State of Utah

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SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

Project Number:_____
Date Received: January 12, 2016
Date to be presented to the WQB: January 27, 2016

WATER QUALITY BOARD
REQUEST FOR HARDSHIP GRANT FUND RESERVE
AUTHORIZATION

APPLICANT:	Coalville City 10 North Main PO Box 188 Coalville, Utah 84017 Telephone: 435-336-5981
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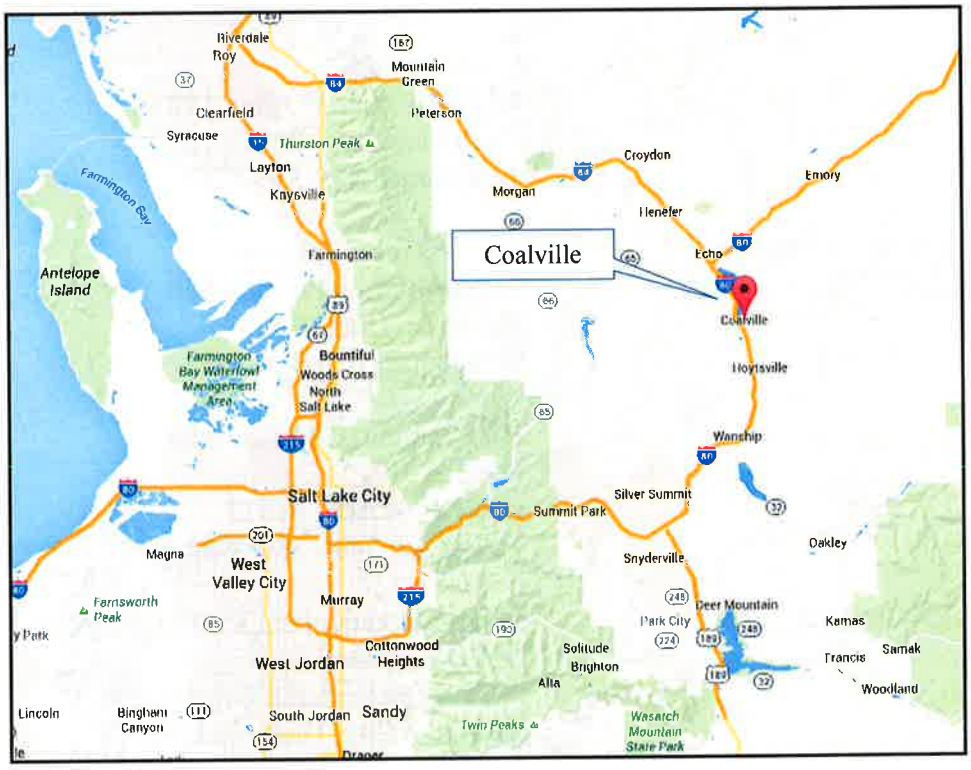
APPLICANT'S REQUEST:

Coalville City is requesting a hardship grant in the amount of **$100,000** to fund repairs to their South Lift Station and the purchase of a dedicated Biosolids Dump Truck.

APPLICANT'S LOCATION

Coalville City is located in Summit County approximately thirty miles north of Park City.



BACKGROUND

On August 28, 2013 the Water Quality Board authorized funding to Coalville City for the construction of a new wastewater treatment plant. Coalville City's existing wastewater treatment plant was nearly fifty years old and in need of significant repairs and upgrades. During the planning process the City discovered their treatment plant was actually located on property owned by the federal Bureau of Reclamation (BOR) and had been leased to the City on a fifty year lease. The BOR was unable to extend the lease or sell the City the land, so the City was left with no choice but to construct a new wastewater treatment plant. This new plant has now reached substantial completion and on September 23, 2015 the Water Quality Board and attended the ribbon cutting ceremony for the new treatment plant.

The United States Department of Agriculture's Office of Rural Development (USDA-RD) also invested in this project, partnering with the Water Quality Board to fully fund the project. The funding breakdown was as follows:

Funding Agency	Amount
WQB Grant	$ 4,121,000
WQB Loan	$ 1,144,000
USDA Loan	$ 2,856,000
USDA Grant	$ 3,665,000
Total:	**$ 11,786,000**

The bids for construction of the treatment plant were opened in July, 2013, and the low bid was $2 million over the City's budgeted amount. To reduce the overall project cost, the City decided to reduce their construction contingency from $975,000 to less than $350,000 (16% of construction costs to 4%).

Shortly after construction began, the City began experiencing catastrophic failures in their South Lift Station and the force main it services. The City didn't originally include upgrades to this lift station as part of the original project in an effort to contain costs and they thought they would still have sufficient service life left in it. However, over the next few months there were more failures and the City realized the lift station and force main would have to be upgraded.

The City immediately coordinated with USDA-RD and Water Quality to discuss these additional project needs. Both agencies recognized the importance and the need of repairing the lift station, particularly with the large investment already made, but with such a small contingency both USDA-RD and Water Quality staff were reluctant to include it at that time. It was decided the City would begin the necessary work (planning, design and environmental) to include the lift station and force main repairs into the project scope, but would wait until the project reached significant completion and see if there were sufficient funds remaining. The City has shrewdly managed their contingency budget ($131,000 remaining) and has also held off on the purchase of a dedicated biosolids dump truck (which was part of the original project scope) to help offset the costs of these repairs. USDA-RD has completed the environmental review and is able to fund most of cost of repairing the lift station and force main, but additional funds are needed. Coalville is asking the Water Quality Board to assist them with this funding requirement.

PROJECT NEED

The City is seeking additional funds for improvements to their South Lift Station and to purchase a dump truck to haul dewatered biosolids. The needs for the South Lift Station arose during construction of the new treatment plant and were not contemplated earlier. The City has been working with both funding agencies ever since the problems with the South Lift Station became apparent. The City has already completed the design, environmental work, and has revised its application with USDA-RD to incorporate this work into the project scope.

In late 2013 and early 2014, during the construction of the new treatment facility, the South Lift Station experienced a series of failures. First, one of the two pumps failed and was subsequently replaced. Shortly after this, the force main, which conveys sewage under I-80, experienced four failures in the

span of three months. The failures all occurred in the section between the lift station and the main highway, three of which occurred between the westbound off-ramp and the main highway. The City hired a contractor on an emergency basis to make repairs on the first two force main breaks. The next two breaks were repaired by the City's Public Works staff. During each repair it was found that the force main was badly corroded and the thickness of the pipe wall was compromised. It is believed that the higher head of the new pump may have triggered the breaks. There are no records available as to the design or construction of the lift station but it is estimated the station was installed in the early 1970's after development occurred on the west side of the highway. This would place the age of the lift station at about 45 years old. The City is very concerned that another break in the force main could occur at any time. In a worst case scenario, a break would occur under the highway or on/off-ramps or near the lift station where the spill could reach the nearby Weber River.

The piping and valves in the lift station wet well are also badly corroded and in disrepair. Since the pump replacement, the station now includes two different types of pumps. The City has spent in excess of $35,000 for these repairs and replacements and still does not have any confidence in the reliability of the station or force main. For the above reasons, the City needs to replace both the force main and the lift station. The force main would be replaced by a combination open cut and pipe bursting methods. The pipe bursting would be used for the area under the highway and on/off-ramps. The lift station replacement would convert the station from a submersible to a suction lift type station and reuse the existing concrete wet well.

The City is also in need of a dedicated truck for hauling biosolids. The scope of the original project included purchase of this truck, but the City elected to exclude it when the bids exceeded the budget. However, since the plant's startup in the July 2015, the City has been experiencing difficulty in trying to handle the dewatered biosolids with their existing equipment which consists of a flatbed truck and a dump trailer. The flatbed truck can only accommodate a relatively small amount of biosolids which requires frequent trips to the landfill and the low sides are a safety and transportation risk, as it is difficult to prevent spillage off the sides and back. The dump trailer has been problematic since the biosolids tend to freeze and then it is very difficult to remove. The City has been using a concrete blanket over the trailer to try and prevent freezing but with limited success. The City also needs the dump trailer for plowing snow and salting, so during winter it's impractical to try and accommodate both needs. It is a significant operational hardship to try and meet the needs of the treatment plant and the City's other Public Works projects without a dedicated vehicle.

PROJECT DESCRIPTION:

The City is looking to purchase a dedicated Biosolids Dump Truck and to make necessary improvements to the South Lift Station and force main.

IMPLEMENTATION SCHEDULE:

Advertise for Bids:	February 2016
Bid Opening:	March 2016
Commence Construction:	April 2016
Complete Construction:	**August 2016**

COST ESTIMATE:

Force Main	$	251,000
Lift Station Improvements	$	162,000
Biosolids Dump Truck	$	75,000
Engineering - Design	$	Done
Engineering - CMS	$	20,000
Contingency	$	27,000
Total	$	535,000

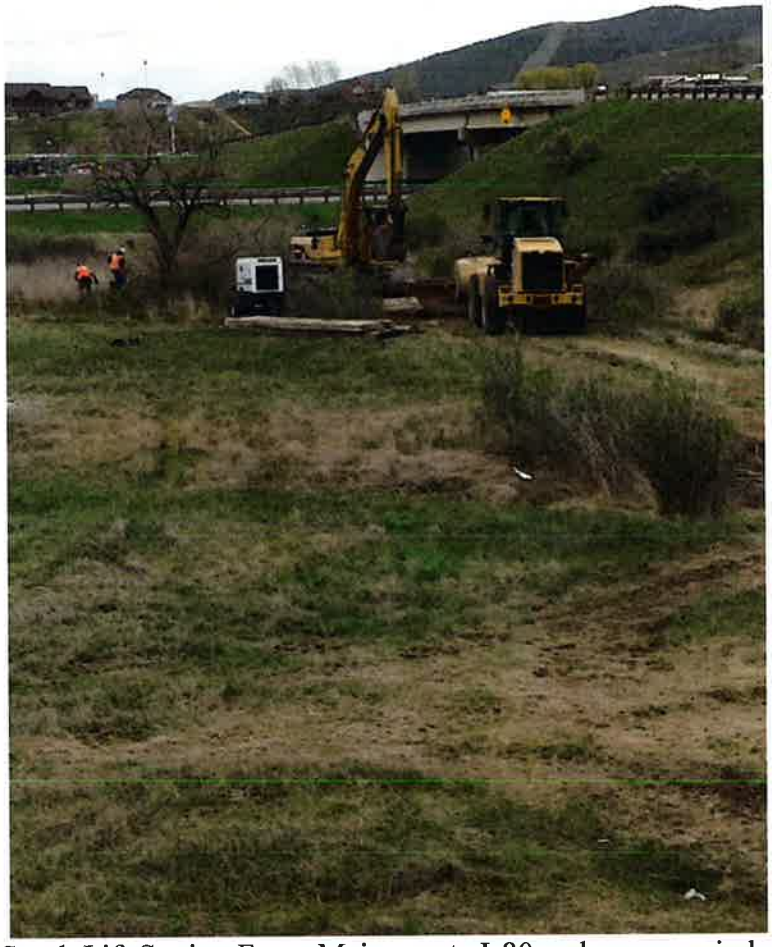
COST SHARING:

Balance left in Contingency	$	131,000
USDA-Rural Development	$	304,000
WQB	$	100,000
	$	535,000

STAFF COMMENTS AND RECOMMENDATION:

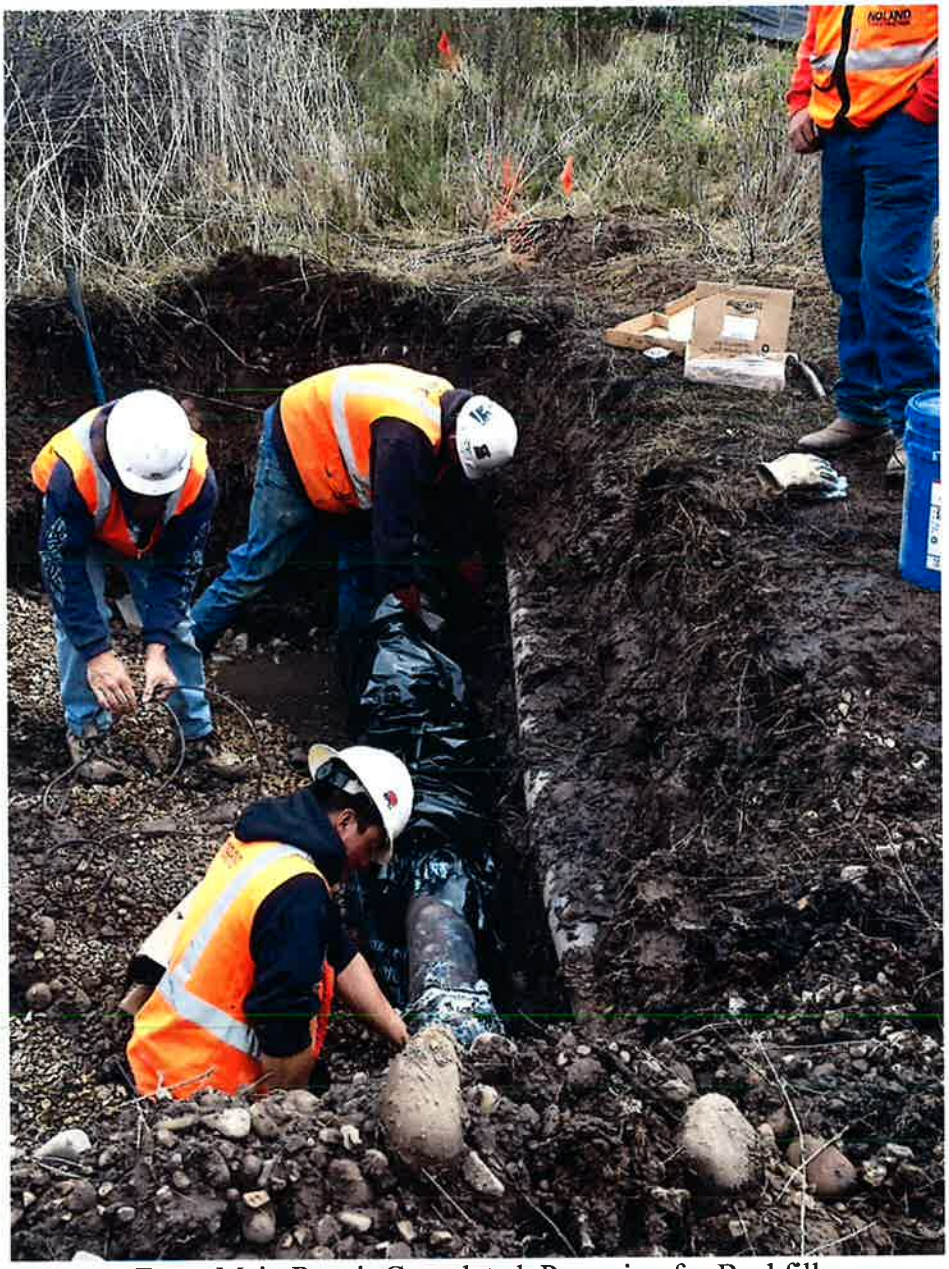
Staff recommends that the Board authorize $100,000 in grant to Coalville City.

SUPPORTING PHOTOS:

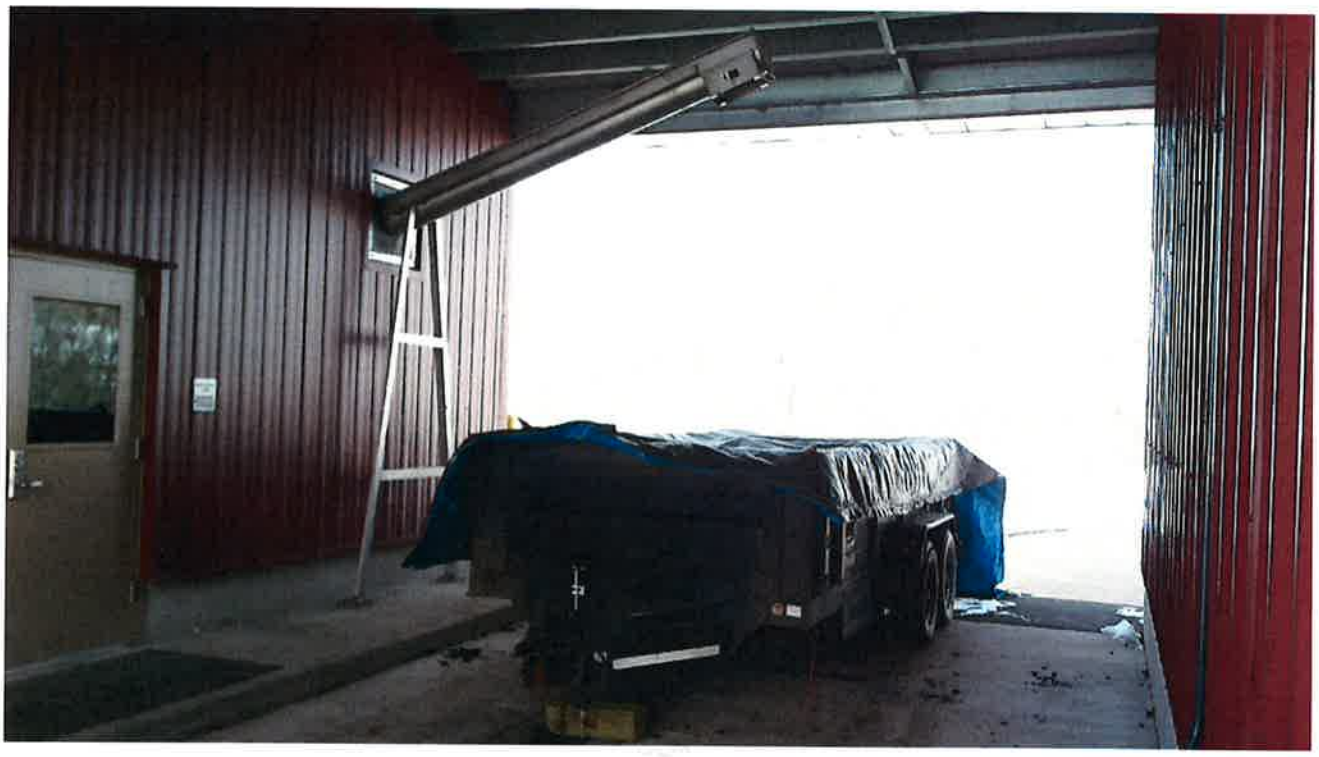


Repair of South Lift Station Force Main – note I-80 and overpass in background.

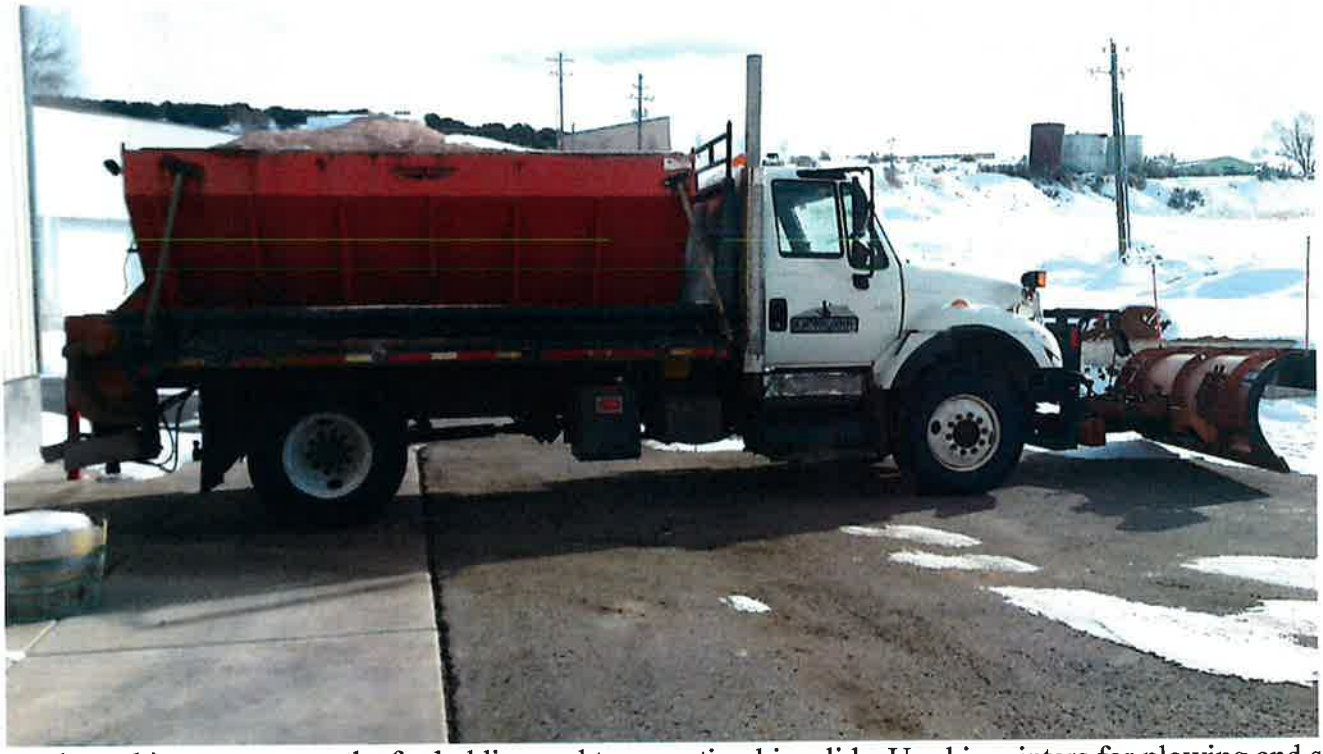
Break in force main. Preparing for repair.



Force Main Repair Completed, Preparing for Backfill



Images showing the equipment trailer used to hold and transport biosolids
(Note concrete blanket used to prevent freezing)



Dump truck used in warmer months for holding and transporting biosolids. Used in winters for plowing and salting. (Note the short walls on the bed not suitable for hauling biosolids)