

Agenda
Utah Board of Water Resources
Board Briefing Meeting

April 9, 2020
Tele-Conference Meeting
1:00 pm

The link to join the Briefing Meeting is: <https://youtu.be/aUK4dydk0cg>

- I. WELCOME/CHAIR'S REPORT
*Chair Blain Ipson

- II. DISCUSSION OF BOARD AGENDA ITEMS
(See Board Meeting Agenda)

- III. INFORMATION TO THE BOARD

- IV. OTHER ITEMS TO DISCUSS

Agenda
Utah Board of Water Resources
Board Meeting
April 9, 2020
2:00 PM
(Electronic Meeting)

Link to presentations & public comment form (Avail. 4/6, 4 PM - 4/9, 12 PM): water.utah.gov/comments
Livestream Link: <https://youtu.be/rJG4MnMxIIe>

APPROVAL OF MINUTES

<u>Proj. No.</u>	<u>Applicant</u>	<u>County</u>	<u>Proj. Manager</u>
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FEASIBILITY REPORTS:

RE434	Salem City	Utah	Marisa Egbert
RE432	Davis & Weber Counties Canal Company	Davis	Tom
Cox			

COMMITTAL OF FUNDS:

RE416	Davis & Weber Counties Canal Company	Davis	Tom
Cox			
RE422	M & M Irrigation Company	Sanpete	Jaqueline Pacheco
RE423	Riverton City	Salt Lake	Russell Hadley

SPECIAL ITEMS:

RE435	Bear River Canal Company (Auth. & Comm.)	Box Elder	Ben Maret
RC057	Ferron Canal & Reservoir Company (Add'l Funds)	Emery	Tom Cox

GOVERNOR'S WATER CONSERVATION TEAM [INTERLOCAL AGREEMENT]:

Motion to enter new agreement with partners - Marcie Larson

LAKE POWELL PIPELINE REPORT:

Motion to file water rights change application - Shalaine De Bernardi

DIRECTOR'S REPORT:

ADJOURNMENT

BOARD OF WATER RESOURCES
Feasibility Report



Applicant: **Salem City**

Project Number: RE434
Fund: Conservation and Development Fund
Cost Estimate: \$2,100,000

Application Received: 2/4/2020
Board Meeting Date: 3/18/2020

Board Member: Wayne Andersen
Project Manager: Marisa Egbert

Project Summary: The project includes the installation of about 1,900 secondary water meters throughout City's service area.

Recommendation: Staff recommends the board authorize 72.8% of the project cost, up to \$1,530,000, and that the bonded indebtedness be returned at 1% interest over 15 years with annual payments of approximately \$119,000 (including reserves).

Project Contacts:

Mayor:
Kurt Christensen
30 West 100 South
Salem, UT 84653
801-423-2770

City Engineer:
Bruce Ward
30 West 100 South
Salem, UT 84653
801-423-2770

Treasurer:
Tammy Beck
30 West 100 South
Salem, UT 84653
801-423-2770

Engineer:
Steve Jones
Hansen, Allen & Luce
859 W. South Jordan Parkway
Suite 200
South Jordan, UT 84095
801-566-5599



Location

The proposed project is located in Salem City in Utah County.

Introduction & Background

Salem City serves culinary water to about 2,500 connections (about 2,390 residential) through 72 miles of pipeline and five storage tanks (2.8 M gallons). Just under 2,300 of the residential connections use secondary water for outdoor irrigation.

The city received funding from the Board on three previous projects. Two projects included culinary storage tanks. These projects have been repaid. The most recent project included the installation of about 23 miles of pipeline for a pressurized irrigation system. The project will be repaid in 2036.

Existing Conditions & Problems

The city currently has a pressurized residential secondary irrigation system for nearly all of the residential connections. The city has installed meters on about 350 of the secondary connections. Due to realized reduction in water use when meters are installed, the city wants to install meters on all of the secondary connections.

Proposed Project

Currently, all but about 150 of the city's residential connections use the secondary system to irrigate lawns and gardens. About 350 of the secondary connections have meters installed. The project includes the installation of more than 1,900 secondary water meters throughout the city's service area. In an effort to save money, the city plans to have city personnel install the meters.

Benefits

The project is expected to reduce residential outdoor water use. The reduced use will allow the city to defer projects to expand the existing culinary water system. The project supports the city's water master plan.

Cost Estimate

The following cost estimate is based on the engineer's preliminary design and has been reviewed by staff:

Item	Description	Quantity	Unit	Unit Price	Total
1	Meters and fittings	1930	EA	\$515.50	\$995,000
2	Installation (city crews)	1	LS	320,000	320,000
3	Equipment purchase and use	1	LS	220,000	220,000
4	AMI System	1	LS	250,000	250,000
Construction Cost					\$1,785,000
Contingency					185,000
Design & Construction Engineering					50,000
Legal and Administrative					55,000
Environmental Compliance					25,000



TOTAL	\$2,100,000
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Cost Sharing & Repayment

The recommended cost sharing and repayment are:

Agency	Cost Sharing	% of Total
Board of Water Resources	\$1,530,000	72.8%
WaterSMART Grant	300,000	14.3
Applicant	270,000	12.9
TOTAL	\$2,100,000	100%

Staff recommends the board authorize 72.8% of the project cost, up to \$1,530,000, and that the bonded indebtedness be returned at 1% interest over 15 years with annual payments of approximately \$119,000 (including reserves).

Economic Feasibility

A benefit cost analysis would typically compare the cost of the proposed project to the cost of the alternative were the project not built. Municipalities and Water Districts that have installed secondary meters have realized a decrease in outdoor usage by as much as 30-40%, thus delaying the need for additional water development. It is in the best interests of the state for secondary connections to be metered. Therefore, the benefit/cost ratio for the metering project is assumed to be 1.0.

Financial Feasibility

The 2018 Median Adjusted Gross Income (MAGI) for Salem City is \$65,000. To determine the affordability for residential customers, the Board of Water Resources' Affordability Guideline is 1.4% of the MAGI. For Salem City, the affordability for the monthly cost of water is \$75.83. The following table indicates the current cost of water for Salem City. With the proposed funding, the city will stay under the Board's affordability guideline.

Water Cost	Annual Cost	Cost/Conn/Mo
Average Drinking Water Bill	-	\$31.00
Average Secondary Water Bill or Assessment	-	33.00
Property Tax for Water (2019)	-	5.87
Proposed Board of Water Resources Funding	\$119,000	4.15
TOTAL	-	\$74.02

Water Rights & Supply

The city has just under 3,400 acre-feet through contracts and shares of several other companies.

The city also has water rights shared with other canal companies. The water rights related to this project are as follows:



Water Right Number	Flow / Volume (cfs / ac-ft)	Canal Company
51-8533	312 ac-ft	East Jordan Irr Co
59-5948	315 ac-ft	Welby Jacob WUC
51-7160	140 ac-ft	East Jordan Irr Co
51-8759	176 ac-ft	Spanish Fork Irr Co

Environmental

The city will be required to complete an Environmental Compliance study in conjunction with the WaterSMART Grant provided by the US Bureau of Reclamation.

Water Conservation

Based on current usage and assuming a conservation rate of 15%, the project would conserve about 265 acre-feet. However, many systems that have installed secondary meters have seen as much as 30-40% reduction in use.

Applicant's Responsibilities

The applicant will be required to make all arrangements to sell the board a non-voted revenue bond, as well as verify it has adequate water rights and rights-of-way to construct the project. If the project is authorized, a full list of requirements and procedures necessary to close the bond will be furnished to the applicant.

Applicant: **Davis & Weber Counties Canal Company**

Project Number: RE432
Fund: Conservation and Development Fund
Cost Estimate: \$6,000,000

Application Received: 1/3/2020
Board Meeting Date: 3/18/2020

Board Member: Kyle Stephens
Project Manager: Tom Cox

Project Summary: The purpose of the project is to enclose approximately 3,400 feet of deteriorating lined and unlined canal and replace about 2,900 feet of corroding steel pipe with precast concrete box culvert or reinforced concrete pipe.

Recommendation: Staff recommends the board authorize 57.4% of the project cost, up to \$3,444,000, and that the project be purchased at 1.71% interest over 30 years with annual payments of approximately \$147,800.

Project Contacts:

President:
Scott Paxman
138 W. 1300 N.
Sunset, UT 84015
801-771-1677

Manager:
Rick Smith
138 W. 1300 N.
Sunset, UT 84015
801-774-6373

Engineer:
Bryce Wilcox, J-U-B Engineers
466 North Kays Drive
Kaysville, UT 84037
801-547-0393



Location

The proposed project is located in Clearfield, Layton and Sunset in Davis County.

Introduction & Background

Davis & Weber Counties Canal Company was organized in 1884 and is registered in good standing with the state Department of Commerce. It delivers approximately 60,000 acre-feet of water annually to its 40,000 acre service area, which includes wholesale water to Weber Basin Water Conservancy District, Roy Water Conservancy Sub-district, Syracuse City, and over 16,000 secondary irrigation connections and approximately 9,000 acres of farm ground. Over 2,400 secondary connections are metered and all new residential development is required to have meters installed. The applicant has recently received a \$300,000 WaterSMART grant to install an additional 600 secondary irrigation meters over the next two years.

Water is diverted from the Weber River and delivered primarily through the 17.2 mile-long Davis & Weber Canal. From 1980 through 2019, the board has committed approximately \$26.2 million to the applicant for canal improvements, and more than \$30.2 million for residential secondary irrigation systems in Clinton, Kaysville, Layton and West Point.

Existing Conditions & Problems

Construction on the Davis & Weber Canal began in 1884, with sections being concrete-lined starting in the 1910's. The applicant has created a list detailing the condition of each section of canal and prioritizing needed improvements. It has been active in upgrading the canal, and since 1995, over 75% of the canal has been replaced or rehabilitated.

Sections of the canal remain unlined or have deteriorating liner, and the open canal tends to collect trash and other debris. The unlined canal is also a potential safety hazard as it winds its way through developed areas. In some places the canal is higher than the adjacent ground and in others water from the canal seeps into nearby basements. The applicant is in the process of lining approximately 1,240 feet of canal using WaterSMART grants and its own funds. It has obtained a grant for this coming off-season and is in the process of applying for additional grant to enclose more canal starting in the fall of 2021.

Proposed Project

The proposed project is to enclose approximately 3,400 feet of deteriorating lined and unlined canal and replace about 2,900 feet of corroding steel pipe with precast concrete box culvert or reinforced concrete pipe. It is anticipated that construction will start fall 2020 and be completed before April 2023. Work can only be completed during the non-irrigation season. Technical assistance is being provided by J-U-B Engineers in Kaysville.

Benefits

The proposed project is estimated to conserve approximately 1,635 acre-feet of water annually, as well as reduce operation and maintenance costs by an estimated \$7,000. Most importantly, it will increase safety by eliminating an open canal and replacing an aging, damaged pipe.



Cost Estimate

The following cost estimate is based on the engineer’s preliminary design and has been reviewed by staff:

Item	Description	Quantity	Unit	Unit Price	Total
1	Mobilization	1	LS	\$100,000	\$100,000
2	Traffic Control	1	LS	45,000	45,000
3	Site Preparation	1	LS	150,000	150,000
4	Pipe Removal	3,685	LF	45	165,825
5	Precast Box Culvert	4,820	LF	700	3,374,000
6	Reinforced Concrete Pipe	1,500	LF	300	450,000
7	Turnouts	3	EA	40,000	120,000
8	Structures	1	LS	140,000	140,000
9	Restoration	1	LS	275,000	275,000
Construction Cost					\$4,819,825
Contingency					482,175
Design & Construction Engineering					650,000
Legal and Administrative					48,000
TOTAL					\$6,000,000

Cost Sharing & Repayment

The recommended cost sharing and repayment are:

Agency	Cost Sharing	% of Total
Board of Water Resources	\$3,444,000	57.4%
WaterSMART Grant	1,948,000	32.5
Applicant	608,000	10.1
TOTAL	\$6,000,000	100%

Execution of the WaterSMART grant is imminent for this fall’s construction season and additional grant has been awarded for work to begin in 2021.

Staff recommends the board authorize 57.4% of the project cost, up to \$3,444,000, and that the project be purchased at 1.71% interest over 30 years with annual payments of approximately \$147,800.

The applicant provides both agricultural and secondary irrigation water at an estimated 50/50 split; therefore, the interest rate is an average of the board’s 1% ag rate and 2.41% M&I target rate. Previous canal improvement projects from the C&D fund have had repayment terms of 30 years or more.



Economic Feasibility

The primary purpose of the proposed project is to increase safety in conveying water; therefore, it is assumed there is no legitimate project alternative and a benefit/cost ratio of 1.0 is assigned.

Financial Feasibility

Monetary benefits of the project include approximately \$7,000 in reduced operation and maintenance costs as well as the availability to use approximately 1,635 acre-feet of conserved water over its 40,000 acre service area.

Water Rights & Supply

The applicant holds dozens of water rights for Weber River diversions and wells to be used on over 40,000 acres. It also has storage rights of 28,000 acre-feet in East Canyon Reservoir and 29,000 acre-feet in Echo Reservoir. The board holds title to 21 of the applicant's major water rights from previous projects.

Easements

The proposed project will be constructed within the existing canal alignment; therefore, no additional easements will be needed.

Environmental

No long-term environmental impacts are foreseen due to the project.

Water Conservation

It is estimated that approximately 1,635 acre-feet of water will be conserved annually by the project which will be used in the applicant's service area.

Applicant's Responsibilities

If the board authorizes the proposed project, the applicant must do the following before a purchase agreement can be executed:

1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.
2. Pass a resolution by the appropriate majority (as defined in the company's Articles of Incorporation and Bylaws) authorizing its officers to do the following:
 - a. Assign properties, easements, and water rights required for the project to the Board of Water Resources.
 - b. Enter into a contract with the Board of Water Resources for construction of the project and subsequent purchase from the board.
3. Have an attorney give the Board of Water Resources a written legal opinion that:
 - a. The company is legally incorporated for at least the term of the purchase contract and is in good standing with the state Department of Commerce.
 - b. The company has legally passed the above resolution in accordance with the requirements of state law and the company's Articles of Incorporation and Bylaws.
 - c. The company has obtained all permits required for the project.
 - d. The company owns all easements and rights-of-way for the project, as well as the

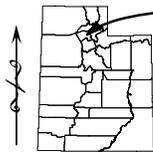


land on which the project is located, and that title to these easements, rights-of-way, and the project itself can be legally transferred to the Board.

- e. The company is in compliance with sections 73-10-33, 10-9a-211, and 17-27a-211 of the Utah Code governing management plans for water conveyance facilities.
4. Obtain approval of final plans and specifications from the Division of Water Resources.
5. Obtain letters from all outside financing agencies establishing their commitment of funds to the project.

Davis & Weber Counties Canal Company Proposed Canal Project

Davis County



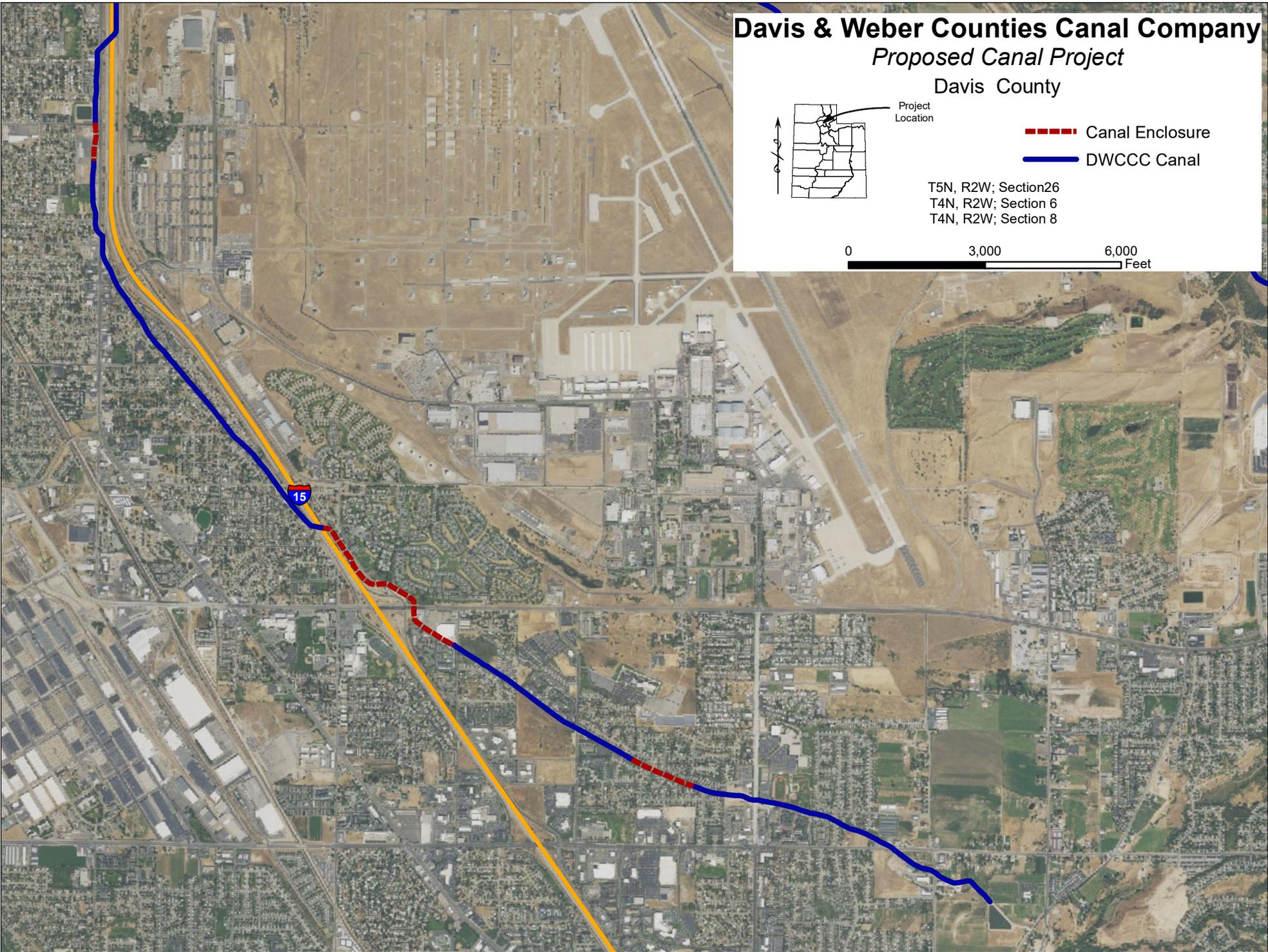
Project Location

--- Canal Enclosure

— DWCCC Canal

T5N, R2W; Section 26
T4N, R2W; Section 6
T4N, R2W; Section 8

0 3,000 6,000 Feet



Applicant: **Davis & Weber Counties Canal Company**

Project Number: RE416
Fund: Conservation and Development Fund
Total Cost: \$5,000,000

Application Received: 9/28/2018
Authorized: 12/6/2018
Board Meeting Date: 3/18/2020

Board Member: Kyle Stephens
Project Manager: Tom Cox

Project Summary: The purpose of the project is to install a pressure boosting station to the applicant's secondary irrigation system near Kaysville Reservoir to eliminate low pressure issues in west Kaysville.

Recommendation: Staff recommends the board commit 85% of the project cost, up to \$4,250,000, and that the project be purchased at 2.41% interest over 15 years, with annual payments of approximately \$341,000.

Project Contacts:

President:
Scott Paxman
138 W. 1300 N.
Sunset, UT 84015
801-771-1677

Manager:
Rick Smith
138 W. 1300 N.
Sunset, UT 84015
801-774-6373

Engineer:
Nate Smith - J-U-B Engineers
466 North Kays Drive
Kaysville, UT 84037
801-547-0309



Location

The proposed project is located in Kaysville City in Davis County.

Project Summary

In December 2018, the board authorized funds for a project to install a pressure boosting station on the applicant's secondary irrigation system near Kaysville Reservoir to eliminate low pressure issues in west Kaysville.

The applicant did not obtain its preferred pump station site due to excessive property cost. Utilizing an alternative site and the resulting project changes, as well as increases in construction cost over the year since the project was authorized, have driven up the project cost.

Cost Estimate & Sharing

The authorized and proposed cost estimate and sharing are as follows:

Agency	Authorized Cost Sharing	% of Total	Proposed Cost Sharing	% of Total
Board of Water Resources	\$3,400,000	85%	\$4,250,000	85%
Applicant	600,000	15	750,000	15
TOTAL	\$4,000,000	100%	\$5,000,000	100%

Repayment

The project was authorized with terms of 3% interest over 10 years with annual payments of approximately \$398,600. Since authorization, staff has changed its way of calculating funding terms from the set 3% interest rate to one based on a bond index which is currently 2.41%. The minimum repayment term was also extended from 10 to 15 years.

Staff recommends the board commit 85% of the project cost, up to \$4,250,000, and that the project be purchased at 2.41% interest over 15 years, with annual payments of approximately \$341,000.

Applicant: **M & M Irrigation Company**

Project Number: RE422
Fund: Revolving Construction Fund
Total Cost: \$1,883,000

Application Received: 3/12/2019
Authorized: 6/20/2019
Board Meeting Date: 3/18/2020

Board Member: Blaine Ipson
Project Manager: Jaqueline Pacheco

Project Summary: The purpose of the project is to replace 3.5 miles of canal with 30-inch HDPE pipe and install a SCADA system and metering devices at each pipe outlet along the pipeline.

Recommendation: Staff recommends the board commit 47.1% of the project cost, up to \$886,000, and that the project be purchased at 0% interest over 25 years, with annual payments of approximately \$35,500.

Project Contacts:

President:
Frank Eliason
P.O. Box 447
Moroni, UT 84646
435-469-0374

Secretary:
Troy Prestwich
P.O. Box 66
Moroni, UT 84646
435-851-6977

Engineer:
Tyler Faddis
Jones & Demille Engineering
50 South Main, Suite #4
Manti, UT 84642
435-835-4540



Location

The proposed project is located four miles north of Mount Pleasant in Sanpete County.

Project Summary

The purpose of the project is to replace 3.5 miles of earthen canal with 30-inch HDPE pipe and install a SCADA system and metering devices at each pipe outlet along the pipeline. This will reduce seepage losses, allow better management of deliveries, and create a pressurized system to enable on-farm improvements.

Cost Estimate & Sharing

The cost estimate and sharing remain as authorized:

Agency	Authorized Cost Sharing	% of Total
Board of Water Resources	\$886,000	47.1%
WaterSMART Grant	841,000	44.7
Applicant	156,000	8.3
TOTAL	\$1,883,000	100%

Repayment

Staff recommends the board commit 47.1% of the project cost, up to \$886,000, and that the project be purchased at 0% interest over 25 years, with annual payments of approximately \$35,500.

Applicant: Riverton City

Project Number: RE423
Fund: Conservation and Development Fund
Total Cost: \$15,600,000

Application Received: 3/17/2019
Authorized: 6/20/2019
Board Meeting Date: 3/18/2020

Board Member: Juliette Tennert
Project Manager: Russell Hadley

Project Summary: The purpose of the project is to install secondary water meters on all 10,200 customer connections. This will conserve approximately 3,000 ac-ft and will help stretch existing secondary supplies to satisfy build-out conditions.

Recommendation: Staff recommends the board commit 76.8% of the project cost, up to \$11,985,000, and that the bonded indebtedness be returned at 1% interest over 15 years with annual payments of approximately \$929,000 (includes reserves).

Project Contacts:

Mayor:
Trent Staggs
12830 S. Redwood Rd.
Riverton, UT 84065
801-208-3129

Secondary Contact:
Duane Green
12830 S. Redwood Rd.
Riverton, UT 84065
385-222-9390

Engineer:
Dan Woodbury, P.E.
12830 S. Redwood Rd.
Riverton, UT 84065
801-208-3169



Location

The proposed project is located in Riverton City in Salt Lake County.

Project Summary

The purpose of the project is to install secondary water meters on all 10,200 customer connections. This will conserve approximately 3,000 ac-ft and will help stretch existing secondary supplies to satisfy build-out conditions. The project will be constructed over 3 years with about 1/3 of the meters installed per year.

Since the project was authorized, the sponsor has obtained a \$1.5 million WaterSmart Grant. The original cost estimate was also increased to reflect more recent construction costs.

Cost Estimate & Sharing

The proposed cost estimate and sharing remain are as follows:

Agency	Authorized Cost Sharing	% of Total	Proposed Cost Sharing	% of Total
Board of Water Resources	\$11,985,000	85%	\$11,985,000	76.8%
WaterSmart Grant			1,500,000	9.6
Applicant	2,115,000	15%	2,115,000	13.6
TOTAL	\$14,100,000	100%	\$15,600,000	100%

Repayment

Staff recommends the board commit 76.8% of the project cost, up to \$11,985,000, and that the bonded indebtedness be returned at 1% interest over 15 years with annual payments of approximately \$929,000 (includes reserves).

BOARD OF WATER RESOURCES
Special Item: Feasibility & Committal of Funds



Applicant: **Bear River Canal Company**

Project Number: RE435
Fund: Revolving Construction Fund
Cost Estimate: \$112,000

Application Received: 2/5/2020
Board Meeting Date: 3/18/2020

Board Member: Charles Holmgren
Project Manager: Ben Marett

Project Summary: The purpose of the project is to replace 2,000 feet of ditch with pipe, replace the existing spill structure, and install a new flow measurement device and telemetry station.

Recommendation: Staff recommends the board authorize and commit 75.9% of the project cost, up to \$85,000, and that the project be purchased at 0% interest over 15 years with annual payments of approximately \$5,700.

Project Contacts:

President:
Jeff Hardy
275 N. 1600 E.
Tremonton, UT 84337

Secretary:
Bob Roche
275 N. 1600 E.
Tremonton, UT 84337
435-452-1446

Engineer:
Chris Slater - J-U-B Engineers
1047 S 100 W Ste. 180
Logan, UT 84321
435-713-9514



Location

The proposed project is located about four miles south of Honeyville in Box Elder County.

Introduction & Background

The Bear River Canal Company diverts water from Cutler Dam to serve approximately 66,000 acres. Water is delivered through 130 miles of transmission canals stretching from Fielding in the north to Brigham City in the south. In addition to the agricultural land, the system provides water for lawns and gardens to most homes in the area and to recreational facilities, schools, and two golf courses.

Hammond East Canal is operated by the applicant and delivers water from its diversion works at Cutler Dam to agricultural land east of the Bear River. The applicant has worked in conjunction with the Division of Water Resources on previous projects to line and pipe portions primarily of the Hammond East Canal. These measures proved to be highly effective in preventing seepage loss making it possible for the applicant to provide water to shareholders on the lower reaches of the canal.

Existing Conditions & Problems

Previous piping and EPDM liner projects have significantly reduced seepage losses in Hammond East Canal. The greater availability of water due to these project have made it possible for the applicant to meet its water delivery obligations to shareholders who rely on this canal. Despite the success of these projects, it remains difficult for the applicant to provide water to those shareholders located at the southernmost reaches of the canal. Additional measures to prevent water loss through seepage would further increase water availability and delivery reliability at the end of the canal.

Proposed Project

The applicant has proposed a project which would further reduce seepage losses from Hammond East Canal to increase the reliability of water delivery to the end of the canal. The project includes replacing approximately 2,000 feet of ditch with pipe, replacing the existing spill structure, and installing new flow measurement and telemetry equipment.

Benefits

The pipeline included in the proposed project will effectively seal the canal and prevent water loss occurring in that stretch. The water conserved will increase the quantity and reliability of water delivery to shareholders at the end of the canal. The flow measurement and telemetry equipment will enable the applicant to monitor and control the flow of water remotely. This will increase the overall efficiency of the system. The new spill structure will further prevent the unintended release of water and increase efficiency of the system.

Cost Estimate

The following cost estimate is based on the engineer's preliminary design and has been reviewed by staff:



Item	Description	Quantity	Unit	Unit Price	Total
1	Turnout Box with Headgate	2	EA	\$4,000	\$8,000
2	18" HDPE pipe	2,000	LF	\$19	\$38,000
3	18" HDPE Elbow	4	EA	\$440	\$1,800
4	Import Material	850	TN	\$15	\$12,800
5	Transition Structure - end	1	EA	\$5,000	\$5,000
6	Transition Structure - start	1	EA	\$4,600	\$4,600
7	Weir & Overflow Structure	1	LS	\$10,000	\$10,000
8	Telemetry Equipment	1	LS	\$5,000	\$5,000
Construction Cost					\$85,200
Contingency					\$9,800
Design & Construction Engineering					\$15,000
Legal & Administrative					\$2,000
TOTAL					\$112,000

Cost Sharing & Repayment

The recommended cost sharing and repayment are:

Agency	Cost Sharing	% of Total
Board Share	\$85,000	75.9%
Applicant Share	\$27,000	24.1%
TOTAL	\$112,000	100%

Staff recommends the board authorize and commit 75.9% of the project cost, up to \$85,000, and that the project be purchased at 0% interest over 15 years with annual payments of approximately \$5,700.

Financial Feasibility

The applicant expects crop types to be shifted toward alfalfa as water delivery becomes more reliable as a result of the proposed project. It is also expected that crop yields will increase. The economic return for the project was estimated using crop acreages, yields, and current crop prices. Using these values, the annual economic return for the project is estimated to be approximately \$17,000. Additionally, the applicant expects an annual O&M reduction of approximately \$1,000. The total financial benefit of the project is estimated to be approximately \$18,000 annually.

Benefit	Amount
Estimated Annual Net Increased Crop Income	\$18,000
Reduced Operation & Maintenance Costs	1,000
NET ANNUAL BENEFIT	\$19,000



Water Rights & Supply

The Board of Water Resources has taken 100% interest in water rights 29-2856, 29-2857, and 29-2858 as part of recent and ongoing projects with the Bear River Canal Company. Water right 29-2633 represents approximately 14,500 acre-feet of water storage in Cutler Reservoir.

Water Right Number	Flow / Volume (cfs / ac-ft)
29-2633	14496.64 ac-ft
29-2856	333 cfs / 10,0031.544 ac-ft
29-2857	133 cfs
29-2858	43 cfs

Easements

No additional easements will need to be obtained for the proposed project beyond those which are already held by the applicant.

Environmental

The proposed project will reduce groundwater seepage from Hammond East Canal. This could potentially affect vegetation or wetlands that may have grown or developed as a result of the seepage losses.

Water Conservation

According to a seepage loss study performed by JUB Engineers approximately 262 acre-feet of water are lost to seepage in the project area every year. Piping the canal will prevent this water from percolating through the canal bed making it available for use to shareholders downstream of this point in the canal.

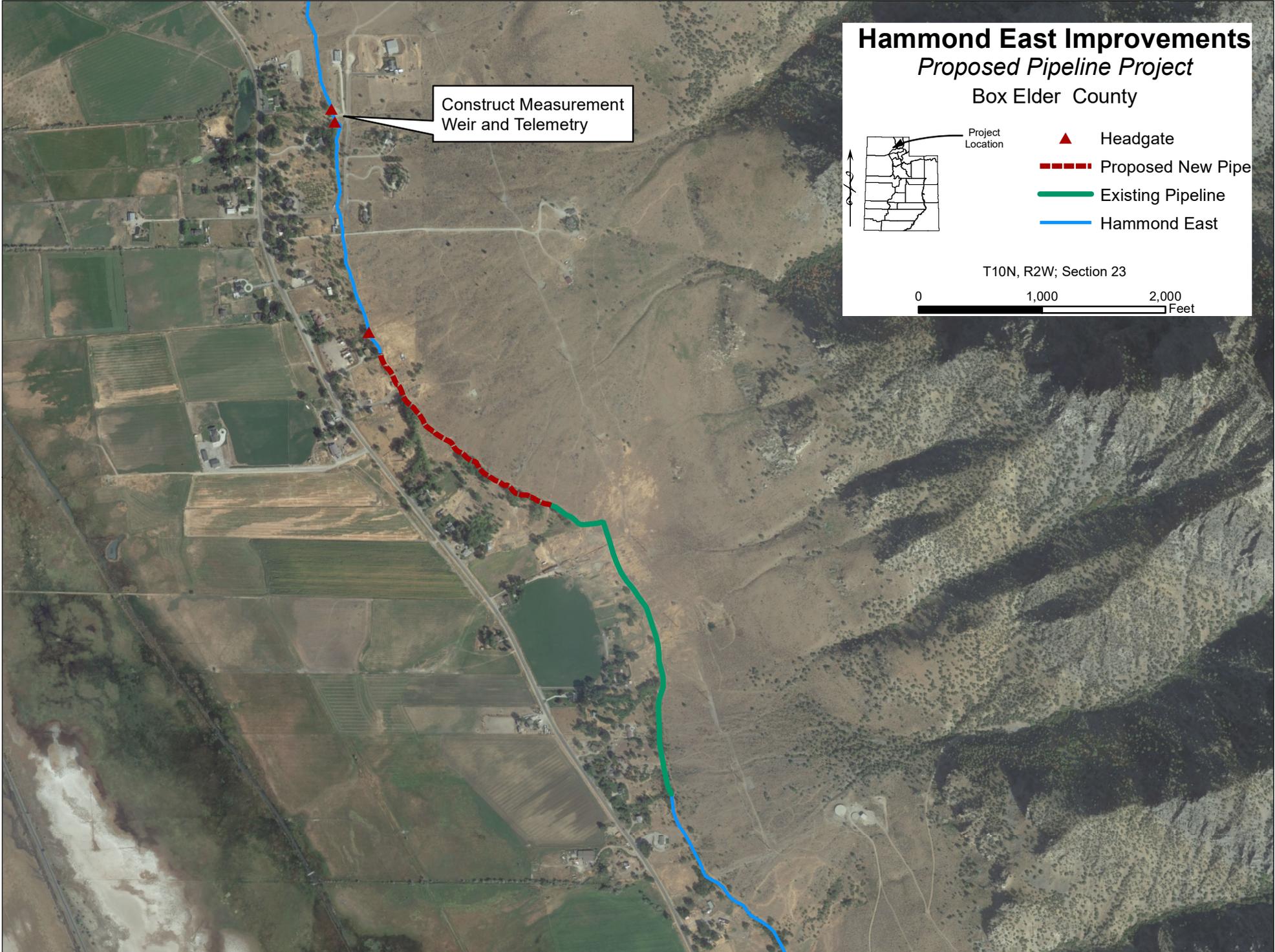
Applicant's Responsibilities

If the board authorizes the proposed project, the applicant must do the following before a purchase agreement can be executed:

1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.
2. Pass a resolution by the appropriate majority (as defined in the company's Articles of Incorporation and Bylaws) authorizing its officers to do the following:
 - a. Assign properties, easements, and water rights required for the project to the Board of Water Resources.
 - b. Enter into a contract with the Board of Water Resources for construction of the project and subsequent purchase from the board.
3. Have an attorney give the Board of Water Resources a written legal opinion that:
 - a. The company is legally incorporated for at least the term of the purchase contract and is in good standing with the state Department of Commerce.
 - b. The company has legally passed the above resolution in accordance with the requirements of state law and the company's Articles of Incorporation and Bylaws.
 - c. The company has obtained all permits required for the project.



- d. The company owns all easements and rights-of-way for the project, as well as the land on which the project is located, and that title to these easements, rights-of-way, and the project itself can be legally transferred to the Board.
 - e. The company's water rights applicable to the project are unencumbered and legally transferable to the Board of Water Resources, and that they cover the land to be irrigated by the project.
 - f. The company is in compliance with sections 73-10-33, 10-9a-211, and 17-27a-211 of the Utah Code governing management plans for water conveyance facilities.
4. Submit or update a water conservation plan for its service area, and obtain approval of it from the Division of Water Resources.
 5. Obtain approval of final plans and specifications from the Division of Water Resources.



Hammond East Improvements

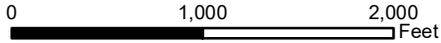
Proposed Pipeline Project

Box Elder County



- Project Location
- ▲ Headgate
- Proposed New Pipe
- Existing Pipeline
- Hammond East

T10N, R2W; Section 23



Construct Measurement Weir and Telemetry

BOARD OF WATER RESOURCES
Special Item - Additional Dam Safety Funds



Applicant: **Ferron Canal & Reservoir Company**

Project Number: RC057
Fund: Revolving Construction and Conservation & Development Funds
Total Cost: \$37,200,000

Application Received: 1/25/2017
Committed: 3/22/2017
Board Meeting Date: 3/18/2020

Board Member: Norman L. Johnson
Project Manager: Tom Cox

Project Summary: The purpose of the project is to rehabilitate Millsite Dam to bring it into compliance with current dam safety standards.

Recommendation: Staff recommends the board commit an additional \$3,000,000 in dam safety grant from the Revolving Construction Fund, and that the contract be amended to state the board will provide 40.2% of the project cost, up to \$11,570,000. Staff also recommends the board commit 40.2% of the project cost remaining after the grant funds are expended, up to \$3,370,000 as a loan from the Conservation and Development Fund. The loan will be returned at 0.1% interest with one lump-sum principal payment of approximately \$3,370,000 to be paid no later than 2031. Interest only payments will be made annually until the loan is repaid. The board will commit additional dam safety grant funds to pay off the loan as soon as it is reasonably available but no later than 2030.

Project Contacts:

President:
Tracy Behling
PO Box 963
Ferron, UT 84523
435-384-2990

Secondary Contact:
John Crawford
PO Box 963
Ferron, UT 84523
435-384-2457

Engineer:
Division of Water Resources
1594 West North Temple
Salt Lake City, UT 84116
801-538-7270



Location

The proposed project is located three miles west of Ferron in Emery County.

Project Summary

The purpose of the project is to rehabilitate Millsite Dam to bring it into compliance with current dam safety standards. The project includes replacing liquefiable soils at the downstream toe of the dam with engineered fill, flattening of the downstream slope, constructing a stability berm, installing chimney and toe drains, extending the outlet works, replacing the spillway and installing monitoring instrumentation.

Construction began in the summer of 2017 and was expected to be complete in December 2018; however, a deficiency was discovered in the spillway design which has delayed work, and it has taken longer than anticipated for the contractor to complete embankment work. Although work continues and the majority has been completed, it is now anticipated that the project may not be finished until Spring 2021. Those issues and other change orders and expenses related to an extended construction period have driven project costs up.

Cost Estimate & Sharing

At the time funds were committed, it was assumed there would be enough NRCS funds to pay for 100% of engineering costs and 65% of construction. As such, engineering expenses were not included in the cost estimate presented to the board.

The NRCS has indicated it has very limited additional funds available at this time (over the \$20.09 million currently committed) to contribute to the project, therefore an estimated \$6,370,000 more board funds are needed. That amount of grant money is not available at this time; however, the applicant is willing to take out a low interest loan with the board to cover the difference until the balance of grant is available. The intent is for the board to commit \$3 million in grant at this time. Additional grant will be committed once it is reasonably available to pay off the loan.

The board will continue to provide 90% of the non-NRCS grant project cost amount and the applicant will continue to supply its cost share (10% of the non-NRCS grant amount) in the form of donated materials and cash.

As shown below, the project cost has increased from \$27.2 million (without engineering) to \$37.2 million (including engineering charges of approximately \$5.9 million). The committed and proposed cost sharing are:

Agency	Committed Cost Sharing (w/o Engineering)	% of Total	Proposed Cost Sharing (with Engineering)	% of Total
BWRe Grant and Loan	\$8,570,000	31.5%	\$14,940,000	40.2%
NRCS – Grant	17,680,000	65	20,600,000	55.4
Applicant	950,000	3.5	1,660,000	4.4
TOTAL	\$27,200,000	100%	\$37,200,000	100%



Staff recommends the board commit an additional \$3,000,000 in dam safety grant from the Revolving Construction Fund, and that the contract be amended to state the board will provide 40.2% of the project cost, up to \$11,570,000. Staff also recommends the board commit 40.2% of the project cost remaining after the grant funds are expended, up to \$3,370,000 as a loan from the Conservation and Development Fund. The loan will be returned at 0.1% interest with one lump-sum principal payment of approximately \$3,370,000 to be paid no later than 2031. Interest only payments will be made annually until the loan is repaid. The board will commit additional dam safety grant funds to pay off the loan as soon as it is reasonably available but no later than 2030.