DEFAULT ORDER

ON THE 12th day of June, 2025, at approximately 9:35 a.m., the above numbered and entitled cause scheduled for 9:30 A.M. came on for hearing in the Second Floor Board Room at the office of the Oklahoma Water Resources Board, 3800 North Classen Boulevard, Oklahoma City, Oklahoma. This matter arises out of the Application No. 2016-0560 ("Application") filed by KTO Farms, LLC ("Applicant"). The Application seeks to amend an existing groundwater permit to withdraw and use an additional 320 acre-feet of groundwater per year, for a total of 357.7 acre-feet of groundwater per calendar year for the purpose of (1) agricultural use; (2) drilling and primary completion of oil and gas wells; (3) irrigation (wheat); (4) recreation , fish and wildlife uses. An additional 160 acres have been dedicated to the application and are located as follows: in the SW/4 of Section 2, T13N, R6 West of the Indian Meridian, in Canadian County.

The Applican**t**, Mr. Kevin Oshman for KTO Farms, LLC, appeared at the time scheduled for the hearing on June 12th, 2025. The following Oklahoma Water Resources Board Exhibits were admitted into the record: 1: Application; 2: Ownership Documents; 3. Notice of Application; 4. Proof of Service; 5: Proof of Publication; 6: Protest Letters (2); 7: OWRB Notice of Hearing for the June 12th, 2025 and Green Cards; 8: Voluntary Withdrawal of Protest from Glen and Elizabeth Hyde; 9: Sign-in / Attendance Sheet.

The Applicant and Protestants have been afforded due process of law and an adequate opportunity to be heard. Ted and Sylvia Hyde ("Protestants") have defaulted and abandoned any interests by failing to appear at the hearing according to Oklahoma Administrative Code ("OAC")

785:4-7-3(c). However, the protest letters submitted by these Protestants are kept as a part of the application record, and in conformity with OAC 785: 4-5-4 (e). The only additional protest letter in the file that objected to the application was by Glen and Elizabeth Hyde, and that was effectively withdrawn by a signed letter dated as received by the Oklahoma Water Resources Board on June 5th, 2025.

If a respondent party fails to appear without good cause shown, the allegations set forth in the Board's notice and supplemental statement thereto, if any, shall be deemed confessed, and the Hearing Examiner may recommend a default order based thereon to the Board without further notice to such defaulting respondent. OAC 785:4-7-3(d). All applicable legal issues including those set forth in the Notices of Hearing and are deemed to have been met by the Applicant KTO Farms, LLC for Application No. 2016-560.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that the Application to Amend Permit No. 2016-0560 is hereby approved.

IT IS SO ORDERED by the Oklahoma Water Resource Board in regular and open meeting this _____ day of _____, 2025.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

WATER RIGHTS ADMINISTRATION DIVISION
Proposed Revised Board Order

July 15, 2025

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF MONIKA CAMPBELL FOR A TEMPORARY GROUNDWATER PERMIT LOCATED IN CANADIAN COUNTY, OKLAHOMA	NO. 2024-0522

REVISED PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND BOARD ORDER

This proceeding arose from the Monika Campbell (or "Applicant") Application for a Groundwater Use Permit, No. 2024-0522, for watering use by multiple cannabis agricultural grow operations from the underlying Salt Plains Formation and Hennessey Group. A hearing was held at the Board offices in Oklahoma City, Oklahoma on February 26, 2025. The only appearing individuals were Christian Campbell, listed on the Application as the contact name, and Fred Abdul, on behalf of the Applicant, Monika Campbell. Neither the Applicant Monika Campbell, nor the Protestants appeared. After the hearing was adjourned, the matter was taken under advisement by the Hearing Examiner. A Proposed Order was prepared, served on the parties, and presented to the Board for consideration and action.

The hearing examiner found, in summary, that the land ownership documents lacked a proper chain of title, and license certificates by the Oklahoma Medical Marijuana Authority did not sufficiently reflect an active status, and a proposed order was submitted to the Board. On April 10th, 2025, Applicant filed a Motion for Remand to Supplement the Record, which was granted by the Oklahoma Water Resources Board at the Regular Meeting on April 15th, 2025. An Order on Remand was issued on April 16th, 2025 to provide Applicant's counsel time to submit documents to remedy the technical issues raised by the Hearing Examiner, which were timely submitted to the Oklahoma Water Resources Board Legal Division on May 30th, 2025. The Hearing Examiner finds that the provided documentation resolves the issues relating to the Ownership and Lease chain of title and current Oklahoma Medical Marijuana Certificates.

Based upon the separately stated Findings of Fact and Conclusions of Law that follow, the Board determines that Application No. 2024-0522 should be granted as set forth below:

FINDINGS OF FACT

Based upon its evaluation of the evidence and additional records and facts officially noticed in the record, the Board hereby makes the following Findings of Fact:

BACKGROUND OF APPLICATION

1. On or about February 8, 2024, the Applicant applied for a Temporary Groundwater Permit that authorizes the withdrawal of groundwater at the rate of 10.0 acre-feet of groundwater per year. The Notice of Application is for three (3) wells located in Canadian County as follows: one (1) well SE/4 NE/4 NE/4, one (1) well NW/4 NE/4 NE/4; then one (1) well in the S/2 NE/4 NE/4 or in the SE/4 NW/4 NE/4; all in Section 12, T14N, R5WIM, Canadian County. The purpose of the requested use is for the agricultural indoor grow of Medical Cannabis, overlying the Salt Plains Formation and Hennessey Group.

NOTICE OF APPLICATION AND PROTESTS

2. Board staff notified Applicants by letter dated June 6, 2024, that the application had been reviewed and directed them to give notice of the application by certified mail to each surface owner within 1,320 feet of the outside boundary of the 10-acre tract of land with a groundwater well location covered by the application. The notice set a protest deadline of ten (10) days after receipt of notice.

3. On July 26, 2024, Applicants filed with the Board an Affidavit of Notification stating that the identified surface estate owners had been notified of the application by certified mail, supported by the documentation included in OWRB Exhibit No. 4.

HEARING

4. The hearing was held on February 26, 2025, as scheduled. Notice of Hearing was mailed out to all interested parties on or about January 13, 2025.

5. The hearing was opened, evidence and argument were received from Christian Campbell, who is not an attorney but the representative authorized by Applicant Monika Campbell. Non-attorney representative appearances are authorized under OAC 785:4-7-3(b). Fred Abdul was present and assisted Christian Campbell, and the hearing was adjourned. The Applicant and

Protestants have been afforded due process of law and an adequate opportunity to be heard. No Protestants from the letters appeared. The Protestants, Vincent Orza, Sheila Kelly, and Stephen Unger failed to appear and have defaulted and abandoned any interests according to Oklahoma Administrative Code ("OAC") 785:4-7-3(c). Johnathon and Brooke Brooks withdrew their protest via legal counsel by filed pleading on February 25, 2025.

6. The admitted exhibits by Applicants from the hearing are: Exhibit 1, "Application No. 2024-0522", Exhibit 2, "Ownership Documents", Exhibit 3, "Notice of Application", Exhibit 4, "Proof of Service", Exhibit 5, "Protests", Exhibit 6, "Map", Exhibit 7, "Notice of Hearing", Exhibit 8, "Withdrawal of Protest", Exhibit 9, "Signed Attendance Sheet", and Exhibit 10, "Applicant's Power Point Presentation".

OWNERSHIP DOCUMENTS

7. The land chain of title documents submitted by Applicant's counsel on May 30th, 2025, including a chart with a summary, and properly supplements the title record chain between the Applicant and end beneficial users.

8. Therefore it is determined that the Applicant's documents did sufficiently establish proof of a proper chain of title to prove ownership and/or authorization by groundwater lease.

BENEFICIAL USE: "LAWFUL PURPOSE" ISSUES

10. Upon remand and as articulated on the first page of this Order, the Applicant's counsel provided proper and updated certification showing current Commercial Indoor Grower Licenses, by the Oklahoma Medical Marijuana Authority.

12. Therefore, it is determined that the Applicant's documentation upon remand did properly establish sufficient evidence to meet the "lawful purpose" prong of the beneficial use analysis pursuant to OAC 785:30-1-2.

WASTE BY POLLUTION

13. There was no evidence that waste by pollution would likely occur or will likely occur. As a result, the findings of fact based upon the evidence indicate that it is more probable than not that no waste by pollution will occur, and Applicant did meet the burden of proof for this element.

WASTE BY DEPLETION

14. There was no evidence to indicate that Applicants' groundwater well use is, or will be, inefficient. There was no evidence of an indication that in the future the applicant would be likely take or use fresh groundwater without a permit, take more fresh groundwater than is authorized by the permit,

or take or use fresh groundwater in any manner so that the water is lost by depletion for beneficial use. As a result, the findings of fact based upon the evidence indicate that it is more probable than not that no waste by depletion will occur, and Applicant did meet the burden of proof.

WELL-SPACING

15. The evidence of the record indicates that it is more probable than not that the land is not in compliance with the well-spacing requirement as set forth OAC 785:30-3-6. However, no Protestant appeared for hearing to dispute the same. Therefore, the issue becomes moot, and because the Protestants have abandoned any interests by not appearing for the hearing or withdrawing their protest, so a disallowance of the well-spacing locations would result in an inequitable or unreasonable result and the well-spacing request is granted.

CONCLUSIONS OF LAW

Based upon applicable law, and as applied to the above Findings of Fact and the evidence in the record, the Board draws the following Conclusions of Law:

LAW APPLICABLE TO USE OF GROUNDWATER GENERALLY

16. Under Title 60 O.S. § 60, the owner of the surface of a given tract of land owns the fresh groundwater beneath the surface of that land. That surface owner, or a lessee of the surface owner, may use such groundwater in accordance with the use regulations imposed by the Oklahoma Groundwater Law, Title 82, Oklahoma Statutes. As written, the law contemplates the eventual depletion of the groundwater resources, and "the use or nonuse by one landowner neither decreases nor increases the proportionate share of another." *OWRB v. Texas County Irr. And Water Resources Ass'n, Inc.*, 1984 OK 96, ¶ 7, 711 P.2d 38.

SUBJECT MATTER JURISDICTION

17. The Board has subject matter jurisdiction to adjudicate applications for use of groundwater according to the Oklahoma Groundwater Law and the Board's rules promulgated pursuant thereto.

PERSONAL JURISDICTION; DUE PROCESS

18. Due and proper notice of this proceeding was given to all potentially interested persons as required by law. The Applicant and the Protestants of record have been afforded due process of law and an adequate opportunity to be heard. All other potentially interested persons who failed to appear for the hearing have defaulted or abandoned their interests for failure to appear at the hearing

or otherwise failing to follow required protest procedures according OAC 785:4-7-3, or they filed a proper withdrawal of protest as set forth and described herein.

GROUNDWATER LAW: ELEMENTS TO BE DETERMINED

19. When a person makes an application for new groundwater permit, OAC 785:30-3-5 in this context, the rules require the Board to determine several specific issues. These are:

a. The applicant owns the surface of the dedicated land or has a valid lease or other legal authority for the taking of groundwater from the land;
b. The dedicated land overlies a fresh groundwater basin or sub-basin.
c. The use to which the Applicant intends to put the water is a beneficial use. Defined by OAC 785:30-1-2, a beneficial use is "the use of such quantity of stream or groundwater when reasonable intelligence and reasonable diligence are exercised in its application for a lawful purpose and as is economically necessary for that purpose. Beneficial uses include but are not limited to municipal, industrial, agricultural, irrigation, recreation, fish and wildlife, etc."
d. Waste by depletion and waste by pollution as defined by 82 O.S.§ 1020.15 will not occur.
e. If the new or proposed well site location is inside of the well-spacing requirements, whether drilling or completing the well at a location within the well-spacing requirements would be inequitable or unreasonable. OAC 785:30-3-6.

If the Board finds for the applicant on all these issues according to OAC 785:30-3-5, the rule provides that the Board shall approve the application.

LEASE AND OWNERSHIP DOCUMENTATION

20. The Board adopts and incorporates the reasons set forth herein that the provided ownership and lease documents did establish a proper chain of title.

BENEFICIAL USE FOR LEGAL PURPOSE

21. The Board adopts and incorporates the reasons set forth herein and concludes that the Applicants did meet the requirements for the "legal purpose" element of the beneficial use of groundwater.

NO WASTE BY POLLUTION

22. The Groundwater Law and Board rules provide that the Board must determine whether Applicant will allow waste by pollution as specified by OAC 785:30-3-5 to occur.

23. For the reasons set forth herein the Board concludes that Applicant did meet the burden of proof that they will not commit waste by pollution as described in 82 O.S. § 1020.15 and OAC 785:30-3-5 by using the requested permit.

NO WASTE BY DEPLETION

24. The Groundwater Law and Board rules provide that the Board must determine whether Applicant will allow waste by depletion as specified by OAC 785:30-3-5 and 82 O.S. § 1020.15 to occur.

25. The Board concludes that Applicant did meet their burden of proof that they will not commit waste by depletion as described in 82 O.S. § 1020.15 and OAC Title 785:30-3-5 by using the requested permit.

WELL-SPACING IS PROPER

26. OAC 785:30-3-6(a)(1) requires the Board to examine whether not granting a well-spacing exception would be unreasonable or inequitable.

27. The Board concludes that the location of the Applicant's wells is allowed because no Protestant appeared for the hearing and they forfeited any interest to dispute the well location as a party. The well-spacing exception is granted.

ULTIMATE CONCLUSION

28. Based upon the Findings of Fact and Conclusions of Law above, the Board concludes a Temporary Groundwater permit should be granted.

ORDER

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that the application for a new Groundwater Permit No. 2024-0522 in the name of Monika Campbell is granted.

IT IS SO ORDERED by the Oklahoma Water Resources Board in regular and open meeting this _____ day of _____, 2025.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

Suzanne Landess, Secretary

(SEAL)

CERTIFICATE OF MAILING

I certify that on the 19th day of June 2025, I mailed a true and correct copy of the above and foregoing instrument to:

Hank Herren,
Attorney for Monica Campbell
324 N. Robinson Ave., Suite 100
Oklahoma City, OK 73013

Angela Rodriguez
OKLAHOMA WATER RESOURCES BOARD

WATER RIGHTS ADMINISTRATION DIVISION
Proposed Consent Order

July 15, 2025

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER of Langston Lake Dam in the NW/4 NE/4 NW/4 of Section 26, Township 17 N, Range 1 West of the Indian Meridian, Logan County, Oklahoma Respondent,	))))))	NID ID: OK02352

CONSENT ORDER

This Consent Order is entered into between the Oklahoma Water Resources Board (hereinafter "Board" or "OWRB") and Langston University (hereinafter "Respondent") pursuant to the Oklahoma Administrative Procedures Act, Section 309(E) of Title 75 of Oklahoma Statutes. The parties waive statutory requirements of formal notice of the preparation and service of proposed Findings of Fact, Conclusions of Law and Board Order, and the entry of final Findings, Conclusions and Order.

I. MATTERS OF JURISDICTION AND AUTHORITY

1. Respondent, as owner of the dam and spillway, is responsible for the safety of the structure and for meeting the requirements placed on owners of dams by the State of Oklahoma. *See* 82 O.S. §§ 110.1 et seq., and Oklahoma Administrative Code (OAC) 785:25-3(a).

2. The Board is the state agency responsible for oversight and approval of the construction, repair, and alteration of certain dams in Oklahoma, including the Langston Lake dam. *See* 82 O.S. §§110.5 and 110.10.

3. By agreement of the parties, an administrative hearing is not necessary, and this Consent Order is entered voluntarily.

II. PARTIES BOUND

4. This Order, once entered, has the force of law and shall apply to and be binding upon the Board, the Respondent, and its agents, successors, and assigns. No change in the ownership or corporation status of any party shall alter its responsibilities under this Order.

III. FINDINGS OF FACT

5. Respondent is a public institution of higher education in the State of Oklahoma and is governed by the Board of Regents for the Oklahoma Agricultural and Mechanical Colleges

(the "Board of Regents"), which is maintained in whole or in part by the State of Oklahoma. Respondent is the owner of and party responsible for Langston Lake Dam and spillway located in Section 26, Township 17 North, Range 01West Indian Meridian, Logan County, Oklahoma.

6. Langston Lake Dam, included in the National Inventory of Dams ("NID") as No. OK02352, is an earthen dam approximately 63 feet in height and can impound a maximum of 8902 acre-feet of water. Langston Lake Dam is classified as high hazard potential because if the dam were to fail, the failure would probably cause loss of human life. *See* OAC 785:25-3-3(a)(2)(C).

7. The Oklahoma Water Resources Board ("Board") records indicate that the Respondent has repeatedly failed to submit the required annual inspection reports for the Langston Lake Dam, as mandated by the Oklahoma Dam Safety Act and applicable Board rules, in its capacity as the owner of a high hazard potential dam.

8. Furthermore, the Board records reflect that, despite the annual reporting requirement, Respondent submitted only three inspection reports for the Langston Lake Dam from the effective date of the Oklahoma Dam Safety Act through December, 2021; specifically on December 9, 1985; February 8, 1993; and June 24, 2010.

9. The Board did not receive any annual dam inspection reports from Respondent between 2010 and 2021.

10. In July 2015, the Board provided Respondent with a complimentary breach inundation model and associated maps for the Langston Lake Dam to assist in the preparation of an Emergency Action Plan ("EAP"), as required by applicable regulations. Despite this assistance and the Board's annual written reminders, the Respondent has never submitted the required EAP for this high hazard potential dam.

11. On March 22, 2021, the Board received the inspection report for Langston Lake Dam from Cecil Bearden, P.E. of That Dam Engineer LLC, for an inspection conducted on February 2, 2021. The inspection report listed Langston Lake Dam to be in satisfactory condition; however, upon review of the inspection report, the Board considered the dam to be in fair condition.

12. On February 28, 2022, the Board received the inspection report for Langston Lake Dam from Cecil Bearden, P.E. of That Dam Engineer LLC, for an inspection conducted on January 31, 2022. The inspection report listed Langston Lake Dam to be in satisfactory condition; however, upon review of the inspection report, the Board considered the dam to be in fair condition.

13. On June 7, 2022, the Chief of the Engineering and Planning Division, Yohanes Sugeng, P.E., notified Langston University by letter that the Board had not received an Emergency Action Plan ("EAP") for the Langston Lake Dam. The Respondent had also previously been advised of this requirement through the Board's annual dam inspection reminder letters.

14. On February 6, 2023, the Chief of the Engineering and Planning Division, Yohanes Sugeng, P.E., notified Langston University by letter that the Board had not received a dam inspection report since January 31, 2022. This notice followed the Board's annual inspection reminder, which had been sent to the Respondent on June 27, 2022.

15. On April 6, 2023, the Board issued a Notice of Violation and Assessment of Administrative Penalty to the Respondent for failure to complete the required annual inspection of a high hazard-potential dam. In response, the Board received an inspection report for the Langston Lake Dam from Cecil Bearden, P.E., of That Dam Engineer LLC, on June 2, 2023, for an inspection conducted on May 9, 2023.

16. On June 24, 2024, and again on October 14, 2024, the Board mailed to Respondent written reminders of their obligation to complete an annual inspection of Langston Lake Dam before December 31, 2024, and to submit the report of that annual inspection not later than 30 days following the inspection.

17. As of December 31, 2024, Respondent failed to complete the required annual inspection for Langston Lake Dam. As of January 30, 2025, The Board had not received an annual inspection report for Langston Lake Dam.

18. On March 3, 2025, the Board issued a Notice of Violation, Assessment of Administrative Penalty, and Notice of Opportunity for Hearing to the Respondent for failure to complete the required annual inspection of a high hazard-potential dam. A copy of the Notice was sent to Respondent at their address of record, 701 Sammy Davis Jr. Drive, Langston Oklahoma 73050 via certified US mail return receipt requested. The Notice was received and signed for by Joseph Line on March 5, 2025. On May 19, 2025, the Notice was delivered back to the Board as unclaimed mail.

19. Respondent did not appear at an administrative hearing which was held at 9:30 in the morning on the 28th day of April, 2025, at OWRB headquarters, 3800 N. Classen Blvd. Accordingly, a default order against Respondent was proposed by the hearing examiner for board approval.

20. Following the hearing, a Proposed Order was prepared by the hearing examiner for approval by the Board. The Proposed Order required the Respondent to complete certain required actions and ordered the Respondent to pay administrative penalties of five hundred dollars ($500.00) per day beginning on the date that the Proposed Order is approved by the Board and continuing until the violation ceases, up to thirty thousand dollars ($30,000.00).

21. In lieu of the Proposed Order, the Board and Respondent now enter into this Consent Order and agree to the statements and actions ordered herein.

IV. CONCLUSIONS OF LAW

22. Oklahoma dams, with appurtenant works that meet the criteria of 82 O.S. § 110.4 are subject to the provisions of the Oklahoma Dam Safety Act ("Act") and rules promulgated by the Board necessary to carry out the provisions of the Act, including but not limited to rules relating to hazard and size classifications, minimum standards for design, operation and maintenance of dams, and fee schedules for inspections and other services. 82 O.S. §§ 110.4 and 110.5. See also Oklahoma Administrative Code ("OAC") 785:25-3-1. "Oversight of the maintenance and operation of constructed dams and reservoirs insofar as necessary to safeguard life and property from injury by reason of the failure thereof is vested in the Board." OAC 785:25-9-1(a).

23. Owner(s) of dams have the responsibility to provide for the safety of such works by making any necessary changes to put the works in a safe condition. OAC 785:25-3-2(a).

24. "Owner" is defined as any person who, jointly or severally, owns, controls, maintains, manages, or proposes to construct a dam or reservoir, and includes those shown by records of the county registrar to have some interest, fee, easement, or otherwise, in the land on which the dam and lake lie and may also include those persons who may derive a direct pecuniary benefit from the existence of the lake. OAC 785:25-1-2.

25. The Board has the authority to inspect existing dams and dams under construction, and dams classified as having high hazard potential shall be inspected at least once annually. 82 O.S. §110.5(4)(a); and OAC 785: 25-9-1(b).

26. Dam owners are responsible for the adequate maintenance, operation, and inspection of an existing dam. OAC 785:25-3-2(a)(2).

27. The Board shall notify dam owners of the date the periodic inspection of the dam is due, and failure of the owner to have the inspection completed shall constitute a violation of Board rules. OAC 785:25-9-1(f).

28. Minimum dam inspection report standards require a qualified person submit a written report describing any dam safety deficiencies observed and outline remedial actions to be taken to address those deficiencies as follows:
    a. Engineering inspection reports shall be prepared for each inspection completed. The inspecting engineer shall record their findings of the inspection and submit a written inspection report to the Board not later than 30 days after the inspection.
    b. All inspections shall also include documentary digital photographs of the dam, auxiliary spillway, principal spillway inlet structure, principal spillway outlet, and potential safety concerns. When explanation is needed to identify or describe the safety concern, notes shall be included in the written report to provide this explanation. Photographs shall be attached to the completed inspection report.
    c. Inspection reports shall include a schedule of corrective actions to be taken to address dam safety deficiencies.
    d. Periodic inspection reports shall also include review of the Emergency Action Plan and of the operation and maintenance manual to assure they are still accurate and applicable, as well as any changes in downstream development or other conditions if applicable. OAC 785:25-9-1(g).

29. The Board may impose administrative penalties against owners of dams who fail, refuse or neglect to comply with the provisions of the Oklahoma Dam Safety Act, rules of the Board promulgated pursuant to the Oklahoma Dam Safety Act, and orders of the Board. Such administrative penalties shall be imposed only after notice and opportunity for hearing on the proposed imposition of such penalties. The penalties shall not exceed Five Hundred Dollars ($500.00) per day for each violation. 82 O.S. §110.10 and OAC 785:25-11-1.

30. In addition to administrative penalties, the Board may seek judicial relief to enforce the Oklahoma Dam Safety Act and Board rules by instituting action in district court. 82 O.S. §110.10(C).

31. Langston Lake Dam is in violation of the Oklahoma Dam Safety Act and Board rules for failing to submit an annual dam inspection report.

32. On January 1, 2025, Langston University violated OAC 785:25-3-2(a)(2), which determines dam owners' responsibilities to provide for dam safety, including the inspection of an existing dam. This violation is ongoing and has not been cured as of the date of this order.

33. On January 1, 2025, Langston University violated 82 O.S. § 110.5(4)(a) and OAC 785:9-1(b)(1), which requires the annual inspection of high hazard-potential dams. This violation

is ongoing and has not been cured as of the date of this order.

34. Langston University violated OAC 785:9-1-(g), which establishes the minimum standards for a written dam inspection report which is to be submitted to the Board. This violation is ongoing and has not been cured as of the date of this order.

35. Langston University violated OAC 785:25-7-7, which requires owners of existing or proposed dams classified as high hazard-potential, regardless of dam size to develop, implement, and maintain a current Emergency Action Plan (EAP). This violation is ongoing and has not been cured as of the date of this order.

36. Langston University is subject to fines and penalties as authorized by 82 O.S. § 110.10(C) for each of the above stated violations of the Oklahoma Dam Safety Act. Said fines and penalties may be imposed in the amount of up to five hundred dollars ($500.00) per day, per violation, each day a violation continues constitutes a separate violation.

37. Respondent agrees to perform the following actions:
    a. Conduct an Emergency Action Plans tabletop exercise by **December 31, 2025.**
    b. Create an operation and maintenance plan for the dam and submit the plan to the Board by **December 31, 2025.**

V. ACTIONS ORDERED

The Respondent is hereby ordered to take the following actions:

38. Pay the Board an administrative penalty of $20,000 by **July 31, 2025**.

39. Obtain a 2024 inspection of the dam, to be conducted by a registered Professional Engineer, in accordance with OAC 758:25-9-1, and submit the resulting written inspection report to the Board on or before **July 31, 2025**.

40. Submit to the Board an approvable Emergency Action Plan incorporating the 2015 breach map and submit the plan to the Board by **August 31, 2025**.

41. Consult with a registered Professional Engineer to develop and submit a plan of action addressing any deficiencies from the 2024 inspection report. The plan shall include a table or timeline outlining each deficiency, proposed remediation, and completion schedule, and shall be submitted to the Board by **December 31, 2025**.

42. Obtain a 2025 inspection of the dam, to be conducted by a registered Professional Engineer, in accordance with OAC 758:25-9-1, and submit the resulting written inspection report to the Board on or before **December 31, 2025**.

VI. CERTIFICATION OF COMPLIANCE AND PENALTIES FOR NON-COMPLIANCE

43. Respondent is to certify completion of each of the above Ordered Actions in Section V, paragraphs 2-5.

    a. The Respondent, or their representative, shall submit formal Notice of Completion of Ordered Action within five (5) business days of the completion of each action.
    b. Such notice shall be in the form of a written statement attesting to the completion of the Action Ordered, its deadline for completion, and the Date of Completion.
    c. The Board shall promptly acknowledge receipt of the notice.
    d. No Ordered Action shall be considered complete until certified in the Notice of Completion of Ordered Action.

44. Failure of Respondent to comply with the Section V above or to certify their completion in compliance with paragraph 1 of this section, by the dates ordered may result in the assessment of any administrative fines allowable by law, specifically 82 O.S. § 110.10(B) which provides for penalties not to exceed Five Hundred Dollars ($500.00) per day for each day the violation continues after the date set forth therein.

45. Penalties for failure to complete the Ordered Actions shall begin on the next calendar day after the stated deadline and shall accrue each day until the Date of Completion as certified according to paragraph 1 above.

VII. EFFECTIVE DATE, AMENDMENTS, AND RELEASE CONDITIONS

46. The effective date of this Order shall be the date on which it is approved by the Board.

47. This Order may be amended by mutual agreement of the Board and Respondent. Amendments shall be in writing and shall be in effect when approved by the Board.

48. Satisfaction and Release under this Consent Order is contingent upon Respondent's compliance with the Actions ordered in Section V of this Order in a manner approved by the Board staff and does not absolve Respondent, its agents, successors, and assigns of continuing compliance with Oklahoma Water Law, the Oklahoma Dam Safety Act, and Chapter 25 of Title 785 of the Oklahoma Administrative Code with respect to Langston Lake dam.

49. Upon the satisfaction of all Actions Ordered, the Board by and through its staff shall issue a letter confirming the satisfaction of all actions.

50. Completion of all Actions Ordered by the dates ordered herein shall prevent further enforcement or penalties arising from the violations alleged herein by the Board, and no

additional penalties or fines shall be assessed arising from these Findings of Fact and Conclusions of Law.

51. Nothing in this Order shall prevent the assessment of regularly applicable fees, as required by Oklahoma Administrative Code; nor shall it prevent the assessment of penalties, fines, late penalties, or fees arising from newly discovered violations or newly committed violations, either preexisting or occurring after the entry of this order, or occurring as a result of Respondent's failure to comply with the Actions Ordered.

ORDER

IT IS SO ORDERED in regular and open meeting of the Oklahoma Water Resources Board this _____ day of _____, 2025.

Langston University, a Public Institution of Higher Education

By: Ruth Ray Jackson
Dr. Ruth Ray Jackson, President

OKLAHOMA WATER RESOURCES BOARD

By: _____
Thomas Gorman, Vice-Chair

ATTEST:

By: _____
Suzanne Landess, Secretary

July 2025 Dam Safety Board Items

N. Consideration of and Possible Action on Dam and Reservoir Construction:

1. Waxhoma Dam, OK10731

NID. NO. & COUNTY	NAME OF APPLICANT & NAME OF PROJECT	PLANS & SPECS PREPARED BY	HAZARD CLASSIFICATION	LEGAL DESCRIPTION
OK10731	City of Barnsdall	Dan Keithline, P.E.	High	Sec. 15, T24N, R11EI
Osage County	Waxhoma Dam	Keithline Engineering Group, LLC		

The applicant requests approval for the repair and alteration of a high hazard potential dam originally constructed in 1955. In May 2021, the dam experienced a partial breach due to internal erosion beneath its concrete spillway during a significant rainfall event. In response, rock was placed in the breach area to prevent further degradation.

Following the incident, the City of Barnsdall entered into a consent order with the Oklahoma Water Resources Board (OWRB) to lower the lake level by five feet below the invert of the breach. This drawdown was achieved through the emergency installation of a siphon. Since that time, the City has maintained the lake at a reduced level and pursued funding for the spillway's replacement.

In April 2025, the spillway breached again after another period of heavy rainfall. To mitigate further damage and reservoir loss, a rockfill berm was constructed in front of the breach. Additionally, the siphon and large pumps were deployed during multiple rain events to maintain the lower lake level.

The proposed project involves replacing the failed spillway with a new concrete chute spillway and baffle block stilling basin. The primary purpose of the structure is municipal water supply. The dam stands 50 feet tall, with a normal storage capacity of 1,618 acre-feet and a maximum impoundment capacity of 2,670 acre-feet.

2. Stigler Lake Dam, OK00699

NID. NO. & COUNTY	NAME OF APPLICANT & NAME OF PROJECT	PLANS & SPECS PREPARED BY	HAZARD CLASSIFICATION	LEGAL DESCRIPTION
OK00699	City of Stigler	Colin Young, P.E.	High	Sec. 20, T09N, R21EI
Haskell County	Stigler Lake Dam	Freese & Nichols, Inc, LLC		

The applicant requests approval for the repair and alteration of a high hazard potential dam originally constructed in 1939. The dam is currently out of compliance with State of Oklahoma criteria due to uncontrolled seepage on the downstream slope and insufficient spillway capacity. In 2024, the City of Stigler entered into a consent order with the Oklahoma Water Resources Board (OWRB) to address these deficiencies.

The proposed work includes flattening of the downstream slope, installation of a toe drain system, construction of a seepage cutoff/barrier system, reconstruction of the concrete spillway lining, and a dam raise. The primary purpose of the dam is municipal water supply. The structure stands 40 feet tall, with a normal storage capacity of 457 acre-feet and a maximum impoundment capacity of 635 acre-feet.

ENGINEERING & PLANNING DIVISION
Permit Applications for Proposed Development on State Owned or Operated Property with Floodplain Areas

July 15, 2025

APPLICATION NO.	NAME OF APPLICANT	LOCATION	PROJECT NARRATIVE
FP-2025-02	OTA	Cleveland County, Oklahoma	Construction of a new 4-lane divided freeway (East-West Connector) generally following the existing Indian Hills Road alignment east of Pennsylvania Avenue to west of Western. Two new brides – WB (Bridge A) and EB (Bridge B) to be constructed over Ten Mile Flats Creek and Boggy Creek.

PLANNING AND MANAGEMENT DIVISION
Floodplain Administrator Accreditation Applications

July 15, 2025

NUMBER	NAME OF COMMUNITY/CID	FLOODPLAIN ADMINISTRATOR
704	City of Comanche	Wayne McCasland
797	Town of Gene Autry	James Van Zant
805	Town of Dover	Holly Sisco

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER of an Update to the Maximum Annual Yield for the Alluvium and Terrace Deposits of the Beaver-North Canadian River underlying parts of Harper, Woodward, Major, Dewey, and Blaine Counties, Oklahoma, covering all or parts of Township 19N, Ranges 12WIM, 13WIM, 14WIM, 15WIM, and 16WIM, and Township 20N, Ranges 12WIM, 13WIM, 14WIM, 15WIM, 16WIM, 17WIM, and 18WIM, and Township 21N, Ranges 14WIM, 15WIM, 16WIM, 17WIM, 18WIM, and 19WIM, and Township 22N, Ranges 17WIM, 18WIM, and 19WIM, and 22 WIM, and Township 23N, Ranges 18WIM, 19WIM, 20WIM, 21WIM, and 22WIM, and Township 24N, Ranges 18WIM, 19WIM, 20WIM, 21WIM, 22WIM, 23WIM, and 24WIM, and Township 25N, Ranges 19WIM, 20WIM, 21WIM, 22WIM, 23WIM, 24WIM, 25WIM, and 26WIM, and Township 26N, Ranges 23WIM, 24WIM, 25WIM, and 26WIM, and Township 27N, Ranges 24WIM, 25WIM, and 26WIM, and Township 28N, Ranges 24WIM, 25WIM, and 26WIM.	)

TENTATIVE ORDER FOR THE UPDATE OF THE MAXIMUM ANNUAL YIELD FOR THE ALLUVIUM AND TERRACE DEPOSITS OF THE BEAVER-NORTH CANADIAN RIVER, REACH I

On this 15th day of July 2025, there came for consideration a proposed order to update the maximum annual yield for the alluvium and terrace deposits of the Beaver-North Canadian River Groundwater Basin (Reach I). Based on the updated hydrologic surveys and investigations, the Oklahoma Water Resources Board ("Board") makes and enters the following tentative findings, tentative conclusions of law, and order and directives.

EXISTING MAXIMUM ANNUAL YIELD

1. On August 9, 1983, the Board issued an Order establishing the maximum annual yield for the alluvium and terrace deposits of the Beaver-North Canadian River Groundwater Basin in Harper, Woodward, Major, Dewey, and Blaine Counties, Oklahoma, covering all or parts of Township 18N, Ranges 12WIM, 13WIM, and 14WIM; Township 19N, Ranges 12WIM, 13WIM, 14WIM, 15WIM, 16WIM, and 17WIM; Township 20N, Ranges 12WIM, 13WIM, 14WIM, 15WIM, 16WIM, 17WIM, and 18WIM; Township 21N, Ranges 14WIM, 15WIM, 16WIM, 17WIM,18WIM, and 19WIM; Township 22N, Ranges 17WIM, 18WIM, 19WIM, 20WIM,

21WIM, and 22WIM; Township 23N, Ranges 17WIM, 18WIM,19WIM, 20WIM, 21WIM, 22WIM, and 23WIM; Township 24N, Ranges 18WIM, 19WIM, 20WIM, 21WIM, 22WIM, 23WIM, and 24WIM; Township 25N, Ranges 19WIM, 20WIM, 21WIM, 22WIM, 23WIM, 24WIM, 25WIM, and 26WIM; Township 26N, Ranges 23WIM, 24WIM, 25WIM, and 26WIM; Township 27N, Ranges 24WIM, 25WIM, and 26WIM; and Township 28N, Ranges 24WIM, 25WIM, and 26WIM.

2. In the Order, the Board determined:

   a. The total land area overlying the basin was 426,000 acres;
   b. The amount of water in storage as of July 1, 1973, was approximately 4.11 million acre-feet;
   c. The rate of natural recharge to the basin was 2.5 inches per year and total discharge from the basin during the 20-year simulation period was 6.23 million acre-feet;
   d. Transmissivity of the basin sediments ranged from 5 to 8,030 feet squared per day and averaged 1,820 feet squared per day; and
   e. Pollution to the basin from natural sources was considered negligible.

3. The Order determined the maximum annual yield, based on a 20-year basin life, to be one (1) acre-foot per year of fresh groundwater.

TENTATIVE FINDINGS

4. The Board has made or caused to be made hydrologic surveys and investigations of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin (Reach I), in parts of Harper, Major, Woodward, Dewey and Blaine counties. The study area is a long, narrow surficial aquifer that resides along an approximate 162-mile-long stretch of the Beaver and North Canadian rivers from the county line delineating Beaver and Harper counties to the Canton Lake in northwestern Blaine County.

The hydrologic surveys and investigations reviewed for this order include the U.S. Geological Survey (USGS) Scientific Investigations Report 2015-5183, Hydrogeological Framework, Numerical Simulation of Groundwater Flow, and Effects of Projected Water Use and Drought for the Beaver-North Canadian River Alluvial Aquifer, Northwestern Oklahoma, by Ryter, D.W., and Correll, J.S. (2015) and U.S. Geological Survey Open-File Report 81-483, Geohydrology and numerical simulation of the alluvium and terrace aquifer along the Beaver-North Canadian River from the Panhandle to Canton Lake, northwestern Oklahoma, by Davis, R.E., and Christenson, S.C., (1981).

5. The Beaver-North Canadian River (BNCR) Alluvium and Terrace Groundwater Basin is composed of unconsolidated alluvial and terrace deposits (principally sand, silt, clay, and gravel) which uncomformably overlie bedrock units ranging in age from Permian to Tertiary. In most places the alluvium and terrace deposits are underlain by relatively impermeable shales (red beds) and fine-grained sandstones. However, in the northwestern region of Harper County, the alluvium and terrace deposits are hydrologically connected with the underlying Ogallala Formation. In this area, the Ogallala Formation deposits are considered part of the BNCR groundwater basin.

6. Groundwater wells completed in the alluvium and terrace deposits typically yield 100-300 gallons per minute, with a mean of 105 gallons per minute. Individual well yields range from less than 10 gallons per minute to more than 1,000 gallons per minute in some high-capacity irrigation and municipal wells. Wells completed in the Ogallala Formation deposits average 50 to 65 gallons per minute. Groundwater is predominately used for irrigation purposes, with a smaller proportion used for public supply and power.

7. The total land area overlying Reach I of the basin is approximately 853 square miles or 545,863 acres (excluding the areas of Lake Canton and Fort Supply Lake) based on updated Oklahoma Geologic Survey surficial geology maps, drillers logs submitted to the OWRB, and aerial photography (see *Executive Summary Report* for details of the changes to the basin area).

8. The amount of groundwater in storage in Reach I is approximately 3.1 million acre-feet, calculated as the sum of the model cell storage values calculated by multiplying the cell area (61.8 acres), cell saturated thickness, and cell specific yield. A close approximation of the storage can be calculated by multiplying the basin area by the average specific yield (Sy) of 0.19, and the average saturated thickness of 30 feet.

9. Model calibrations for the Reach I numerical flow model yielded a mean annual recharge estimated of 143,990 acre-feet per year or about 3.15 inches per year using the 858 square mile basin area; when adjusted to the updated 853 square mile OWRB defined basin area, the mean annual recharge to the basin decreased to 143,136 acre-feet per year. Accordingly, over a 20-year period, the total amount of recharge to the groundwater basin would be approximately 2.86 million acre-feet. Mean annual recharge is less in the northwestern region of the study area than in the southeastern region. Locally, annual recharge estimates can be as high as 10.6 inches.

10. To calculate the total amount of discharge from Reach I of the basin attributable to groundwater withdrawals, the Board assumes full withdrawal of groundwater authorized by rights to use the groundwater established under state laws as they existed prior to July 1, 1973, with such rights being recognized in final orders determining prior rights to use groundwater. For Reach I, active prior rights authorize the withdrawal of 33,816.5 acre-feet per year. Current regular active permits in Reach I (as of May 2025) constitute a total authorized withdrawal of 60,524.7 acre-feet per year. The total anthropogenic discharge from the basin over 20 years is about 1.9 million acre-feet, assuming full withdrawal of the authorized groundwater use and no change in the status of the permits over the life of the basin. The cumulative total discharge from the basin during the 20-year model simulation was about 4.58 million acre-feet.

11. Model calibrated horizontal hydraulic conductivity (Kh) for Reach I ranged from 6 to 279 feet per day, with a mean of 70 feet per day. Values of transmissivity from six published aquifer tests in Woodward County showed a transmissivity range of 2,144 to 8,710 feet squared per day. Davis and Christenson (1981) estimated a mean transmissivity of 1,780 feet squared per day for the modeled basin area. Model-calibrated specific yield (Sy) ranged from 0.11 to 0.29, with a mean of 0.19.

12. In general, groundwater in the basin is calcium bicarbonate type and is considered suitable for most uses. The average concentration of total dissolved solids within Reach I is about 447.6 milligrams per liter (mg/L). Groundwater that is sourced from the alluvium of either the Beaver or North Canadian rivers generally has a higher overall concentration of total dissolved solids than the associated terrace deposits; concentrations greater than 1,000 mg/L have been measured in this aquifer historically and were characterized as either sodium chloride or calcium sulfate types. Higher concentrations of sulfate and chloride are likely sourced from dissolution of underlying Permian-age bedrock. A limited number of samples had concentrations of sulfate, manganese, iron, and chloride that exceeded EPA drinking water standards. High nitrate concentrations in groundwater are associated with areas of the aquifer overlain by croplands and are likely attributed to fertilizers; nitrate concentrations from samples collected in cropland areas were roughly 46% higher than samples collected in grassland areas.

13. From the updated hydrologic investigation and based on information in Tentative Findings Nos. 7 through 11, the maximum annual yield for Reach I of the Beaver-North Canadian Alluvium and Terrace Groundwater Basin is tentatively determined to be about 234,011 acre-feet per year, (equivalent to 4.68 million acre-feet over 20 years) with an equal proportionate share of 0.5 (acre-feet/acre)/year) for the undeveloped land areas. Current active regular permits will maintain an equal proportionate share of 1.00 (acre-feet/acre)/year) based on the August 1983 final order.

TENTATIVE CONCLUSIONS

14. The Board is given authority by the Oklahoma Groundwater Law, 82 O.S. Supp. 2000, Sections 1020.4, 1020.5 and 1020.6 to make hydrologic surveys and investigations, enter orders to make tentative determinations, hold hearings on the tentative determinations and make final determinations of the maximum annual yields of each groundwater basin and subbasin. The Board is also given authority to cooperate with state and federal agencies engaged in similar surveys and investigations and may accept and use the findings of such agencies.

15. The Beaver-North Canadian Alluvium and Terrace Groundwater Basin has been designated by the Board as a "major groundwater basin" as defined by the Oklahoma Groundwater Law. See Section 1020.1(3) of Title 82 of the Oklahoma Statutes.

16. According to Section 1020.5 of Title 82 of the Oklahoma Statutes, after completing hydrologic surveys, the Board is to make a tentative determination of the maximum annual yield of groundwater to be produced from a basin or subbasin based upon the following:

a. total land area overlying the basin or subbasin;
b. amount of water in storage in the basin or subbasin;
c. rate of recharge to and total discharge from the basin or subbasin;
d. transmissibility of the basin or subbasin; and
e. possibility of the basin or subbasin from natural sources.

The maximum annual yield is to be based on a minimum basin life of 20 years from the date of the final order determining the maximum annual yield.

17. After a tentative maximum annual yield for a basin is determined, hearings are to be called and held in centrally located places within the area of the major groundwater basin. The hydrologic survey and information relied on to make the tentative order is to be made available for

all interested persons, and notice is to be provided as required by Section 1020.6 of Title 82 of the Oklahoma Statutes.

ORDER AND DIRECTIVES

IT IS THEREFORE ORDERED by the Oklahoma Water Resources Board that the updated maximum annual yield of Reach I of the Beaver-North Canadian Alluvium and Terrace Groundwater Basin as described in this Order, is 234,011 acre-feet per year and that the equal proportionate share of the yield to be allocated to each acre of undeveloped land overlying the basin is tentatively determined to be 0.5 acre-feet per acre per year. Current active regular permits will maintain an equal proportionate share of 1.00 (acre-feet/acre)/year) based on the August 1983 final order.

IT IS FURTHER ORDERED that hearings be held in a centrally located place within the area of the groundwater basin, that the hydrologic survey and information relied on to establish the tentative order be made available to interested persons, and that notice of the hearings be given as required by law. After said hearings, a proposed final order shall be prepared and submitted to the Board for consideration as required by law.

IT IS FURTHER ORDERED that in conjunction with any hearings held, staff should seek input concerning any modification of the well spacing distance set forth in the current rules of 660 feet, and staff shall consider such input in drafting a proposed rule amendment for the next permanent rulemaking proceeding.

IT IS SO ORDERED by the Oklahoma Water Resources Board in regular and open meeting this 15th day of July 2025.

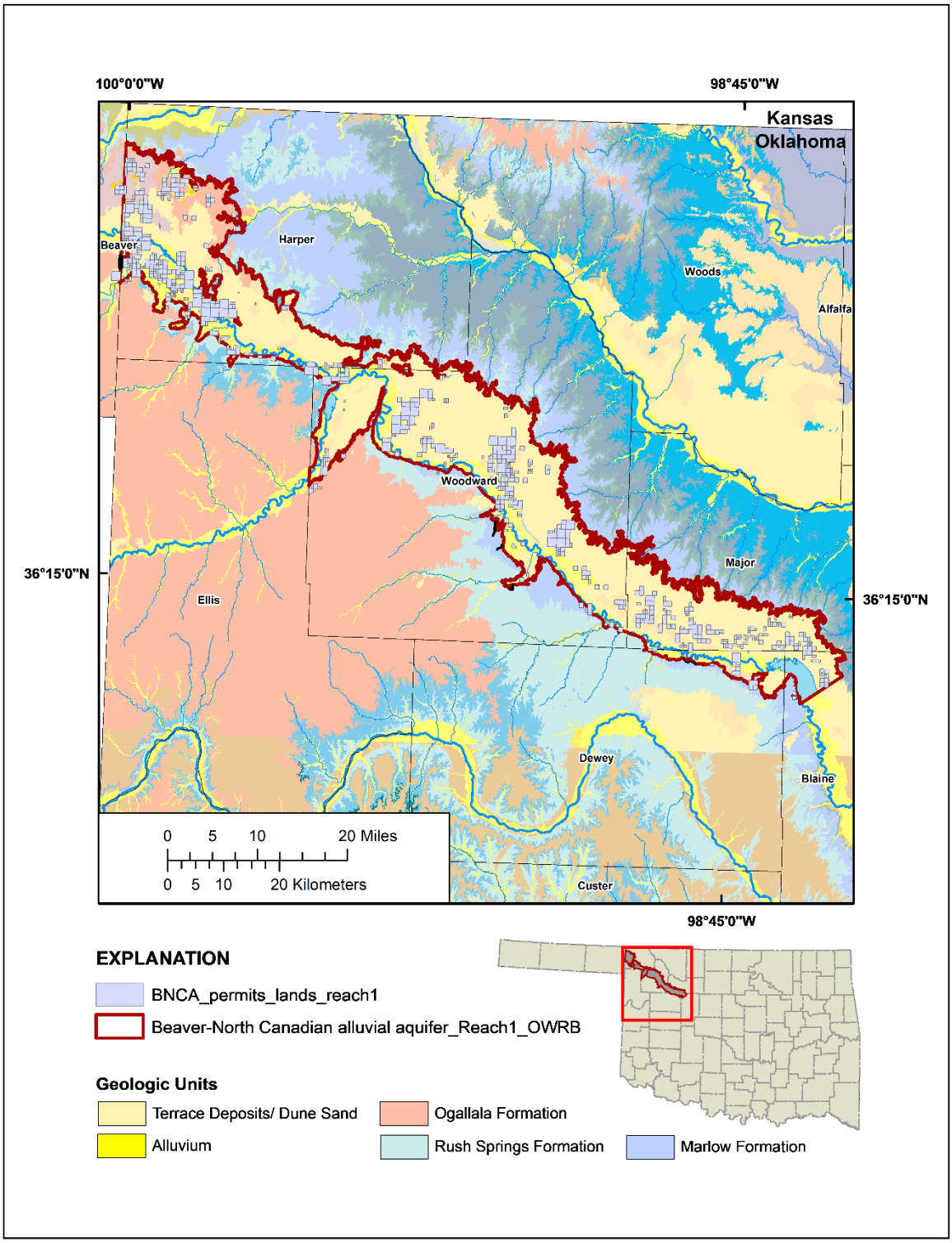
OKLAHOMA WATER RESOURCES BOARD

ATTEST:

Thomas Gorman Date	Suzanne Landess Date
Chairman	Secretary

(SEAL)

Attachment 1. Updated boundary of Reach I of the Beaver-North Canadian Alluvial Groundwater Basin with permitted lands.



OKLAHOMA
Water Resources Board

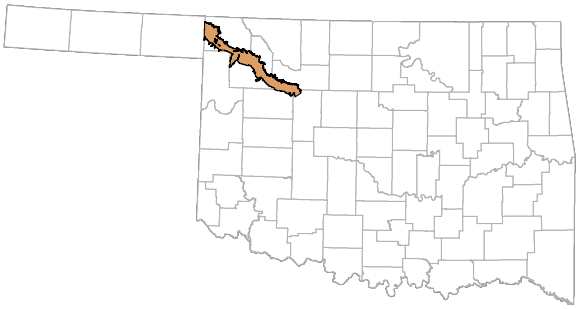
40-YEAR UPDATE

MAXIMUM ANNUAL YIELD DETERMINATION

FOR THE

BEAVER-NORTH CANADIAN RIVER ALLUVIUM AND TERRACE GROUNDWATER BASIN, REACH I

Executive Summary Report



Oklahoma Water Resources Board
Water Rights Administration Division
Christopher R. Neel
Division Chief

July 11, 2025

Introduction

Title 82, Section 1020.4 of the Oklahoma statutes requires the Oklahoma Water Resources Board [OWRB] to conduct hydrologic investigations of major and minor groundwater basins or subbasins prior to the establishment of a tentative maximum annual yield and that at least every twenty (20) years after issuance of the final order determining the maximum annual yield, the Board shall review and update, if necessary, the hydrologic investigations.

A "groundwater basin" is defined in the Oklahoma Administrative Code Title 785, Section 30-1-2 as a distinct underground body of water overlain by contiguous land and having substantially the same geological and hydrological characteristics and yield capabilities from which groundwater wells in a "major groundwater basin" yield a least fifty (50) gallons per minute on the average basin wide, if from a bedrock aquifer and at least one hundred fifty (150) gallons per minute on the average basin wide if from an alluvium and terrace aquifer [§82:1020.1(3)]. The tentative determination of the maximum annual yield must be based on the following:

1. The total land area overlying the basin or subbasin;
2. The amount of water in storage in the basin or subbasin;
3. The rate of recharge to and total discharge from the basin or subbasin;
4. Transmissivity of the basin or subbasin; and
5. The possibility of pollution of the basin or subbasin from natural sources.

The statute further provides that the maximum annual yield of each groundwater basin or subbasin shall be based upon a minimum basin or subbasin life of twenty (20) years from the effective date of the order establishing the final determination of the maximum annual yield [§82:1020.5].

On August 9, 1983, a final order for Reach I of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin was signed by the chairman of the board, establishing an equal proportionate share of one acre-foot per acre per year. The final order determinations were based on information provided in the U.S. Geological Survey [USGS] Open-File Report 81-783 entitled Geohydrology and Numerical Simulation of the Alluvium and Terrace Aquifer along the Beaver-North Canadian River from the Panhandle to Canton Lake, Northwestern Oklahoma (Davis and Christenson, 1981).

The purpose of this report is to summarize hydrologic data from an updated hydrologic investigation necessary to update the maximum annual yield of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin in accordance with Oklahoma groundwater law. Data was summarized from the USGS Scientific Investigation Report 2015-5183 entitled Hydrogeological Framework, Numerical Simulation of Groundwater Flow, and Effects of Projected Water Use and Drought for the Beaver-North Canadian River Alluvial Aquifer, Northwestern Oklahoma (Ryter and Correll, 2015).

Study Area

The Beaver-North Canadian River [BNCR] Alluvium and Terrace Groundwater Basin (Reach I) underlies approximately 545,863 acres (853 square miles [mi^2]) of land along approximately 162 miles of the Beaver and North Canadian Rivers in northwestern Oklahoma, extending from the Beaver-Harper County line to Canton Lake in northwestern Blaine County.

Summary of Hydrogeologic Characteristics

- The Beaver-North Canadian River Alluvium and Terrace Groundwater Basin is composed of Quaternary- and Tertiary-age sediments (sand, silt, clay, and gravel) that uncomformably overlie Permian-age bedrock units principally composed of shale and sandstone. The semi-consolidated Tertiary-age sediments are associated with the Ogallala Formation in Harper County.

- The saturated thickness of the groundwater basin can vary from less than a foot to a maximum of about 230 feet where Ogallala Formation sediments are present but is typically less than 100 feet where the Ogallala Formation sediments are absent. The average saturated thickness of Reach I as determined at the end of the 1980–2011 transient model period was about 35 feet (including cells with a saturated thickness of zero [dry cells]). The aquifer base and potentiometric surface were reevaluated, resulting in a mean saturated thickness of 30 feet (including dry cells).

- Six (6) published aquifer tests from Woodward County showed a transmissivity range of 2,144 to 8,710 square feet per day (ft^2/day), with a mean of 5,315 ft^2/day (Woods and Stacy, 1965). Davis and Christenson (1981) indicated a model transmissivity range of 0 to 8,030 ft^2/day with a mean of 1,780 ft^2/day.[1] Model-calibrated horizontal hydraulic conductivity (Kh) for Reach I ranged from 6 to 279 feet per day (ft/day), with a mean of 70 ft/day.

- The specific yield (Sy) determined from three (3) published aquifer tests ranges from 0.1 to 0.24, with a mean of 0.16 (Fox and Kizer, 2009; Mogg and others, 1960). Model-calibrated specific yield (Sy) ranged from 0.11 to 0.29, with a mean of 0.19.[2] This Sy value is larger than the mean values determined for other alluvium and terrace aquifers in western Oklahoma, which range between 0.1 and 0.16.

- The mean annual recharge estimated from a transient soil-water balance model (Westenbroek and others, 2010) was 136,400 acre-ft/year in Reach I (3.01 inches per year [in/year]) for the period 1980–2011; annual recharge arrays derived from this transient model were used as inputs for the numerical flow model. Reach I model calibrations resulted in a slightly higher mean annual recharge estimate of 143,990 acre-ft/year (3.15 in/year) for the same period; when adjusted to the updated OWRB defined basin area (see *Changes in Basin Area* subsection), the mean annual recharge was adjusted to 143,136 acre-ft/year.

- The total amount of available groundwater in storage estimated from the USGS model files was about 3.5 million acre-feet (sum of model cell storage values calculated from the multiplication of cell area, cell saturated thickness, and cell specific yield). The available water in storage was adjusted to about 3.1 million acre-feet following a reanalysis of the aquifer base and potentiometric surface. The storage volumes determined from the 2016 USGS model files and OWRB reanalysis are smaller than the 4.1 million acre-feet estimated in the 1981 hydrologic investigation because of the larger (0.29) specific yield estimate used for that model. The OWRB volume is less than the USGS volume because of the reduced saturated thicknesses in Harper, Woodward, and Major counties.

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1. The range is reflective of transmissivity values from the modeled no-flow boundary surrounding the basin (T = 0) to the values determined from the multiplication of hydraulic conductivity (Plate 7) and saturated thickness (Plate 8).

2. Initial estimates of Sy adjusted during the numerical-model calibration were determined from a logarithmic regression relationship between Kh and Sy based on published values for different geologic materials following the method of Mashburn and others (2013). The initial mean value of Sy for Reach I was 0.16. Likewise, the initial estimates of Kh were taken from ranges published by Fetter (1994).

Maximum Annual Yield and Equal Proportionate Share Determination

The definition of the Life of a groundwater basin or subbasin indicates that there are two endpoints for the determination of the maximum annual yield, either fifty percent of the basin area will retain a saturated thickness allowing for pumping of the maximum annual yield for a minimum twenty-year life of basin OR the average saturated thickness of the basin will be calculated to be maintained at five feet for alluvium and terrace aquifers and fifteen feet for bedrock aquifers, respectively. For simplicity, these scenarios are herein referred to as the fifty percent and full depletion scenarios. In nearly all cases, both endpoints will not be satisfied at the same time because of the non-uniform geometry of groundwater basins. This gives the Board flexibility to determine how to manage each groundwater basin.

- Maximum annual yield (MAY): *"a determination by the Board of the total amount of fresh groundwater that can be produced from each basin or subbasin allowing a minimum twenty (20) year life of basin or subbasin"*

- Equal proportionate share (EPS): *"the maximum annual yield of water from a groundwater basin or subbasin which shall be allocated to each acre of land overlying such basin or subbasin. It shall be that percentage of the maximum annual yield, determined as provided by 82 O.S., §1020.5 and 785:30-9-2 which is equal to the percentage of the land overlying the fresh groundwater basin or subbasin which is owned or leased by an applicant for a regular permit".*

In pursuance of the fifty percent scenario, the United States Geological Survey (USGS) developed a finite-difference numerical groundwater-flow model for Reach I of the Beaver-North Canadian River Groundwater Basin based on available hydrogeologic data which included historical data from previous investigations and data queried from the OWRB well driller's database, the USGS National Water Information System, and the Oklahoma Climatological Survey. To determine the EPS rate for Reach I, one hypothetical groundwater-pumping well was put in each active model cell and pumped at the same applied rate over several iterations until half of the model cells had a saturated thickness of five feet or less. The EPS rates listed in **Table 1** represent the applied rates used in the numerical flow model to achieve the forecasting goal; The applied rate refers to the uniform rate set for each pumping cell within the model domain. The MAY is calculated as the cumulative amount of water recovered (pumped) over a simulation period divided by the length of the simulation period. The MAY volumes for each life of basin period and recharge scenario are listed in **Table 1.**

Table 1. Equal-proportionate-share rates for select life of basin periods in Reach I of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin, northwestern Oklahoma (Ryter and Correll, 2015).

Period (years)	Reach I applied EPS pumping rates		
	Recharge reduced by 10 percent	No change in recharge	Recharge increased by 10 percent
20	0.53	0.57	0.60
40	0.49	0.54	0.58
50	0.48	0.53	0.57
	Reach I MAY volumes (from model)		
20	210,524.88	225,458.75	240,102.24
40	216,795.62	203,953.71	184,379.68
50	176,629.04	193,215.24	209,186.14

The aquifer base, potentiometric surface, and basin area were reanalyzed to address conflicts between the published data and well log data from the OWRB well drillers database, particularly in Harper County where the Ogallala is present. Adjustments to the base, potentiometric surface, and basin area changed the aquifer saturated thickness and the volume of water in storage. These changes necessitated new model simulations. The EPS rates and MAY volumes listed in the upper half of **Table 2** represent values for Reach I of the basin as determined from the updated OWRB analytical model (calibrated to the USGS model) to achieve the fifty percent scenario. The EPS rates and MAY volumes listed in the lower half of **Table 2** reflect the removal of prior rights, including existing regular permits.

Table 2. Equal-proportionate-share rates for select life of basin periods in Reach I of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin as determined from the updated OWRB analytical Excel pumping model, for the fifty percent basin depletion scenario.

Period (years)	Reach I EPS pumping rates (Final applied rate)		
	Recharge reduced by 10 percent	No change in recharge	Recharge increased by 10 percent
20	0.56	0.60	0.64
40	0.53	0.57	0.60
50	0.53	0.57	0.60
	Reach I MAY volumes (from model)		
20	216,262.28	228,939.63	241,616.98
40	194,073.48	205,760.15	217,446.81
50	186,600.50	197,861.12	209,121.73
	Reach I EPS pumping rates (After removal of prior rights)		
20	0.44	0.48	0.52
40	0.40	0.44	0.48
50	0.40	0.44	0.48
	Reach I MAY volumes (After removal of prior rights)		
20	121,920.58	134,597.93	147,275.28
40	99,731.78	111,418.45	123,105.11
50	92,258.80	103,519.42	114,780.03

An EPS rate of 0.60 (acre-feet/acre)/year and a MAY volume[3] of 228,939.63 acre-feet/year were estimated from the OWRB analytical model for the 20-year basin life. To accommodate the 147 prior rights and ensure they are adequately protected, 33,817 acre-feet of water rights established before July 1, 1973, in Reach I, were removed from the model-derived MAY. Removal of the prior rights reduced the MAY to about 195,123 acre-feet/year. As of the date of this report, there are 194 active regular groundwater-use permits within Reach I. Collectively, these permits constitute a total annual allocation of 60,524.7 acre-feet. Because regular permits retain their allocation amounts, they also had to be subtracted from the model-derived MAY, which reduced the MAY to 134,597.9 acre-feet/year. The final EPS rate for the undeveloped lands was determined to be 0.48 (acre-feet/acre)/year for the fifty percent scenario over a 20-year basin life. Existing dedicated lands will retain an EPS rate of 1.0 (acre-feet/acre)/year per the 1983 final order. To note, the full depletion scenario was not statutorily permitted until 1994. The relatively large difference between the final order EPS rate and the rates determined by the USGS model by Ryter and Correll (2016) and the OWRB analytical model speaks to the sensitivity of each model to parameterization. The Davis and Christenson (1981) numerical flow model yielded a 20-year EPS rate of 0.73 (acre-feet/acre)/year, which was increased to 1.0 (acre-feet/acre)/year through the addition of twenty percent return flow. The USGS

3. Unlike numerical flow models, where the final EPS and MAY values are determined by mass balancing during a simulation, analytical calculators require the user to set predefined volumes at which the model will stabilize based on estimated water remaining in storage.

and OWRB models did not include return flows — instead, any water pumped during each timestep was removed from the model domain. Return flow does occur, but under the extreme pumping conditions set in the EPS scenarios, the maximum available water capacity of the soil would be quickly reached, so any additional pumped water would flow out of each model cell as runoff.

The updated OWRB analytical model was also used to determine the EPS rates and MAY volumes for the full depletion scenario, the values of which are listed in **Table 3**. The USGS numerical flow model did not simulate this MAY determination endpoint.

Table 3. Equal-proportionate-share rates for select life of basin periods in Reach I of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin were determined from the updated OWRB analytical Excel pumping model, for the full depletion endpoint.

Period (years)	Reach I EPS pumping rates (Final applied rate)		
	Recharge reduced by 10 percent	No change in recharge	Recharge increased by 10 percent
20	1.19	1.24	1.30
40	0.93	0.98	1.02
50	0.93	0.98	1.02
	Reach I MAY volumes (from model)		
20	278,554.22	288,888.35	299,222.47
40	206,676.71	214,992.17	223,307.63
50	197,113.65	204,857.22	212,600.80
	Reach I EPS pumping rates (After removal of prior rights)		
20	1.14	1.20	1.26
40	0.86	0.90	0.95
50	0.86	0.90	0.95
	Reach I MAY volumes (After removal of prior rights)		
20	184,212.52	194,546.65	204,880.77
40	112,335.01	120,650.47	128,965.93
50	102,771.95	110,515.52	118,259.10

An EPS rate of 1.24 (acre-feet/acre)/year and a MAY volume of 288,888.35 acre-feet/year were estimated from the OWRB analytical model for the 20-year basin life. To accommodate the 147 prior rights and 194 active regular groundwater-use permits in Reach I and ensure they are adequately protected, 94,341.7 acre-feet of water rights were removed from the model-derived MAY, reducing the volume to 194,546.7 acre-ft/year. The final EPS rate for the undeveloped lands was determined to be 1.20 (acre-feet/acre)/year based on the model-derived MAY and existing dedicated lands permitted at 1.0 (acre-feet/acre)/year. However, because the final EPS rate exceeds the 1983 final-order EPS rate, all existing dedicated lands would be eligible for a rate increase equivalent to the difference between the existing rate and rate derived by dividing the nominal MAY by the full basin area; the final EPS for the entire basin would be 1.12 (acre-feet/acre)/year after the removal of prior rights. The full depletion scenario is a much more extreme pumping scenario than the one used to determine the 1983 final order rate; any similarity between the rates is coincidental.

For completeness, EPS pumping rates and MAY volumes were also estimated using the original version of the OWRB analytical calculator developed by technical staff in the early 2000s. This analytical calculator was used to determine the tentative and final EPS rate for Vamoosa-Ada, Ogallala-Northwest, Ashland Isolated Terrace, Cherokee Group, El Reno, Woodbine, Little River, Haworth Isolated Terrace regions 1&2, Pennsylvanian, Cache Creek, Post Oak, Hennessey-Garber, Beaver Creek, North-Central Oklahoma, and

Antlers aquifers. In each case, the EPS pumping rates were determined based on an amalgamation of the two Life of Basin endpoints, where pumping linearly declines from 100% of the basin at interval one to 50% of the basin at interval 10, and where the volume remaining in storage is equal to the basin area multiplied by the mean specific yield and averaged saved saturated thickness of five (5) or fifteen (15) feet depending on whether it was an alluvial or bedrock aquifer.

Table 4. Equal-proportionate-share rates for select life of basin periods in Reach I of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin were determined from the original OWRB analytical Excel pumping model, for the full depletion endpoint.

Period (years)	Reach I EPS pumping rates (Final applied rate)		
	Recharge reduced by 10 percent	No change in recharge	Recharge increased by 10 percent
20	0.65	0.69	0.72
40	0.49	0.52	0.56
50	0.45	0.49	0.53
	Reach I MAY volumes (from model)		
20	258,821.09	273,134.69	287,448.29
40	193,821.74	208,135.34	222,448.94
50	180,821.87	195,135.47	209,449.07
	Reach I EPS pumping rates (After removal of prior rights)		
20	0.54	0.58	0.62
40	0.35	0.39	0.43
50	0.32	0.36	0.40
	Reach I MAY volumes (After removal of prior rights)		
20	164,479.39	178,792.99	193,106.59
40	99,480.04	113,793.64	128,107.24
50	86,480.17	100,793.77	115,107.37

An EPS rate of 0.69 (acre-feet/acre)/year and a MAY volume of 273,134.69 acre-feet/year were estimated from the OWRB analytical model for the 20-year basin life. To accommodate the prior rights and active regular groundwater-use permits, 94,341.70 acre-feet was removed from the model-derived MAY, reducing the volume to 178,792.99 acre-feet/year. The final EPS rate for the undeveloped lands was determined to be 0.58 (acre-feet/acre)/year, with existing dedicated lands permitted at 1.0 (acre-feet/acre)/year.

Changes in Groundwater Basin Area

The 1983 final order for the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin (Reach I) established a groundwater basin area of about 426,000 acres (666 mi^2); the basin area was defined within the final order under Findings of Fact 6 and 7 as the area with a saturated thickness of at least five (5) feet as of July 1, 1973. The groundwater basin area was derived from the result of simulation 5 (**Figure 1**; Plate 13 in Davis and Christenson, 1981), which simulated flow for the period 1957–1973 using a constant recharge rate of one (1) inch per year and annual pumping rates based on reported groundwater use for the three largest water use categories in the study area (irrigation, public supply, and industrial). To note, about 100.7 mi^2 (64,448 acres) of the study area[4] were excluded from the model domain purportedly

4. The basin area of Reach I in Davis and Christenson (1981) was estimated to be about 845.7 mi^2, of which about 827.6 mi^2 are underlain by Quaternary age Alluvium and Terrace deposits. The study area included Canton Lake (11.07 mi^2) and Fort Supply Reservoir (2.64 mi^2), and several bedrock outcrops (cumulative area of about 4.4 mi^2).

because they had no flow (**Figure 2**; yellow areas); the largest of these areas located east of Fort Supply Lake between T.22–24N., R.22WI was excluded from the model domain because "*the band of little or no saturated thickness at the northern edge of this area precludes significant flux from the area to the Beaver-North Canadian River.*" Smaller areas along the basin's edges were also excluded from the model domain because either flow was directed away from the Beaver-North Canadian River or the flow was considered negligible (related to the thinning of aquifer sediments).

In addition to the no-flow areas, about 60.8 mi^2 (38,912 acres) of the study area were excluded from the equal proportional share simulation because they had little (less than 5 feet) or no saturation during the 1957 steady-state model calibration (**Figure 2**; blue areas). In total, about 161.5 mi^2 (103,360 acres) were excluded from the simulations requested by the Oklahoma Water Resources Board for the determination of the equal proportionate share. At the end of simulation 5, about 16.5 mi^2 of additional basin area had a saturated thickness that fell below five (5) feet (**Figure 2**; orange areas), bringing the total area with little to no saturation to about 178 mi^2; the subtraction of this area from the study area (845.7 mi^2) is how the authors of the 1981 model report came to a basin area of 666 mi^2.

The updated hydrologic investigation report by Ryter and Correll (2016) used the same study area as Davis and Christenson (1981), albeit with a more detailed boundary defined using the Woodward hydrologic atlas surface geology map (Morton, 1980). For modeling purposes, the USGS shifted the Reach I to Reach II transition line about 1.9 miles southeast of Lake Canton to avoid boundary condition issues; the shifted transition line increased the model basin to 858 mi^2 (549,439 acres). Unlike the Davis and Christenson model, the Ryter and Correll model included areas with little or no saturated thickness because the groundwater level fluctuates throughout a simulation period and because recharge to these areas can flow into the thickener areas or be pumped out.

A revised groundwater basin boundary was defined for Reach I based on updated geologic maps for northwestern Oklahoma published by the Oklahoma Geological Survey for the Buffalo, Woodward, and Fairview quadrangles (Stanley and Suneson, 2002; Stanley, 2002; Stanley and others, 2002) and a technical review by OWRB staff geologists (**Figure 3**); the revised basin boundary adheres to the lateral extent established in the 1983 final order. The groundwater basin area (excluding the areas of Canton and Fort Supply lakes) was determined to be about 853 mi^2 (545,863 acres)

EPS Recommendation

The Water Right Administration Division recommends that an equal proportionate share rate between 0.48 (acre-ft/acre)/year (fifty percent scenario) and 1.12 (acre-ft/acre)/year (full depletion scenario) be adopted for the undeveloped land areas based on the two life of a groundwater basin endpoints; existing regular permits with an EPS rate of 1.0 (acre-ft/acre)/year would need to be increased to 1.12 (acre-ft/acre)/year if that full depletion scenario is adopted. The model-determined maximum annual yield ranged between 228,940 and 288,888 acre-feet per year, or about 4.58 to 5.78 million acre-feet over the next 20 years. Current dedicated lands with an EPS rate of 1.00 (acre-ft/acre)/year correspond to a MAY of 60,524.7 acre-feet/year or about 1.21 million acre-feet over the next 20 years, and current prior rights correspond to a MAY of 33,817.0 acre-feet/year or about 676,340 acre-feet over the next 20 years.

The model-determined MAY volumes assume immediate full basin development and continuous pumpage at the applied EPS rate over a 20-year life of the basin. Neither assumption reflects current or expected future demand from the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin. Of the 94,341.7 acre-feet per year allocated to current active regular and prior rights permits, only about seventeen

(17) percent is used annually based on the mean annual groundwater use of 15,309 acre-feet per year reported in Ryter and Correll (2016) for the period 1967–2011. The mean annual groundwater use is equivalent to an EPS rate of 0.03 (acre-ft/acre)/year when equally distributed across the full basin area or about 0.25 (acre-ft/acre)/year when divided into the dedicated lands. In either case, the conservative EPS recommendation should not negatively impact most future beneficial-use landowners.

The Board can elect to adopt any EPS rate between 0.48–1.12 (acre-ft/acre)/year for the undeveloped lands, with the understanding that as the EPS rate increases, the percentage of the basin that will have a saturated thickness of five (5) feet or more will decrease (under the conditions set in the EPS simulations). If the Board elects to maintain the 1983 final order EPS rate of 1.0 (acre-ft/acre)/year, the equivalent MAY value would be about 266,408 acre-ft/year. A Board subcommittee meeting was held on May 15, 2025, to discuss rate options for the basin; the subcommittee members selected an EPS rate of 0.5 (acre-ft/acre)/year for Reach I to be presented to the full Board in the tentative order. An EPS rate of 0.5 (acre-ft/acre)/year is equivalent to a MAY volume of 234,011 acre-feet/year. Existing regular permits would maintain an EPS rate of 1.0 (acre-ft/acre)/year.

Percent Developed

According to Title 82, Section 1020.6 of the Oklahoma statutes, the Board may prescribe delayed or gradual implementation of equal proportionate share allocations if the current total allocated amount of groundwater from the aquifer is twenty-five percent (25%) or less of the maximum annual yield. The percentage is herein referred to as the "MAY percent developed". The MAY percent developed for Reach I was calculated to be 41.2 percent for the fifty (50) percent scenario and 32.7 percent for the full depletion scenario (when prior rights allocations are included), using the model-determined maximum annual yield volumes. If the prior rights allocations are not included, the percent developed was calculated to be 26.4 percent for the fifty (50) percent scenario and 21.0 percent for the full depletion scenario. For completeness, a non-statutory percent developed value can be determined for land overlying a groundwater basin that has been dedicated to active regular groundwater permits, herein referred to as the "developed basin area percentage". Reach I has a developed basin area percentage of 11.1 percent.

Groundwater Quality

Davis and Christenson (1981) collected water samples from thirty (30) wells within the basin area to determine the concentration of common chemical constituents, with 15 of the sampled wells also being analyzed for trace constituents; all the sampling was conducted during the summer of 1978. Of the 30 samples collected, two (2) samples were sodium chloride type, two (2) samples were calcium sulfate type, and the rest were calcium bicarbonate type. Chemical water types were determined by the predominant cation and anion, where predominant means that the concentration was greater than fifty (50) percent of the total concentration. Of the 30 samples collected, fifteen (15) had one or more chemical constituents with concentrations greater than or equal to the limits set for public supply use.

Eight (8) samples had concentrations of nitrogen that exceeded 10 milligrams per liter (mg/L), nine (9) samples had total dissolved solid concentrations that exceeded 500 mg/L, one (1) sample had a chloride concentration that exceeded 250 mg/L, two (2) samples had sulfate concentrations that exceeded 250 mg/L, two (2) samples had iron concentrations that exceeded 300 micrograms per liter (ug/L), two (2) sites had manganese concentrations that exceeded 50 ug/L, and one (1) sample had a selenium concentration that exceeded 10 ug/L.

As part of the ongoing groundwater monitoring and assessment program (GMAP), the OWRB collected water samples from nineteen (19) wells across the basin area in 2015. All 19 samples were calcium-bicarbonate type; two (2) samples had sodium concentrations that constituted more than 35 percent of the total cation concentration, and one (1) sample had a sulfate concentration that constituted more than 45 percent of the total anion concentration. Seven (7) samples had concentrations of nitrogen that exceeded 10 milligrams per liter, and three (3) samples had TDS concentrations that exceeded 500 mg/L. Summary statistics for selected chemical constituents are shown in **Tables 5 & 6**. Nitrogen (as nitrate) is considered a water quality concern in Reach I of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin.

Table 5. Summary statistics for groundwater-quality data for 30 samples collected by Davis and Christenson (1981)

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; ºC, degrees Celsius; mg/L, milligrams per liter; ug/L, micrograms per liter]

Parameter	Detection limit	Mean	Min	Percentile			Max	EPA Standard
				25	50	75		
Specific Cond., µS/cm	--	757.3	210.0	371.3	542.5	771.5	2,400.0	--
Temperature, ºC	--	17.4	16.0	15.6	17.0	18.0	23.5	--
pH, standard unit	--	7.0	6.4	6.8	7.1	7.3	7.5	--
Dissolved Solids, mg/L	--	507.7	148.0	238.5	352.5	539.0	1,690.0	500
Calcium, mg/L	--	84.0	25.0	50.6	68.0	92.3	270.0	--
Magnesium, mg/L	--	20.1	3.9	9.5	14.0	22.5	90.0	--
Sodium, mg/L	--	47.2	5.5	9.8	14.5	45.8	230.0	--
Potassium, mg/L	--	2.7	0.9	1.6	2.1	2.9	4.6	--
Sulfate, mg/L	--	94.7	4.7	15.3	45.0	67.3	750.0	250
Chloride, mg/L	--	53.3	3.9	8.7	18.0	42.0	330.0	250
Bicarbonate, mg/L	--	--	--	--	--	--	--	--
Fluoride, mg/L	--	0.5	0.1	0.2	0.4	0.7	1.2	2
Silica, mg/L	--	27.9	30.0	24.3	27.0	29.0	48.0	--
Alkalinity, mg/L	--	169.7	50.0	130.0	180.0	210.0	310.0	--
Inorganic Nitrogen, mg/L	--	8.2	0.1	3.2	6.0	11.5	35.0	10
Arsenic, ug/L	--	2.1	1.0	1.0	2.0	3.0	4.0	10
Boron, ug/L	--	64.0	20.0	30.0	50.0	87.5	170.0	--
Cadmium, ug/L	--	0.7	0.0	0.0	0.0	0.0	10.0	5
Chromium, ug/L	--	2.0	0.0	0.0	0.0	0.0	10.0	100
Copper, ug/L	--	6.0	0.0	0.0	0.0	0.0	70.0	1000
Iron, ug/L	--	0.1	0.0	0.0	0.0	0.1	0.7	300
Lead, ug/L	--	0.0	0.0	0.0	0.0	0.0	0.0	15
Manganese, ug/L	--	39.3	0.0	0.0	0.0	10.0	420.0	50
Selenium, ug/L	--	3.1	0.0	0.0	1.0	2.5	25.0	50
Zinc, ug/L	--	111.3	10.0	20.0	50.0	105.0	620.0	5000

--, indicates not available

Table 6. Summary statistics for groundwater-quality data for 19 samples collected by the Oklahoma Water Resources Board, 2015.

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; ºC, degrees Celsius; mg/L, milligrams per liter; ug/L, micrograms per liter]

Parameter	Detection limit	Mean	Min	Percentile			Max	EPA Standard
				25	50	75		
Specific Cond., µS/cm	--	624.1	298.4	403.9	556.7	717.3	1,374.2	--
Temperature, ºC	-5.0	18.7	16.6	17.6	18.5	19.8	21.7	--
pH, standard unit	--	7.0	6.4	6.9	7.1	7.2	7.2	--
Dissolved Solids, mg/L	10.0	387.5	183.0	263.5	323.0	446.0	826.0	500
Calcium, mg/L	0.5	74.3	34.6	48.4	64.8	91.8	156.0	--
Magnesium, mg/L	0.5	16.4	5.8	8.7	12.0	20.1	43.7	--
Sodium, mg/L	0.5	28.1	10.2	15.5	21.0	35.9	99.7	--
Potassium, mg/L	0.5	--	<	<	2.6	3.8	6.2	--
Sulfate, mg/L	10.0	59.6	11.9	18.9	38.7	62.0	250.0	250
Chloride, mg/L	10.0	40.6	< 10.0	16.2	26.0	40.7	173.0	250
Bicarbonate, mg/L	12.0	226.0	81.0	154.5	203.0	310.0	397.0	--
Fluoride, mg/L	0.2	--	<	<	<	0.4	0.6	2
Silica, mg/L	0.05	30.3	24.2	26.2	27.8	32.7	42.8	--
Alkalinity, mg/L	10.0	182.6	66.0	125.5	165.5	254.0	325.0	--
Inorganic Nitrogen, mg/L	0.05	8.4	0.8	5.3	7.3	10.2	20.8	10
Arsenic, ug/L	1.0	2.4	<	1.5	2.2	3.5	4.6	10
Boron, ug/L	20.0	67.4	<	34.1	61.4	71.3	241.0	--
Cadmium, ug/L	0.5	--	--	--	--	--	--	5
Chromium, ug/L	1.0	--	<	<	2.1	5.8	12.3	100
Copper, ug/L	1.0	--	<	<	2.3	3.6	8.8	1000
Iron, ug/L	20.0	--	<	<	<	<	29.4	300
Lead, ug/L	0.5	--	<	<	<	0.8	1.0	15
Manganese, ug/L	5.0	--	<	<	<	<	0.1	50
Selenium, ug/L	1.0	--	<	<	2.6	3.8	6.2	50
Zinc, ug/L	5.0	--	<	<	25.2	28.4	139.0	5000

--, indicates not available

<, indicates concentration is less than the minimum reported detection limit.

SUMMARY

Oklahoma groundwater law requires the Oklahoma Water Resources Board to make a tentative determination of the maximum annual yield of each groundwater basin based on the following:

1. The total land area overlying the basin or subbasin;
2. The amount of water in storage in the basin or subbasin;
3. The rate of recharge to and total discharge from the basin or subbasin;
4. Transmissivity of the basin or subbasin; and
5. The possibility of pollution of the basin or subbasin from natural sources.

The Oklahoma Water Resources Board has, based on information from the USGS and the Board, made the following determinations:

Beaver-North Canadian River Alluvium and Terrace Groundwater Basin (Reach I)

1. Total land overlying the basin was determined to be 545,863 acres or 853 square miles.

2. The total amount of water in storage in Reach I in 2011 was determined to be about 3.1 million acre-feet based on the sum of model cell storage values calculated from the multiplication of cell area, cell saturated thickness, and cell specific yield.

3. The rate of natural recharge to the basin is about 143,136 acre-feet per year, which based on the overlying land area of the basin is equivalent to about 3.15 inches per year.

4. Total anthropogenic discharge (allocated water rights) from the basin was calculated to be about 94,341.7 acre-feet/year or about 1,886,834 acre-feet of water over the 20-year Life of the basin.

5. Values of transmissivity within the basin range from 0 to 8,030 square feet per day, with a mean of around 1,780 feet squared per day.

6. Nitrogen (as nitrate) is considered a water quality concern in Reach I of the Beaver-North Canadian River Alluvial and Terrace Groundwater Basin, specifically in areas overlain by croplands.

7. The MAY percent developed for the basin was calculated to be between 32–41 percent based on the total allocated rights (prior and regular); therefore, EPS allocations for new permits will not be eligible for delayed or gradual implementation.

8. The maximum annual yield ranges from 228,940 to 288,888 acre-feet per year, equivalent to an EPS range between 0.48 to 1.20 (acre-feet/acre)/year for the undeveloped land area. Current active regular permits will maintain an equal proportionate share of 1.00 (acre-feet/acre)/year based on the August 1983 final order. If the Board elects to use the full depletion scenario, the EPS rate for both developed and undeveloped land would be 1.12 (acre-feet/acre)/year to maintain the same maximum annual yield. If the Board elects to use the 1983 final order EPS rate, the equivalent MAY volume would be about 266,408 acre-ft/year. The Board subcommittee selected an EPS rate of 0.5 (acre-feet/acre)/year, equivalent to a MAY volume of 234,011 acre-feet/year.

Figure 1. Map showing saturated thickness at the end of transient model simulation 5 (1957–1973) in the alluvium and terrace aquifer along the Beaver-North Canadian River, Northwestern Oklahoma (Davis and Christenson, 1981).

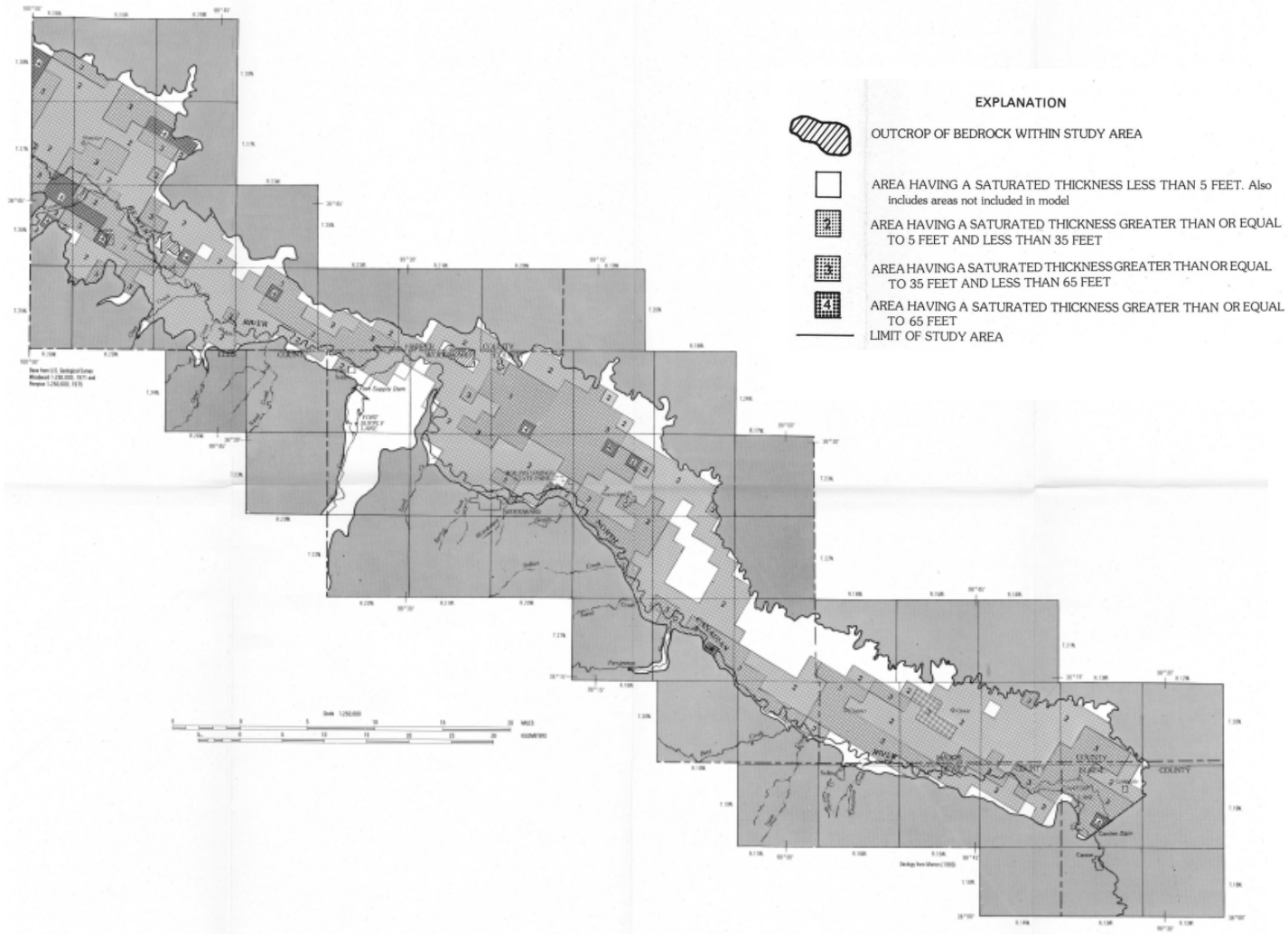


Figure 2. Map showing areas excluded from groundwater flow model simulations because of a purported lack of flow or little (less than 5 feet) or no saturation. Areas were digitized from plates 5, 7, and 13 in Davis and Christenson (1981).

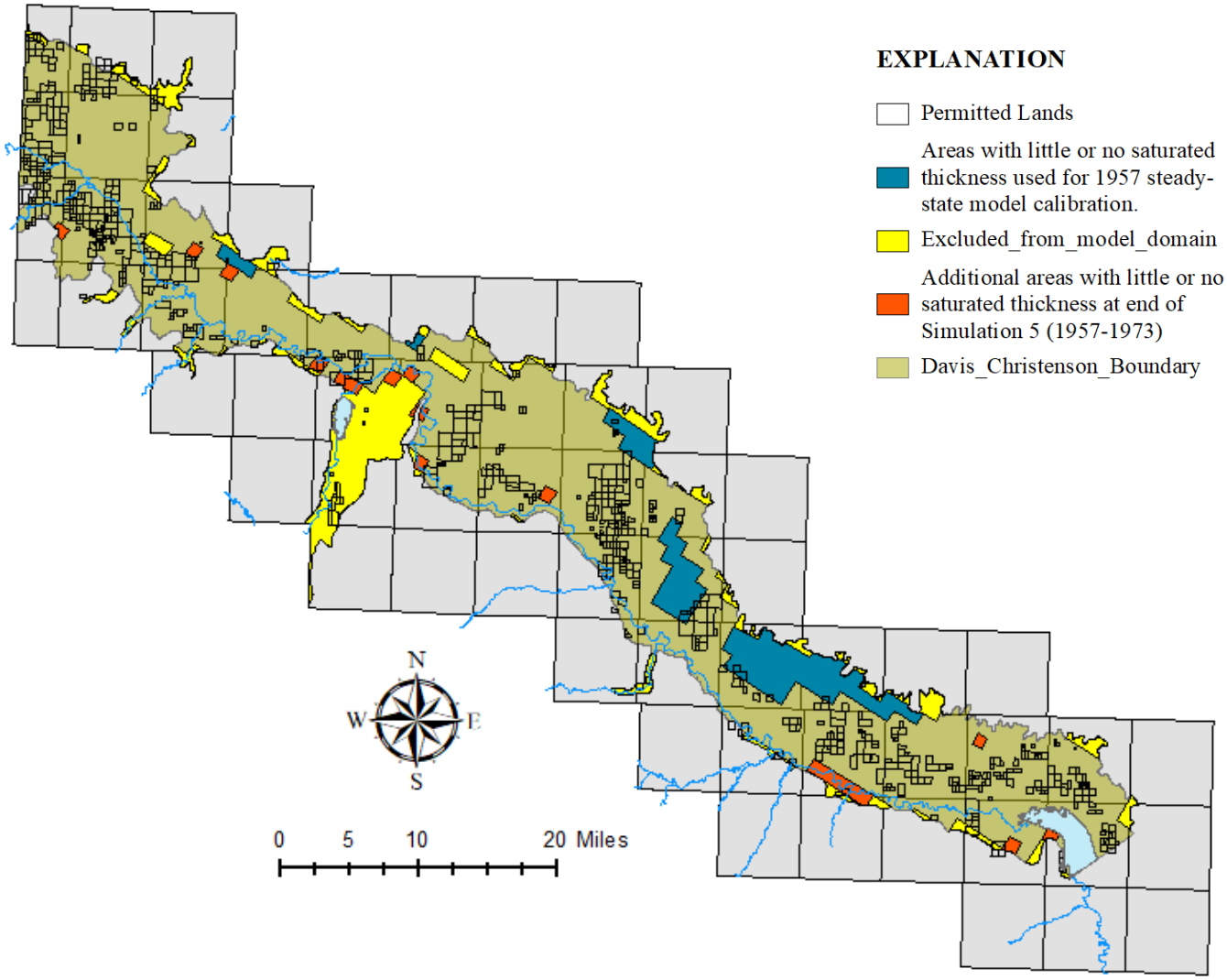
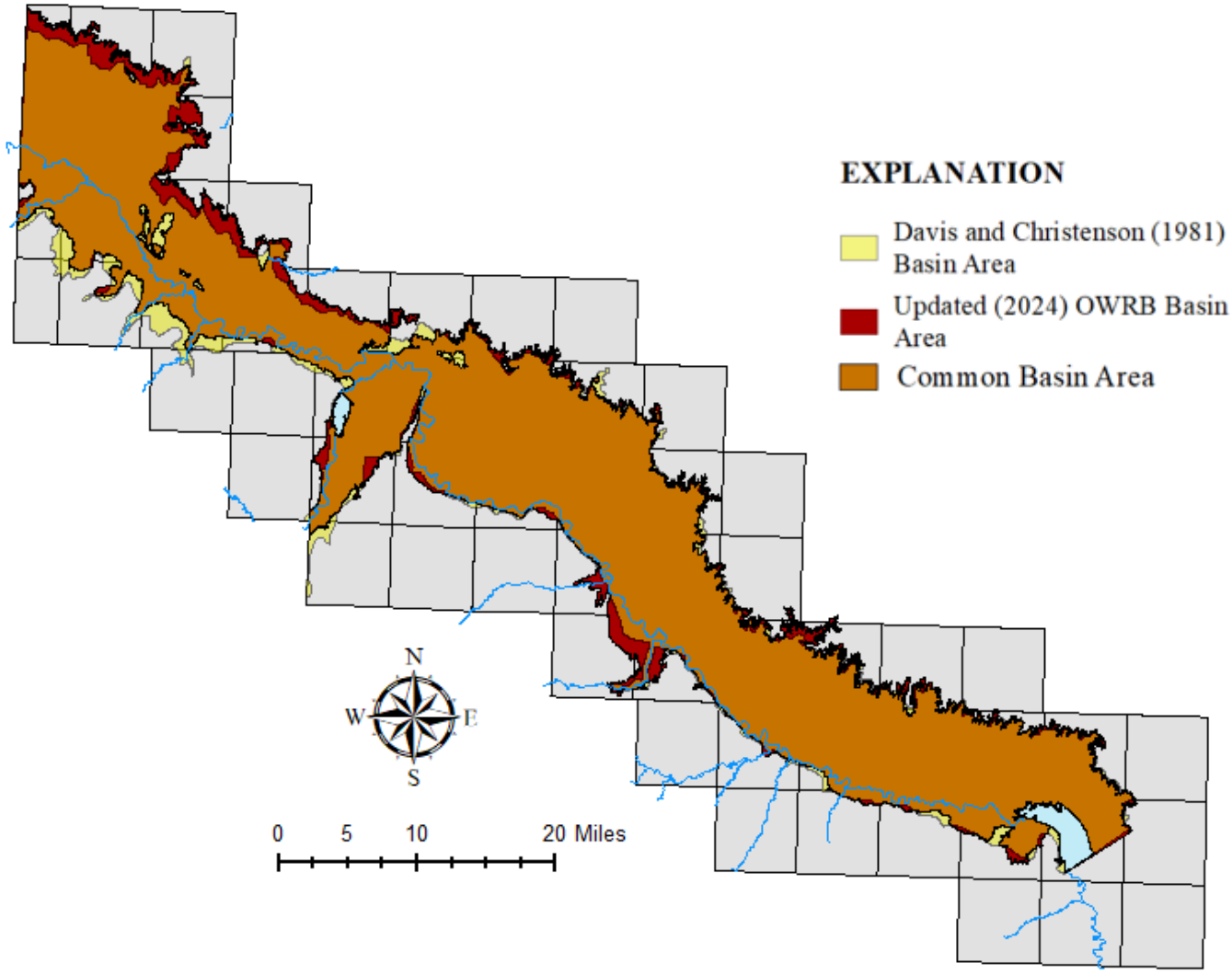


Figure 3. The 1983 final order groundwater basin of the Beaver-North Canadian River Alluvium and Terrace Aquifer (yellow region) and revised OWRB groundwater basin area (red region); common basin area shown in orange region.



Supplemental

The aquifer base and potentiometric surface were reevaluated using data from the OWRB well drillers database as part of a post-report analysis**. Figure S1** shows the USGS aquifer base (bottom) and the reevaluated OWRB aquifer base (top). **Figure S2** shows a residual map of the two aquifer base maps, with negative values indicating the OWRB base is below the USGS base and positive values indicating the OWRB base is above the USGS base. The differences between the two maps varied from +200 feet to -100 feet, with a mean of 4.5 feet and a standard deviation of 31 feet. The large changes in Harper County are attributed to revised base picks from 183 drillers' reports — all logs contained lithologic descriptions (most commonly "red bed") indicating the Tertiary-Permian geologic contact.

Figure S3 shows the USGS potentiometric surface (bottom) and the reevaluated OWRB potentiometric surface (top). The 160 well sites (117 in Reach I) used in the 2012 water-level synoptic were used for the OWRB reevaluation, and additional data from the OWRB drillers' database. **Figure S4** shows a residual map of the two potentiometric surface maps, with negative values indicating the OWRB potentiometric surface was below the USGS potentiometric surface and positive values indicating the OWRB potentiometric surface was above the USGS potentiometric surface. Differences between the two potentiometric surface maps varied from +83 to -82, with a mean of 0.4 feet, and a standard deviation of 16 feet. Excluding areas near the edges of the defined basin or previously mapped bedrock outcrops, the largest change in Major County is attributed to 47 supplemental depth-to-water measurements from drillers' reports — the measurements were taken during different years but provided a general depth to the water table in an area that had insufficient synoptic measurements to map the surface in greater detail. Wells drilled in this region of the basin generally target the underlying Marlow Formation because the terrace sands are unsaturated.

Figure S5 shows the USGS saturated thickness map (bottom) and the reevaluated OWRB saturated thickness map (top). The most apparent difference is in Harper County, where the Ogallala Formation is present. The USGS saturated thickness map has a larger area greater than 120 feet thick that is not well supported by drillers' logs, the Davis and Christenson (1981) report, or the USGS report on the saturated thickness of the High Plains Aquifer by McGuire and others (2012). The OWRB saturated thickness map shows a narrower valley of high saturated thickness near the current day Beaver-North Canadian River that may represent a pre-Pliocene paleo-channel or series of collapse features that extend into the Panhandle. The relatively thick, semi-circular saturated thickness areas northeast of the river may be attributed to pre-Pliocene collapse features that were infilled with Ogallala or Laverne Formation deposits (Myers, 1959; Davis and Christenson, 1981). **Figure S6** shows the potentiometric surface (bottom) and base (top) maps digitized from the Davis and Christenson (1981) report.

Table S1 lists the EPS rates and cumulative volumes of water recovered (pumped) during each life of the basin simulation period for the unmodified USGS numerical flow model and the calibrated OWRB analytical model (under normal recharge). Model calibration was performed to refine input coefficients so that the depletion curves derived from each model were similar for each life of the basin period. The refined input coefficients were then used to estimate EPS rates and MAY volumes for the two pumping scenarios based on changes to the basin boundary, base, and potentiometric surface by the OWRB.

Table S1. EPS rates and cumulative volumes of water recovered during each life of basin simulation period for the unmodified USGS numerical flow model and calibrated OWRB analytical model.

Period (years)	USGS EPS Rate	OWRB EPS Rate	USGS cumulative volume pumped	OWRB cumulative volume pumped	Percent difference
20	0.57	0.57	4,508,960.25	4,509,215.62	0.006
40	0.54	0.54	8,158,146.54	8,158,924.83	0.010
50	0.53	0.53	9,660,762.87	9,660,451.52	0.003

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Figure S1. The USGS aquifer base map (bottom) and reevaluated OWRB aquifer base map (top). Both maps used the same altitude intervals shown in the top figure.

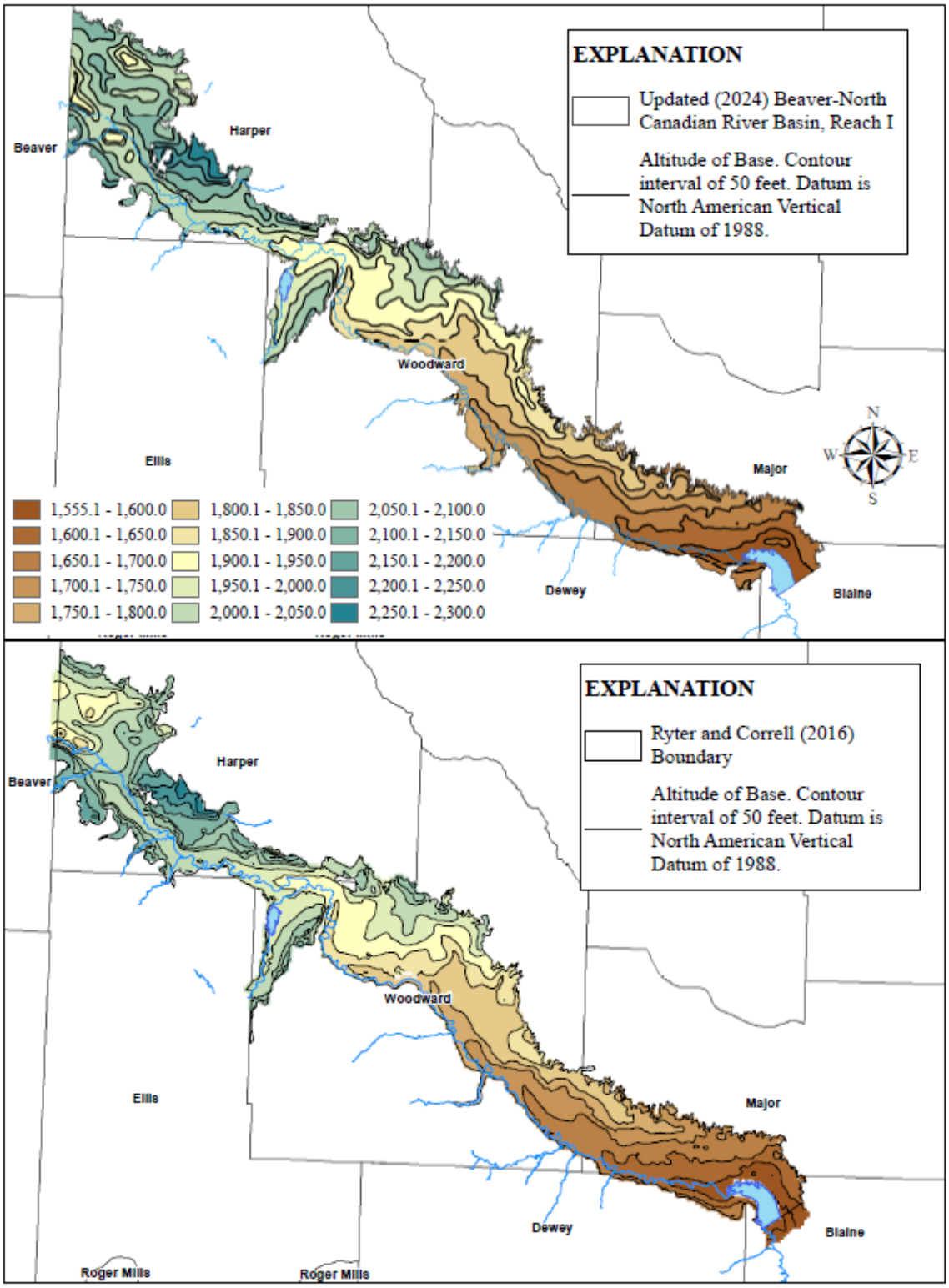


Figure S2. Residual map for the OWRB base aquifer minus the USGS aquifer base. Negative values indicate the OWRB base is below the USGS base and positive values indicate the OWRB base is above the USGS base. The average difference between the two base maps is 4.5 feet.

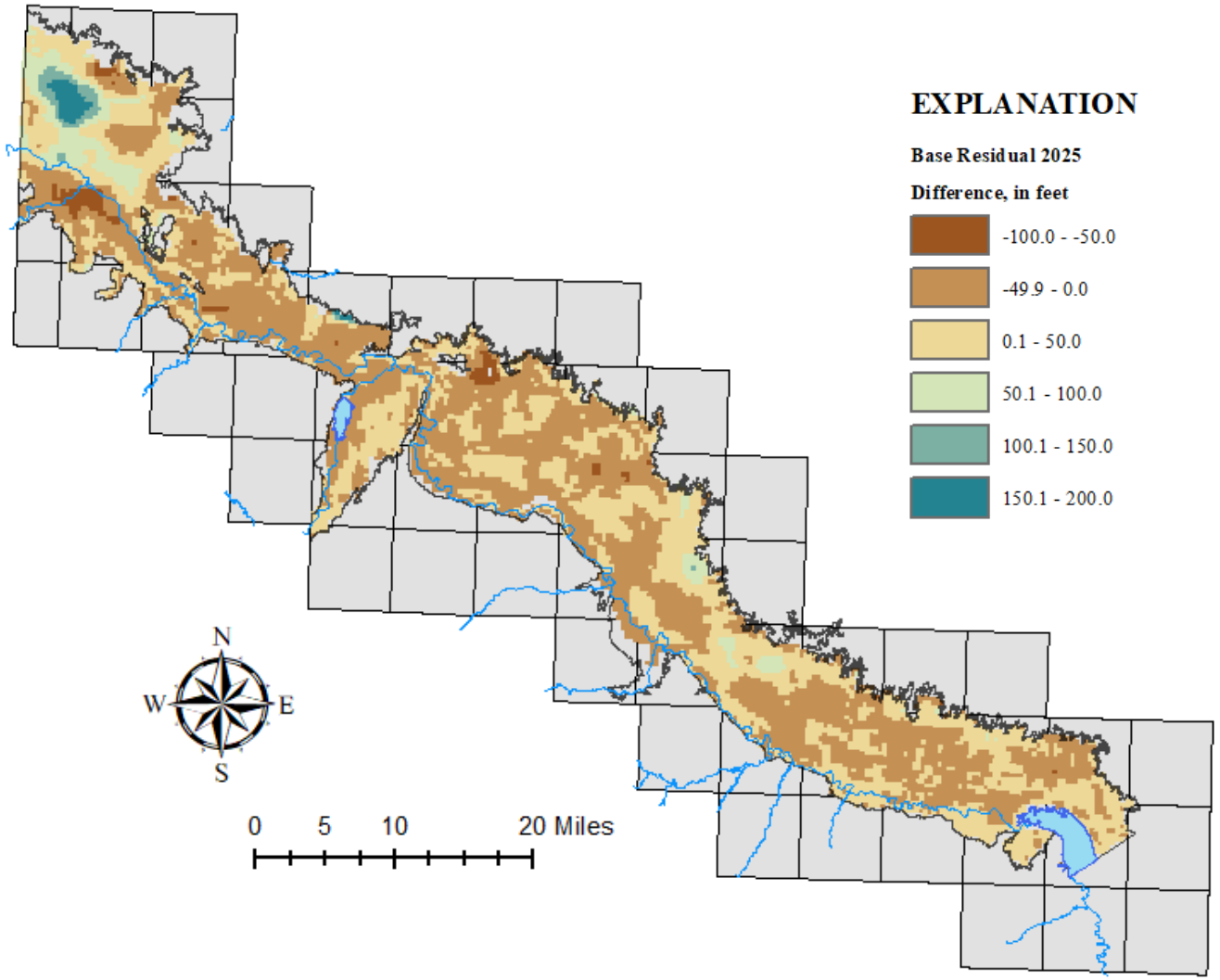


Figure S3. The USGS potentiometric surface map (bottom) and reevaluated OWRB potentiometric surface map (top). Both maps used the same altitude intervals which is only shown in the top figure.

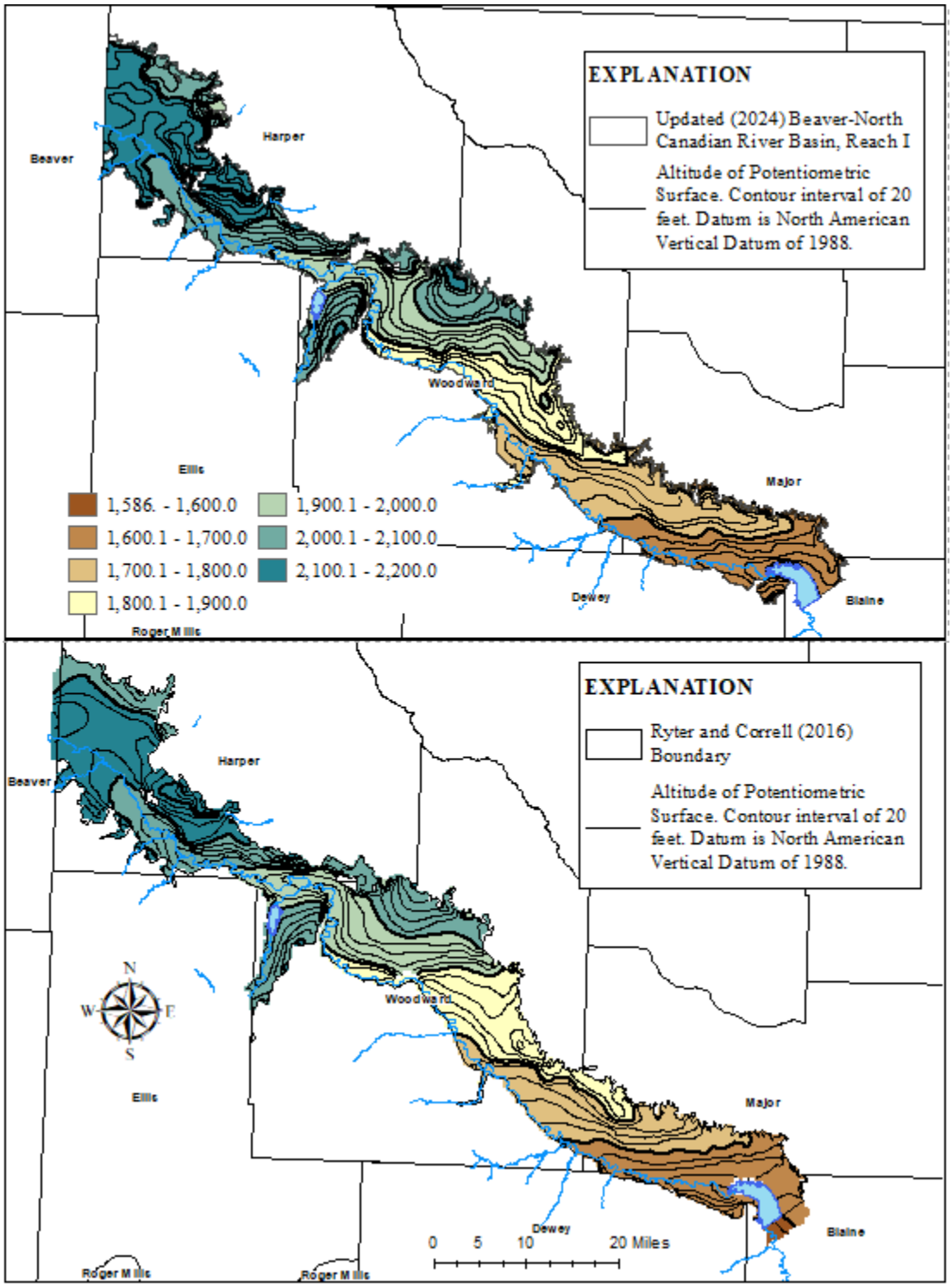


Figure S4. Residual map for the OWRB potentiometric surface minus the USGS potentiometric surface. Negative values indicate the OWRB potentiometric surface is below the USGS POT, and positive values indicate the OWRB potentiometric surface is above the USGS POT. The average difference between the two base maps is 1.5 feet.

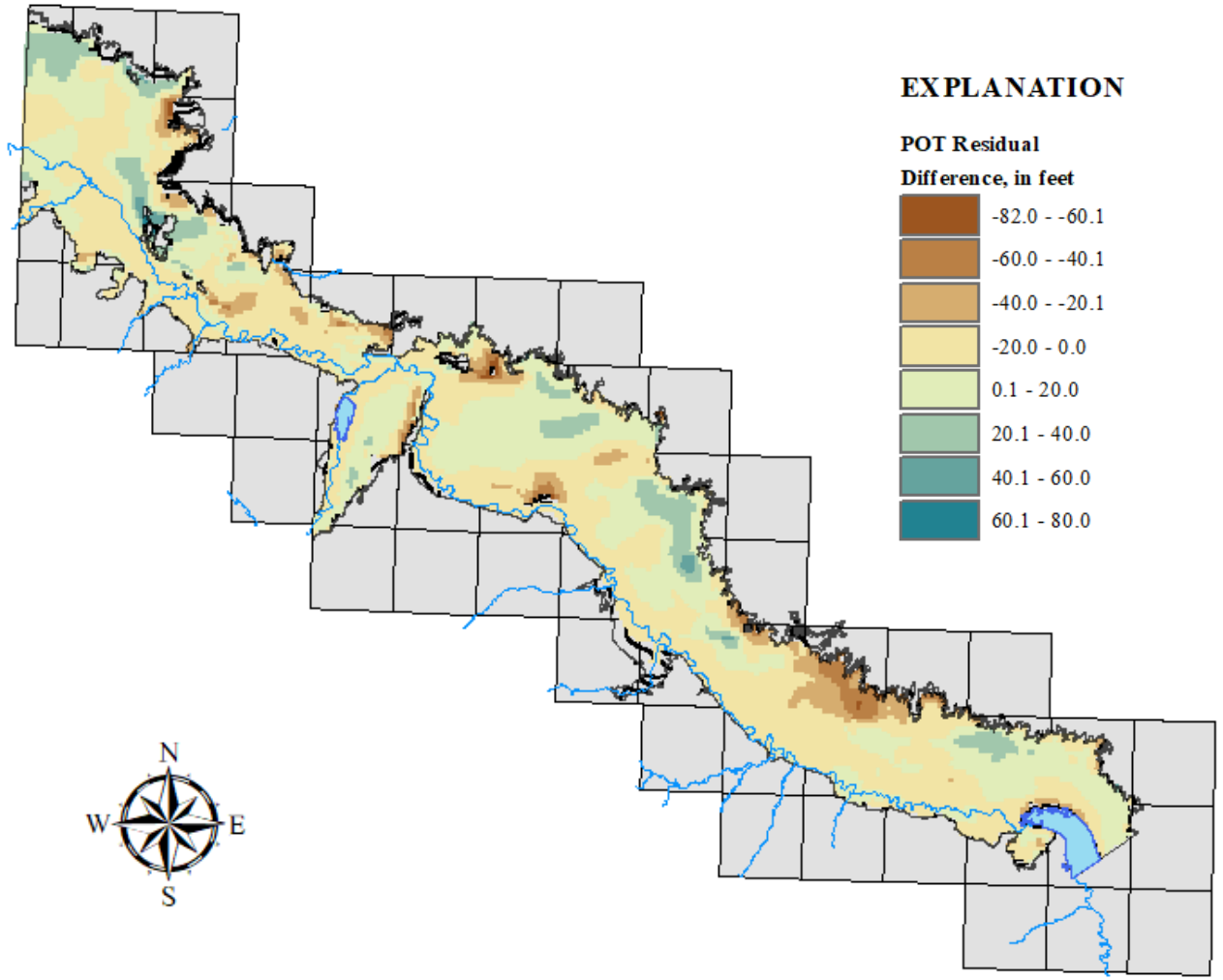


Figure S5. The OWRB saturated thickness map (top) and 2016 USGS saturated thickness map (bottom).

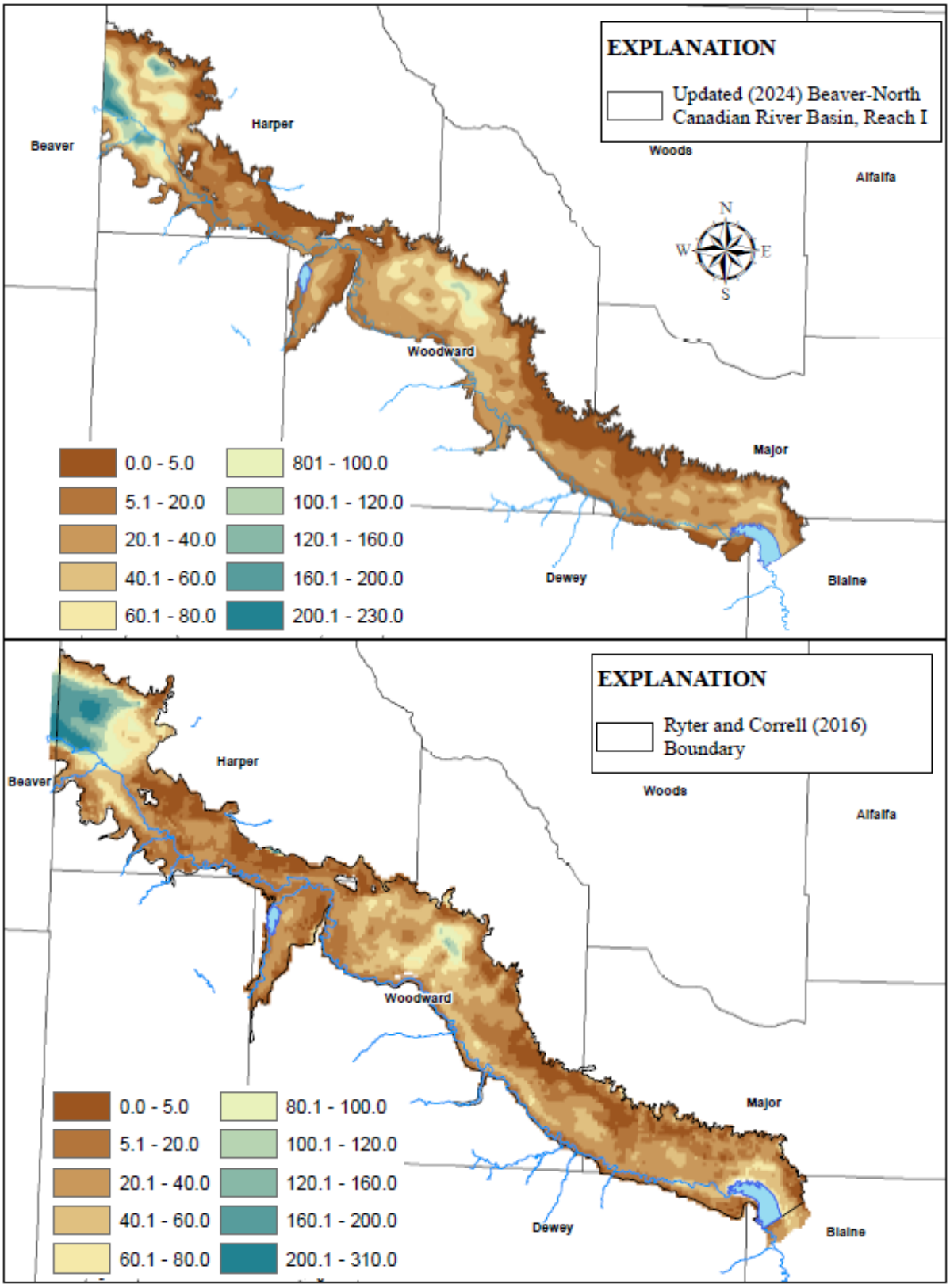


Figure S6. The Davis and Christenson (1981) base map (top) and potentiometric surface map (bottom). The maps use the same altitude intervals as the USGS and OWRB maps in Figures S1 and S3.

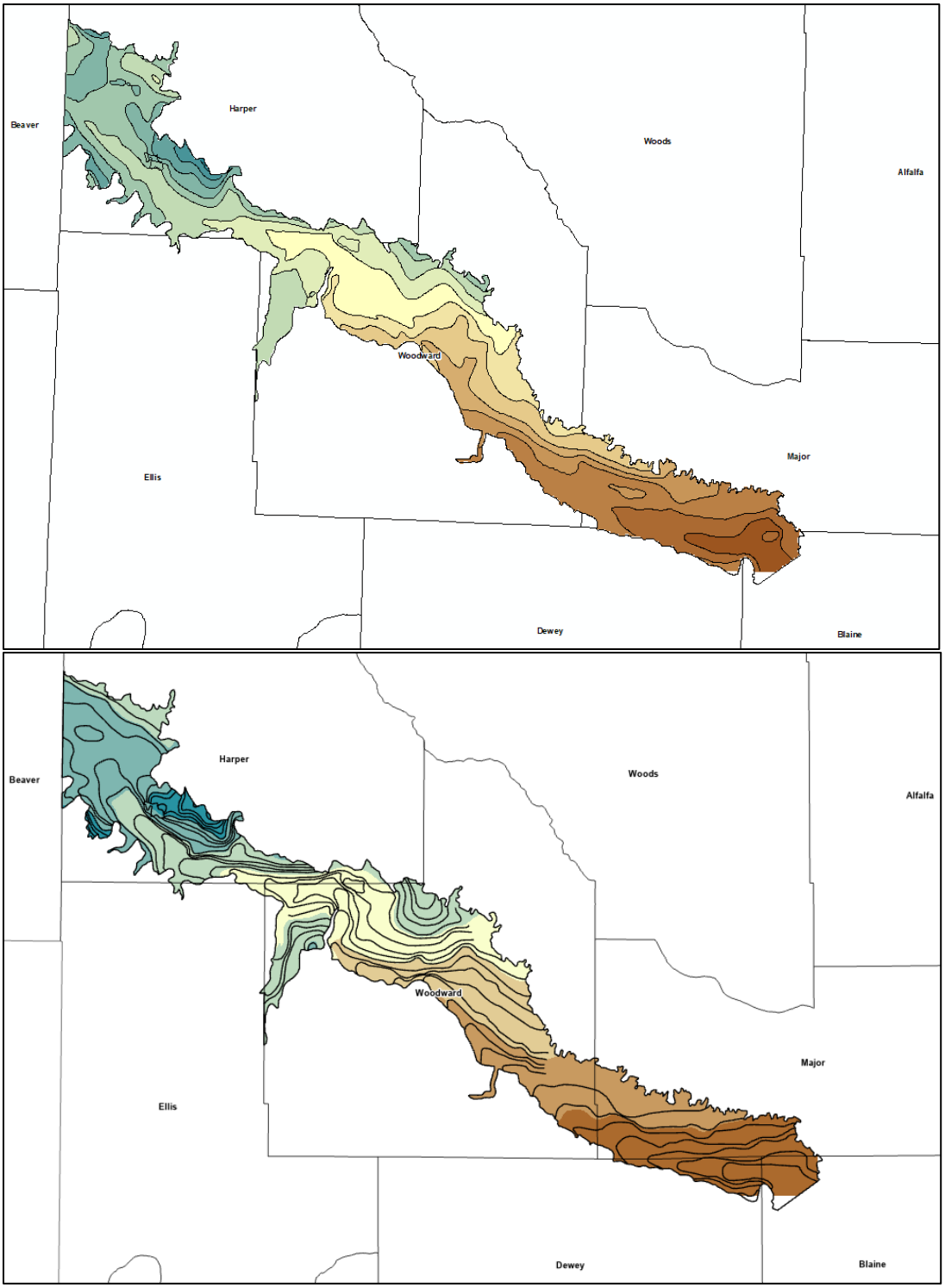
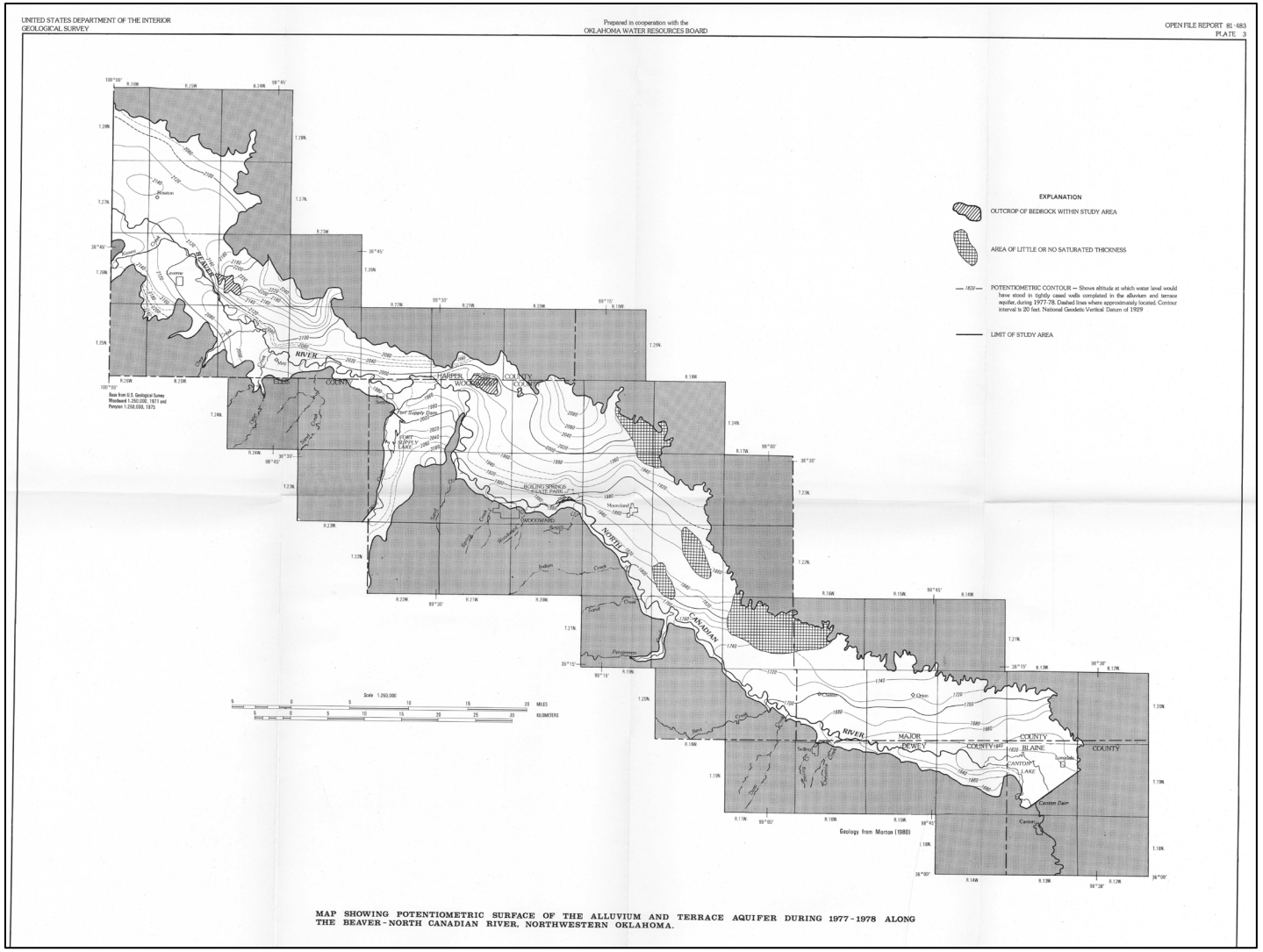


Figure S7. Plate 3 map from Davis and Christenson (1981) showing the potentiometric surface of the alluvium and terrace aquifer during 1977-1978 along the Beaver-North Canadian River, Northwestern Oklahoma. Included herein to show why some contours just end in **Figure S6**.



BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER of an Update to the Maximum Annual Yield for the Alluvium and Terrace Deposits of the Beaver-North Canadian River underlying parts of Blaine, Canadian, and Oklahoma counties, Oklahoma, covering all or parts of Township 12N, Ranges 4WIM, 5WIM, 6WIM, and 7WIM and Township 13N, Ranges 4WIM, 5WIM, 6WIM, 7WIM, 8WIM, and 9WIM, and Township 14N, Ranges 8WIM, 9WIM, 10WIM, and 11WIM, and Township 15N, Ranges 10WIM, 11WIM, and 12WIM, and Township 16N, Ranges 10WIM, 11WIM, and 12WIM, and Township 17N, Ranges 11WIM, 12WIM, and 13WIM, and Township 18N, Ranges 12WIM and 13WIM, and Township 19N, Ranges 12WIM and 13WIM.	)

TENTATIVE ORDER FOR THE UPDATE OF THE MAXIMUM ANNUAL YIELD FOR THE ALLUVIUM AND TERRACE DEPOSITS OF THE BEAVER-NORTH CANADIAN RIVER, REACH II

On this 15th day of July 2025, there came for consideration a proposed order to update the maximum annual yield for the alluvium and terrace deposits of the Beaver-North Canadian River Groundwater Basin (Reach II). Based on the updated hydrologic surveys and investigations, the Oklahoma Water Resources Board ("Board") makes and enters the following tentative findings, tentative conclusions of law, and order and directives.

EXISTING MAXIMUM ANNUAL YIELD

1. On April 10, 1990, the Board issued an Order establishing the maximum annual yield for the alluvium and terrace deposits of the Beaver-North Canadian River Groundwater Basin in Blaine, Canadian, and Oklahoma counties, Oklahoma, covering all or parts of Township 12N, Ranges 4WIM, 5WIM, 6WIM, and 7WIM; Township 13N, Ranges 4WIM, 5WIM, 6WIM, 7WIM, 8WIM, and 9WIM; Township 14N, Ranges 8WIM, 9WIM, 10WIM, and 11WIM; Township 15N, Ranges 10WIM, 11WIM, and 12WIM; Township 16N, Ranges 10WIM, 11WIM, and 12WIM; Township 17N, Ranges 11WIM, 12WIM, and 13WIM; Township 18N, Ranges 12WIM and 13WIM, and Township 19N, Ranges 12WIM and 13WIM.

2. In the Order, the Board determined:

a. The total land area overlying the basin was 211,840 acres;
b. The amount of water in storage as of July 1, 1973, was approximately 950,000 acre-feet;
c. The rate of natural recharge to the basin was 2.5 inches per year and total discharge from the basin during the 20-year simulation period was 2.83 million acre-feet;
d. Transmissivity of the basin sediments ranged from 0 to 2,050 feet squared per day and averaged 1,080 feet squared per day; and
e. Pollution to the basin from natural sources was considered negligible.

3. The Order determined the maximum annual yield, based on a 20-year basin life, to be one (1) acre-foot per year of fresh groundwater.

TENTATIVE FINDINGS

4. The Board has made or caused to be made hydrologic surveys and investigations of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin (Reach II), in parts of Blaine, Canadian, and Oklahoma counties. The study area is a long, narrow surficial aquifer that resides along an approximate 116-mile-long stretch of the North Canadian River from Canton Lake in northwestern Blaine County to Lake Overholser on the west side of Oklahoma City.

The hydrologic surveys and investigations reviewed for this order include the U.S. Geological Survey (USGS) Scientific Investigations Report 2015-5183, Hydrogeological Framework, Numerical Simulation of Groundwater Flow, and Effects of Projected Water Use and Drought for the Beaver-North Canadian River Alluvial Aquifer, Northwestern Oklahoma, by Ryter, D.W., and Correll, J.S. (2016) and U.S. Geological Survey Open-File Report 83-4076, Numerical Simulation of the Alluvium and Terrace Aquifer along the North Canadian River from Canton Lake to Lake Overholster, Central Oklahoma, by Christenson, S.C., (1983).

5. The Beaver-North Canadian River Alluvium and Terrace Groundwater Basin is composed of Quaternary- and Tertiary-age sediments (sand, silt, clay, and gravel) that uncomformably overlie Permian-age bedrock units principally composed of shale and sandstone. In Canadian County, bedrock outcrops in a narrow band approximately 22 miles long that separates the alluvial deposits from the older and topographically higher terrace deposits.

6. Groundwater wells completed in the alluvium and terrace deposits typically yield 100-300 gallons per minute, with a mean of 105 gallons per minute. Individual well yields range from less than 10 gallons per minute to more than 1,000 gallons per minute in some high-capacity irrigation and municipal wells. Groundwater is predominantly used for irrigation and public supply purposes, with smaller proportions for power, industrial, and recreational uses.

7. The total land area overlying Reach II of the basin is approximately 363 square miles or 232,035 acres (excluding the area of Lake Overholster) based on updated Oklahoma Geologic Survey surficial geology maps, drillers logs submitted to the OWRB, and aerial photography (see *Executive Summary Report* for details of the changes to the basin area).

8. The amount of groundwater in storage in Reach II is approximately 1.1 million acre-feet, calculated as the sum of the model cell storage values calculated by multiplying the cell area (61.8 acres), cell saturated thickness, and cell specific yield. A close approximation of the storage can be calculated by multiplying the basin area by the average specific yield (Sy) of 0.20, and the average saturated thickness of 24 feet.

9. Model calibrations for the Reach II numerical flow model yielded a mean annual recharge estimated of 60,950 acre-feet per year or about 3.1 inches per year using the 369 square mile basin area; when adjusted to the updated 362 square mile OWRB defined basin area, the mean annual recharge to the basin decreased to 59,942 acre-feet per year. Accordingly, over a 20-year period, the total amount of recharge to the groundwater basin would be approximately 1.20 million acre-feet. Mean annual recharge across the basin area is generally less than 5 inches per year. Locally recharge rates can be as much as 10.6 inches per year.

10. To calculate the total amount of discharge from Reach II of the basin attributable to groundwater withdrawals, the Board assumes full withdrawal of groundwater authorized by rights to use the groundwater established under state laws as they existed prior to July 1, 1973, with such rights being recognized in final orders determining prior rights to use groundwater. For Reach II, active prior rights authorize the withdrawal of 27,402.1 acre-feet per year. Current regular active permits in Reach II (as of June 2025) constitute a total authorized withdrawal of 32,986.0 acre-feet per year. The total anthropogenic discharge from the basin over 20 years is about 1.21 million acre-feet, assuming full withdrawal of the authorized groundwater use and no change in the status of the permits over the life of the basin. The cumulative total discharge from the basin during the 20-year model simulation was about 2.40 million acre-feet.

11. Model-calibrated horizontal hydraulic conductivity (Kh) for Reach II ranged from 4 to 279 feet per day, with a mean of 70 feet per day. Values of transmissivity from three published aquifer tests in Canadian County (all in alluvium) showed a transmissivity range of 5,347.2 to 13,100.7 feet squared per day. Christenson (1983) estimated a mean transmissivity of 1,080 feet squared per day for the modeled basin area. Model-calibrated specific yield (Sy) ranged from 0.10 to 0.25, with a mean of 0.20.

12. In general, groundwater in the basin is calcium bicarbonate type and is considered suitable for most uses. The average concentration of total dissolved solids within Reach II is about 732 milligrams per liter (mg/L). Groundwater that is sourced from the alluvium of the North Canadian River generally has a higher overall concentration of total dissolved solids than the associated terrace deposits; concentrations greater than 1,000 mg/L have been measured in this aquifer historically and were characterized as either sodium chloride or calcium sulfate types. Higher concentrations of sulfate and chloride are likely sourced from the dissolution of halite (NaCl) and gypsum (CaSO4-2H2O) in the underlying Permian-age bedrock. Total dissolved solids, nitrogen (as nitrate), iron, and manganese are all considered water quality concerns in Reach II; more than half of the water quality samples collected had total dissolved solid concentrations exceeding 500 milligrams per liter. High concentrations of iron and manganese in several samples suggest that dissolved oxygen is being depleted from the groundwater locally or that pumping has induced the upward migration of more mineralized groundwater. High nitrate concentrations in groundwater are associated with areas of the aquifer overlain by croplands and are likely attributed to fertilizers.

13. From the updated hydrologic investigation and based on information in Tentative Findings Nos. 7 through 11, the maximum annual yield for Reach II of the Beaver-North Canadian Alluvium and Terrace Groundwater Basin is tentatively determined to be about 120,644 acre-feet per year, (equivalent to 4.68 million acre-feet over 20 years) with an equal proportionate share of 0.5 (acre-feet/acre)/year) for the undeveloped land areas. Current active regular permits will maintain an equal proportionate share of 1.00 (acre-feet/acre)/year) based on the April 1990 final order.

TENTATIVE CONCLUSIONS

14. The Board is given authority by the Oklahoma Groundwater Law, 82 O.S. Supp. 2000, Sections 1020.4, 1020.5 and 1020.6 to make hydrologic surveys and investigations, enter orders to make tentative determinations, hold hearings on the tentative determinations and make final determinations of the maximum annual yields of each groundwater basin and subbasin. The Board is also given authority to cooperate with state and federal agencies engaged in similar surveys and investigations and may accept and use the findings of such agencies.

15. The Beaver-North Canadian Alluvium and Terrace Groundwater Basin has been designated by the Board as a "major groundwater basin" as defined by the Oklahoma Groundwater Law. See Section 1020.1(3) of Title 82 of the Oklahoma Statutes.

16. According to Section 1020.5 of Title 82 of the Oklahoma Statutes, after completing hydrologic surveys, the Board is to make a tentative determination of the maximum annual yield of groundwater to be produced from a basin or subbasin based upon the following:

a. total land area overlying the basin or subbasin;
b. amount of water in storage in the basin or subbasin;
c. rate of recharge to and total discharge from the basin or subbasin;
d. transmissibility of the basin or subbasin; and
e. possibility of the basin or subbasin from natural sources.

The maximum annual yield is to be based on a minimum basin life of 20 years from the date of the final order determining the maximum annual yield.

17. After a tentative maximum annual yield for a basin is determined, hearings are to be called and held in centrally located places within the area of the major groundwater basin. The hydrologic survey and information relied on to make the tentative order is to be made available for all interested persons, and notice is to be provided as required by Section 1020.6 of Title 82 of the Oklahoma Statutes.

ORDER AND DIRECTIVES

IT IS THEREFORE ORDERED by the Oklahoma Water Resources Board that the updated maximum annual yield of Reach II of the Beaver-North Canadian Alluvium and Terrace Groundwater Basin as described in this Order, is 120,644 acre-feet per year and that the equal proportionate share of the yield to be allocated to each acre of undeveloped land overlying the basin is tentatively determined to be 0.5 acre-feet per acre per year. Current active regular permits will maintain an equal proportionate share of 1.00 (acre-feet/acre)/year) based on the April 1990 final order.

IT IS FURTHER ORDERED that hearings be held in a centrally located place within the area of the groundwater basin, that the hydrologic survey and information relied on to establish the tentative order be made available to interested persons, and that notice of the hearings be given as required by law. After said hearings, a proposed final order shall be prepared and submitted to the Board for consideration as required by law.

IT IS FURTHER ORDERED that in conjunction with any hearings held, staff should seek input concerning any modification of the well spacing distance set forth in the current rules of 660 feet, and staff shall consider such input in drafting a proposed rule amendment for the next permanent rulemaking proceeding.

IT IS SO ORDERED by the Oklahoma Water Resources Board in regular and open meeting this 15th day of July 2025.

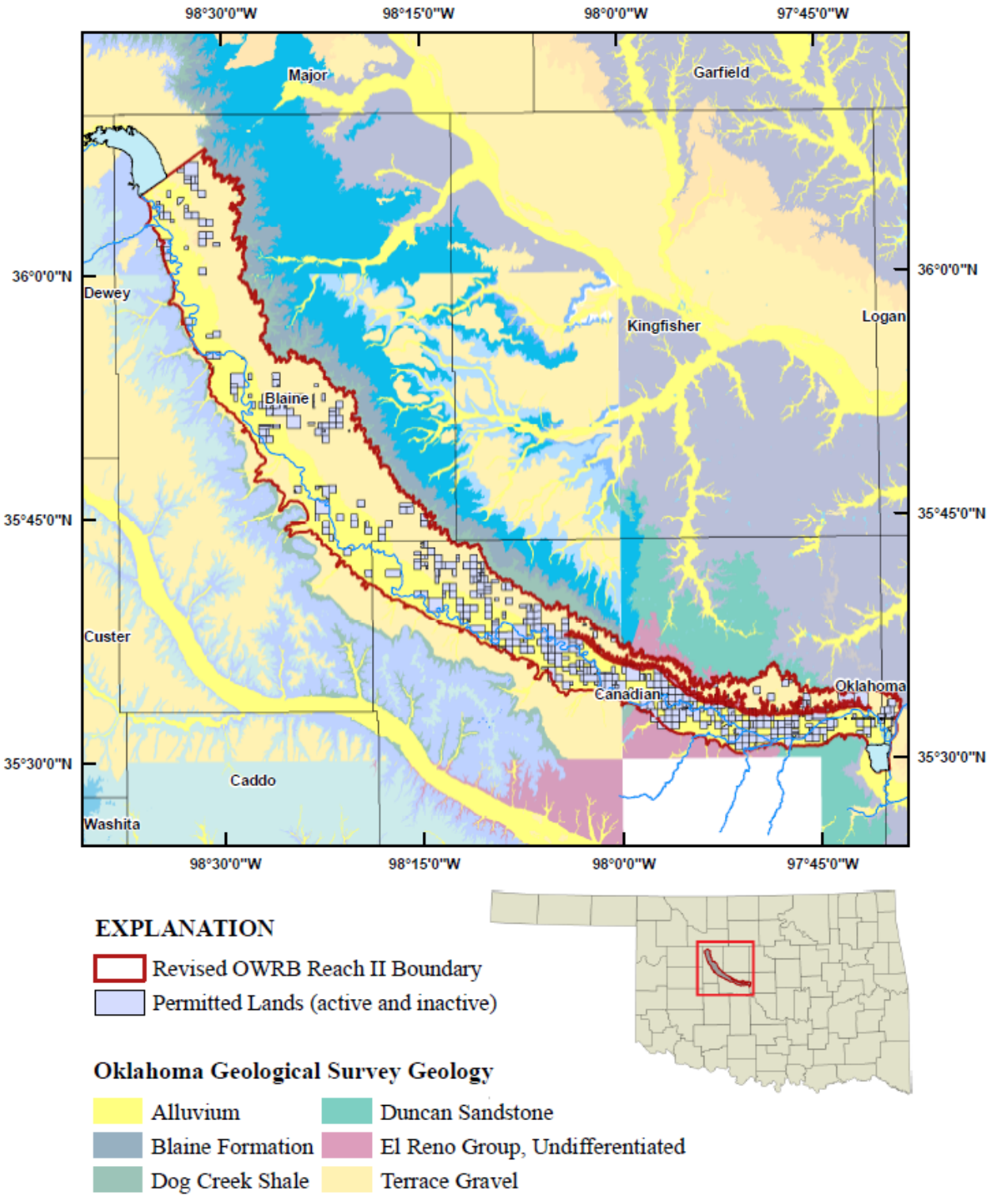
OKLAHOMA WATER RESOURCES BOARD

ATTEST:

Thomas Gorman Date	Suzanne Landess Date
Chairman	Secretary

(SEAL)

Attachment 1. Updated boundary of Reach II of the Beaver-North Canadian Alluvial Groundwater Basin with permitted lands.



OKLAHOMA
Water Resources Board

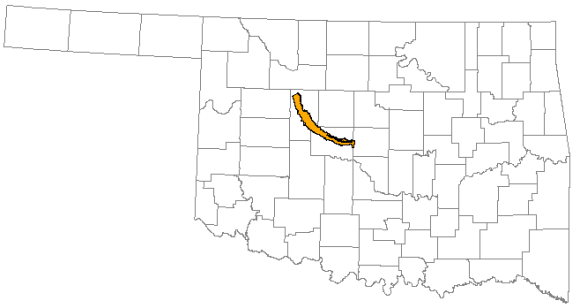
40-YEAR UPDATE

MAXIMUM ANNUAL YIELD DETERMINATION

FOR THE

BEAVER-NORTH CANADIAN RIVER ALLUVIUM AND TERRACE GROUNDWATER BASIN, REACH II

Executive Summary Report



Oklahoma Water Resources Board
Water Rights Administration Division
Christopher R. Neel
Division Chief

July 11, 2025

Introduction

Title 82, Section 1020.4 of the Oklahoma statutes requires the Oklahoma Water Resources Board [OWRB] to conduct hydrologic investigations of major and minor groundwater basins or subbasins prior to the establishment of a tentative maximum annual yield and that at least every twenty (20) years after issuance of the final order determining the maximum annual yield, the Board shall review and update, if necessary, the hydrologic investigations.

A "groundwater basin" is defined in the Oklahoma Administrative Code Title 785, Section 30-1-2 as a distinct underground body of water overlain by contiguous land and having substantially the same geological and hydrological characteristics and yield capabilities from which groundwater wells in a "major groundwater basin" yield a least fifty (50) gallons per minute on the average basin-wide, if from a bedrock aquifer and at least one hundred fifty (150) gallons per minute on the average basin-wide if from an alluvium and terrace aquifer [§82:1020.1(3)]. The tentative determination of the maximum annual yield must be based on the following:

1. The total land area overlying the basin or subbasin;
2. The amount of water in storage in the basin or subbasin;
3. The rate of recharge to and total discharge from the basin or subbasin;
4. Transmissivity of the basin or subbasin; and
5. The possibility of pollution of the basin or subbasin from natural sources.

The statute further provides that the maximum annual yield of each groundwater basin or subbasin shall be based upon a minimum basin or subbasin life of twenty (20) years from the effective date of the order establishing the final determination of the maximum annual yield [§82:1020.5].

On April 10, 1990, a final order for Reach II of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin was signed by the chairman of the board, establishing an equal proportionate share of one acre-foot per acre per year. The final order determinations were based on data and information provided in the U.S. Geological Survey [USGS] Water Resources Investigation Report 83-4076 entitled Numerical Simulation of the Alluvium and Terrace Aquifer along the North Canadian River from Canton Lake to Lake Overholster, Central Oklahoma (Christenson, 1983).

The purpose of this report is to summarize hydrologic data from an updated hydrologic investigation necessary to update the maximum annual yield of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin in accordance with Oklahoma groundwater law. Data was summarized from the USGS Scientific Investigation Report 2015-5183 entitled Hydrogeological Framework, Numerical Simulation of Groundwater Flow, and Effects of Projected Water Use and Drought for the Beaver-North Canadian River Alluvial Aquifer, Northwestern Oklahoma (Ryter and Correll, 2015).

Study Area

The Beaver-North Canadian River [BNCR] Alluvium and Terrace Groundwater Basin (Reach II) underlies approximately 232,035 acres (362.6 square miles [mi^2]) of land along approximately 116 miles of the North Canadian River in northwestern Oklahoma, extending from Canton Lake Dam in northwestern Blaine County to Lake Overholster on the west side of Oklahoma City.

Summary of Hydrogeologic Characteristics

- The Beaver-North Canadian River Alluvium and Terrace Groundwater Basin is composed of Quaternary- and Tertiary-age sediments (sand, silt, clay, and gravel) that uncomformably overlie Permian-age bedrock units principally composed of shale and sandstone. In Canadian County, bedrock outcrops in a narrow band approximately 22 miles long that separates the alluvial deposits from the older and topographically higher terrace deposits.

- The saturated thickness of the groundwater basin can vary from less than a foot to a maximum of about 70 feet. The average saturated thickness of Reach II as determined at the end of the 1980–2011 transient model period was about 28 feet (including model cells with a saturated thickness of zero [dry cells]). The aquifer base and potentiometric surface were reevaluated, resulting in a mean saturated thickness of 24 feet (including dry cells).

- Three (3) published aquifer tests from Canadian County (all in alluvium) yielded transmissivity values of 5,347.2, 8,020.8, and 13,100.7 square feet per day (ft^2/day), respectively (Mogg and others, 1960). The transmissivity estimates are equivalent to hydraulic conductivity values of 162, 191, and 545.9 feet per day (ft/day), respectively. Mogg and others (1960) posed that an average transmissivity of about 7,352 ft^2/day may be representative of the alluvium deposits. The Christenson (1983) model transmissivities ranged from 0 to 2,050 ft^2/day with a mean of 1,080 ft^2/day. Model-calibrated horizontal hydraulic conductivity ranged from 4 to 279 feet per day (ft/day), with a mean of 92 ft/day.

- Model-calibrated specific yield ranged from 0.10 to 0.25, with a mean of 0.20[1]. This Sy value is larger than the mean values determined for other alluvium and terrace aquifers in western Oklahoma, which range between 0.1 and 0.16.

- The mean annual recharge estimated from a transient soil-water balance model (Westenbroek and others, 2010) was 82,400 acre-ft/year in Reach II (4.18 inches per year [in/year]) for the period 1980–2011; annual recharge arrays derived from this transient model were used as inputs for the numerical flow model. Reach II model calibrations resulted in a smaller mean annual recharge estimate of 60,950 acre-ft/year (3.1 in/year) for the same period within the 369 mi^2 model area[2]; when adjusted to the OWRB-defined basin area (see *Changes in Basin Area* subsection), the mean annual recharge is approximately 59,942 acre-ft/year.

- The total amount of available groundwater in storage estimated from the USGS model files was about 1.28 million acre-feet in 2011 (sum of model cell storage values calculated from the multiplication of cell area, cell saturated thickness, and cell specific yield). The available water in storage was adjusted to about 1.1 million acre-feet following a reanalysis of the aquifer base and potentiometric surface. The storage volumes determined from the 2016 USGS model files and OWRB reanalysis are larger than the 950,000 acre-feet estimated in the 1983 hydrologic investigation because of the smaller (0.16) specific yield estimate used for that model. The OWRB volume is less than the USGS volume because of reduced saturated thicknesses in Blaine and Canadian counties.

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1. Initial estimates of Sy adjusted during the numerical-model calibration were determined from a logarithmic regression relationship between Kh and Sy based on published values for different geologic materials following the method of Mashburn and others (2013). The initial mean value of Sy for Reach II was 0.20. Likewise, the initial estimates of Kh were taken from ranges published by Fetter (1994).

2. The report lists the model area for Reach II as approximately 371 square miles (3,843 model cells). However, when the model files were imported into ArcGIS, the number of model cells was determined to be 3,825, equivalent to an area of about 369 square miles.

Maximum Annual Yield and Equal Proportionate Share Determination

The definition of the Life of a groundwater basin or subbasin indicates that there are two endpoints for the determination of the maximum annual yield, either fifty percent of the basin area will retain a saturated thickness allowing for pumping of the maximum annual yield for a minimum twenty-year life of basin OR the average saturated thickness of the basin will be calculated to be maintained at five feet for alluvium and terrace aquifers and fifteen feet for bedrock aquifers, respectively. For simplicity, these scenarios are herein referred to as the fifty percent and full depletion scenarios. In nearly all cases, both endpoints will not be satisfied at the same time because of the non-uniform geometry of groundwater basins. This gives the Board flexibility to determine how to manage each groundwater basin.

- Maximum annual yield: *"a determination by the Board of the total amount of fresh groundwater that can be produced from each basin or subbasin allowing a minimum twenty (20) year life of basin or subbasin"*

- Equal proportionate share: *"the maximum annual yield of water from a groundwater basin or subbasin which shall be allocated to each acre of land overlying such basin or subbasin. It shall be that percentage of the maximum annual yield, determined as provided by 82 O.S., §1020.5 and 785:30-9-2 which is equal to the percentage of the land overlying the fresh groundwater basin or subbasin which is owned or leased by an applicant for a regular permit".*

In pursuance of the fifty percent scenario, the United States Geological Survey (USGS) developed a finite-difference numerical groundwater-flow model for Reach II of the Beaver-North Canadian River Groundwater Basin based on available hydrogeologic data which included historical data from previous investigations and data queried from the OWRB well driller's database, the USGS National Water Information System, and the Oklahoma Climatological Survey. To determine the EPS rate for Reach II, one hypothetical groundwater-pumping well was put in each active model cell and pumped at the same applied rate over several iterations until half of the model cells had a saturated thickness of five feet or less. The EPS rates listed in **Table 1** represent the applied rates used in the numerical flow model to achieve the forecasting goal. The applied rate refers to the uniform rate set for each pumping cell within the model domain. The MAY is calculated as the cumulative amount of water recovered (pumped) over a simulation period divided by the length of the simulation period. The MAY volumes for each life of basin period and recharge scenario are listed in **Table 1.**

Table 1. Equal-proportionate-share rates for select life of basin periods in Reach II of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin, northwestern Oklahoma (Ryter and Correll, 2015).

Period (years)	Reach II applied EPS pumping rates		
	Recharge reduced by 10 percent	No change in recharge	Recharge increased by 10 percent
20	0.69	0.73	0.77
40	0.57	0.61	0.65
50	0.60	0.61	0.67
	Reach II MAY volumes (from model)		
20	123,913	130,454	138,034
40	99,064	106,042	113,112
50	98,874	106,258	113,628

The aquifer base, potentiometric surface, and basin area were reanalyzed to address conflicts between the published data and well log data from the OWRB well drillers database; contours were added or adjusted to add more control over the interpolation process. Adjustments to the base, potentiometric surface, and basin area changed the aquifer saturated thickness and the volume of water in storage. These changes necessitated new model simulations. The EPS rates and MAY volumes listed in the upper half of **Table 2** represent values for Reach II of the basin as determined from the updated OWRB analytical model (calibrated to the USGS model) to achieve the fifty percent scenario. The EPS rates and MAY volumes listed in the lower half of **Table 2** reflect the removal of prior rights, including existing regular permits.

Table 2. Equal-proportionate-share rates for select life of basin periods in Reach II of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin as determined from the updated OWRB analytical Excel pumping model, for the fifty percent basin depletion scenario.

Period (years)	Reach II EPS pumping rates (Final applied rate)		
	Recharge reduced by 10 percent	No change in recharge	Recharge increased by 10 percent
20	0.66	0.69	0.72
40	0.55	0.58	0.61
50	0.55	0.58	0.61
	Reach II MAY volumes (from model)		
20	115,697.17	120,643.56	125,589.94
40	94,276.27	98,923.86	103,571.45
50	94,406.21	99,013.93	103,621.62
	Reach II EPS pumping rates (After removal of prior rights)		
20	0.46	0.50	0.54
40	0.34	0.38	0.41
50	0.34	0.38	0.41
	Reach II MAY volumes (After removal of prior rights)		
20	55,309.07	60,255.46	65,201.84
40	33,888.17	38,535.76	43,183.35
50	34,018.11	38,625.82	43,233.52

An EPS rate of 0.69 (acre-feet/acre)/year and a MAY volume[3] of 120,643.56 acre-feet/year were estimated from the updated OWRB analytical model for the 20-year basin life. To accommodate the 127 prior rights and ensure they are adequately protected, 27,402.1 acre-feet of water rights established before July 1, 1973, in Reach I, were removed from the model-derived MAY. Removal of the prior rights reduced the MAY to about 93,241.46 acre-feet/year. As of the date of this report, there are 177 active regular groundwater-use permits within Reach I. Collectively, these permits constitute a total annual allocation of 32,986.0 acre-feet. Because regular permits retain their allocation amounts, they also had to be subtracted from the model-derived MAY, which reduced the MAY to 60,255.46 acre-ft/year. The final EPS rate for the undeveloped lands was determined to be 0.50 (acre-feet/acre)/year for the fifty percent scenario over a 20-year basin life. Existing dedicated lands will retain an EPS rate of 1.0 (acre-feet/acre)/year per the 1990 final order. To note, the full depletion scenario was not statutorily permitted until 1994. Unlike the Reach I numerical flow model by Davis and Christenson (1981), the Christenson (1983) numerical flow model for Reach II did not arrive at an EPS rate of 1.0 (acre-feet/acre)/year, but rather ran the model assuming water would be withdrawn at a rate sufficient to irrigate every acre of land within a node at a rate of 1.0 (acre-feet/acre)/year.

3. Unlike numerical flow models, where the final EPS and MAY values are determined by mass balancing during a simulation, analytical calculators require the user to set predefined volumes at which the model will stabilize based on estimated water remaining in storage.

The updated OWRB analytical model was also used to determine the EPS rates and MAY volumes for the full depletion scenario, the values of which are listed in **Table 3**. The USGS numerical flow model did not simulate this MAY determination endpoint.

Table 3. Equal-proportionate-share rates for select life of basin periods in Reach II of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin were determined from the updated OWRB analytical Excel pumping model, for the full depletion endpoint.

Period (years)	Reach II EPS pumping rates (Final applied rate)		
	Recharge reduced by 10 percent	No change in recharge	Recharge increased by 10 percent
20	0.77	0.80	0.84
40	0.63	0.66	0.69
50	0.62	0.65	0.69
	Reach II MAY volumes (from model)		
20	120,137.97	124,862.60	129,227.23
40	94,824.49	98,985.25	103,146.02
50	94,315.07	98,432.71	102,550.35
	Reach II EPS pumping rates (After removal of prior rights)		
20	0.59	0.63	0.67
40	0.43	0.47	0.50
50	0.42	0.46	0.50
	Reach II MAY volumes (After removal of prior rights)		
20	59,749.87	64,294.50	68,839.13
40	34,436.39	38,597.15	42,757.92
50	33,926.97	38,044.61	42,162.25

An EPS rate of 0.80 (acre-feet/acre)/year and a MAY volume of 124,862.60 acre-feet/year were estimated from the OWRB analytical model for the 20-year basin life. To accommodate the 127 prior rights and 177 active regular groundwater-use permits in Reach I and ensure they are adequately protected, 60,388.10 acre-feet of water rights were removed from the model-derived MAY, reducing the volume to 64,294.50 acre-ft/year. The final EPS rate for the undeveloped lands was determined to be 0.63 (acre-feet/acre)/year based on the model-derived MAY and existing dedicated lands permitted at 1.0 (acre-feet/acre)/year. Differences between the USGS model EPS rates and those determined from the OWRB analytical model speak to the sensitivity of each model to parameterization and mass balance approaches.

For completeness, EPS pumping rates and MAY volumes were also estimated using the original version of the OWRB analytical calculator developed by technical staff in the early 2000s. This analytical calculator was used to determine the tentative and final EPS rate for Vamoosa-Ada, Ogallala-Northwest, Ashland Isolated Terrace, Cherokee Group, El Reno, Woodbine, Little River, Haworth Isolated Terrace regions 1&2, Pennsylvanian, Cache Creek, Post Oak, Hennessey-Garber, Beaver Creek, North-Central Oklahoma, and Antlers aquifers. In each case, the EPS pumping rates were determined based on an amalgamation of the two Life of Basin endpoints, where pumping linearly declines from 100% of the basin at interval one to 50% of the basin at interval 10, and where the volume remaining in storage is equal to the basin area multiplied by the mean specific yield and averaged saved saturated thickness of five (5) or fifteen (15) feet depending on whether it was an alluvial or bedrock aquifer. The analytical calculator was modified to allow for changes in recharge and to account for permits with a final order EPS rate.

Table 4. Equal-proportionate-share rates for select life of basin periods in Reach II of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin were determined from the original OWRB analytical Excel pumping model, for the full depletion endpoint.

Period (years)	Reach I EPS pumping rates (Final applied rate)		
	Recharge reduced by 10 percent	No change in recharge	Recharge increased by 10 percent
20	0.58	0.61	0.65
40	0.45	0.48	0.52
50	0.42	0.46	0.49
	Reach I MAY volumes (from model)		
20	97,653.69	103,647.93	109,642.16
40	75,800.91	81,795.15	87,789.39
50	71,430.36	77,424.60	83,418.73
	Reach I EPS pumping rates (After removal of prior rights)		
20	0.37	0.41	0.45
40	0.22	0.26	0.30
50	0.19	0.23	0.27
	Reach I MAY volumes (After removal of prior rights)		
20	37,265.59	43,259.83	49,245.06
40	15,412.81	21,407.05	27,401.29
50	11,042.26	17,035.60	23,030.73

An EPS rate of 0.61 (acre-feet/acre)/year and a MAY volume of 103,647.93 acre-feet/year were estimated from the OWRB analytical model for the 20-year basin life. To accommodate the prior rights and active regular groundwater-use permits, 60,388.10 acre-feet was removed from the model-derived MAY, reducing the volume to 43,259.83 acre-feet/year. The final EPS rate for the undeveloped lands was determined to be 0.41(acre-feet/acre)/year, with existing dedicated lands permitted at 1.0 (acre-feet/acre)/year.

Changes in Groundwater Basin Area

The 1990 final order for the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin (Reach II) established a groundwater basin area of about 211,840 acres (331 mi^2); the basin area was defined within the final order under Findings of Fact 8 as the area with a saturated thickness of at least five (5) feet as of July 1, 1973. The groundwater basin area was derived from a calibrated transient flow simulation for the period 1940–1973 (**Figure 1**; Plate 8 in Christenson, 1983), which used a constant recharge rate of one (1) inch per year, an average specific yield of 0.16, and annual pumping rates based on reported groundwater use for the three largest water use categories in the study area (irrigation, public supply, and industrial). To note, about 39.6 mi^2 (25,319 acres) of the study area[4] were excluded from the model domain purportedly because they had little or no saturated thickness and therefore negligible flow during the steady-state model calibrations (**Figure 2**; yellow areas); the largest of these areas were northwest of the city of Watonga and west of the town of Richland. Smaller areas along the basin's edges were also excluded from the model domain because either flow was directed away from the Beaver-North Canadian River or the flow was considered negligible (related to the thinning of aquifer sediments).

4. The study area of Reach II in Christenson (1983) was estimated to be about 400 square miles. However, when digitized in ArcGIS and calculated, the study area was determined to be 373.4 square miles (238,976 acres). Based on Plate 5 in the modeling report, the authors included alluvium and terrace deposits northeast of Canton Lake in T.19N., R.13WI, as well as the outcropping bedrock areas in Canadian County ; the aggregate of these areas with the defined basin boundary was estimated to be about 396 square miles.

At the end of the 1940–1973 calibrated transient flow simulation, an additional 7.2 mi^2 (4,635 acres) of the basin area had a saturated thickness that fell below five (5) feet (**Figure 2**; orange areas), bringing the total area with little or no saturated thickness to about 46.8 mi^2; the subtraction of this area from the study area (373.4 mi^2) results in a groundwater basin area of 326.6 mi^2. Model discretization resulted in some areas of outcropping bedrock being encompassed within saturated model cells at the end of the 1940–1973 transient flow simulation. Consequently, about 3.9 mi^2 of outcropping bedrock was erroneously included in the total groundwater basin area (**Figure 2**; blue areas), which is how the authors of the 1983 model report came to a basin area of 331 mi^2. To note, the groundwater basin area in Christenson (1983) included the area of Canton Lake, which served as a constant head boundary.

For modeling purposes, the updated hydrologic investigation report by Ryter and Correll (2015) included alluvium and terrace deposits adjacent to and south of Lake Overholster in parts of Canadian and Oklahoma counties that were not included in the 1990 final order boundary (**Figure 3**; pink hashed area). As the Reach I executive summary mentioned, the Reach I to Reach II transition line was shifted about 1.9 miles southeast of Lake Canton to avoid boundary conditions within the model. The boundary was defined based on surface geology maps for the Woodward, Clinton, and Oklahoma City hydrologic atlases (Carr and Bergman, 1976; Morton,1980; Bingham and Moore, 1975). The total area of Reach II was about 377.8 mi^2 — excluding Lake Overholster, the total area of Reach II was about 375.4 mi^2. Unlike the Christenson model, the Ryter and Correll model included areas with little or no saturated thickness because the groundwater level fluctuates throughout a simulation period and because recharge to these areas can flow into the thickener areas or be pumped out.

A revised groundwater basin boundary was defined for Reach II based on updated geology maps for northwestern Oklahoma published by the Oklahoma Geological Survey for the Fairview, Watonga, and Oklahoma City North quadrangles (Stanley and others, 2002; Fay, 2010, Stanley, 2021) and a technical review by OWRB staff geologists (**Figure 3;** orange area). The revised groundwater basin boundary is largely indistinguishable from the study area of Christenson (1983), aside from the isolated outcropping bedrock areas being conjoined into a single polygon and refined detail along the basin edges that more precisely follow topographic contours. To adhere to the lateral extent established in the 1990 final order, the 2016 model area adjacent to and south of Lake Overholster was excluded, and the area between the shifted Reach I to Reach II transition line and Canton Lake (**Figure 3**; green hashed area) was included. The groundwater basin area (excluding the area of Lake Overholster) was determined to be about 362.6 mi^2 (232,035 acres).

EPS Recommendation

The Water Right Administration Division recommends that an equal proportionate share rate between 0.50 (acre-ft/acre)/year (fifty percent scenario) and 0.63 (acre-ft/acre)/year (full depletion scenario) be adopted for the undeveloped land areas based on the two life of a groundwater basin endpoints; existing regular permits would maintain an EPS rate of 1.0 (acre-ft/acre)/year. The model-determined maximum annual yield ranged between 120,644 and 124,863 acre-feet per year, or about 2.41 to 2.50 million acre-feet over the next 20 years. Current dedicated lands with an EPS rate of 1.00 (acre-ft/acre)/year correspond to a MAY of 32,986 acre-feet/year or about 659,750 acre-feet over the next 20 years, and current prior rights correspond to a MAY of 27,402.1 acre-feet/year or about 548,042 acre-feet over the next 20 years.

The model-determined MAY volumes assume immediate full basin development and continuous pumpage at the applied EPS rate over a 20-year life of the basin. Neither assumption reflects current or expected future demand from the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin. Of the

60,388.10 acre-feet per year allocated to current active regular and prior rights permits, only about seventeen (23) percent is used annually based on the mean annual groundwater use of 14,098 acre-feet per year reported in Ryter and Correll (2016) for the period 1967–2011. The mean annual groundwater use is equivalent to an EPS rate of 0.06 (acre-ft/acre)/year when equally distributed across the full basin area or about 0.43 (acre-ft/acre)/year when divided into the dedicated lands. In either case, the conservative EPS recommendation should not negatively impact most future beneficial-use landowners.

The Board can elect to adopt any EPS rate between 0.50–0.63 (acre-ft/acre)/year for the undeveloped lands, with the understanding that as the EPS rate increases, the percentage of the basin that will have a saturated thickness of five (5) feet or more will decrease (under the conditions set in the EPS simulations). If the Board elects to maintain the 1990 final order EPS rate of 1.0 (acre-ft/acre)/year, the life of the basin would drop to about 10 years, assuming full development. A Board subcommittee meeting was held on May 15, 2025, to discuss rate options for the basin; the subcommittee members selected an EPS rate of 0.5 (acre-ft/acre)/year for Reach II to be presented to the full Board in the tentative order. An EPS rate of 0.5 (acre-ft/acre)/year is equivalent to a MAY volume of 120,644 acre-feet/year. Existing regular permits would maintain an EPS rate of 1.0 (acre-ft/acre)/year.

Percent Developed

According to Title 82, Section 1020.6 of the Oklahoma statutes, the Board may prescribe delayed or gradual implementation of equal proportionate share allocations if the current total allocated amount of groundwater from the aquifer is twenty-five percent (25%) or less of the maximum annual yield. The percentage is herein referred to as the "MAY percent developed". The MAY percent developed for Reach II was calculated to be 50.1 percent for the fifty percent scenario and 48.4 percent for the full depletion scenario (when prior rights allocations are included), using the model-determined maximum annual yield volumes. If the prior rights allocations are not included, the percent developed was calculated to be 27.3 percent for the fifty (50) percent scenario and 26.4 percent for the full depletion scenario. For completeness, a non-statutory percent developed value can be determined for land overlying a groundwater basin that has been dedicated to active regular groundwater permits, herein referred to as the "developed basin area percentage." Reach II has a developed basin area percentage of 14.2 percent.

Groundwater Quality

Christenson (1983) collected water samples from thirty-three (33) wells within the basin area to determine the concentration of common chemical constituents and selected trace constituents; all the sampling was conducted during 1980. Of the 33 samples, nine (9) were calcium bicarbonate type, nine (9) were mixed-cation bicarbonate type, nine (9) were mixed-cation mixed-anion type, nine (9) were calcium bicarbonate type, two (2) were calcium sulfate type, two (2) were calcium mixed-anion type, one (1) was sodium sulfate type, and one (1) was sodium mixed-anion type. Chemical water types were determined by the predominant cation and anion, where predominant means that the concentration was greater than fifty (50) percent of the total concentration. If no cation or anion was predominant, the type was considered mixed. Of the 33 samples collected, twenty-seven (27) had one or more chemical constituents with concentrations greater than or equal to the limits set for public supply use. Eleven (11) samples had concentrations of nitrogen that exceeded 10 milligrams per liter (mg/L), nineteen (19) samples had total dissolved solid concentrations that exceeded 500 mg/L, nine (9) samples had sulfate concentrations that exceeded 250 mg/L, one (1) samples had a chloride concentration that exceeded 250 mg/L, six (6) samples had iron concentrations that exceeded 300 micrograms per liter (ug/L), thirteen (13) samples had manganese concentrations that exceeded 50 ug/L, and two (2) samples had Selenium concentrations that exceeded 10 ug/L.

As part of the ongoing groundwater monitoring and assessment program (GMAP), the OWRB collected water samples from fourteen (14) wells across the basin area in 2015. Of the 19 samples, five (5) were calcium bicarbonate type, five (5) were mixed-cation bicarbonate type, three (3) were sodium bicarbonate type, and one (1) was calcium mixed-anion type. Inorganic nitrogen was not measured in any of the wells. Five (5) samples had sulfate concentrations that exceeded the EPS drinking water standard of 250 milligrams per liter (mg/L), one (1) sample had a chloride concentration that exceeded the EPS drinking water standard of 250 mg/L, eight (8) samples had total dissolved solid concentrations that exceeded 500 mg/L, six (6) samples had iron concentrations that exceeded 300 micrograms per liter (ug/L), and seven (7) samples had manganese concentrations that exceeded 50 ug/L. Summary statistics for selected chemical constituents are shown in **Tables 4 & 5**. High total dissolved solids, nitrogen (as nitrate), iron, and manganese are all considered water quality concerns in Reach II of the Beaver-North Canadian River Alluvium and Terrace Groundwater Basin. Although iron (Fe) and manganese (Mn) occur naturally in soils, rocks, and minerals, the relatively high concentrations of these metals in several samples imply that dissolved oxygen is being depleted from the groundwater locally. Either that or localized pumping has induced the upward migration of more mineralized groundwater from the underlying bedrock. The principal source of elevated sulfate and chloride concentrations in Oklahoma groundwater is the dissolution of halite (NaCl) and gypsum (CaSO4-2H2O) from the Permian-age bedrock units. The source of elevated nitrogen concentrations is likely anthropogenic.

Table 4. Summary statistics for groundwater-quality data for 33 samples collected by Christenson (1983)

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; ºC, degrees Celsius; mg/L, milligrams per liter; ug/L, micrograms per liter]

Parameter	Detection limit	Mean	Min	Percentile			Max	EPA Standard
				25	50	75		
Specific Cond., µS/cm	--	1,098.9	345.0	628.5	937.5	1,195.0	2,700.0	--
Temperature, ºC	--	22.6	17.5	20.0	22.1	25.0	29.3	--
pH, standard unit	--	7.0	6.5	6.9	7.0	7.2	7.8	--
Dissolved Solids, mg/L	--	734.1	230.0	409.0	568.0	881.0	2,180.0	500
Calcium, mg/L	--	103.5	41.0	68.0	88.0	120.0	260.0	--
Magnesium, mg/L	--	37.1	9.1	20.0	28.0	46.0	114.0	--
Sodium, mg/L	--	95.9	13.0	35.0	63.0	110.0	520.0	--
Potassium, mg/L	--	4.0	1.0	1.9	3.1	3.9	23.0	--
Sulfate, mg/L	--	197.0	10.0	57.0	110.0	250.0	870.0	250
Chloride, mg/L	--	72.9	9.2	28.0	40.0	79.0	400.0	250
Bicarbonate, mg/L	--	--	--	--	--	--	--	--
Fluoride, mg/L	--	0.6	0.2	0.5	0.5	0.7	1.2	2
Silica, mg/L	--	22.9	11.0	20.0	22.0	25.0	34.0	--
Alkalinity, mg/L	--	258.9	43.0	170.0	250.0	360.0	550.0	--
Inorganic Nitrogen,	--	10.4	0.1	2.5	6.7	13.0	46.0	10
Arsenic, ug/L	--	2.9	1.0	2.0	2.0	3.0	15.0	10
Boron, ug/L	--	244.5	30.0	90.0	180.0	280.0	1,100.0	--
Cadmium, ug/L	--	1.6	< 1.0	0.5	2.0	2.0	4.0	5
Chromium, ug/L	--	9.4	0.0	10.0	10.0	10.0	20.0	100
Copper, ug/L	--	30.4	0.0	5.0	11.0	24.0	430.0	1000
Iron, ug/L	--	262.7	<10.0	10.0	40.0	170.0	2,200.0	300

Parameter	Detection limit	Mean	Min	Percentile			Max	EPA Standard
				25	50	75		
Lead, ug/L	--	3.0	0.0	2.0	3.0	4.0	7.0	15
Manganese, ug/L	--	207.2	< 1.0	4.8	20.0	352.5	1,100.0	50
Selenium, ug/L	--	2.6	0.0	0.0	1.0	3.0	25.0	50
Zinc, ug/L	--	282.1	10.0	50.0	80.0	160.0	3,700.0	5000

Table 5. Summary statistics for groundwater-quality data for 14 samples collected by the Oklahoma Water Resources Board, 2015.

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; ºC, degrees Celsius; mg/L, milligrams per liter; ug/L, micrograms per liter]

Parameter	Detection limit	Mean	Min	Percentile			Max	EPA Standard
				25	50	75		
Specific Cond., µS/cm	5.0	1,196.8	529.7	698.4	954.6	1,614.2	2,616.9	--
Temperature, ºC	-5.0	19.4	17.2	18.5	19.0	20.2	23.0	--
pH, standard unit	--	6.9	6.4	6.7	6.9	7.1	7.3	--
Dissolved Solids, mg/L	10.0	732.2	313.0	408.5	559.0	946.3	1,370.0	500
Calcium, mg/L	0.5	101.4	60.4	77.3	91.3	120.0	191.0	--
Magnesium, mg/L	0.5	37.8	14.2	18.4	30.1	49.7	91.0	--
Sodium, mg/L	0.5	96.1	22.7	30.8	59.7	160.3	276.0	--
Potassium, mg/L	0.5	3.7	0.9	1.6	2.6	3.2	12.5	--
Sulfate, mg/L	10.0	182.7	39.0	81.2	136.6	261.0	454.0	250
Chloride, mg/L	10.0	77.2	15.1	21.2	58.6	108.6	281.0	250
Bicarbonate, mg/L	12.0	372.6	142.0	212.5	341.5	476.8	775.0	--
Fluoride, mg/L*	0.2	0.5	0.3	0.3	0.4	0.7	1.3	2
Silica, mg/L	0.05	25.9	22.3	24.0	25.3	27.4	34.6	--
Alkalinity, mg/L	10.0	305.4	116.0	174.3	280.0	391.0	635.0	--
Inorganic Nitrogen,	--	--	--	--	--	--	--	10
Arsenic, ug/L*	1.0	4.3	1.2	2.5	4.4	5.8	8.0	10
Boron, ug/L	20.0	198.6	45.5	60.8	154.0	262.0	586.0	--
Cadmium, ug/L	--	--	--	--	--	--	--	5
Chromium, ug/L*	1.0	23.8	10.8	16.7	20.4	30.0	45.1	100
Copper, ug/L*	1.0	9.6	1.5	1.9	4.1	7.8	45.0	1000
Iron, ug/L*	20.0	799.1	32.6	302.0	828.0	1,330.0	1,580.0	300
Lead, ug/L	0.5	--	<	<	<	0.8	1.0	15
Manganese, ug/L*	5.0	457.1	155.0	313.5	377.0	540.0	961.0	50
Selenium, ug/L	--	--	--	--	--	--	--	50
Zinc, ug/L*	5.0	0.06	0.01	0.01	0.03	0.07	0.25	5000

--, indicates not available
*, indicates statistics were based on a smaller sample population.
<, indicates concentration is less than the minimum reported detection limit

SUMMARY

Oklahoma groundwater law requires the Oklahoma Water Resources Board to make a tentative determination of the maximum annual yield of each groundwater basin based on the following:

1. The total land area overlying the basin or subbasin;
2. The amount of water in storage in the basin or subbasin;
3. The rate of recharge to and total discharge from the basin or subbasin;
4. Transmissivity of the basin or subbasin; and
5. The possibility of pollution of the basin or subbasin from natural sources.

The Oklahoma Water Resources Board has, based on information from the USGS and the Board, made the following determinations:

Beaver-North Canadian River Alluvium and Terrace Groundwater Basin (Reach II)

1. Total land overlying the basin was determined to be 232,035 acres or 362.6 square miles.

2. The total amount of water in storage in Reach II in 2011 was determined to be about 1.1 million acre-feet based on the sum of model cell storage values calculated from the multiplication of cell area, cell saturated thickness, and cell specific yield.

3. The rate of natural recharge to the basin is about 59,942 acre-feet per year, which based on the overlying land area of the basin is equivalent to about 3.1 inches per year.

4. Total anthropogenic discharge (allocated water rights) from the basin was calculated to be about 60,388.10 acre-feet/year or about 1,207,762 acre-feet of water over the 20-year Life of the basin.

5. Values of transmissivity within the basin range from 0 to 2,050 feet squared per day. with a mean of 1,080 feet squared per day.

6. Total dissolved solids, nitrogen (as nitrate), iron, and manganese are all considered water quality concerns in Reach II of the Beaver-North Canadian River Alluvial and Terrace Groundwater Basin.

7. The MAY percent developed for the basin was calculated to be between 48–50 percent based on the total allocated rights (prior and regular); therefore, EPS allocations for new permits will not be eligible for delayed or gradual implementation.

8. The maximum annual yield ranges from 120,644 to 124,863 acre-feet per year, equivalent to an EPS range between 0.50 to 0.63 (acre-feet/acre)/year for the undeveloped land area. Current active regular permits will maintain an equal proportionate share of 1.00 (acre-feet/acre)/year based on the April 1990 final order. If the Board elects to use the 1990 final order EPS rate, the life of the basin would drop to about 10 years, assuming full development. The Board subcommittee selected an EPS rate of 0.5 (acre-feet/acre)/year, equivalent to a MAY volume of 120,644 acre-feet/year.

Figure 1. Map showing saturated thickness at the end of the transient model simulation (1940–1973) in the alluvium and terrace aquifer along the Beaver-North Canadian River, Northwestern Oklahoma (Christenson, 1983).

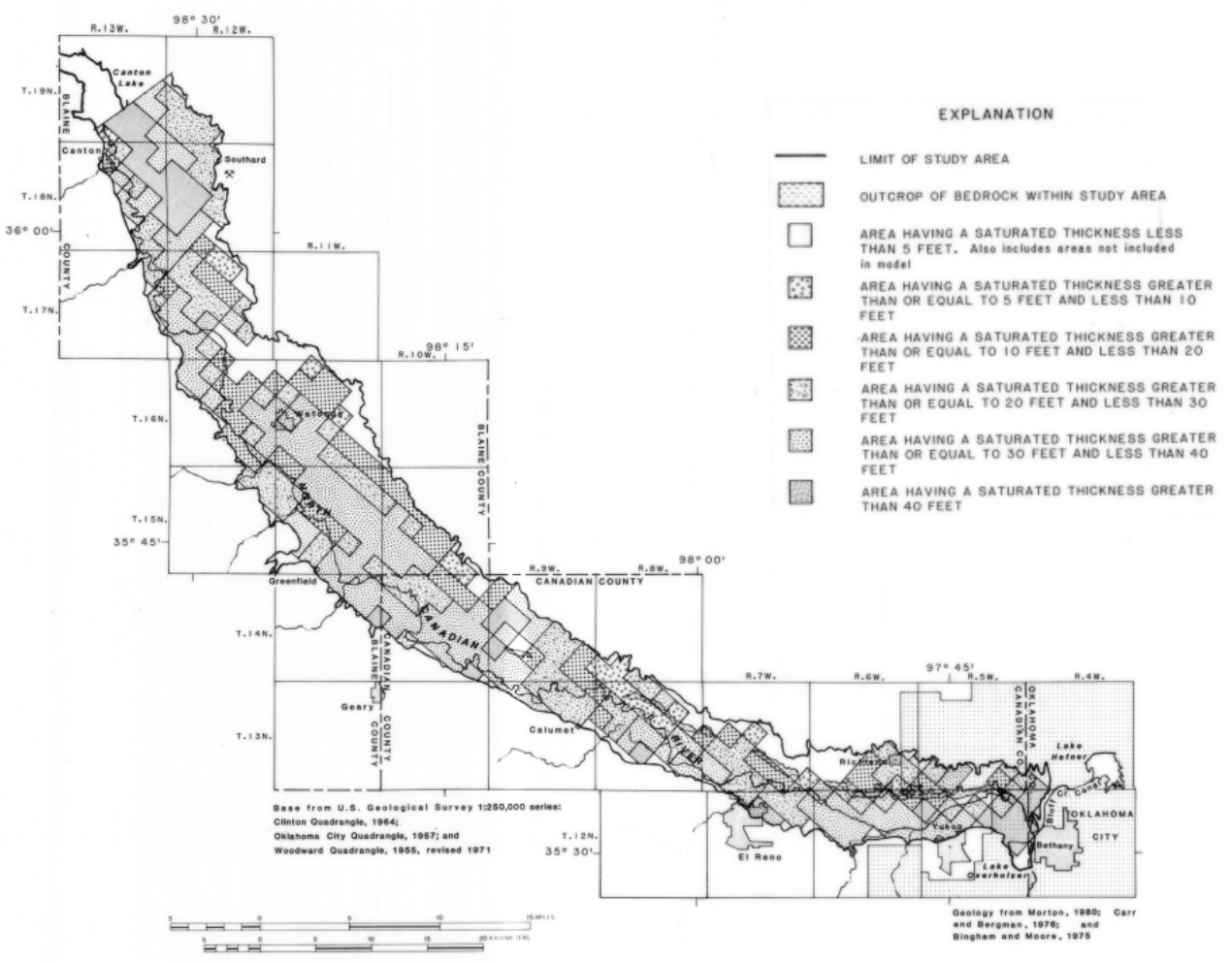


Figure 2. Map showing areas excluded from groundwater flow model simulations because of a purported lack of flow or little (less than 5 feet) or no saturation. Areas were digitized from plates 6 and 8 in Christenson (1983).

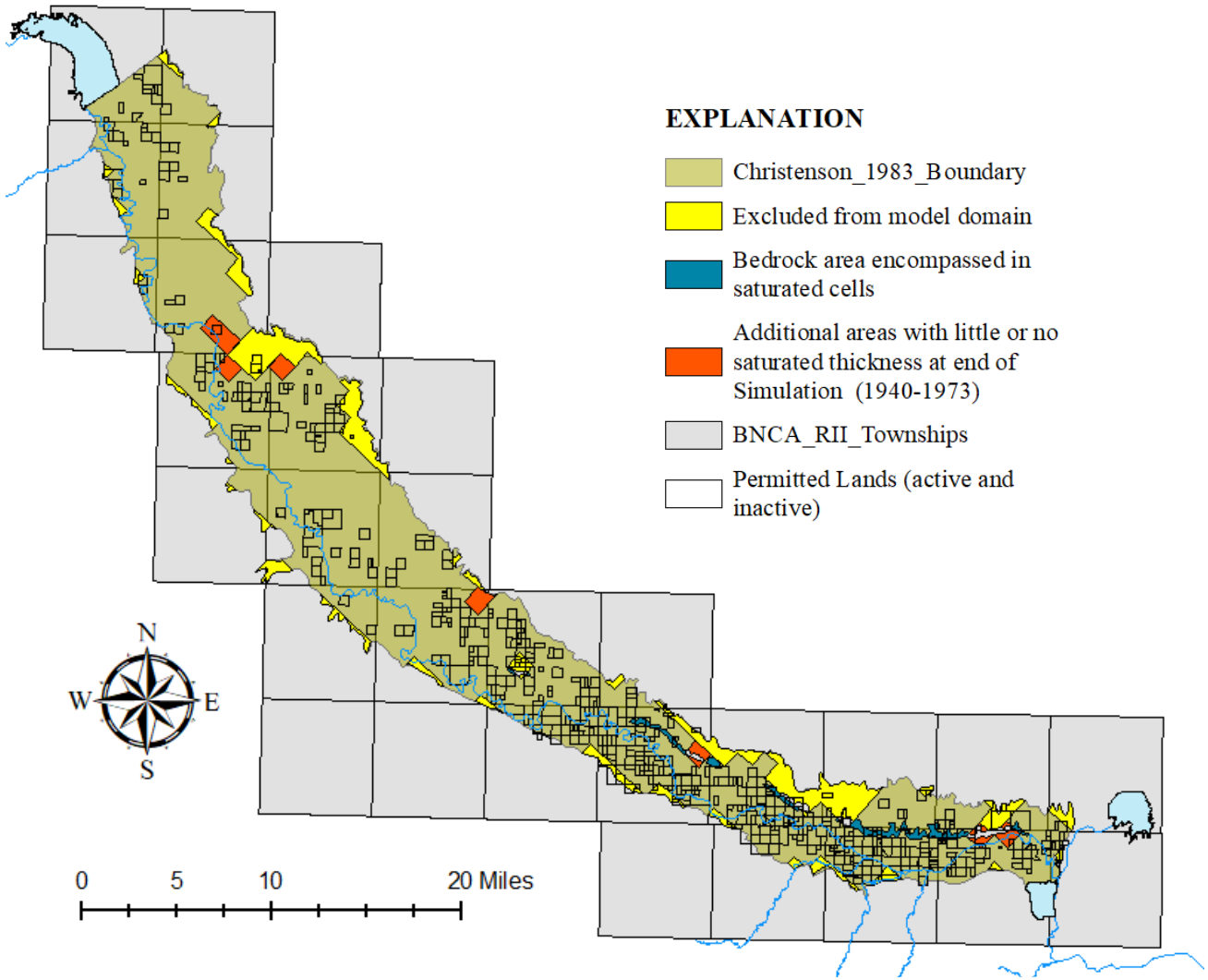
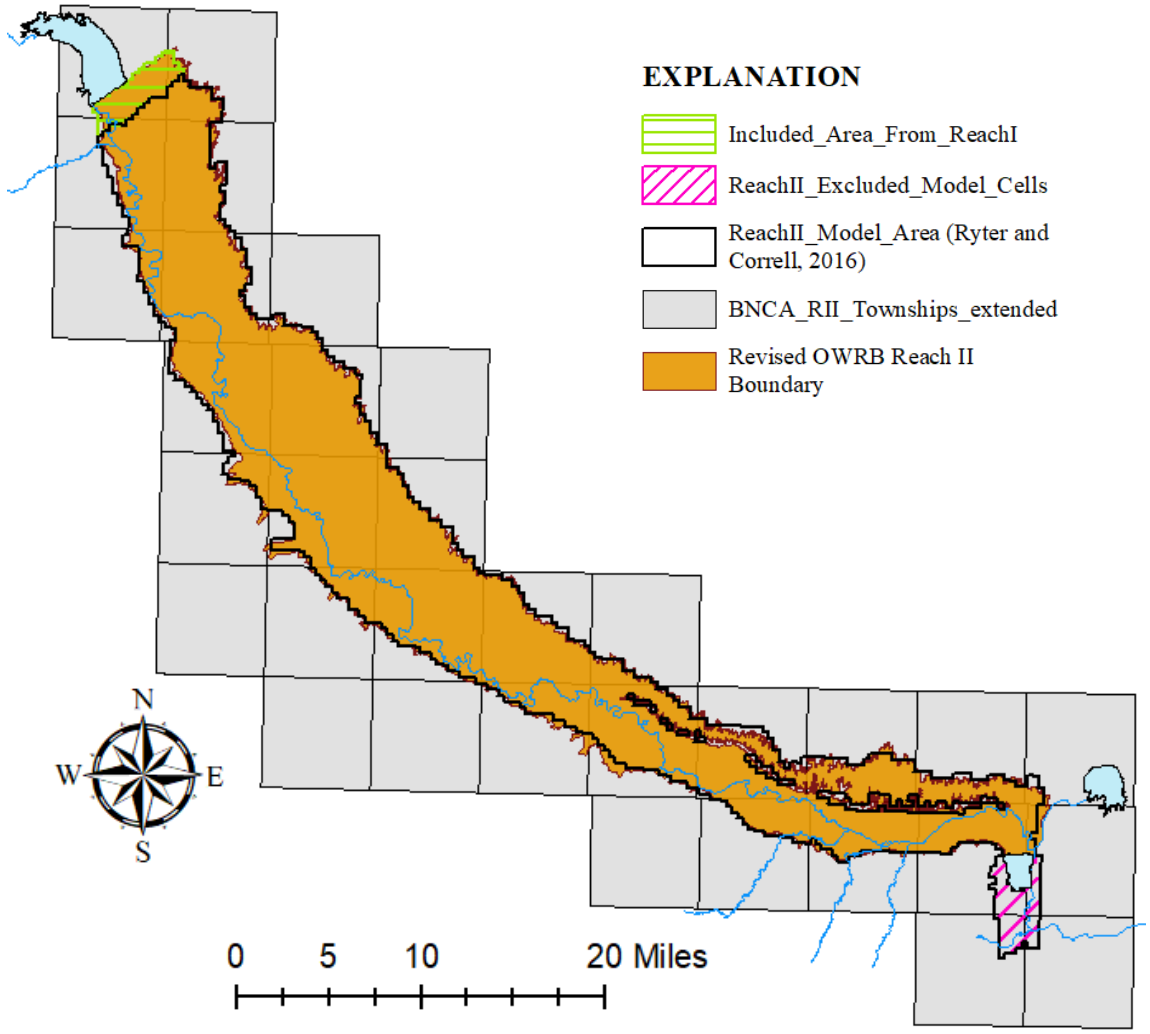


Figure 3. The revised OWRB groundwater basin area of the Beaver-North Canadian River Alluvium and Terrace Aquifer (orange region) overlain by the 2016 USGS model area (black outline). The revised groundwater basin area excluded part of the USGS Reach II model area (pink hashed area) and included part of the USGS Reach I model area (green hashed area).



Supplemental

The aquifer base and potentiometric surface were reevaluated using data from the OWRB well drillers database as part of a post-report analysis**. Figure S1** shows the USGS aquifer base (bottom) and the reevaluated OWRB aquifer base (top). **Figure S2** shows a residual map of the two aquifer base maps, with negative values indicating the OWRB base is below the USGS base and positive values indicating the OWRB base is above the USGS base. The differences between the two maps varied from +96 feet to -52 feet, with a mean of 1.2 feet and a standard deviation of 13.0 feet. The largest differences generally occur near the edges of the basin, where the base contours are set at a higher altitude based on more than 1,600 drillers' reports — all logs contained lithologic descriptions (most commonly "red bed") indicating the Quaternary-Permian geologic contact.

Figure S3 shows the USGS potentiometric surface (bottom) and the reevaluated OWRB potentiometric surface (top). The 160 well sites (43 in Reach II) used in the 2012 water-level synoptic were used for the OWRB reevaluation, and additional data from the OWRB drillers' database. **Figure S4** shows a residual map of the two potentiometric surface maps, with negative values indicating the OWRB potentiometric surface was below the USGS potentiometric surface and positive values indicating the OWRB potentiometric surface was above the USGS potentiometric surface. Differences between the two potentiometric surface maps varied from +30 to -46, with a mean of 2.6 feet and a standard deviation of 8 feet. The relative difference between the two water table surfaces is small, with large changes occurring because of contour shifting during the interpolation process based on 1,300 supplemental depth-to-water measurements from drillers' reports.

Figure S5 shows the USGS saturated thickness map (bottom) and the reevaluated OWRB saturated thickness map (top). The most apparent difference is in Canadian County along and north of the band of outcropping bedrock. In this area, most wells (85%) were drilled to depths greater than 90 feet (average of 124 feet), with depth to the base of the terrace deposits ranging from 1 to 60 feet. Wells drilled in this region of the basin generally target the underlying Duncan Sandstone because the terrace sands have little or no saturated thickness. In other areas, the saturated thickness was reduced based on changes to the base or potentiometric surface — in several areas of Blaine County cell saturated thickness in the USGS model exceeded the total thickness of local alluvium and terrace deposits based on available driller's logs. **Figure S6** shows the potentiometric surface (bottom) and base (top) maps digitized from the Christenson (1983) report.

Table S1 lists the EPS rates and cumulative volumes of water recovered (pumped) during each life of the basin simulation period for the unmodified USGS numerical flow model and the calibrated OWRB analytical model (under normal recharge). Model calibration was performed to refine input coefficients so that the depletion curves derived from each model were similar for each life of the basin period. The refined input coefficients were then used to estimate EPS rates and MAY volumes for the two pumping scenarios based on changes to the basin boundary, base, and potentiometric surface by the OWRB.

Table S1. EPS rates and cumulative volumes of water recovered during each life of basin simulation period for the unmodified USGS numerical flow model and calibrated OWRB analytical model.

Period (years)	USGS EPS Rate	OWRB EPS Rate	USGS cumulative volume pumped	OWRB cumulative volume pumped	Percent difference
20	0.73	0.73	2,609,087.88	2,609,982.35	0.034
40	0.61	0.61	4,241,684.29	4,242,064.24	0.009
50	0.61	0.61	5,312,902.67	5,313,535.85	0.012

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Figure S1. The USGS aquifer base map (bottom) and reevaluated OWRB aquifer base map (top). Both maps used the same altitude intervals shown in the top figure.

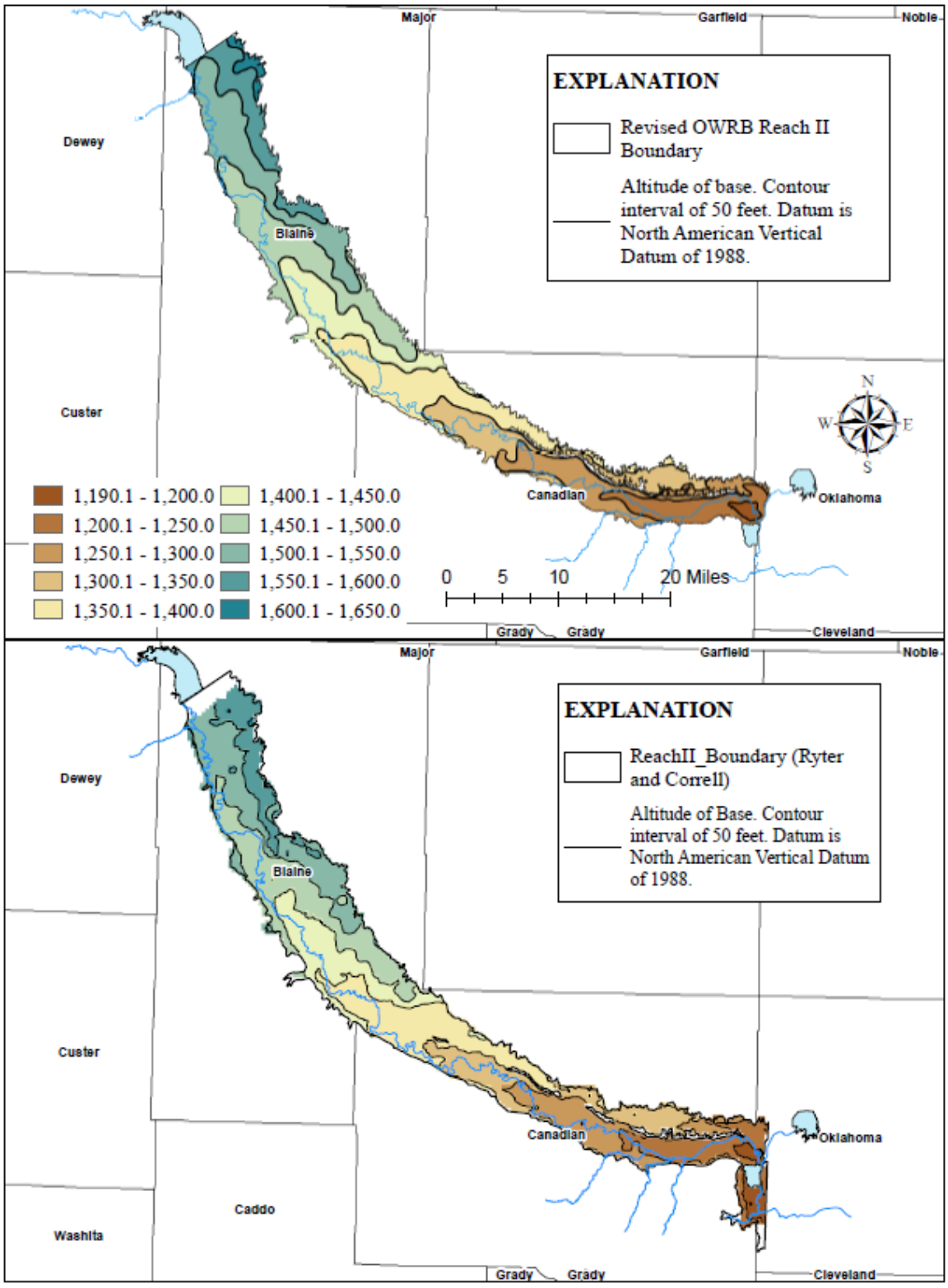


Figure S2. Residual map for the OWRB base aquifer minus the USGS aquifer base. Negative values indicate the OWRB base is below the USGS base and positive values indicate the OWRB base is above the USGS base. The average difference between the two base maps is 1.2 feet.

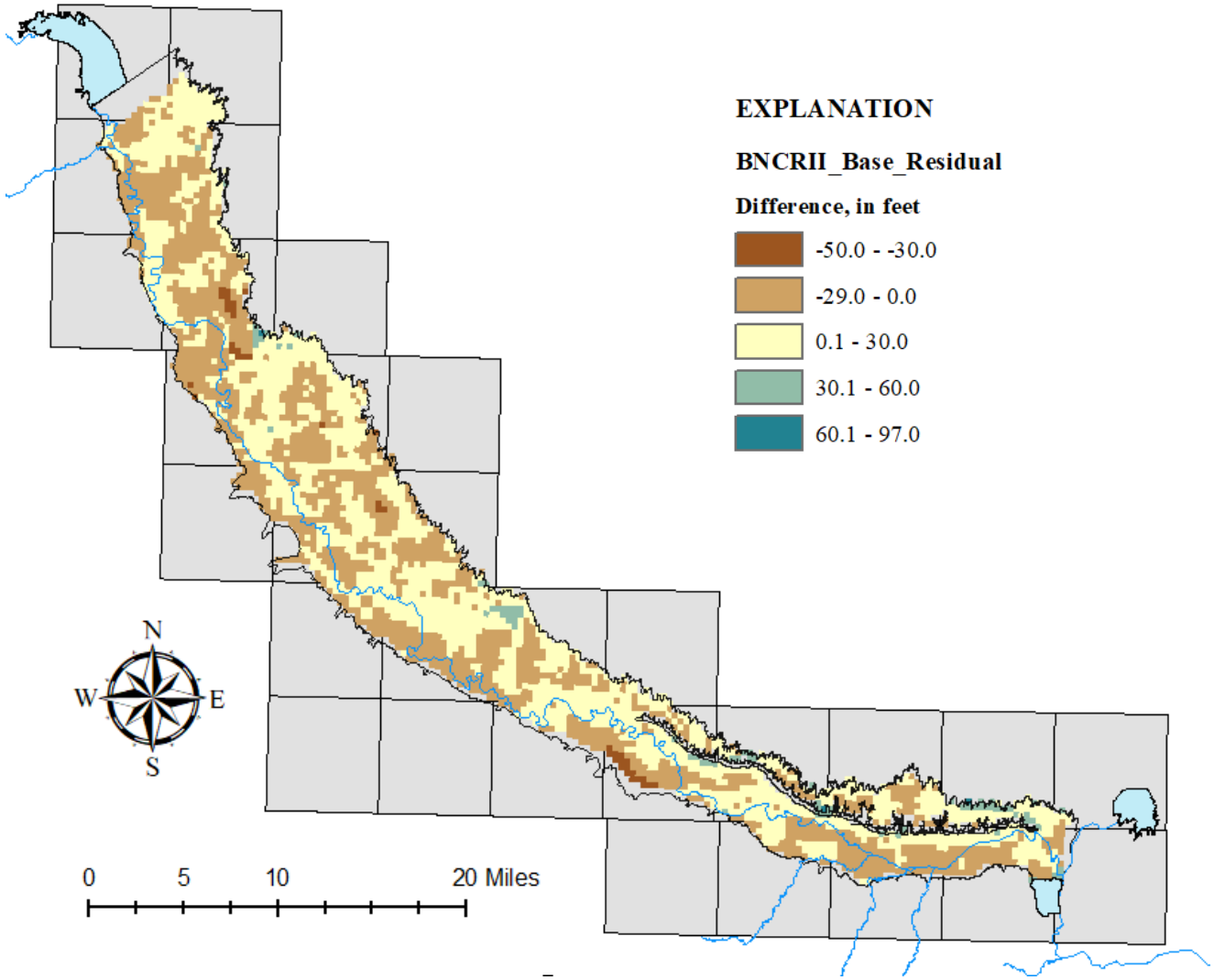


Figure S3. The USGS potentiometric surface map (bottom) and reevaluated OWRB potentiometric surface map (top). Both maps used the same altitude intervals which is only shown in the top figure.

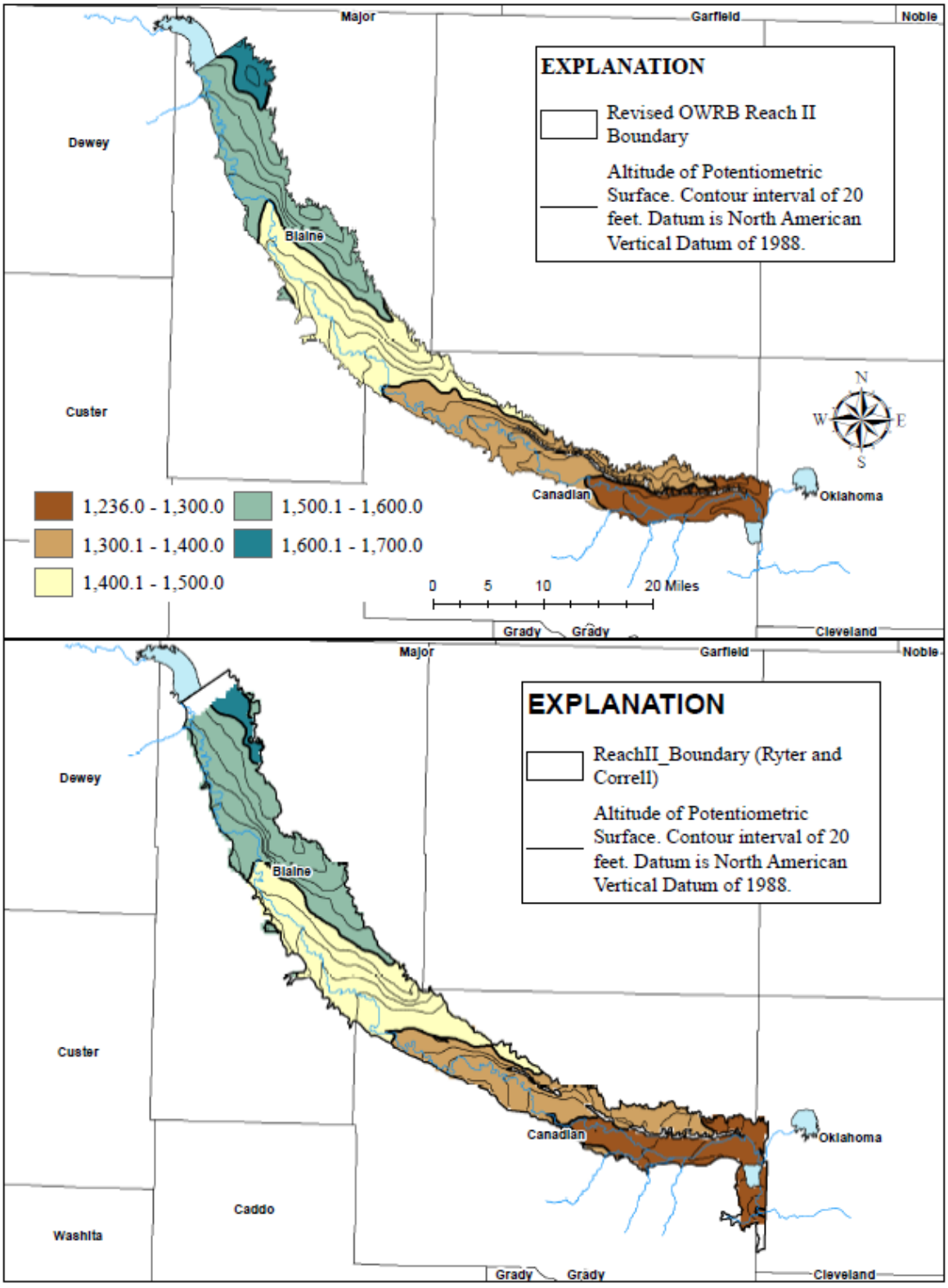


Figure S4. Residual map for the OWRB potentiometric surface minus the USGS potentiometric surface. Negative values indicate the OWRB potentiometric surface is below the USGS POT, and positive values indicate the OWRB potentiometric surface is above the USGS POT. The average difference between the two base maps is 2.6 feet.

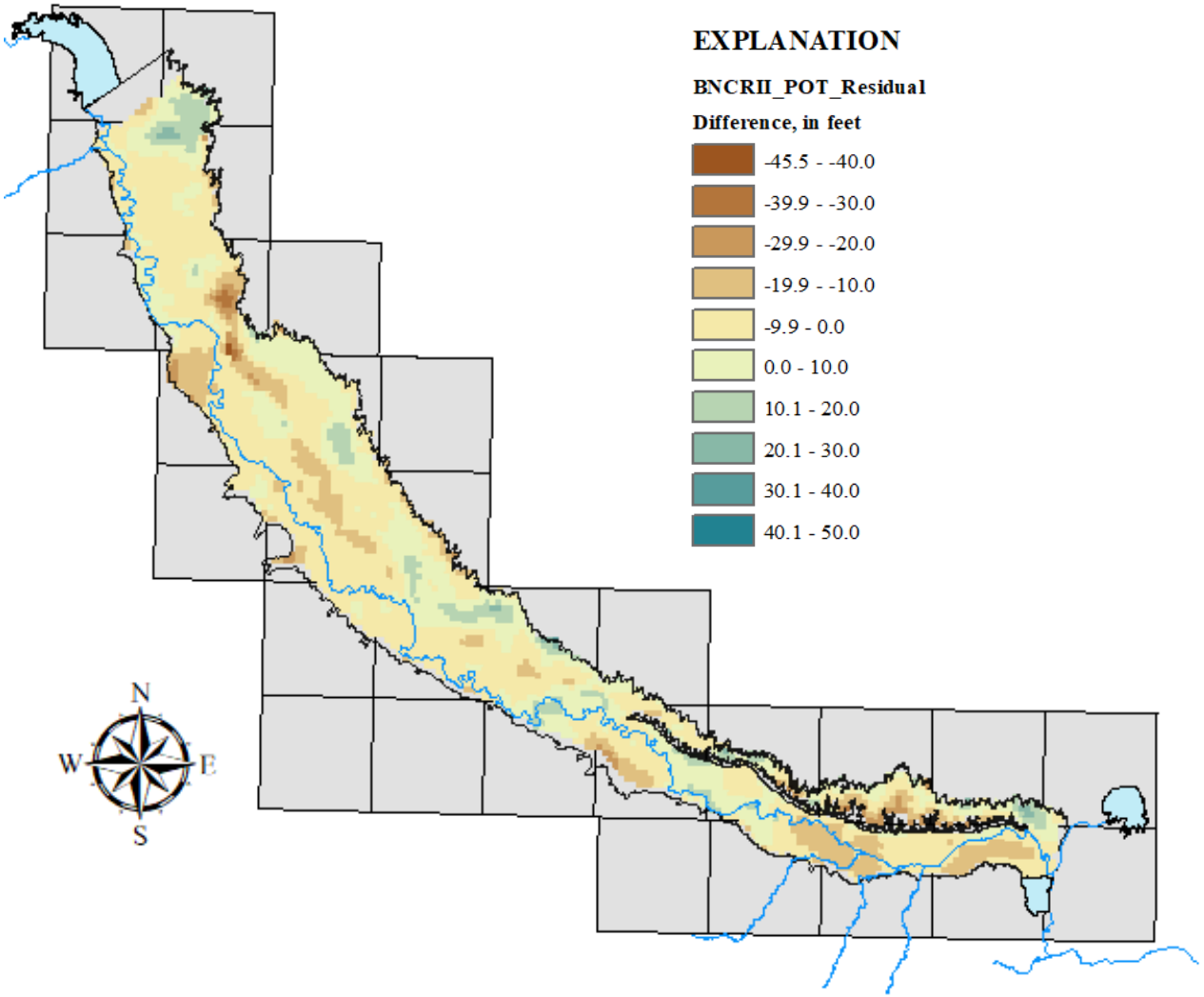


Figure S5. The OWRB saturated thickness map (top) and 2016 USGS saturated thickness map (bottom).

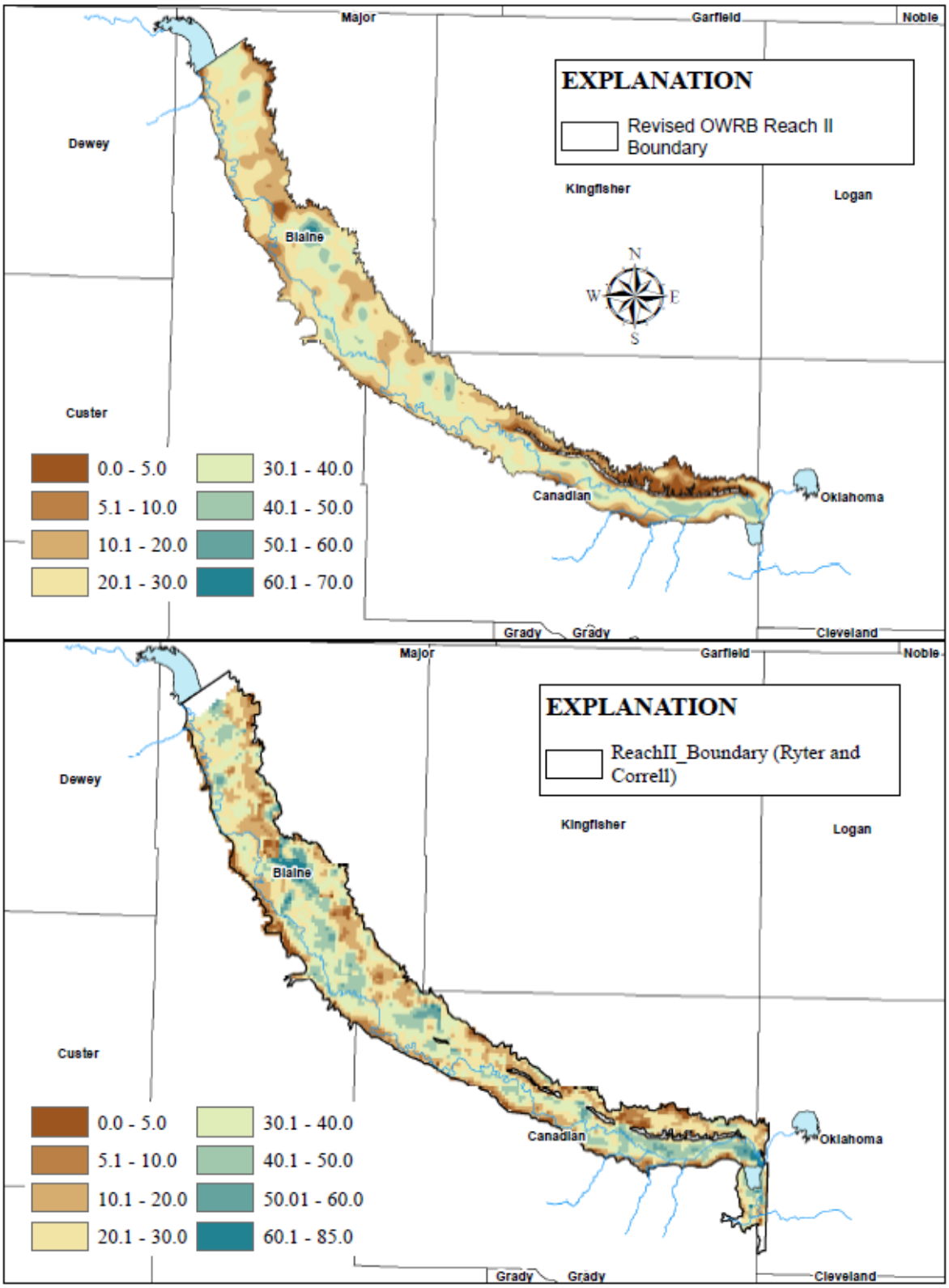
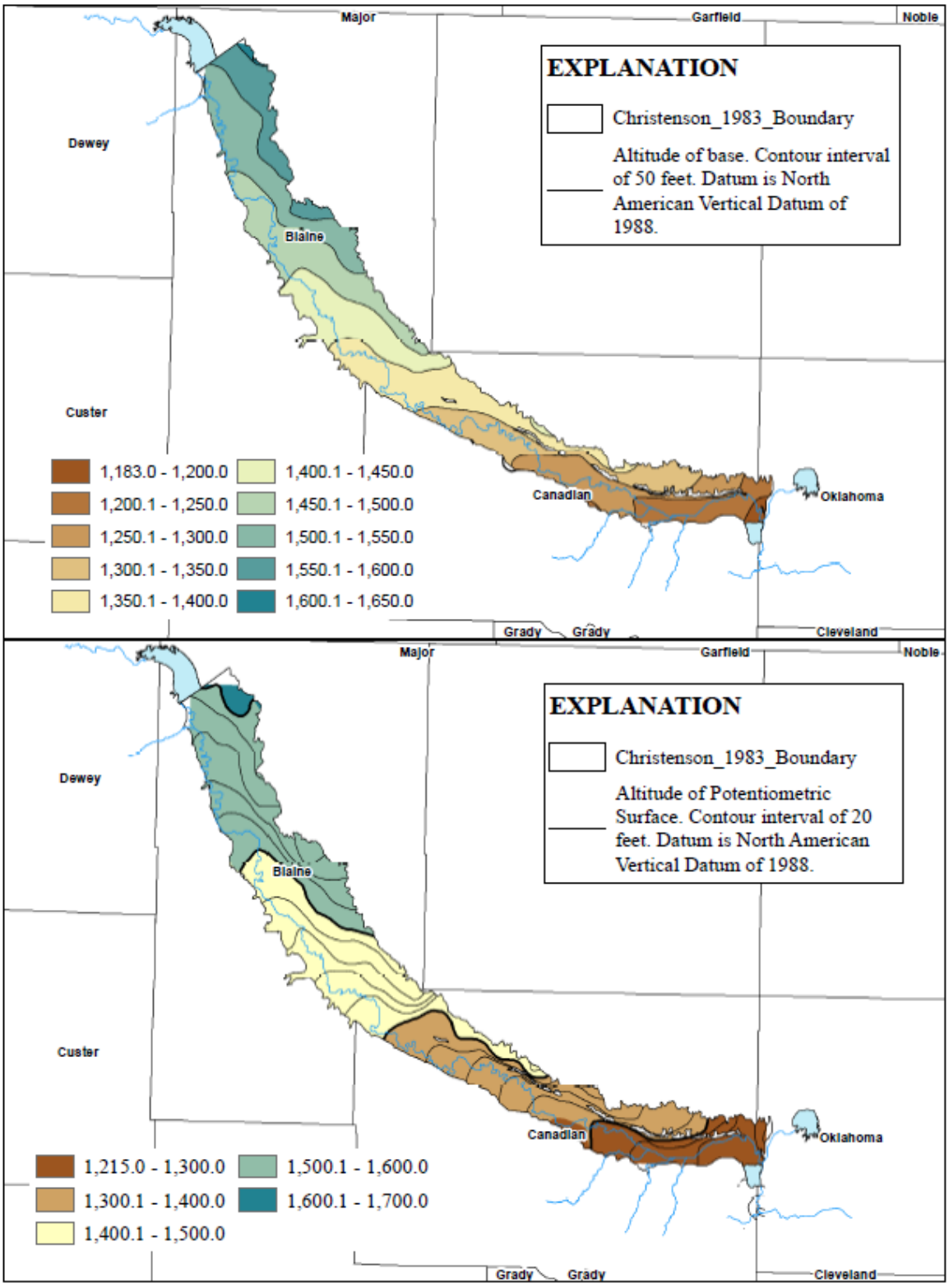


Figure S6. The Christenson (1983) base map (top) and potentiometric surface map (bottom). The maps use the same altitude intervals as the USGS and OWRB maps in Figures S1 and S3.



5. SPECIAL CONSIDERATION

WATER RIGHTS ADMINISTRATION DIVISION

July 15, 2025

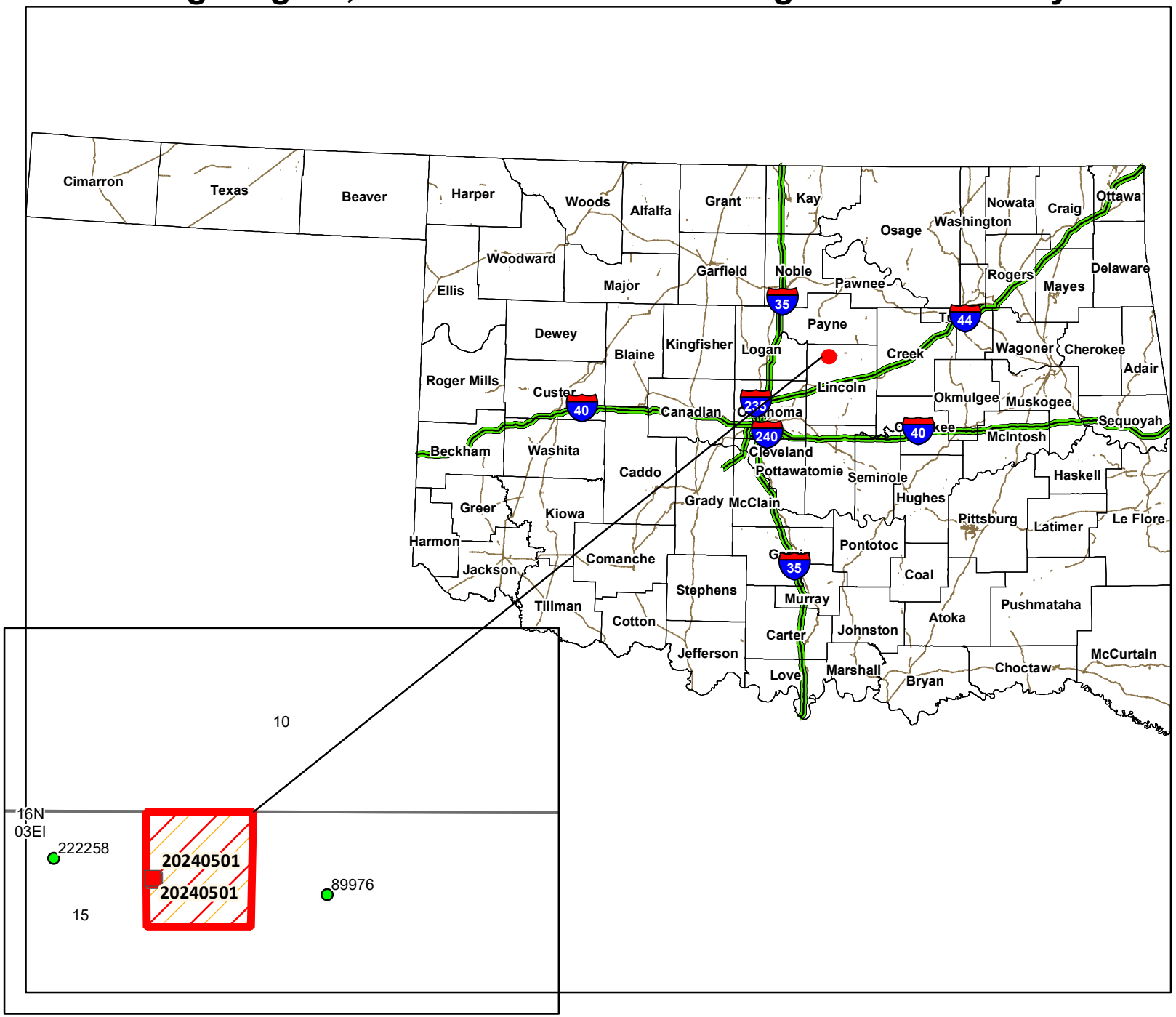
WATER RIGHTS ADMINISTRATION DIVISION
Application for a Limited Quantity Regular Groundwater Permit

July 15, 2025

NUMBER & DATE	COUNTY	NAME OF APPLICANT	RECOMMENDATION
2024-501 1/3/2024	Lincoln County	Liguang Xu, David L. Morris and Li Meng	Approval for proposed order

Notice is given by Liguang Xu, David L. Morris and Li Meng c/o Li Meng of 3204 Sycamore Dr. Moore, OK 73160 has filed an application, #2024-501, with the Oklahoma Water Resources Board (Board) for a permit to use 1 acre-feet of groundwater per year. The groundwater is proposed to be used for agriculture (medical marijuana) purposes and to be withdrawn from 5 acres located in the NE NW NW of Section 15, T16N, R3EIM, Lincoln County. The groundwater will be used in Lincoln County as more specifically described in the application plat. The applicant intends to withdraw the groundwater from one (1) well located in the NE NW NW of Section 15, T16N, R3EIM, Lincoln County. The applicant gave proper Public Notice, the application was protested, and an administrative hearing was held on June 19, 2025. The Board concludes that the well exception request should be granted. The hearing examiner recommends approval of the application.

Groundwater Application: #20240501
Liguang Xu, David L. Morris & Li Meng- Lincoln County



Legend

- Dedcated Land
- Existing Wells to be Permitted
- Groundwater Wells
- Groundwater, Active
- Groundwater, Pending
- Surface Water, Active
- Surface Water, Pending
- Groundwater, Active
- Groundwater, Pending
- Surface Water, Active
- Surface Water, Pending
- Interstates

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Date: 7/7/2025

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State of Oklahoma
OWRB
Water Resources Board
the water agency

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF LI MENG, DAVID L. MORRIS AND LIGUANG XU TO USE GROUNDWATER IN LINCOLN COUNTY, OKLAHOMA	APPLICATION NO. 2024-0501

PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND BOARD ORDER

This proceeding arose from the Application for Groundwater Permit, by David L. Morris, Li Meng, and Liguang Xu, (or "Applicants"), No. 2024-0501, to withdraw groundwater from an existing well in the amount of one (1) acre-foot per year on 5 acres of land. Protestants ("Protestants") who appeared for the hearing, pro-se, were Erin Tipton and Jennifer Decker.

A hearing was held at the Board offices in Oklahoma City, Oklahoma on June 19th, 2025. After the hearing was adjourned, the matter was taken under advisement by the hearing examiner. A Proposed Order was prepared, served on the parties, and presented to the Board for consideration and action.

Based upon the separately stated Findings of Fact and Conclusions of Law that follow, the Board determines that Application No. 2024-0501 should be granted as set forth below:

FINDINGS OF FACT

Upon its evaluation of the evidence and additional records and facts officially noticed in the record, the Board hereby makes the following Findings of Fact:

BACKGROUND OF APPLICATION

1. On or about January 2nd, 2024, the Applicants applied for a Regular Limited Quantity Permit that authorizes the withdrawal of groundwater at the rate of 1.0 acre-foot per year from one existing (1) well of the Applicants. The land encompasses 5 acres in the NE NW NW of Section 15, Township 16 North, Range 3 East of the Indian Meridian, Lincoln County, Oklahoma. The purpose of the requested use is for the agricultural indoor grow of Medical Cannabis. The land dedicated to the permit overlies the groundwater basin known as the Garber - Wellington Basin. The Board has approved a maximum annual yield for this basin and the amount of groundwater available to the Applicants is two (2.0) acre-feet per acre per year.

NOTICE OF APPLICATION AND PROTESTS

2. Board staff notified Applicants by letter dated October 29, 2024, that the application had been reviewed and directed them to give notice of the application by certified mail to each surface owner within 1,320 feet of the outside boundary of each ten (10) acre-tract of wells covered by the application. The notice set a protest deadline of ten (10) days after receipt of notice.

3. On November 25th, 2024, Applicants filed with the Board an Affidavit of Notification stating that the identified surface estate owners had been notified of the application by certified mail, supported by the documentation included in OWRB Exhibit No. 4.

HEARING

4. The hearing was held on June 19th, 2025, as scheduled. David L. Morris and Li Meng, the Applicants, and Protestants, Jennifer Decker and Erin Tipton, all attended the hearing pro-se. Erin Tipton did not file a letter of protest, but at the hearing articulated a reasonable explanation for not complying with OAC 785:4-5-4(b) which sets forth the written requirement for a protest. Her reasoning related to the timing of notice of the application and the date she stated she had acquired her property, for which she determined was within the scope of the notice for the vicinity of the Applicant's well. The hearing examiner allowed her to fully participate in the hearing and offer evidence and arguments, pursuant to the rarely used discretionary authority under OAC 785:4-5-4(d). The hearing was opened, evidence and argument were received, and the hearing was adjourned.

5. The admitted exhibits from the hearing are Exhibit 1: Application, Exhibit 2: Ownership Documents, Exhibit 3: Notice of Application, Exhibit 4: Proof of Service; Exhibit 5: OMMA Certificates and Registration, Exhibit 6: Protest Letter, Exhibit 7: Notice of Hearing and Green Cards, and Exhibit 8, Attendance Sheet.

WELL IS ON LAND PROPERLY DEDICATED TO THE PERMIT

6. The undisputed evidence from the hearing and from Exhibit 2 that includes a Quit Claim Deed to all of the Applicant individuals, Liguang Xu, David L. Morris and Li Meng, dated filed on February 1, 2021, demonstrated that Applicant has their well on the property for which they have land rights.

THE LAND OVERLIES A GROUNDWATER BASIN

7. The property dedicated to the permit overlies a groundwater basin known as the Garber-Wellington Basin. The Board has approved a maximum annual yield for this basin and the amount of groundwater available to the Applicants is two (2.0) acre-feet per acre per year.

BENEFICIAL USE: "LAWFUL PURPOSE" ELEMENT

8. Applicants propose to permit the beneficial use of the agricultural indoor grow of Medical Cannabis. Applicants adequately showed at the hearing by a preponderance of the evidence that the Medical Cannabis company Limeng Green, LLC owned by Li Meng, is current on its Oklahoma Medical Marijuana Authority licensure requirements, License Number GAAA-WDNA-OI12, and that it met the lawful purpose element for a beneficial agricultural use.

WASTE BY POLLUTION ELEMENT

9. There was no evidence that waste by pollution would likely occur or will likely occur. As a result, the findings of fact based upon the evidence indicate that it is more probable than not that no waste by pollution will occur.

WASTE BY DEPLETION ELEMENT

10. There was no evidence to indicate that Applicants' groundwater well use is, or will be, inefficient. There was no evidence of an indication that in the future the applicant would be likely to take or use fresh groundwater without a permit, take more fresh groundwater than is authorized by the permit, or take or use fresh groundwater in any manner so that the water is lost by depletion for beneficial use. Further, the Applicants have applied for one (1) acre-foot of groundwater per year, which is less than that of the Board's approved equal proportionate share for this basin in the amount of two (2) acre-feet per acre per year. As a result, the findings of fact based upon the evidence indicate that it is more probable than not that no waste by depletion will occur.

THE WELL-SPACING EXCEPTION REQUEST IS PROPER

11. The evidence shown in Exhibit 2 indicated that the well is already in place and has been since November 2001. No evidence was shown that there would be a better location on the property owned by Applicants to justify the cost of placing a new well elsewhere. Therefore, it is found that a disallowance of a location exception would result in an inequitable or unreasonable result, and the well-spacing exception request that was made pursuant to OAC 785:30-3-6 should be granted.

CONCLUSIONS OF LAW

Based upon applicable law, and as applied to the above Findings of Fact and the evidence in the record, the Board draws the following Conclusions of Law:

LAW APPLICABLE TO USE OF GROUNDWATER GENERALLY

12. Under Title 60 O.S. § 60, the owner of the surface of a given tract of land owns the fresh groundwater beneath the surface of that land. That surface owner, or a lessee of the surface owner, may use such groundwater in accordance with the use regulations imposed by the Oklahoma Groundwater Law, Title 82, Oklahoma Statutes. As written, the law contemplates the eventual depletion of the groundwater resources, and "the use or nonuse by one landowner neither decreases nor increases the proportionate share of another." OWRB v. Texas County Irr. And Water Resources Ass'n, Inc., 1984 OK 96, ¶ 7, 711 P.2d 38.

SUBJECT MATTER JURISDICTION

13. The Board has subject matter jurisdiction to adjudicate applications for use of groundwater according to the Oklahoma Groundwater Law and the Board's rules promulgated pursuant thereto.

PERSONAL JURISDICTION; DUE PROCESS

14. Due and proper notice of this proceeding was given to all potentially interested persons as required by law. The Applicant and the Protestants of record have been afforded due process of law and an adequate opportunity to be heard.

GROUNDWATER LAW: ELEMENTS TO BE DETERMINED

15. When a person makes an application for new groundwater permit, OAC 785:30-3-5 in this context, the rules require the Board to determine several specific issues. These are:

a. The applicant owns the surface of the dedicated land or has a valid lease or other legal authority for the taking of groundwater from the land;
b. The dedicated land overlies a fresh groundwater basin or sub-basin.
c. The use to which the Applicant intends to put the water is a beneficial use. Defined by OAC 785:30-1-2, a beneficial use is "the use of such quantity of stream or groundwater when reasonable intelligence and reasonable diligence are exercised in its application for a lawful purpose and as is economically necessary for that purpose. Beneficial uses include but are not limited to municipal, industrial, agricultural, irrigation, recreation, fish and wildlife, etc."
d. Waste by depletion and waste by pollution as defined by 82 O.S.§ 1020.15 will not occur.
e. If the new or proposed well site location is inside of the well-spacing requirements, whether drilling or completing the well at a location within the well-spacing requirements would be inequitable or unreasonable. OAC 785:30-3-6.

If the Board finds for the Applicant on all these issues according to OAC 785:30-3-5, the rule provides that the Board shall approve the application.

EVIDENCE OF VALID OWNERSHIP FOR THE WELL LAND DEDICATED TO THE PERMIT WAS PROPERLY ESTABLISHED

16. Board finds that Applicants have provided sufficient proof of ownership and rights showing that the land is dedicated to the location being sought to be permitted.

LAND OVERLIES A GROUNDWATER BASIN

17. Based upon the submitted evidence, the Board concludes that the property dedicated to the permit overlies a groundwater basin known as the Garber-Wellington Basin. The Board has approved a maximum annual yield for this basin and the amount of groundwater available to Applicants is two (2.0) acre-feet per acre per year.

BENEFICIAL USE FOR LEGAL PURPOSES WAS ESTABLISHED

18. The Board adopts and incorporates the reasons provided in paragraph 8 and concludes that the Applicants met the requirements for the beneficial use of groundwater.

NO WASTE BY POLLUTION SHOWN TO BE LIKELY TO OCCUR

19. The Groundwater Law and Board rules provide that the Board must determine whether Applicant will allow waste by pollution as specified by OAC 785:30-3-5 to occur.

20. For the reasons set forth in Paragraph 9, the Board concludes that Applicants will more likely than not commit waste by pollution as described in 82 O.S. § 1020.15 and OAC 785:30-3-5 by using the requested permit.

NO WASTE BY DEPLETION

21. The Groundwater Law and Board rules provide that the Board must determine whether Applicant will allow waste by depletion as specified by OAC 785:30-3-5 and 82 O.S. § 1020.15 to occur.

22. The Board acknowledges Protestants' important public concerns about the groundwater supply in the area and that the use of groundwater could potentially be adversely affected by neighboring uses of groundwater from the same basin. However, there is no basis in this case to determine that Applicant's proposed use will be impermissible or unlawful. The stated purpose of Oklahoma Groundwater Law is to promote the reasonable development and use of the groundwater resources by overlying landowners. 82 O.S. § 1020.2(A). As written, the law contemplates the eventual depletion of the groundwater resources, and "the use or nonuse by one landowner neither decreases nor increases the proportionate share of another." OWRB v. Texas County Irr. And Water Resources Ass'n, Inc. 1984 OK 96, ¶ 7, 711 P.2d 38. Here, as regards the issue of depletion, the application is in accordance with and is not contrary to the law and rules. The protest letter that was admitted as Exhibit No. 6 and the oral record of objection in the hearing made by Ms. Tipton, shall regardless of the above be kept as a part of this Application record.

23. Based upon the Findings of Fact in paragraph 10, the Board concludes that Applicants will not commit waste by depletion as described in 82 O.S. § 1020.15 and OAC Title 785:30-3-5 by using the requested permit.

A WELL-SPACING EXCEPTION IS PROPER

24. OAC 785:30-3-6(a)(1) requires the Board to examine whether disallowing a well-spacing exception would be unreasonable or inequitable.

25. For the reasons set forth in Paragraph 11, the Board concludes that the applicable well-spacing exception should be granted.

ULTIMATE CONCLUSION

26. Based on the Findings of Fact and Conclusions of Law above, the Board concludes Regular Limited Quantity Groundwater permit with a well-spacing exception shall be granted.

ORDER

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that the application for a new Regular Limited Quantity Groundwater Permit No. 2024-0501, with a well-spacing exception, in the names of David L. Morris, Li Meng, and Liguang Xu, is hereby granted.

IT IS FURTHER ORDERED that all other terms and provisions set forth in the application and not inconsistent with provisions of this Order shall be incorporated into and made a part of the permit.

IT IS SO ORDERED by the Oklahoma Water Resources Board in regular and open meeting this _____ day of _____, 2025.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Vice Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

CERTIFICATE OF MAILING

I certify that on the _____ day of June, 2025, I mailed via certified mail, return receipt requested, a true and correct copy of the above and foregoing instrument was mailed to:

Terry Decker and Jennifer Decker
(Protestants)

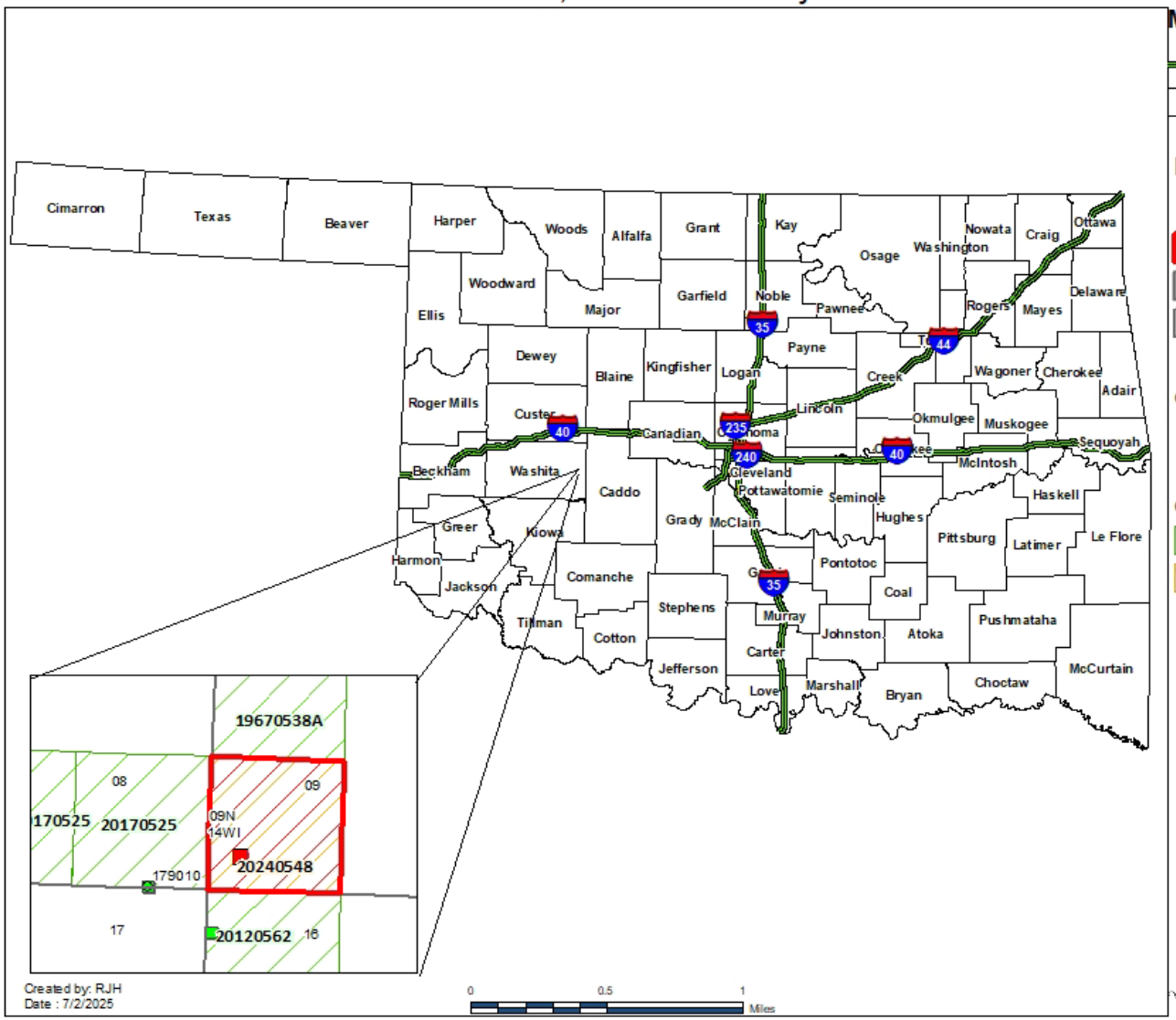
WATER RIGHTS ADMINISTRATION DIVISION
Application for a Temporary Groundwater Permit

July 15, 2025

NUMBER & DATE	COUNTY	NAME OF APPLICANT	RECOMMENDATION
2024-548 3/7/2024	Washita County	Jacob Yost	Approval for proposed order

Notice is given by Jacob Yost of 8085 CR 1170, Lookeba, OK 73053 has filed an application, #2024-548, with the Oklahoma Water Resources Board (Board) for a permit to use 320 acre-feet of groundwater per year. The groundwater is proposed to be used for irrigation (corn and small grains) and taken from 160 acres located as follows: in the SW of Section 9, T9N, R14WIM, Washita County. The water is to be withdrawn from one (1) well located as follows: in the SW SW of Section 9, T9N, R14WIM, Washita County. The applicant gave proper Public Notice. The application was protested and an administrative hearing was held on June 5, 2025. The hearing examiner recommends approval.

Groundwater Applicationt: Permit #2024-548
Jacob Yost, Washita County



Main Legend

- Interstates
- Counties

Inset Legend

- Well to be Permitted
- Land to be Dedicated
- Townships
- Sections
- Reported Well Logs

OWRB Permits

- Groundwater, Active
- Groundwater, Pending

OWRB Dedicated Lands

- Groundwater, Active
- Groundwater, Pending

OWRB Water Resources Board

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF JACOB YOST FOR PERMIT TO USE GROUNDWATER IN WASHITA COUNTY, OKLAHOMA	NO. 2024-0548

PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND BOARD ORDER

This proceeding arose from the Jacob Yost, (or "Applicants") for an application for a Temporary Groundwater Use Permit, No. 2024-0548. The Protestant ("Protestant") Mr. Roy Jackson Harper III appeared for the hearing. He informed the Court that he intended to participate pro-se for the hearing and without the legal counsel present who submitted the protest letter on his behalf.

The hearing was conducted at the Board offices in Oklahoma City, Oklahoma on June 5th, 2025. After the hearing was adjourned, the matter was taken under advisement by the hearing examiner. A Proposed Order was prepared, served on the parties, and presented to the Board for consideration and action.

Based upon the separately stated Findings of Fact and Conclusions of Law that follow, the Board determines that Application No. 2024-0548 should be granted as set forth below:

FINDINGS OF FACT

Upon its evaluation of the evidence and additional records and facts officially noticed in the record, the Board hereby makes the following Findings of Fact:

BACKGROUND OF APPLICATION

1. On or about March 7, 2024, Mr. Yost applied for a Temporary Groundwater Permit that authorizes the withdrawal of groundwater at the rate of 320 acre-feet per year from one (1) well owned by the Applicant located SW SW in the 160 acres of the SW of Section 9, Township 9 North, Range 14 West of the Indian Meridian, Washita County, Oklahoma. The purpose of the requested use is for the agricultural irrigation of crops consisting of corn and small grains. The land dedicated to the permit overlies the groundwater basin known as the Rush Springs Sandstone Formation.

NOTICE OF APPLICATION AND PROTESTS

2. Board staff notified Applicants by letter dated July 18th, 2024, that the application had been reviewed and directed them to give notice of the application by certified mail to each surface owner within 1,320 feet of the outside boundary of each ten (10)-acre tract of land. The notice set a protest deadline of ten (10) days after receipt of notice.

3. On October 7th, 2024, Mr. Yost filed with the Board an Affidavit of Notification. The Affidavit of Notification stated that the identified surface estate owners had been notified of the application by certified mail on October 2nd, 2024. The timely written protest of the one appearing

Protestant, in general and cumulatively, expressed a concern about potential depletion from the proximity of the proposed well location.

HEARING

4. The hearing was held on June 5th, 2025, as scheduled. Mr. Yost and the Protestant appeared pro-se. The hearing was opened, evidence and argument were received, and the hearing was adjourned. Thereafter, the matter was taken under advisement. The admitted exhibits from the OWRB file are Exhibits: 1, Application; 2, Ownership Documents; 3-Notice of Application, 4, Affidavit of Notification & Green Cards; 5, Proof of Publication; 6, Protest; 7, Notice of Hearing and Green Cards; and 8, The Attendance Sign-in Sheet.

THE PROPOSED LOCATION OF WELL IS LOCATED ON LAND DEDICATED TO THE EXISTING PERMIT

5. Mr. Yost, the Applicant, testified that his well is located on land that he owns, and Protestant did not object. Sufficient proof was submitted that the proposed location of the well is on land dedicated to the permit.

LAND OVERLIES A GROUNDWATER BASIN

6. The property dedicated to the permit overlies a groundwater basin known as the Rush Springs Sandstone Formation, which was also not disputed by Protestant. The Board has not yet approved a maximum annual yield for this basin and the amount of groundwater available to Yost is two (2.0) acre-feet of groundwater per acre, per year.

BENEFICIAL USE

7. The stated use for the groundwater permit application is for the agricultural irrigation of crops consisting of corn and small grains, which was undisputed. The Court finds that this is a proper an accepted beneficial use purpose.

NO EVIDENCE OF WASTE WAS FOUND

9. The Applicant testified that no waste as defined by Oklahoma Water Law would occur, which was undisputed by the Protestant. Based upon the testimony in the hearing, the Court finds no waste is likely to occur as contemplated and defined by 82 O.S. 785:4-5-4.

A REQUIRED WELL-SPACING DISTANCE IS NOT APPLICABLE TO THE WELL

14. Jacob Hernandez, Water Permitting Specialist, employed by the Oklahoma Water Resources Board, testified that no maximum annual yield determination has been established for the Rush Springs Sandstone Formation by the Board, and as a result there are no well-spacing distance requirements. Protestant did not offer proof to the contrary. Therefore, it is determined that no well-spacing request was made because there is no spacing requirement under OAC 785:30-3-6 that is applicable to this location, for the reason that no maximum annual yield determination has yet been established for the Rush Springs Basin.

CONCLUSIONS OF LAW

Based upon applicable law, and as applied to the above Findings of Fact and the evidence in the record, the Board draws the following Conclusions of Law:

LAW APPLICABLE TO USE OF GROUNDWATER GENERALLY

15. Under Title 60 O.S. § 60, the owner of the surface of a given tract of land owns the fresh groundwater beneath the surface of that land. That surface owner, or a lessee of the surface owner, may use such groundwater in accordance with the use regulations imposed by the Oklahoma Groundwater Law, Title 82, Oklahoma Statutes. As written, the law contemplates the eventual depletion of the groundwater resources, and "the use or nonuse by one landowner neither decreases nor increases the proportionate share of another." OWRB v. Texas County Irr. And Water Resources Ass'n, Inc., 1984 OK 96, ¶ 7, 711 P.2d 38.

SUBJECT MATTER JURISDICTION

16. The Board has subject matter jurisdiction to adjudicate applications for use of groundwater according to the Oklahoma Groundwater Law and the Board's rules promulgated pursuant thereto.

PERSONAL JURISDICTION; DUE PROCESS

17. Due and proper notice of this proceeding was given to all potentially interested persons as required by law. The Applicant, Protestants of record, and all other potentially interested persons have been afforded due process of law and an adequate opportunity to be heard. All other potentially interested persons who failed to appear for the hearing have defaulted or abandoned their interests for failure to appear at the hearing or otherwise failing to follow required protest procedures according OAC 785:4-7-3.

GROUNDWATER LAW: ELEMENTS TO BE DETERMINED

18. When a person makes an application for new groundwater permit, OAC 785:30-3-5 in this context, the rules require the Board to determine several specific issues. These are:

a. The applicant owns the surface of the dedicated land or has a valid lease or other legal authority for the taking of groundwater from the land;
b. The dedicated land overlies a fresh groundwater basin or sub-basin.
c. The use to which the Applicant intends to put the water is a beneficial use. Defined by OAC 785:30-1-2, a beneficial use is "the use of such quantity of stream or groundwater when reasonable intelligence and reasonable diligence are exercised in its application for a lawful purpose and as is economically necessary for that purpose. Beneficial uses include but are not limited to municipal, industrial, agricultural, irrigation, recreation, fish and wildlife, etc."
d. Waste by depletion and waste by pollution as defined by 82 O.S.§ 1020.15 will not occur.
e. If the new or proposed well site location is inside of the well-spacing requirements, whether drilling or completing the well at a location within the well-spacing requirements would be inequitable or unreasonable. OAC 785:30-3-6. It is found for the above-stated reasons that there are no well-spacing requirements for this location.

If the Board finds for the applicant on all these issues according to OAC 785:30-3-5, the rule provides that the Board shall approve the application.

APPLICANTS' WELL IS LOCATED ON LAND
DEDICATED TO THE PERMIT

19. Based upon the submitted evidence that was not controverted, the Board concludes that Applicant Jacob Yost owns the surface of the dedicated land.

LAND OVERLIES A GROUNDWATER BASIN

20. Based upon the submitted and uncontroverted evidence, the Board concludes that the property dedicated to the permit overlies a groundwater basin known as the Rush Springs Sandstone Formation. The Board has not yet approved a maximum annual yield for this basin, and the amount of groundwater available to Yost is two (2.0) acre-feet of groundwater per acre per year.

"WASTE" WAS NOT FOUND TO BE PRESENT

21. The Groundwater Law and Board rules provide that the Board must determine whether Applicant will allow waste by pollution as specified by OAC 785:30-3-5 to occur.

22. For the reasons set forth in Paragraph 9, the Board concludes that Applicant will not commit waste by pollution as described in 82 O.S. § 1020.15 and OAC 785:30-3-5 by using the requested permit.

A WELL-SPACING EXCEPTION IS NOT REQUIRED BY LAW

26. For the reasons set forth in Paragraph 14, the Board concludes that there is no distance requirement for this well location that is triggered by the applicable well-spacing rules.

ULTIMATE CONCLUSION

28. Based upon the Findings of Fact and Conclusions of Law above, the Board concludes that Yost has satisfied the necessary elements for approval of the application for a Temporary Groundwater permit, and that no well-spacing requirements are applicable to this permit application location and aquifer. It determines that the application should be granted.

ORDER

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that the Application for Temporary Groundwater Permit No. 2024-0548 at the rate of 320 acre-feet per year by Jacob Yost, shall be and the same is hereby granted.

IT IS FURTHER ORDERED that all other terms and provisions set forth in the application and not inconsistent with provisions of this Order shall be incorporated into and made a part of the permit.

IT IS SO ORDERED by the Oklahoma Water Resources Board in regular and open meeting this _____ day of _____, 2025.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Vice Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

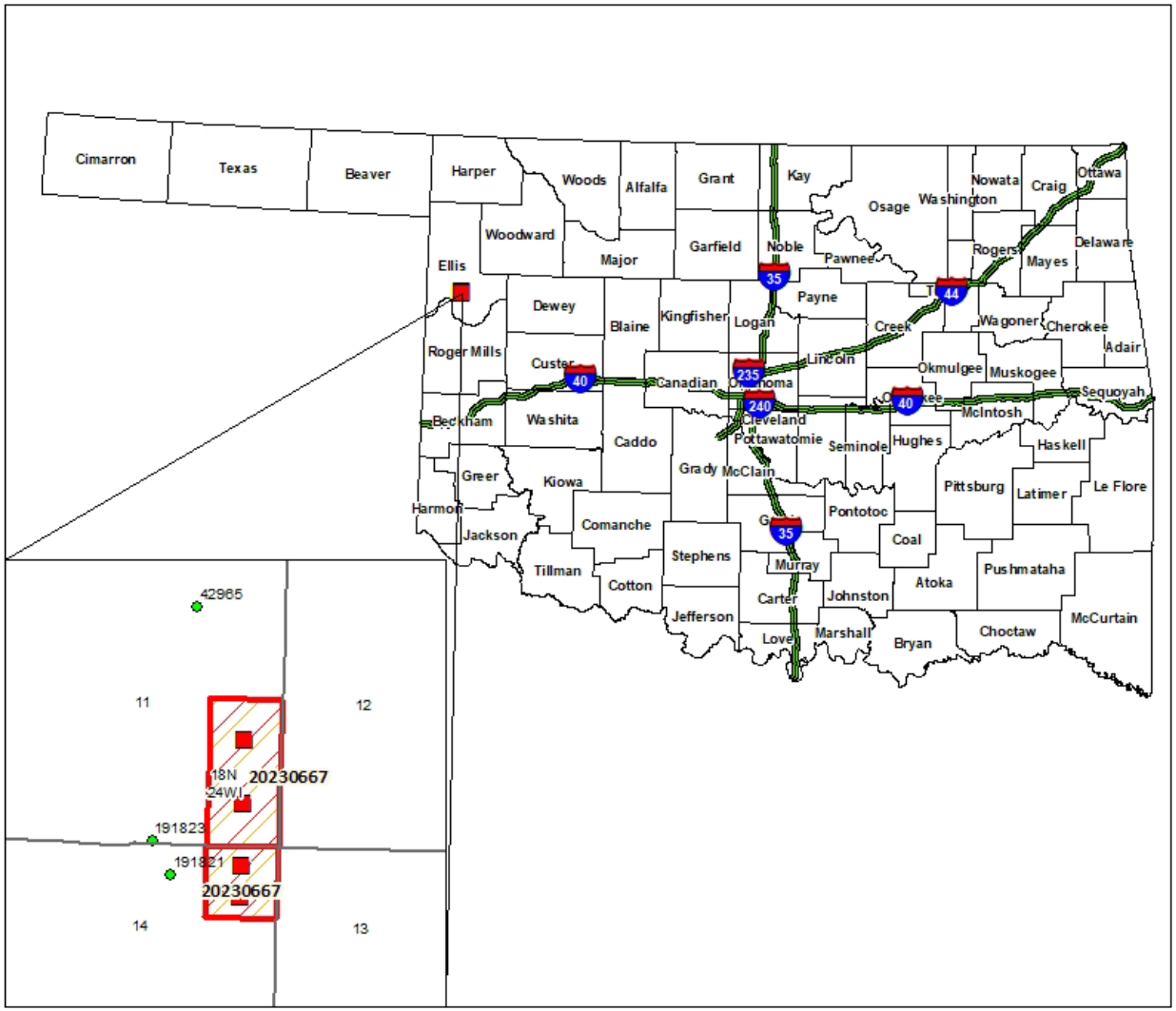
WATER RIGHTS ADMINISTRATION DIVISION
Application for a Regular Groundwater Permit

July 15, 2025

NUMBER & DATE	COUNTY	NAME OF APPLICANT	RECOMMENDATION
2023-667 11/7/2023	Ellis County	Winding River Energy Services Corp.	Denial for proposed order

Notice is given by Winding River Energy Services Corp. c/o TJ Woodruff / Josh Zimmer of PO Box 1238, Oklahoma City, OK 73101 has filed an application, #2023-667, with the Oklahoma Water Resources Board (Board) for a permit to use 168 acre-feet of groundwater per year. The groundwater is proposed to be used for irrigation (wheat, soybeans) and recreation/fish and wildlife (duck pond) and taken from 120 acres located as follows: 80 acres in the E2 SE of Section 11, and 40 acres in the NE NE of Section 14, all land in T18N, R24WIM, Ellis County. The water is to be withdrawn from four (4) wells located as follows: two (2) wells in the E2 SE of Section 11, and two (2) wells in the NE NE of Section 14, all in T18N, R24WIM, Eillis County. The applicant gave proper Public Notice. The application was protested and an administrative hearing was held on March 13, 2025. The hearing examiner recommends the application shall be Denied.

Groundwater Application: Permit #20230667, Winding River Energy Services Corp, Ellis County



Created by: CW
Date: 7/3/2025

Main Legend

- Proposed Wells
- Counties
- Interstates

Inset Legend

- Proposed Wells
- Dedicated Land
- Counties
- Townships
- Sections
- Proposed Wells
- Groundwater Wells
- Reported Well Logs

OWRB Permits

- Groundwater, Active
- Groundwater, Pending
- Surface Water, Active
- Surface Water, Pending

OWRB Dedicated Lands

- Groundwater, Active
- Groundwater, Pending
- Surface Water, Active
- Surface Water, Pending

OWRB Water Resources Board

5006

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

In the Matter of the Application of	)	
Winding River Energy Services Corp.	)	Application No. 2023-0667
For a Permit to Use Groundwater in Ellis County.	)	

PROPOSED
FINDINGS OF FACT, CONCLUSIONS OF LAW AND BOARD ORDER

INTRODUCTION

This matter arises out of the Application No. 2023-0667 ("Application") filed by Winding River Energy Services Corp. ("Applicant") for a Permit to use Groundwater. The Application seeks a permit authorizing the use of one hundred and sixty-eight (168) acre-feet of groundwater annually for irrigation and recreation, fish, and wildlife (duck pond) with proposed crops of soybeans and wheat. Jeffrey Gross ("Protestant") submitted a protest to the Application and the matter was set for hearing February 12, 2025. The hearing was continued to March 13, 2025, by request of the Protestant without objection by the Applicant due to inclement weather (potential ice). A request was made by the Protestant to continue the March 13, 2025, hearing due to inclement weather (potential wind and fire) but was objected to by the Applicant. The hearing proceeded as scheduled on March 13, 2025.

Based upon the separately stated Findings of Fact and Conclusions of Law that follow, the Board determines that the Application should be denied.

HEARING

1. The hearing was held on March 13, 2025, at the Oklahoma Water Resources Board Office, Board Room, 2nd Floor, 3800 North Classen Boulevard Oklahoma City, OK. Applicant Winding River Energy Services Corp. appeared in person by Timothy John "TJ" Woodruff and Josh Zimmer, the only partners and controlling managers of Winding River Energy Services Corp. Protestant appeared in person. The hearing was opened, appearances were entered, witnesses were sworn, exhibits were entered, evidence and arguments were heard, and the hearing was adjourned. After the hearing was adjourned, the matter was taken under advisement. Thereafter, a proposed order was prepared, served on the parties, and presented to the Board for consideration at its May 20, 2025, meeting.

2. OWRB Exhibits. The following Oklahoma Water Resource Board ("OWRB") exhibits were admitted into evidence without objection: OWRB Exhibit No. 1, Application No. 2023-0667; OWRB Exhibit No. 2, Ownership Documents; OWRB Exhibit No. 3, Notice of Application; OWRB Exhibit No. 4, Proof of Publication; OWRB Exhibit No. 5, Proof of Service; OWRB Exhibit No. 6, Protest Letter; OWRB Exhibit No. 7, Map; OWRB Exhibit No. 8, Notice of Hearing; OWRB Exhibit No. 9, Request to Reschedule; and OWRB Exhibit No. 10, Continuance Order.

FINDINGS OF FACT

Upon its evaluation of the testimony and documentary exhibits offered or officially noticed during the hearing, the Board hereby makes the following findings of fact:

BACKGROUND OF APPLICATION

3. On November 7, 2023, Applicant submitted an application for a Permit, which was given the Application number 2023-0667. The Application sought to withdraw one-hundred and sixty-eight (168) acre-feet of groundwater from its property in Ellis County, Oklahoma for the purpose of irrigation and recreation, fish, and wildlife (duck pond) for growing proposed crops of soybeans and wheat. *See OWRB Exhibit No. 1.*

4. Pursuant to the Application, groundwater was to be withdrawn from four (4) proposed wells located on the Applicant's property, two (2) located in the E2 SE of Section 11 and two (2) located in the NE NE of Section 14, all in T18N, R24WIM, Ellis County, Oklahoma. *See OWRB Exhibit No. 1.*

5. To support this Application, Applicant submitted a Warranty Deed (Book 1055 Page 621) signed on May 30, 2023, from Janet E. Sage-Cottrell and Jeffrey Harry Cottrell to Winding River Energy Services Corp. *See OWRB Exhibit No. 2.*

NOTICE OF THE APPLICATION AND HEARING

6. On December 28, 2023, Board staff notified Applicant that the Application had been reviewed and directed Applicant to give notice of the essential facts and intended use by newspaper publication and by sending notice by certified mail, return receipt requested, to surface estate owners of lands located within 1,320 feet of the outside boundary of each ten acre-tract regarding wells subject of the Application. *See OWRB Exhibit No. 3.*

7. Notice of Application was published in the Northwest Oklahoman on January 18, 2024, and January 25, 2024. *See OWRB Exhibit No. 4*.

8. Notice of the Application was sufficiently delivered by certified U.S. mail to Gross Family on January 8, 2024, Berryman Heirs c/o Anne Porter Berryman (return receipt signed but not dated), Berryman Heirs (return receipt signed but not dated), Intrust Bank, N.A. Corse Children Gifting Trust on January 9, 2024, and David L. Baker, et al. c/o Julie Ferguson (return receipt signed but not dated), surface estate owners of land located within 1,320 feet of the outside boundary of each ten acre-tract regarding wells subject of the Application. Evidence of this services was demonstrated by the Affidavit of Notification and Parcel Map identifying the above listed surface owners by name and mailing address and the return receipts submitted to the Board and the U.S. Postal Service Certified Mail Receipt with tracking number. *See OWRB Exhibits No. 1 and 5*.

9. Notice of Hearing was sent to all interested parties by certified US Mail on December 9, 2024. The Notice of Hearing gave a date, time, and location for the administrative

hearing and explained the nature of the administrative hearing and the issues that would be presented. *See OWRB Exhibit No. 8.*

10. Notice of the Hearing was sufficiently delivered by certified U.S. mail to the Protestant and Applicant. Notice of the Hearing was delivered by certified U.S. mail to Applicant on December 13, 2024. Notice of the Hearing was mailed by certified U.S. mail to the Protestant and return receipt signed but not dated. *See OWRB Exhibit No. 8.*

11. The Order Granting Continuance was sufficiently delivered by email to the Protestant and Applicant on February 10, 2025. *See OWRB Exhibit No. 10.*

PROTEST

12. Protestant, Jeffrey Gross, protested the Application and was made party herein. *See OWRB Exhibit No. 6.*

ELEMENTS TO BE DETERMINED

A. LANDS OWNED OR LEASED BY THE APPLICANT

13. Applicant asserted ownership of the following tract which it sought to dedicate to its Application: one hundred and twenty (120) acres, eighty (80) acres in the E2 SE of Section 11 and forty (40) acres in the NE NE of Section 14, all land in T18N, R24WIM, Ellis County. In support of the Applicant assertion of ownership, there is a Warranty Deed (Book 1055 Page 621) signed on May 30, 2023, from Janet E. Sage-Cottrell and Jeffrey Harry Cottrell to Winding River Energy Services Corp. *See OWRB Exhibit No. 1 and 2.*

B. LANDS OVERLIE FRESH GROUNDWATER BASIN

14. Upon their initial review of the Application, OWRB Board staff determined that the tract at issue overlies the Ogallala Northwest groundwater basin. *See OWRB Exhibits No. 1.* That the lands overlie the Ogallala Northwest groundwater basin was not disputed at the hearing.

C. GROUNDWATER TO BE PUT TO BENEFICIAL USE

15. The proposed use of groundwater, as stated in the Application, is for irrigation and recreation, fish, and wildlife (duck pond) with proposed crops of soybeans and wheat, of the land dedicated to the permit. *See OWRB Exhibits No. 1.* The Applicant did not mention use of groundwater for purposes of irrigation or proposed crops of soybeans and/or wheat at the hearing. The Applicant denies that the water would be used for oil and gas purposes.

D. WASTE BY DEPLETION

16. The proposed use of the groundwater, as stated in the Application, is for irrigation and recreation, fish, and wildlife (duck pond) with proposed crops of soybeans and wheat, of the land dedicated to the permit. *See OWRB Exhibits No. 1.*

17. TJ Woodruff, Applicant, testified (in summary) that he can see how the Protestant would think that they intend to use the water for oil and gas purposes based on the name of the company and what TJ Woodruff and Josh Zimmer do for a living. They are not planning to use the water for oil and gas purposes. TJ Woodruff and Josh Zimmer, for a living drill, oil and gas wells under different entities, "not this, this is a mineral non op and land company. We are a title water broker but we are not actively doing any water business in this entity, there has been no activity with anything to do with Winding River. We have probably taken almost thirty (30) thousand acres of leases in the last five (5) years between Ellis, Roger Mills, and Dewey County purely for oil and gas for mineral owners and we've probably spent in Ellis County with furnishing of wells and leases to a lot people almost forty (40) million dollars in the last two (2) years."

Josh Zimmer also owns a company called Okie Fly; he is a sportsman. TJ Woodruff is an avid bow hunter. TJ Woodruff further stated, "That it is well known between both of us that over the last three (3) years there has been a big push for oil and gas in Ellis County and the region, there are a lot of landowners out there that are using the water throughout the whole county for the purposes to sell, there's been a lot, you can see it everywhere and they are pulling water off of everybody, anybody around there to sell for it, again our purposes are not for that, we really just want drill a well to decide what we want to do with it someday for recreational use," "never dedicated that it was going to be an irrigation pivot, for irrigation. Truthfully when we bought the property, we do the right steps to get a permit if going to drill for ground water," and "mainly out there sand, its kind of a nice place if we are going to use for any type of hunting, white tail deer hunting anything out there. Now necessarily of how big of an impoundment he is suggesting, do you line it, sure, is it big enough to support frack water, absolutely not. Then again there would need to be more permits that would need to be done through the state of Oklahoma." There has been no disturbance of dirt or improvements. There are pivots in the area that farmers use for irrigation and growing crops. TJ Woodruff, stated that the Applicant's "have purchased another property/several properties all the way down through the packsaddle in through Hammon, Oklahoma all of which are for recreation use, you can go out and visibly see that there is hunting, deer blind stands, anything of that nature, that we that is what we have bought this/these properties for, we have several properties all over the state of Oklahoma none which have ever sold one (1) barrel of water off of any of them." TJ Woodruff stated that Application is for four (4) wells in case of dry hole and that there is no other water on the property.

18. When asked how much water the Applicant would need for the listed purposes or would need, TJ Woodruff responded "Again I don't think that we can sit here and define exactly how much at the moment, this was again purchased solely for recreational use, with a plan of/the simple thought of will get well drill a well out here/a water well and we will figure this out as we go, so don't have a defined answer as to exactly amount." Would "be drilling an irrigation pivot or a water well of probably 4-to-5-inch diameter to where static is probably two hundred and forty-five (245) feet in which your gallons per minute will average between three hundred (300) to four

hundred (400) gallons per minute on a good well to as low as one hundred and fifty (150) to two hundred (200) gallons per minute." When asked how big the pond will be TJ Woodruff responded that they "haven't disclosed or even looked at the property, because we have had this going, we haven't made a decision, this isn't exactly on the top of our list, as being for more than recreational uses."

19. Josh Zimmer, Applicant, testified (in summary) that the "last thing they want to do is harm anyone's aquifer but if the case in which his bringing up probably have two hundred (200) plus landowners selling commercial water, as we speak, don't know if there permits have been checked and there are a lot of people and even potentially and I don't know what the [Protestant] does for a living I have spoke to landowners as well as what he does with water use as well so if really wanted to pull the onion back and figure out the bigger picture there is more to the story of what is going on." The Applicants do not have fences on the property. The property is rough country with sandy soil.

20. Jeffrey Gross, Protestant, testified (in summary) that Applicant's claim of irrigation and duck pond in sugar sand/brush country is not valid. The only way to get a pond out there to hold water is to line the pond. The Applicant does not have a pond, does not have it lined. Mr. Gross believes the Applicant is going to sell frack water. The wells in the area have been dropped twenty (20) to thirty (30) feet to keep water supply. Mr. Gross uses well water to water cattle and does not have a pond. When asked what the vintage of the water is, when his well was commenced, what the diameter of the water well is, who drilled the water well, what the cost of the well was, if the well is cased with PVC, and what the integrity of the well is, Protestant responded "I know that the one (1) well that is closest to your property has been there for ten (10) years and the one (1) that was dry holed has been there for twenty-five (25) years." When asked what Protestant's goal was for the Applicant, the Protestant replied, "my goal is to help save our aquifer. I am just worried, has had a neighbor that in the past five (5) years has had ten (10) to fifteen (15) wells redrilled or pumps dropped another forty (40) foot. Would be willing to make an exception for one (1) well, just worried that with four (4) wells would have issues."

21. No documentation or expert testimony was presented regarding the quality of the soil on the dedicated land.

22. The Applicant did not provide evidence of how much water would be needed.

23. Applicant testified that they intend to only use groundwater for recreation, fish, and wildlife purposes including the possibility of duck pond; however, Applicant also mentioned a pivot and the Application listed irrigation with proposed crops of soybeans and wheat. Protestant argued that the water use is for oil and gas purposes. No documentation was provided for any of the proposed or argued groundwater uses. It is unclear exactly what Applicant's intended use of the groundwater is.

BY POLLUTION

24. No evidence was presented that there would be any waste of groundwater by pollution.

WELL SPACING

25. Well spacing rules set by the Board require that the well be located at a distance of at least one thousand and three hundred and twenty (1,320) feet from existing wells or proposed well location on lands of another unless a well location exception is granted.

26. The Applicant admitted that they would need the well exception because their proposed wells are within one thousand and three hundred and twenty (1,320) feet from existing wells on the lands of another and also stated that the exception is needed to be able to find the best source of water within the one hundred and twenty (120) acre area and because it is a small piece of land.

27. The Protestant is concerned that if the Applicant drills four (4) wells in close proximity that they will pull the water level down. The Protestant has two (2) wells, one (1) with water and the other is a dry hole. Protestant additionally stated that Applicant's proposed wells in Section 11 are within one thousand and three hundred and twenty (1,320) feet of the Protestant's well.

28. No evidence was presented of the specific distances between the Applicant's new proposed wells and any existing wells on the lands of another.

29. No documentation or expert testimony was presented that the amount of groundwater available in locations that would meet spacing requirements is inequitable or unreasonable for the purposes to be authorized or if there were any locations that would meet spacing requirements.

CONCLUSIONS OF LAW

Based upon applicable law, and as applied to the above Findings of Fact and evidence in the record, the Board draws the following Conclusions of Law:

JURISDICTION AND AUTHORITY

30. The Board is vested with exclusive authority to determine groundwater permit application by Oklahoma's Groundwater Law, 82 O.S. § 1020.1 et seq., and by Chapter 30 of Title 785 of the Oklahoma Administrative Code ("OAC"). The OWRB is vested with authority to conduct administrative hearings under Article 7, § 1 of the Oklahoma State Constitution and by Article II of the Oklahoma Administrative Procedures Act (APA), 75 O.S. §§ 308a through 323. Hearings are conducted pursuant to Article II of the APA and Chapter 4 of Title 785 of the OAC.

31. The Board has subject matter jurisdiction to adjudicate applications for permits according to the Oklahoma Groundwater Law and the Board's rules promulgates pursuant thereto.

NOTICE OF THE APPLICATION AND HEARING

32. Notification of the Application for a regular groundwater permit was properly given as required by law, in accordance with 82 O.S. § 1020.8 and OAC 785:30-3-4.

33. Notice of the Hearing was given to all interested parties in accordance with OAC 785:30-3-4.

PERSONAL JURSIDICTION; DUE PROCESS

34. Due and proper notice of the Application and subsequent proceedings was given to all potentially interested persons as required by law. Applicant and Protestant are interested parties to this proceeding. All other potentially interested persons have defaulted or abandoned their interests, pursuant to OAC 785:4-7-3.

USE OF GROUNDWATER

35. Under 60 O.S. § 60, the owner of the surface of a given tract of land owns the fresh groundwater beneath the surface of the land. The surface owner or lessee may use such groundwater in accordance with the use regulations imposed by the Oklahoma Groundwater Law, 82 O.S. §§ 1020.1 et seq.

ELEMENTS TO BE DETERMINED

36. When a person makes an application for a groundwater permit, 82 O.S. § 1020.9 and OAC 785:30-3-5 requires the Board to determine several specific issues. These are:

A. Whether the applicant owns the surface of the dedicated land or has a valid lease or other legal authority for the taking of groundwater from the land;
B. Whether the dedicated land overlies a fresh groundwater basin or subbasin;
C. Whether the applicant's intended use for the water is a beneficial use; and
D. That waste by depletion and waste by pollution as specified in 82 O.S. § 1020.15 will not occur.

Additionally, wells are required to be at least one thousand three hundred and twenty (1,320) feet from an authorized existing well or proposed well location on lands of another, unless a well location exception is granted, pursuant to OAC 785: 30-3-6. A location exception would be granted if the Board determines that the new or proposed well at the location required to comply with the established well spacing would be inequitable or unreasonable.

If the Board finds for the applicant on all these issues, the rules provides that the Board shall approve the application and issue the appropriate permit, pursuant to 82 O.S. §§ 1020.9 and 1020.10.

A. LANDS OWNED OR LEASED BY APPLICANT

37. Based on the information submitted in the Application and at the hearing, the Board concludes that Applicant provided evidence of its right to take groundwater from the land, in the form of ownership documentation.

B. LANDS OVERLIE FRESH GROUNDWATER BASIN

38. The dedicated land overlies the Ogallala Northwest groundwater basin. The Board has determined a maximum annual yield for this basin and set the equal proportionate share at 1.4 acre-feet of groundwater per year per acre owned/leased.

C. GROUNDWATER PUT TO BENEFICIAL USE

39. "Beneficial Use" is defined in OAC 785:30-1-2 as "the use of such quantity of stream or groundwater when reasonable intelligence and reasonable diligence are exercised in its application for a lawful purpose and as is economically necessary for that purpose. Beneficial uses include but are not limited to municipal, industrial, agricultural, irrigation, recreation, fish and wildlife, etc." "Irrigation use" is defined in OAC 785:30-1-2 as "use of water for the production of food, fiber, crops, timber, fruits, nuts; and water applied to pastures, fields, landscaping, horticulture services, and golf courses." "Agriculture use" is defined in OAC 785:30-1-2 as "water used for livestock, poultry, fish farms, fish hatcheries, veterinary services, feed lots, etc. (see also "Irrigation use")." "Recreation, fish and wildlife use" is defined in OAC 785:30-1-2 as "use which includes but is not limited to the use of water for swimming, water skiing, boating, fishing, hunting or other forms of water recreation, and water for fish and wildlife conservation." "Domestic use" is defined in OAC 785:30-1-2 as "the use of water by a natural individual or by a family or household for household purposes, for farm and domestic animals up to the normal grazing capacity of the land whether or not the animals are actually owned by such natural individual or family, and for the irrigation of land not exceeding a total of three (3) acres in area for the growing of gardens, orchards, and lawns [82:1020.1(2)]. Domestic use also includes:(1) the use of water for agriculture purposes by natural individuals, (2) use of water for fire protection, and (3) the use of water by non-household entities for drinking water purposes, restroom use, and the watering of lawns, provided that the amount of groundwater used for any such purposes does not exceed five acre-feet per year."

40. The facts in this case are unclear to establish that amount of water request by Applicant based on the proposed uses meets the definition of beneficial use.

D. WASTE BY DEPLETION

41. The Board must determine whether Applicant will allow waste as specified by 82 O.S. § 1020.15 to occur. Waste may occur by the "… 2. Taking or using groundwater in any manner so that the water is lost for beneficial use; … 4. Transporting groundwater from a well to the place of use in such a manner that there is an excessive loss in transit; 5. Using groundwater in such an inefficient manner that excessive losses occur; … 8. Drilling wells and producing

groundwater therefrom except in accordance with the well spacing previously determined by the Board."

42. It is unclear exactly what Applicant's intended use of the groundwater is based on the testimony offered at the hearing.

43. Waste by depletion may occur if the Application is approved.

BY POLLUTION

44. The provisions of 82 O.S. § 1020.15(A)(7) provide the Board shall not permit any groundwater user to commit waste by "[p]ermitting or causing the pollution of a fresh water strata or basin through any act which will permit fresh groundwater polluted by minerals or other waste to filter or otherwise intrude into such a basin or subbasin." There was no evidence presented that waste by pollution would occur by the granting of this Application.

45. The Board concludes that waste by pollution will not occur.

WELL SPACING

46. The Board requires that a well be located at a distance of at least one thousand three hundred and twenty (1,320) feet from existing wells or proposed well locations on lands of another unless a well location exception is granted, pursuant to OAC 785:30-3-6.

47. A well location exception would be granted if the Board determines that the new or proposed well at the location required to comply with the established well spacing would be inequitable or unreasonable.

48. The Board concludes that the Applicant should not be granted well location exception. The Applicant has not proven that the new or proposed well at the location required to comply with the established well spacing would be inequitable or unreasonable.

CONCLUSION

Based upon the Findings of Fact and Conclusions of Law above, the Board hereby concludes that Winding River Energy Services Corp. has not satisfied the necessary elements for obtaining a Regular Groundwater Permit No. 2023-0667. The Board hereby orders that the Application for a regular groundwater Permit No. 2023-0667 shall be DENIED.

ORDER

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED the Application No. 2023-0667 filed by Winding River Energy Services Corp. is hereby DENIED.

IT IS FURTHER ORDERED that all other terms and provisions set forth in the Application and not inconsistent with provisions of this Order shall be incorporated into and made a part of the permit.

IT IS SO ORDERED by the Oklahoma Water Resource Board in regular and open meeting this 19th day of June, 2025.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas Gorman, Chairman

ATTEST:

_____
Suzanne Landess, Secretary

(SEAL)

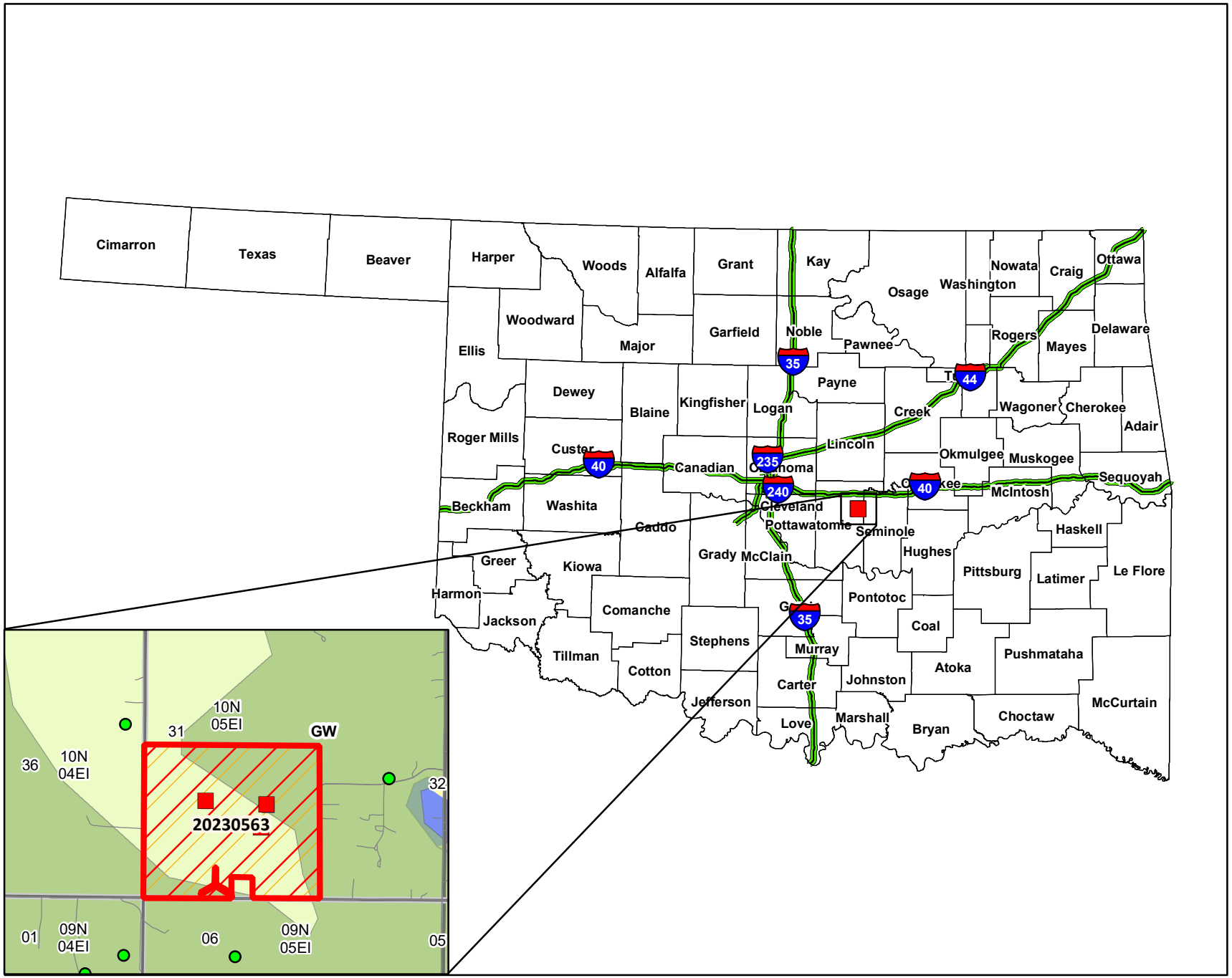
WATER RIGHTS ADMINISTRATION DIVISION
Application for a Limited Quantity Temporary Groundwater Permit

July 15, 2025

NUMBER & DATE	COUNTY	NAME OF APPLICANT	RECOMMENDATION
2023-563 5/30/2023	Pottawatomie County	Boro Family Farms, LLC	Approval for proposed order

Notice is given by Boro Family Farms, LLC c/o Parker Jones of PO Box 121, Earlsboro, OK 74840 has filed an application, #2023-563, with the Oklahoma Water Resources Board (Board) for a permit to use eight (8) acre-feet of groundwater per year. The groundwater is proposed to be used for agriculture (medical marijuana) purposes and to be withdrawn from 189.05 acres located in the S1/2 of Section 31, T10N, R5EIM, Pottawatomie County. The applicant intends to withdraw the groundwater from three (3) wells located as follows: one (1) well each in the SE NE SW, NE SE SW, and SE NW SW of Section 31, T10N, R5EIM, Pottawatomie County. The applicant gave proper Public Notice. The application was protested, and an administrative hearing was held on June 18, 2025. The hearing examiner recommends approval.

Groundwater Application: Permit #20230563 - Boro Family Farms LLC- Pottawatomie County



Legend

- Well Locations
- Dedicated Lands
- Interstates

Inset

- Groundwater Wells
- County Roads

OWRB Permits

- Groundwater, Active
- Groundwater, Pending
- Surface Water, Active
- Surface Water, Pending

OWRB Dedicated Lands

- Groundwater, Active
- Groundwater, Pending
- Surface Water, Active
- Surface Water, Pending

OWRB Major Aquifers

- GW - Garber-Wellington

Created by: JC
Date: 7/8/2025

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State of Oklahoma
OWRB
Water Resources Board
the water agency

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF BORO FAMILY FARMS, LLC FOR PERMIT TO USE GROUNDWATER IN POTTAWATOMIE COUNTY, OKLAHOMA	APPLICATION No.: 2023-0563

PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND BOARD ORDER

This proceeding arose from Boro Family Farms, LLC. (or "Applicants") for an application for a Temporary Groundwater Use Permit, No. 2023-0563. Protestant ("Protestant") Deborah Crane appeared for the hearing and Parker Jones appeared on behalf of Boro Family Farms, LLC ("Applicant"). The hearing was conducted at the Board offices in Oklahoma City, Oklahoma on June 18th, 2025. After the hearing was adjourned, the matter was taken under advisement by the hearing examiner. A Proposed Order was prepared, served on the parties, and presented to the Board for consideration and action.

Based upon the separately stated Findings of Fact and Conclusions of Law that follow, the Board determines that Application No. 2023-0563 should be granted as set forth below:

FINDINGS OF FACT

Upon its evaluation of the evidence and additional records and facts officially noticed in the record, the Board hereby makes the following Findings of Fact:

BACKGROUND OF APPLICATION

1. On or about May 30, 2023, Boro Family Farms, LLC applied for a Temporary Groundwater Permit to authorize the withdrawal of groundwater at the rate of 8 acre-feet per year from three (3) wells owned by the Applicant located in approximately 189.05 acres located as follows: one (1) well each in the SE/4 NE/4 SW/4, the NE/4 SE/4 SW/4 and the SE/4 NW/4 SW/4 of Section 31, Township 10 North, Range 5, East of the Indian Meridian. The purpose of the requested use is for agricultural purposes in relation to medical cannabis. The land dedicated to the permit overlies the groundwater basin known as the Vanoss Group Groundwater Basin.

NOTICE OF APPLICATION AND PROTESTS

2. Board staff notified Applicants by letter dated August 12th, 2024, that the application had been reviewed and directed them to give notice of the application by certified mail to each surface owner within 1,320 feet of the outside boundary of each ten (10)-acre tract of wells subject to the application. The notice set a protest deadline of ten (10) days after receipt of notice.

3. On September 23rd, 2024, Mr. Jones filed with the Board an Affidavit of Notification. The Affidavit of Notification stated that the identified surface estate owners had been notified of the application by certified mail on August 22nd, 2024.

HEARING

4. The hearing was held on June 18th, 2025 as scheduled. The Applicant and the Protestant, Deborah Crane, appeared pro-se. The Protestant, Dick Ninness, effectively and formally withdrew his protest by filing a withdrawal letter on or about September 23rd, 2024. Protestant Mike Bertram failed to appear for the hearing, and the Court finds he has defaulted and abandoned his interest for failure to appear at the hearing, pursuant to OAC 785:4-7-3. The hearing was opened, evidence and argument were received, and the hearing was adjourned. Thereafter, the matter was taken under advisement. The admitted exhibits from the OWRB file are Exhibits: 1, Application; 2, Ownership Documents; 3-Notice of Application, 4, Proof of Service; 5, OMMA Certificates and Registration; 6, Protest; 7, Notice of Hearing and Green Cards; 8, Withdrawal of Protest by Dick Ninness via his attorney; 9, Attendance Sign-in Sheet; 10, Applicant's Maps; and 11, Applicant's Water Use Reports.

THE PROPOSED LOCATION OF THE WELLS IS LOCATED
ON LAND DEDICATED TO THE PERMIT

5. Mr. Jones, for the Applicant, testified that the wells are all located on land dedicated to the permit, and Protestant raised no objection. Sufficient proof was submitted that the proposed location of the well is on land dedicated to the permit. See also, Exhibit 2.

LAND OVERLIES A GROUNDWATER BASIN

6. The property dedicated to the permit overlies a groundwater basin known as the Vanoss Group Groundwater Basin. See OWRB Staff Checklist in Exhibit 1.

BENEFICIAL USE

7. The stated use for the groundwater permit application is for agricultural growth and labs related to medical marijuana, which was undisputed. The Court finds that this is a proper and accepted beneficial use purpose.

NO EVIDENCE OF WASTE WAS FOUND

8. The Applicant testified that no waste as defined by Oklahoma Water Law would be likely to occur, and that the facility in part uses water from the Tri-County Rural Water District #2. Based upon the uncontroverted testimony in the hearing, the Court finds that no waste is likely to occur as contemplated and defined by 82 O.S. 785:4-5-4.

SPACING AND LOCATION OF THE WELLS IS PROPER

9. Mr. Jones testified that it was his estimate that the wells are located over 1,320 feet from the wells of the Protestants, Ms. Deborah Crane and to that of the non-appearing Protestant, Mr. Mike Bertram. Appearing Protestant Deborah Crane did not dispute the testimony. It is determined that the well-spacing in this case is properly located, and that the letters of protest lack legal standing to for conferring party status. However, the letters will remain a part of the record.

CONCLUSIONS OF LAW

Based upon applicable law, and as applied to the above Findings of Fact and the evidence in the record, the Board draws the following Conclusions of Law:

LAW APPLICABLE TO USE OF GROUNDWATER GENERALLY

10. Under Title 60 O.S. § 60, the owner of the surface of a given tract of land owns the fresh groundwater beneath the surface of that land. That surface owner, or a lessee of the surface owner, may use such groundwater in accordance with the use regulations imposed by the Oklahoma Groundwater Law, Title 82, Oklahoma Statutes. As written, the law contemplates the eventual depletion of the groundwater resources, and "the use or nonuse by one landowner neither decreases nor increases the proportionate share of another." OWRB v. Texas County Irr. And Water Resources Ass'n, Inc., 1984 OK 96, ¶ 7, 711 P.2d 38.

SUBJECT MATTER JURISDICTION

11. The Board has subject matter jurisdiction to adjudicate applications for use of groundwater according to the Oklahoma Groundwater Law and the Board's rules promulgated pursuant thereto.

PERSONAL JURISDICTION; DUE PROCESS

12. Due and proper notice of this proceeding was given to all potentially interested persons as required by law. The Applicant, Protestants of record, and all other potentially interested persons have been afforded due process of law and an adequate opportunity to be heard.

GROUNDWATER LAW: ELEMENTS TO BE DETERMINED

13. When a person makes an application for new groundwater permit, OAC 785:30-3-5 in this context, the rules require the Board to determine several specific issues. These are:

a. The applicant owns the surface of the dedicated land or has a valid lease or other legal authority for the taking of groundwater from the land;
b. The dedicated land overlies a fresh groundwater basin or sub-basin.
c. The use to which the Applicant intends to put the water is a beneficial use. Defined by OAC 785:30-1-2, a beneficial use is "the use of such quantity of stream or groundwater when reasonable intelligence and reasonable diligence are exercised in its application for a lawful purpose and as is economically necessary for that purpose. Beneficial uses include but are not limited to municipal, industrial, agricultural, irrigation, recreation, fish and wildlife, etc."
d. Waste by depletion and waste by pollution as defined by 82 O.S.§ 1020.15 will not occur.
e. If the new or proposed well site location is inside of the well-spacing requirements, whether drilling or completing the well at a location within the well-spacing requirements would be inequitable or unreasonable. OAC 785:30-3-6.

If the Board finds for the applicant on all these issues according to OAC 785:30-3-5, the rule provides that the Board shall approve the application.

APPLICANTS' WELL IS LOCATED ON LAND
DEDICATED TO THE PERMIT

14. Based upon the submitted evidence that was not controverted, the Board concludes that the wells of Applicant Boro Family Farms, LLC are on land properly located and dedicated for the permit.

LAND OVERLIES A GROUNDWATER BASIN

15. Based upon the submitted and uncontroverted evidence, the Board concludes that the property dedicated to the permit, overlies a groundwater basin known as the Vanoss Group Groundwater Basin. See, checklist document by OWRB staff, in "Application", Exhibit 1.

"WASTE" WAS NOT FOUND TO BE PRESENT

16. The Groundwater Law and Board rules provide that the Board must determine whether Applicant will allow waste as specified by OAC 785:30-3-5 to occur.

17. For the reasons set forth in Paragraph 9, the Board concludes that Applicant will likely not commit waste by pollution as described in 82 O.S. § 1020.15 and OAC 785:30-3-5 by using the requested permit.

THE LOCATION FOR WELL-SPACING IS PROPER IN THIS CASE

18. For the reasons set forth in Paragraph9, the Board concludes that the wells are properly located and that no relocation of them is required.

ULTIMATE CONCLUSION

19. Based upon the Findings of Fact and Conclusions of Law above, the Board concludes that the Applicant has satisfied the necessary elements for approval of the application for a Temporary Groundwater permit, and Applicant has properly met the well-spacing requirements. It determines that the application should be granted.

ORDER

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that the Application for Temporary Groundwater Permit No. 2023-0563 for Applicant, Boro Family Farms, LLC, is hereby granted.

IT IS FURTHER ORDERED that all other terms and provisions set forth in the application and not inconsistent with provisions of this Order shall be incorporated into and made a part of the permit.

IT IS SO ORDERED by the Oklahoma Water Resources Board in regular and open meeting this _____ day of _____, 2025.

OKLAHOMA WATER RESOURCES BOARD

_____

Thomas A. Gorman, Vice Chairman

ATTEST:

_____

Suzanne Landess, Secretary

(SEAL)

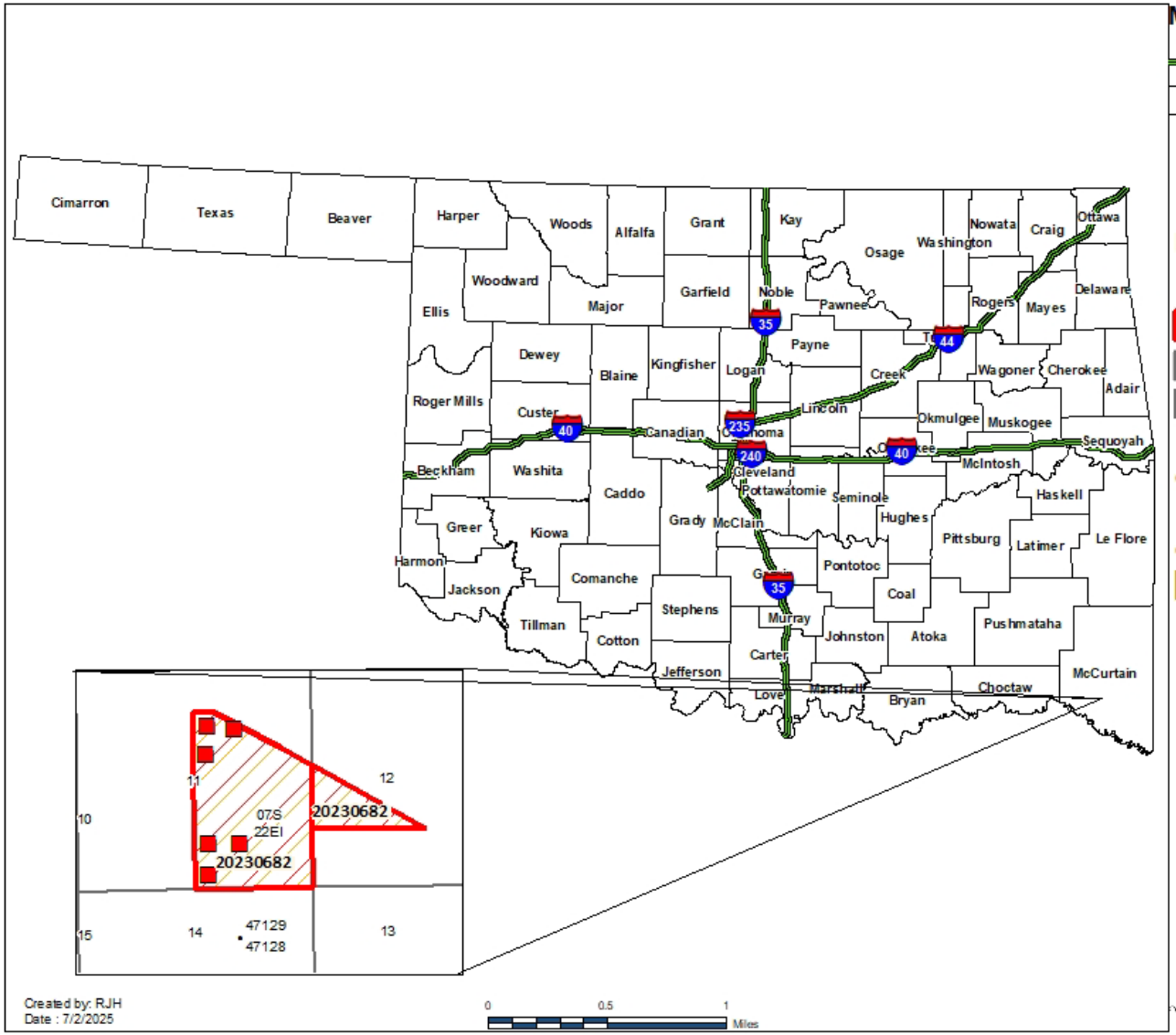
WATER RIGHTS ADMINISTRATION DIVISION
Application for a Regular Groundwater Permit

July 15, 2025

NUMBER & DATE	COUNTY	NAME OF APPLICANT	RECOMMENDATION
2023-682 12/8/2023	McCurtain County	Mai Thi Quynh Phan, Duc Minh Tran, and Quang Phan Dang Tran	Approval for proposed order

Notice is given by Mai Thi Quynh Phan, Duc Minh Tran, and Quang Phan Dang Tran c/o Quang Tran of 485 Rooster Lane, Idabel, OK 74745 has filed an application, #2023-682, with the Oklahoma Water Resources Board (Board) for a permit to use 265 acre-feet of groundwater per year. The groundwater is proposed to be used for agriculture use (poultry production) and taken from 265 acres located as follows: 42 acres in the W2 of Section 12 and 223 acres in the E2 of Section 11, all in T7S, R22EIM, McCurtain County. The water is to be withdrawn from six (6) wells located as follows: one (1) well in the NE SW SE, two (2) wells in the SE SW SE, and three (3) wells in the NE NW SE, all in Section 11, T7S, R22EIM, McCurtain County. The applicant gave proper Public Notice. The application was protested and an administrative hearing was held on May 8, 2025. The hearing examiner recommends approval.

Groundwater Applicationt: Permit #2023-682
Mai Thi Quynh Phan, Duc Mihn Tran, and Quang Phan Dang Tran. McCurtain County



Main Legend

- Interstates
- Counties

Inset Legend

- OWRB Permits selection
- OWRB Dedicated Lands selection
- Townships
- Sections
- Reported Well Logs

OWRB Permits

- Groundwater, Pending

OWRB Dedicated Lands

- Groundwater, Pending

OWRB
Water Resources Board

BEFORE THE OKLAHOMA WATER RESOURCES BOARD
STATE OF OKLAHOMA

In the Matter of the Application of Mai Thi Quynh Phan, Duc Minh Tran, and Quang Phan Dang Tran, for a Regular Permit To Use Groundwater in McCurtain County, Oklahoma	)))))	Application No. 2023-0682

PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND BOARD ORDER

Introduction

1. On May 8, 2025, a Hearing was held before the Oklahoma Water Resources Board (the "OWRB or "Board") on the Groundwater Application of Mai Thi Quynh Phan, Duc Minh Tran, and Quang Phan Dang Tran (the "Applicants"), at the Oklahoma City Offices of the Oklahoma Water Resources Board, for the agricultural use of poultry production in McCurtain County, Oklahoma. The agricultural use of groundwater for poultry production is recognized as a beneficial use in OAC 785:30-1-2. The Groundwater Basin involved is identified in the Application as "Antlers Sandstone" and the Equal Proportionate Share (EPS) is 2.1. The Applicants request groundwater in the amount of 265 acre-feet per year for the water to be used in McCurtain County, Oklahoma. (*See* OWRB Exhibit 1). The Applicants provided evidence of their ownership of the dedicated property for this Application in their Application.

2. The Applicants appeared for the Hearing on May 8, 2025, and were represented by Bryan Nowlin and Connor Andreen of the Hall Estill, 521 E. 2nd Street, Ste. 1200, Tulsa, OK 74120.

3. After initially taking this matter under advisement as required under the Board's Rules OAC 785:4-7-11, it is now proposed by the assigned Hearing Examiner, that the Board adopt the following findings of fact as having been proven in the Hearing as follows:

Notice

4. The OWRB through its staff, issued a letter to the Applicants dated July 18, 2024, that was signed by Chris Neel, Division Chief, Water Rights Administration Division (the "Staff Letter"), which among other things, notified the Applicants that their Application to use groundwater had been reviewed and was deemed complete. OWRB Exhibit 3. The Staff Letter stated that pursuant to 75 O.S. § 309 and 82 O.S. § 1020.8 and the Board Rule OAC 785:30-3-4 the Board Staff enclosed a Notice of Application to be published at the Applicants' expense in a newspaper that is qualified to publish legal notices in McCurtain County, Oklahoma. The Staff Letter stated that the notice must be published once a week beginning on July 28, 2024, and August 4, 2024, and that either the Applicants or the publisher forward the certified proofs of publication to the OWRB by August 26, 2024. The Staff Letter noted that OAC 785:30-3-4(a) requires that the Applicants notify by certified mail, return receipt requested, "surface owners of lands located within 1,320 feet of the outside boundary of each ten acre-tract of wells subject of your application" and that the Applicants were to notify these landowners on or before the day of

publication. The Staff Letter noted that the "surface owners are allowed ten days from receipt of notice to submit comments regarding your application."

5. Pursuant to the Staff Letter, the Notice of Application was published in the *Southeast Times*, a weekly publication that is a "legal newspaper" as that phrase is defined in 25 O.S. Sec. 106, published at Idabel, Oklahoma, for the County of McCurtain, Oklahoma, on August 23 and August 30, 2024, as verified by the Southeast Times Publisher Jerry Ellis, through an Affidavit of Publication, subscribed and sworn to by Publisher Jerry Ellis dated August 30, 2024. OWRB Exhibit 4.

6. In accordance with the provisions of 75 O.S. §309 and 82 O.S.§1020.10, together with Oklahoma Administrative Code ("OAC") 785:30-3-4, the Hearing Examiner, having reviewed the "Notice of Application to Use Groundwater", which form of notice was to be mailed by the Applicant by certified mail, return receipt requested, to the surface estate owners of lands within 1,320 feet of the outside boundary of each ten (10) acre-tract of wells subject of the Application.

7. The Applicants certified in writing with signed returned receipts attached, that they notified the surface estate owners of lands located within 1,320 feet of the outside boundary of each ten (10) acre tract of the wells subject of application no. 2023-0682, of the Applicants' intention to use groundwater by forwarding the notice of application by U. S. Mail, certified mail return receipt requested, on August 28, 2024, to the attached list of names that correspond to those listed on the Ownership Plat attached to the application, as follows: (1) Gillem Family Land and Cattle LLC; (2) Endsley Teryn Irrev Trust; and, (3) Brad and Diana Phillips; (4) Kerry Don Stout; which notice certified that all certified mail green cards with signed return receipt and/or returns of service (or other proof of service that provides the sender with a signature and/or return of service), which was attached to the submitted affidavit, which affidavit was notarized. OWRB Exhibit 4. The assigned Hearing Examiner determined that notice of the application was properly given as required by law, which determination was announced in the hearing.

8. The protestants named as follows: Natalie Hefti, Nyles and Luana Strickland, Phylis Cooper, Rosemary Bastible, Donald and Roberta Ohler King, Simpson Cattle Company c/o Mark C. Simpson, Jeffrey C. and Renee Johnston, Williamson Family Revocable Trust c/o Cecil and Katherine Williamson, Clifford Wayne Williamson, Trint and Jill Trapp, Endsley, Teryn Irrevocable Trust, Brad Phillips, Mark Provence, Shur, Darrell & Roberta (M.D.), Brassfield Cattle c/o Oscar Brassfield, Kerry Don Stout, Sandy and Stevie Songer, Lambe Cattle c/o Shanette Lambe, Gregory L. Smith, Charles Calvin Loftice, Brassfield Cattle c/o Stacey Brassfield, Diana Haynie, Thomas Cattle c/o Savanah Coffey, Thomas Cattle c/o Minnie Francis Thomas, Thomas Cattle c/o Brenda Coffey. The protestants basically, as natural individuals, or families or households for household purposes, for farm and domestic animals up to the normal grazing capacity of the land whether or not the animals are actually owned by such natural individuals or families, for farm and domestic animals, and for irrigation of land not exceeding a total of three (3) acres in area for the growing of gardens, orchards, and lawns, have a right to groundwater for domestic use without obtaining any groundwater from the OWRB. (*See* 82 O.S. Sec. 1020.1(2) for a more complete definition of "domestic use").

9. Pursuant to Board Rule OAC 785:4-7-1 and OAC 785:4-7-7, records were admitted

that were offered by the OWRB pertinent to this Application, including in part, the application, ownership documents, notice documents, maps, comments and protests of: (1) Natalie Hefti, (2) Nyles and Luana Strickland, (3) Phylis Cooper, (4) Rosemary Bastible, (5) Donald and Roberta Ohler King, (6) Simpson Cattle Company c/o Mark C. Simpson, (7) Jeffrey C. and Renee Johnston, (8) Williamson Family Revocable Trust c/o Cecil and Katherine Williamson, (9) Clifford Wayne Williamson, (10) Trint and Jill Trapp, Endsley, (11) Teryn Irrevocable Trust, (12) Brad Phillips, (13) Mark Provence, (14) Shur, Darrell & Roberta (M.D.), (15) Brassfield Cattle c/o Oscar Brassfield, (16) Kerry Don Stout, (17) Sandy and Stevie Songer, (18) Lambe Cattle c/o Shanette Lambe, (19) Gregory L. Smith, (20) Charles Calvin Loftice, (21) Brassfield Cattle c/o Stacey Brassfield, (22) Diana Haynie, (23) Thomas Cattle c/o Savanah Coffey, (24) Thomas Cattle c/o Minnie Francis Thomas, (25) Thomas Cattle c/o Brenda Coffey (containing legal descriptions of the locations of water wells of the Protestants) supplied by the Applicants, a G.I.S. Map prepared by the OWRB for this application showing the Applicants' proposed water wells as well as those water wells of the Protestants, in McCurtain County, Oklahoma, the letters of protest from the Protestants and the hearing. *See* OWRB Exhibits 1-7. After the hearing was adjourned, the matter was taken under advisement with the record remaining open for five days. A proposed order was prepared, served on the parties, and presented to the Board for consideration and action.

Ownership and Legal Description of Land Dedicated

10. The Applicants own 265 acres, of which acreage:

42 acres in the W2 of Section 12, Twp 7 S, Rng 22 EIM in McCurtain County, Oklahoma; and

223 acres of E2 of Section 11, Twp 7S, Rng 22 EIM in McCurtain County, Oklahoma.

Well Information for Six Proposed Wells

11. Three (3) wells in NE¼ of NW¼ of SE¼ of Section 11, Twp 7 S, Rng 22 EIM, in McCurtain County, Oklahoma; and

One (1) well in NE¼ of SW¼ of SE¼ of Section 11, Twp 7 S, Rng 22 EIM, in McCurtain County, Oklahoma; and

Two (2) wells in SE¼ of SW¼ of SE¼ of Section 11, Twp 7 S, Rng 22 EIM, in McCurtain County, Oklahoma.

12. The Applicants filed proposed Findings of Fact and Conclusions of Law which were submitted to the OWRB on the fifth business day after the Hearing was concluded on May 8, 2025, pursuant to OAC 785:4-7-10.

Applicants' Witnesses

13. Being duly sworn, the applicant, Mr. Tran, testified that he owns the water rights, that he owns 265 acres of land, that he needs the water for the chickens, that he needs 6-7 million gallons of water per year (approximately 21 acre-feet per year), and that he will not need all 265 acre-feet of water requested. Mr. Tran noted that rural water is not available on his side of the road

as such hook-up would require the rural water district drilling under the highway at a cost to him of $500,000. According to Mr. Tran, there are to be twelve (12) Chicken Houses with two (2) chicken houses per water well with six (6) water wells proposed. Mr. Tran further noted that there is one existing well that was for domestic use but it is too small for his proposed agricultural use. Mr. Tran noted that he has a permit for his "poultry feeding operation" (as the phrase "poultry feeding operation" is defined in 2 O.S. § 10-9.1(20) from the Oklahoma Department of Agriculture, which assertion as to permit issuance and possession by Mr. Tran was not controverted.

14. The Applicants' expert witness, Matthew Coe, being duly sworn, testified that he has been a Registered Professional Engineer since 2011 and that he is a Certified Hydrologist and member of the American Institute of Hydro-Technology. Mr. Coe's testimony supported the Application.

Protestants' Witnesses

15. The protestants appeared and were represented by Matt Irby, Landowner Firm, PLLC., Tulsa. OK. The protestants produced three (3) protestants as witnesses to testify at the Hearing on May 8, 2025. Only protestants Brad Phillips, Jeffrey Johnston, Dr. Roberta Suhr, M.D., and expert witness Robert "Bob" Jackman, were actually sworn and testified in the Hearing on May 8, 2025. The Protestants' expert witness Bob Jackman testified about the quality of the groundwater rather than the quantity of the groundwater, which is the only aspect of groundwater that is within the jurisdiction of the OWRB. (*See* OAC 785:30-3-5).

Land Ownership

16. The Applicants supplied a General Warranty Deed dated April 22, 2024, with Jeffrey Bruce Bochning and Tisha Diana Bochning, husband and wife, being the Grantors, recorded in the Records of the County Clerk of McCurtain County, Oklahoma, on April 23, 2024, in Book 1201, at Page 984 and following, for the following described real estate, situated in McCurtain County, Oklahoma, to wit:

> Begin at the Southeast corner of the SE¼ and all that part of Section 11, Township 7 South, Range 22 East of the Indian Base and Meridian, McCurtain County, Oklahoma, thence West 1321.65 feet; thence North 3432.6 feet to the South Right-of- Way line of the Kiamichi Railroad; thence Southeasterly along said Railroad Right-of-Way 1513.54 feet; thence South 2695 feet to the point of beginning.
>
> And
>
> All that part of the SW¼ and all that part of the SW¼SW¼NW¼ of Section 12, Township 7 South, Range 22 East of the Indian Base and Meridian, described as follows:
>
> Begin 1320 feet North of the Southwest corner of the SW¼ of said Section 12; thence North 1375 feet to the South Right-of-Way line of Kiamichi Railroad; thence Southeasterly along Railroad Right-of-Way 2772.49 feet; thence West 2407.5 feet to the point of beginning.

And

All that part of the SW¼NE¼ of Section 11, Township 7 South, Range 22 East of the Indian Base and Meridian, Lying South of Kiamichi Railroad. And the W2 SE of Section 11, Township 7 South, Range 22 East of the Indian Base and Meridian. (*See* OWRB Exhibit 2).

Land Located Over Groundwater Basin

17. The **land dedicated to this application overlies the Antlers Sandstone groundwater basin**. It was uncontested that the land dedicated to this application overlies the Antlers-Sandstone groundwater basin. The maximum annual yield determination established by the Board for the Antlers-Sandstone groundwater basin set the equal proportionate share at 2.1 acre-feet per year per acre. **This maximum annual yield determination by the Board for the Antlers-Sandstone groundwater basin was not contested by the Protestants at the Hearing.**

Beneficial Use

18. The proposed use of the groundwater in the Application is for agricultural use of poultry production. *See* OWRB Exhibit 1. The beneficial use of the groundwater by the Applicant (agricultural use), as a poultry feeding operation is recognized as a beneficial use of agriculture under OAC 785:30-1-2, and such beneficial use was uncontested at the hearing. The agricultural use of the requested groundwater for a poultry feeding operation was only contested in the protest letters filed with the OWRB (See OWRB Exhibit 6).

Waste by Depletion

19. Expert testimony was presented at the hearing that waste by depletion will not occur by the granting of the application for a permit as proposed in the Application. As the proposed water wells have not been drilled, no specific evidence was admitted that waste by depletion will occur should the application be granted. While the Protestants collectively expressed concerns that the Applicant would be using too much water from their six (6) proposed groundwater wells should the Application be approved and the permit be issued, the Protestants introduced no evidence to substantiate that waste by depletion will occur should the requested permit be granted by the OWRB.

Waste by Pollution

20. Testimony was presented at the hearing by the Applicant that there would not be any waste by pollution and no evidence was admitted that waste by pollution will occur should the application be granted.

Applicants' Proposed Order Filed Pursuant to OAC 785:4-7-10

21. Under the Applicants' filed, Proposed Order, the OWRB agrees with Applicants proposed Findings of Fact No. 1, 2, 3, 4. 5, 6, 7, 21, 22, 23, 24, and 25.

22. Under the Applicants' filed, proposed Order, the OWRB agrees with the Applicants' proposed Conclusion of Law No. 8, 9, 10 (in part), 11, 13 (in part), 12, 14, 15, 16, 17, 18, 19 (in part that the Applicant's poultry operation is defined as a "poultry feeding operation" in 2 O.S. § 10-9.1(20), but not that the proposed Applicant's poultry operation is a "confined" poultry operation), 20, 26, 27, 28, 29, 30, 31, 32, and 33.

23. Under the Applicants' filed, Proposed Order, the OWRB rejects Proposed Finding of Fact 13 (in part as no reference to the "Woodbine Minor Bedrock Aquifer" was made by the Applicants' expert Jacob Hernandez or anyone else at the Hearing, Applicant or Protestant).

24. It is noted that the Protestants did not file a Proposed Order with Findings of Fact and Conclusions of Law. It is further noted that the Protestants filed a document entitled "Problems and Concerns with USGS Abstract for McCurtain Co, March 19, 2025", after the Hearing but within the five-day period immediately following the Hearing. Accordingly, the Protestants provided no testimony regarding the problems and concerns raised by the Protestants subsequent to the Hearing.

25. Based upon the separately stated Proposed Findings of Fact and Conclusions of Law above and those that follow, the Board determines that **the application should be approved**.

CONCLUSIONS OF LAW

26. Based upon applicable law, and as applied to the above Proposed Findings of Fact and evidence in the record, the Board draws the following Proposed Conclusions of Law:

Use of Groundwater

27. Under 60 O.S. § 60 entitled "Ownership of water--Use of running water", among other things, the owner of the surface of a given tract of land owns the fresh groundwater standing thereon or flowing over or under its surface but not forming a definite stream. That surface owner may use such groundwater in accordance with the use regulations imposed by the Oklahoma Groundwater Law, 82 O.S. § 1020.1 *et seq*.

Subject Matter Jurisdiction

28. The Board has subject matter jurisdiction to adjudicate applications for permits according to the Oklahoma Groundwater Law and the Board's rules promulgated pursuant thereto. 82 O.S. § 1020.7.

Personal Jurisdiction; Due Process

29. Due and proper notice of the application and subsequent proceedings was given to all potentially interested persons as required by law, the Applicant and Protestants are interested parties to this proceeding. All other potentially interested persons have defaulted or abandoned their interests. Oklahoma Administrative Code ("OAC") 785:4-7-3.

Issues to be Determined by Board

30. When a person makes an application for a groundwater permit, 82 O.S. § 1020.9 and OAC 785:30-3-5, requires the Board to determine several specific issues. These are:

> (a) whether the applicant owns the surface of the dedicated land or holds a valid lease for the taking of groundwater from the land;
>
> (b) whether the dedicated land overlies a fresh groundwater basin or subbasin;
>
> (c) whether the use to which the applicant intends to put the water is a beneficial use; and
>
> (d) that waste by depletion and waste by pollution as specified in 82 O.S. § 1020.15 will not occur.

Generally, if the Board finds for the applicant on all these issues, the rule provides that the Board shall approve the application and issue the appropriate permit. Section 1020.9(D) of Title 82 provides further that the Board may specify conditions in the permit, including but not limited to the rate of withdrawal and the level of perforation and sealing wells.

Ownership of Land

31. Ownership of land in the name of the Applicants through their General Warranty Deed was not challenged at the hearing by the Protestants. Regardless, based on the information submitted in the application and the evidence admitted at the hearing, the Board concludes that Applicant provided evidence of the Applicants' right to take groundwater from the land identified on the application, in the form of ownership documentation listed above in Proposed Finding of Fact paragraph 34 to the Applicant**.** *See* OWRB Exhibits 1 and 2.

Groundwater Basin

32. **It was uncontested that the dedicated land in this Application overlies the Antlers-Sandstone groundwater basin**. The maximum annual yield for this basin has been determined and the equal proportionate share is 2.1 acre-feet per acre per year. This issue was presented and addressed by the Applicants at the hearing. Therefore, based on that maximum annual yield, the Applicants, assuming all other legal requirements are factually found to exist and to be in compliance with Oklahoma law, would be entitled to a groundwater allocation of 2.1 acre-feet per acre per year, as provided in 82 O.S. § 1020.11(8).

Beneficial Use

33. This Board defines beneficial use in OAC 785:30-1-2 as follows:

> "Beneficial use" means the use of such quantity of stream or groundwater when reasonable intelligence and reasonable diligence are exercised in its application for a lawful purpose and as is economically necessary for that purpose. Beneficial uses include but are not limited to municipal, industrial, agricultural, irrigation, recreation, fish and wildlife, etc."

34. The Protestants assert that the Applicants have the burden of proof that the use to which it intends to put the water is a beneficial use without any citation of statute, administrative rule, case law, or any other legal authority. **Although beneficial use was not legitimately disputed or challenged at the hearing, the evidence established that Applicants' proposed agricultural use to for poultry feeding operation, meets the definition of beneficial use in OAC 785:30-1-2**.

Waste by Depletion

35. The Board must determine whether Applicant will allow waste as specified by 82 O.S. § 1020.15 to occur. Section 1020.15 is quoted as follows:

> A. The Oklahoma Water Resources Board shall not permit any groundwater user to commit waste by:
>
> 1. Drilling a well, taking or using groundwater without a permit, except for domestic use;
> 2. Taking more groundwater than is authorized by the permit;
> 3. Taking or using groundwater in any manner so that the water is lost for beneficial use;
> 4. Transporting groundwater from a well to the place of use in such a manner that there is an excessive loss in transit;
> 5. Using groundwater in such an inefficient manner that excessive losses occur;
> 6. Allowing any groundwater to reach a pervious stratum and be lost into cavernous or otherwise pervious materials encountered in a well;
> 7. Permitting or causing the pollution of fresh water strata or basin through any act which will permit fresh groundwater polluted by minerals or other waste to filter or otherwise intrude into such a basin or subbasin. The Board shall be precluded from determining whether waste by pollution will occur pursuant to the provisions of this paragraph if the activity for which the applicant or water user intends to or has used the water as specified under Section 1020.9 of [Title 82] is required to comply with rules and requirements of or is within the jurisdictional areas of environmental responsibility of the Department of Environmental Quality or the Oklahoma Department of Agriculture, Food and Forestry;
> 8. Drilling wells and producing groundwater therefrom except in accordance with the well spacing previously determined by the Board;
> 9. Using groundwater for air conditioning or cooling purposes without providing facilities to aerate and reuse such water; or
> 10. Failure to properly plug abandoned water wells in accordance with rules of the Board and file reports thereof.

According to OAC 785:30-1-1, paragraphs (1) through (6) and paragraphs (8) and (9) are forms of "waste by depletion" (as that term is used in the case of *Oklahoma Water Resources Board v. Texas County Irrigation and Water Resources Ass 'n*, 1984 OK 96). Paragraphs (7) and (10) immediately above are forms of "waste by pollution").

36. According to the case of *Lowery v. Hodges*, 1976 OK 132, ¶18-19, 555 P. 2d 1016, to satisfy the requirements of 82 O.S. §1020.9 that the evidence in a case must show that waste will not occur, …an applicant must show what method he intends to use for irrigating a particular area; but once that information has been furnished the Board [OWRB], it [OWRB] then has the authority to determine that waste will not occur. If the Protestants think that waste will occur, they would need to present that evidence to the Board [OWRB] for its consideration. If the plans submitted to the Board do not on their face demonstrate such waste, and the Protestants fail to introduce evidence that waste will occur, the statute [82 O.S. §1020.9] has been satisfied and further questions concerning waste must await completion of the project.

Waste by Pollution

37. The provisions of 82 O.S. § 1020.15(A)(7) provide the Board shall not permit any groundwater user to commit waste by "permitting or causing the pollution of a fresh-water strata or basin through any act which will permit fresh groundwater polluted by minerals or other waste to filter or otherwise intrude into such a basin or subbasin." Therefore, the Board concludes that waste by pollution will not occur.

Well Spacing

38. Pursuant to 82 O.S. § 1020.17, the Board is authorized to promulgate rules under the Administrative Procedures Act, 75 O.S. § 250 et seq., which establish a proper spacing of wells which, in its [the Board's] judgment is necessary to an orderly withdrawal of water in relation to the allocation, by regular permits and temporary permits, of water to the land overlying the basin or subbasin.

39. As authorized in 82 O.S. § 1020.17, the Board has adopted spacing requirements for various basins and subbasins through OAC 785:30-3-6. As to the Antlers Sandstone groundwater basin at issue in this case, a basin where the maximum annual yield has been determined, OAC 785:30-3-6(a)(1) provides that no new or proposed well(s) shall be authorized by regular permit to be drilled and completed within one thousand three hundred twenty feet (1,320') of an authorized existing or proposed well location on lands of another, provided that the well on lands of another is capable of taking water from the same basin.

CLOSING THE RECORD AND SUBMISSION OF CAUSE FOR RULING

40. According to the provisions of Board Rule OAC 785:4-7-11:

After all interested parties have had an opportunity to be heard and present evidence, and after expiration of any additional time allowed, the hearing shall be deemed completed and submitted for Final Order and ruling and the hearing record shall be deemed closed unless otherwise ordered by the Hearing Examiner. The

Subject matter of the hearing shall thereupon be taken under advisement for final decision and Order by the Board.

CONCLUSION

41. The Board hereby orders that application no. 2023-0682 in the name of Mai Thi Quynh Phan, Duc Minh Tran, and Quang Phan Dang Tran shall be and is **hereby approved.**

ORDER

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that **Application No. 2023-0682 in the name of** Mai Thi Quynh Phan**, Duc Minh Tran, and Quang Phan Dang Tran shall be and the same is hereby approved**. **A permit shall be issued.**

IT IS SO ORDERED by the Oklahoma Water Resources Board in regular and open meeting this __ day of _____, 20____.

OKLAHOMA WATER RESOURCES BOARD

_____
Thomas A. Gorman, Chairman

ATTEST:

_____
Secretary

(SEAL)