



SLFRF APPLICATION

South Davis Sewer District

Requested: \$1,000,000

ARPA SCOPE OF WORK WORKSHEET

1. Overview

Federal Award Grant Name	Coronavirus State and Local Fiscal Recovery Funds (SLFRF)
Federal Assistance Listing Number	21.027
Subrecipient Name	South Davis Sewer District
Subrecipient's UEI or TIN	GS8LJ74VKNK6
Subaward Start Date	
Subaward End Date	9/1/2026
1. Amount of Federal Funds Obligated in this SOW	\$1,299,000
2. Total Amount of ALL Federal Funds Obligated to Subrecipient from Davis County (including this SOW)	\$1,000,000
3. Total Amount of ALL Federal Funds Obligated to Subrecipient from Davis County (including this SOW)	\$1,000,000
Federal Award Agency	US Department of Treasury
Pass-through Entity	Davis County, Utah
Awarding Official	Name: Curtis Koch Title: Davis County Clerk Auditor
After Approval by Davis County Commissioners	Address: Davis County Admin Building 61 South Main Street Farmington, Utah 84025 Phone: (801) 451-3491 Email: Ckoch@co.davis.ut.us
Primary Contact	Name: Lanese Hendrickson Title: Assistant General Manager Contact Address: PO Box 140111 Salt Lake City, UT 84114-0111 Phone: Office (801) 295-3469, Cell (801) 815-0590 Email: lhendrickson@sdsd.us
Research & Development	Application is not related to research & development

2. Expenditure Categories

Eligible Category	Infrastructure
Expenditure Category Number	2.13
Expenditure Category Name	Other economic support
Primarily Disadvantaged Households	
This project impacts all residents of Davis County, including disadvantaged households.	
COVID Impact Statement	
The South Davis Sewer District provides critical wastewater collection and treatment services to the community. In order to maintain stability during COVID, the District implemented protocols to limit interactions between personnel from different operational units. While personnel have been affected and required to quarantine from time to time, lost time has not significantly affected operations. Routine cross-training and District overtime compensation policies have provided the extra necessary man-hours.	

3. Staffing

Provide list of staff and time commitments to be allocated to each activity in the statement of work.

Key Staff Name	Title/Activity	Time Commitment
Mathew Meyers	General Manager	As needed
Lanese Hendrickson	Assistant General Manager, POC	As needed
Aqua Engineering	Engineering and Design	As needed

Any changes in the key personnel assigned or their general responsibilities under this project are subject to the prior approval of Davis County.

4. Performance Monitoring

Davis County will monitor the performance of the Subrecipient against goals and performance standards as stated above. Substandard performance as determined by the Davis County will constitute noncompliance with this Agreement. If action to correct such substandard performance is not taken by the Subrecipient within a reasonable period of time after being notified by Davis County, contract suspension or termination procedures will be initiated.

Statement of Work

The purpose of the North Plant Upgrade Project is to upgrade the South Davis Sewer District's existing sewage treatment facility (the "North Plant") in West Bountiful to expand biological capacity to meet permit requirements associated with nutrient limits mandated by the State of Utah for nitrogen and phosphorus and provide adequate service to approximately 2050. The specific work contemplated hereunder is to design and engineer the Project and includes design of the Project, preparation of plans and specifications and modifications to said plans and specifications as necessary to receive a construction permit from UDWQ. The main tasks associated with the North Plant Upgrade are as follows:

- a. Replace the existing Headworks building.
- b. Demolish the existing Headworks facility.
- c. Replace the existing Primary Influent Pump Station.
- d. Move the Ferric System into the new Headworks building and allow for potential Alum usage in the system.
- e. Install a new primary clarifier.
- f. Install a new snail removal system to protect the downstream unit process.
- g. Install a new MBBR treatment process.
- h. Install a new blower building for the MBBR treatment system.
- i. Rehabilitate Pump Station #2 to allow for pumping to the new MBBR treatment system.
- j. Install a new dewatering system.
- k. Install a new digester with the associated equipment necessary for operation.
- l. Replace the existing effluent pipe.
- m. Upgrade the electrical system including a new generator.
- n. Install a new SCADA system.
- o. Modify the primary clarifier splitter box.
- p. Replace trickling filter arms.
- q. Replace trickling filter effluent gates.
- r. Upgrade the raw sludge pump station.
- s. Sandblast and paint existing primary and final clarifiers.
- t. Sandblast and paint gravity thickener.
- u. Upgrade gas safety equipment.
- v. Sandblast and recoat digester cover and digester guides.

- w. Replace digester cover insulation.
- x. Other items as needed for the completion of this Project.

If the District doesn't design and then construct the necessary capital improvements to expand biological capacity, the result will be non-compliance with regulatory requirements, which will lead to enforcement actions by the Utah Division of Water Quality and fines of up to \$10,000 per day for violations.

Description of population to receive assistance

Helping to fund design and engineering of the North Plant Upgrade Project with ARPA funds decreases the amount the District must bond for, which reduces the cost of this vital project that must be passed on to residents and businesses, including disadvantaged households. This benefits all residents, businesses, and institutions within the District.

Description of process to ensure disadvantaged households are provided access to project

All households, including disadvantaged households, are permanently connected to and receive wastewater collection and treatment services from the District.

Physical location where assistance will be provided	The physical address of the North Plant is 1800 West 1200 North, West Bountiful, Utah 84087.
Geographic Service Area(s)	South portion of Davis County, including the communities of Bountiful, Centerville, North Salt Lake, West Bountiful, Woods Cross, and unincorporated Davis County.

Project Outline

In 2019, the District began evaluating alternatives for reducing ammonia ahead of anticipated reductions in permit limits for nutrients. The District selected Advanced Biologic Nutrient Removal (ABNR™) as the preferred alternative because it is an innovative process that uses sustainable practices to achieve nutrient reductions without producing significant additional biosolid waste for disposal.

The District originally planned to install ABNR™ at its South Plant but, because of South Plant effluent toxicity, the process was not effective, so the District decided to implement ABNR™ at its North Plant instead where early testing showed no presence of toxicity or process inhibition. Clearas Water Recovery (“Clearas”), the ABNR technology provider with whom the District has been working, has also been working with the Village of Roberts, Wisconsin, and brought an ABNR™ system online there in October 2020.

In December 2021, the District discovered that the Roberts plant was having issues with toxicity. The District began monitoring the situation in the Village of Roberts closely and determined that it could not, in good faith, proceed with full-scale engineering and construction of ABNR™ before identifying the source of toxicity occurring at the Roberts plant and confirming that it could be removed or treated economically along with the ABNR process.

In order to allow the District to thoroughly investigate the issues, conduct additional feasibility analysis and piloting, and evaluate potential alternative treatment options, the District requested a two-year extension of its ammonia Compliance Schedule from the Utah Division of Water Quality (UDWQ). In response, UDWQ agreed to extend the Compliance Schedule by one year through September 1, 2026, rather than the two years requested.

In response, the District and Aqua Engineering developed a plan in which the District would proceed immediately with design of a phased approach to upgrading the North Plant. This approach would include, as phase 1, immediate design and construction of a moving bed biofilm reactor (MBBR) to treat for ammonia such that the North Plant would be capable of meeting the new discharge limits for near term capacity (5-10 year planning horizon). Provisions would be made to allow for expanding MBBR treatment or for implementing Advanced Biologic Nutrient Removal (“ABNR”) as a phase 2 to extend capacity for a 20-year solution.

The District requested that the Compliance Schedule in the Permit be revised as follows:

Date	Milestone
September 1, 2022	SDSD shall commence detailed design of phase 1.
December 31, 2022	SDSD shall submit a completed capital facilities plan revision consistent with SRF requirements, which plan shall include phase 1 and options for phase 2.
September 1, 2023	SDSD shall submit detailed construction plans and specifications to DWQ to obtain a construction permit for phase 1.
December 1, 2023	State issues construction permit
January 31, 2024	SDSD shall bid construction of approved wastewater treatment upgrades as outlined in the DWQ construction permit.
August 1, 2026	SDSD shall complete construction of the upgrades and begin startup and optimization of upgraded wastewater treatment upgrades.
September 1, 2026	Final total ammonia effluent limits will go into effect.

A modified permit that included the revised Compliance Schedule was approved and went into effect on October 1, 2022. Based on feedback from UDWQ on the capital facilities plan submitted by the District, the District has made the decision to eliminate the phased approach and design and construct a moving bed biofilm reactor (MBBR) to provide a 20-year solution.

Project Outcome

Completion and submittal of plans and specifications to and issuance of a construction permit by UDWQ for the North Plant Upgrade Project will complete the design and engineering of the new treatment facilities required to expand biological capacity to meet permit requirements and provide adequate service through the year 2050.

5. Schedule/Timeline

Timeline reflect the time from the start to end of subaward date.

Budget calculations should match figures in budget table.

	CY 2023
Activities	Design/Engineering/Administration
Budget Expenditures (SOW funding source only)	\$1,000,000

List all obligated funding sources individually and funding amounts for this project.

Funding Sources	Amount
ARPA (Davis County)	\$1,000,000
Other Federal Grants	
Bountiful City (ARPA)	\$ 160,000
City of North Salt Lake (ARPA)	\$ 76,000
West Bountiful City (ARPA)	\$ 21,000
Woods Cross (ARPA)	\$ 42,000
<i>TOTAL</i>	<i>\$ 299,000</i>
Local Funding/Reserves	\$ 0
Bonding	\$1,650,500

6. Budget Non-Construction

	ARPA	Other Federal Grants	State Funding	Local Funding/ Reserves	Bonding
Personnel					
Fringe Benefits					
Travel					
Supplies					
Contractual					
Construction					
Other (Technical Assistance)	\$ 10,000				
Indirect Charges					
Program Income					

7. Budget Construction

	ARPA	Other Federal Grants	State Funding	Local Funding/ Reserves	Bonding
Administration and legal expenses					
Land, structures, rights-of-way, appraisals, etc.					
Relocation expenses and payments					
Architectural and engineering fees	\$ 990,000	\$ 299,000			\$1,650,500
Project inspection fees					
Site work					
Demolition and removal					
Construction					
Equipment					
Miscellaneous					
Contingencies					
Project (program) income					