Exhibit A

Statement Of Work	
Prepared Date:	**4/29/24**
Name of Grantee:	**Julesburg Irrigation District**
Name of Water Project:	**Julesburg Reservoir Expansion Feasibility Study**

Water Project Overview:

The Grantee and Grantee's consultant will complete a feasibility study to address existing dam safety concerns and enlarge Julesburg Reservoir from approximately 20,200 acre-feet up to 28,178 acre-feet of storage. This study will include inflow hydrology and reservoir routing, seepage, and stability calculations, civil site and geotechnical design, drawings, dam safety requirements, and cost opinions. Julesburg Reservoir is a complex structure made of 5 separate dams and foundation seepage has been an issue since construction (Dam 2 failed in 1910). Enlarging the reservoir could be completed by (1) relocating dams 2 and 3 downstream, (2) reducing or removing the voluntary storage restriction, (3) increasing the embankment height, or (4) a combination of all three. A key goal of this report is to identify the best method for accomplishing the enlargement.

This project will allow the Grantee to begin the process of planning how to fund the design and eventual construction of enlarging the reservoir. The information will be critical to apply for federal funding programs and identifying partners for the enlargement of the reservoir.

Project Objectives:

The Grantee's consultant will complete a feasibility report on the enlargement of Julesburg Reservoir that accomplishes the following objectives:

- Geotechnical evaluation
- Hydrology evaluation
- Complete feasibility design and report
- Cost estimates
- Preliminary design that meets all current dam safety standards and is determined to be the best method to increase the normal storage volume by approximately 7,972 acre-feet from multiple possibilities

Tasks

Task 1 – Feasibility Study

Description of Task:

The Grantee's consultant will obtain the following information as part of the feasibility study:

Background Data, Site Visit, Site Mapping, and Preliminary Volume Estimates

- Collect available information and data to create updated maps of the reservoir and complete preliminary estimates of the current volume.

Hydrology Evaluation

- Updated inflow hydrology will be required to evaluate spillway alternatives for the reservoir enlargement. The updated inflow hydrology can also be used for emergency action planning and several future design elements if the enlargement is progressed to final design.

Geotechnical Evaluation

- Use existing subsurface data to prepare updated seepage and slope stability modeling.

Feasibility Design

- Data generated to complete a feasibility level enlargement design for the Julesburg Reservoir dams

Feasibility Report

- Design calculations and assumptions will be documented in a feasibility design report. The report will define key project elements and anticipated design or construction challenges.

Method/Procedure:

Background Data:

- At the start of the project, The Grantee's consultant will obtain publicly available 2016 LiDAR topographic data and prepare an updated base mapping of the site. Additionally, property ownership data will be obtained and incorporated into the base mapping. The Grantee's consultant will perform an office evaluation of the topographic mapping to develop preliminary estimates of potential storage increases that can be achieved through allowing safe, full storage in the reservoir, relocating Dams 2 and 3, and minor embankment raises. There will be an initial site visit to meet with the District personnel to discuss the project and observe site conditions. Topographic mapping data will be field verified during the site visit. The Grantee's consultant will convert the 1998 files for use in updated programs, and will request existing Julesburg Reservoir files and documentation from the Department of Water Resources (DWR). The Grantee's consultant will complete a comprehensive review of the available data and provide a document index and digital document copies to the District.

Hydrology Evaluation

- The Grantee's consultant will complete an updated hydrology study following guidelines presented in the Guidelines for Hydrological Modeling and Flood Analysis, published by the DWR Dam Safety Branch in 2022. The Grantee's consultant will use the resulting inflow hydrographs to prepare a runoff model of the reservoir and its tributary basin. The model will then be used to complete routing of the enlarged reservoir and evaluate spillway alternatives. The Grantee's consultant will also determine the potential wave runup and freeboard requirements using methods presented in the 2020 Dam Safety Rules and Regulations (Rules), published by the DWR Dam Safety Branch. The spillway will be sized to provide the minimum required freeboard. The Grantee's consultant will present the results of the hydrology study in a stand alone Hydrology Report, suitable for DWR submittal and approval.

- The DWR's Hydrologic Hazard Analysis is not included in this scope of work. However, it may be possible to complete a Hydrologic Hazard Analysis to evaluate downstream consequences of a dam breach and reduce the Inflow Design Flood (IDF) to a smaller, lower frequency storm. The Colorado DWR's Hydrologic Hazard Classification system was implemented with the 2020 Rules update and allows dams with little potential for loss of life to be designed using a reduced inflow design flood. Given the maximum dam section's proximity to the South Platte River and its large floodplain, there is a strong potential to reduce the spillway IDF, resulting in a smaller spillway. This scope of work assumes that the dam is classified as High Hazard and Extreme Hydrologic Hazard, requiring the spillway to be sized for the PMP, the maximum inflow design flood required by the DWR.

Geotechnical Evaluation

- Existing data generally consists of boring logs and soils laboratory testing completed in conjunction with previously completed subsurface investigations and geotechnical studies. Seepage and stability modeling will be completed using the GeoStudio products SEEP/W and SLOPE/W. The Grantee's consultant will use this modeling to evaluate embankment design slopes, internal dam drainage requirements, and seepage cutoff design. The Grantee's consultant will also complete a brief seismic study to evaluate seismic loading design requirements and foundation liquefaction potential.

Feasibility Design

- Key design tasks will include embankment grading and earthworks quantities, required modifications to the existing outlet works tower, design of a new outlet works at the replacement dam for existing Dams 2 and 3, spillway design, upstream slope armoring, and evaluating required inlet canal modifications. Property ownership and general land acquisition requirements as well as wetland impacts will be considered in the design. The Grantee's consultant will prepare feasibility level design drawings for the proposed reservoir enlargement. The design and drawings will generally be developed to approximately 10 percent definition, a level which is typically sufficient for feasibility cost estimating and funding applications.

Feasibility Report

- The feasibility report will include a summary of previously evaluated alternatives and an Association for the Advancement of Cost Estimating (AACE) Level 4 opinion of probable cost. The report will provide recommendations for additional data collection, as needed, and permitting and final design studies. The report will be prepared by the Grantee's consultant with sufficient data to support basic funding applications.

Deliverable:

The Grantee will provide CWCB Staff with:

- Updated maps of Julesburg Reservoir
- Completed Hydrology Evaluation Report
- Completed Geotechnical Evaluation Report
- Conceptual design documents for reservoir enlargement
- Final feasibility design report

Budget and Schedule

This Budget and Schedule reflect the tasks identified in the Statement of Work.

Task No.	Task Description	Estimated Task Start Date	Estimated Task End Date	Grant Funding	Match Funding	Total
1	Feasibility Study	6/15/24	6/1/29	$ 67,236.73	$ 22,412.27	$ 89,649.00
			Total	$ 67,236.73	$ 22,412.27	$ 89,649.00

Reporting Requirements

Progress Reports: The grantee shall provide the CWCB a progress report every six months, beginning from the date of issuance of the grant agreement. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Report: At completion of the project, the applicant shall provide the CWCB a final report on the applicant's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

The CWCB will pay out the last 10% of the budget when the final report is completed to the satisfaction of CWCB staff. Once the final report has been accepted, and final payment has been issued, the grant agreement will be closed without any further payment.

Payment

Payment will be made based on actual expenditures and must include invoices for all work completed. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

Costs incurred prior to the effective date of this grant agreement are not reimbursable. The last 10% of the entire grant will be paid out when the final deliverable has been received. All products, data and information developed as a result of the grant agreement must be provided to the CWCB as part of the project documentation.

Performance Measures

Performance measures for the grant agreement shall include the following:

(a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget. Per grant guidelines, the CWCB will pay out the last 10% of the budget when the final report is completed to the satisfaction of CWCB staff. Once the final report has been accepted, and final payment has been issued, the grant agreement will be closed without any further payment.

(b) Accountability: Per grant guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per Grant Guidelines, progress reports must be submitted at least once every 6 months. A final report must be submitted and approved before final project payment.

(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each progress report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.

(d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the grant agreement.