

Amended

A G E N D A

UTAH BOARD OF WATER RESOURCES

Department of Natural Resources  
Auditorium  
1594 W. North Temple  
Salt Lake City, Utah

August 11, 2016

1:00 p.m.

1. CALL TO ORDER
2. APPROVAL OF MINUTES - June 23, 2016
3. CHAIR'S REPORT
4. FEASIBILITY REPORTS  
E379 East Wanship Irr. Co. Summit  
E380 Blanding Irr. Co. San Juan  
E384 Scipio Irr. Co. Millard
5. COMMITMENT OF FUNDS  
L575 Beaver City Beaver  
E362 Moon Lake Water Users Assoc. Duchesne  
E367 Lower Marion Pipeline Co. Summit
6. SPECIAL ITEM REPORTS  
E340 Coop Farm Irr. Co. (Withdrawal) Weber
7. DAM SAFETY FUNDING  
C048 North Utah County WCD (Silver Lake Flats) Utah  
C052 North Utah County WCD (Tibble Fork) Utah  
C053 North Utah County WCD (Battle Creek) Utah  
C054 North Utah County WCD (Grove Creek) Utah
8. LAKE POWELL PIPELINE PROJECT REPORT  
Request for Funds - Bureau of Reclamation
9. WATER USE & CONSERVATION REPORT
10. DIRECTOR'S REPORT
11. ADJOURNMENT

**BRIEFING MEETING AGENDA**

**UTAH BOARD OF WATER RESOURCES**

Division of Water Resources  
Room 314  
1594 W. North Temple  
Salt Lake City, Utah

August 11, 2016

10:00 a.m.

- I. WELCOME/CHAIR'S REPORT Chairman Lemmon
  
- II. DISCUSSION OF PROJECTS
  
- III. OTHER ITEMS

**BOARD OF WATER RESOURCES**

**REVOLVING CONSTRUCTION FUND**

**Funding Status  
August 11, 2016**

Funds Available for Projects This FY \$ 12,858,000

---

**Projects Contracted This FY**

1 None	\$	-	
Total Funds Contracted			\$ -
Funds Balance			\$ 12,858,000

**Projects with Funds Committed**

1 Daniel Irrigation Co	E370		\$	240,000	
* 2 Lower Marion Pipeline Company	E367			986,000	
3 Marion Waterworks Co	E322			247,000	
* 4 Moon Lake Water Users Association	E362			403,000	
* 5 North Utah County WCD (Silver Lake Flat, add)	C048	**Grant		134,000	
* 6 North Utah County WCD (Tibble Fork, add)	C052	**Grant		488,000	
* 7 North Utah County WCD (Battle Creek)	C053	**Grant		788,000	
* 8 North Utah County WCD (Grove Creek)	C054	**Grant		638,000	
9 Ouray Park Irrigation Co (Cliff Lake)	C047	**Grant		968,000	
10 Ouray Park Irrigation Co (Cliff Lake)	C047	**		107,000	
11 Rockville Town Ditch Co	E313			145,000	
Total Funds Committed					\$ 5,144,000
Funds Balance					\$ 7,714,000

**Projects Authorized**

* 1 Blanding Irrigation Co	E380		\$	404,000	
* 2 East Wanship Irrigation Co	E379			616,000	
3 Ephraim Irrigation Co	E361			497,000	
4 Salem Pond Co	E329			93,000	
5 Silver Creek Reservoir Co	E381			500,000	
Total Funds Authorized					\$ 2,110,000
Remaining Funds Available					# \$ 5,604,000

\* To be presented at Board Meeting  
\*\* Dam Safety Projects

# End of year balance if all listed projects were fully paid

**BOARD OF WATER RESOURCES**

**CITIES WATER LOAN FUND**

**Funding Status  
August 11, 2016**

Funds Available for Projects This FY		\$ 9,715,000
--------------------------------------	--	--------------

<b>Bonds Closed This FY</b>
-----------------------------

1 None		\$ -	
Total Bonds Closed		\$ -	
Funds Balance		\$ 9,715,000	

<b>Projects with Funds Committed</b>
--------------------------------------

* 1 Beaver City	L575		\$ 315,000	
Total Funds Committed			\$ 315,000	
Funds Balance			\$ 9,400,000	

<b>Projects Authorized</b>
----------------------------

1 Duchesne County WCD	E334		\$ 3,000,000	
2 Herriman City	E344		4,930,000	
Total Funds Authorized			\$ 7,930,000	
Remaining Funds Available			# \$ 1,470,000	

\* To be presented at Board Meeting

# End of year balance if all listed projects were fully paid

**BOARD OF WATER RESOURCES**

**CONSERVATION & DEVELOPMENT FUND**

**Funding Status  
August 11, 2016**

Funds Available for Projects This FY \$ 40,179,000

---

**Projects Contracted/Bonds Closed This FY**

1 None	\$	-
Total Funds Contracted/Closed		\$ -
Funds Balance		\$ 40,179,000

**Projects with Funds Committed**

1 Summit Creek Irrigation and Canal Co (Phase 3) E308	\$	502,000
Total Funds Committed		\$ 502,000
Funds Balance		\$ 39,677,000

**Projects Authorized**

1 Benson Irrigation Co E378	\$	1,424,000
2 Box Elder Cnty & Perry City Flood Control Dist E223		660,000
3 Brooklyn Canal Co E223		1,000,000
4 Fremont Irrigation Co E279		8,177,000
5 Manti City Creek Water Users Mutal Assoc. E342		1,606,000
6 Rock Point Canal Co E368		615,000
* 7 Scipio Irrigation Co E384		1,700,000
8 Settlement Canyon Irrigation Co (Phase 2) E240R2		552,500
9 Summit Creek Irrigation and Canal Co (Phase 4) E308		1,200,000
10 Uintah WCD E316		36,550,000
11 Weber Basin WCD (Phase 5+) E225		7,000,000
12 Whiterocks Irrigation Co E375		1,785,000
13 Woodruff Irrigating Co E365		3,200,000
Total Funds Authorized		\$ 65,470,000
Remaining Funds Available		# \$ (25,793,000)

\* To be presented at Board Meeting  
\*\* Dam Safety Projects

# End of year balance if all listed projects were fully paid

**BOARD OF WATER RESOURCES**

**August 11, 2016**

**ADDITIONAL ACTIVE PROJECTS**

Sponsor	No.	Fund	Est. Board Cost	Total Cost
1 Sanpete WCD (Narrows Dam)	D377	C&D	\$29,325,000	\$ 34,500,000
2 Kane County WCD	D828	C&D	1,500,000	2,000,000
3 Weber Basin WCD (Secondary, Ph 3-5)	E029R3+	C&D	21,639,000	25,816,000
4 Hooper Irrigation Co (Press Irr, Ph 3+)	E060R3+	C&D	11,033,000	12,980,000
5 East Juab County WCD	E071	C&D	425,000	500,000
6 Parowan City (Bond Ins Grant)	E121	C&D	34,000	2,034,000
7 Fremont Irrigation Co	E131	C&D	1,500,000	2,000,000
8 Fountain Green Irrigation Co (Flow Augment)	E186	RCF	75,000	100,000
9 Corinne City	E216	C&D	80,000	100,000
10 Weber Basin WCD	E312	C&D	85,000,000	100,000,000
11 South Willard Water Co	E317	C&D	1,700,000	2,000,000
12 Ferron Canal & Reservoir Co	E320	C&D	2,720,000	3,200,000
13 Fountain Green Co-op Well	E328	RCF	255,000	300,000
14 La Sal Irrigation Co	E354	C&D	1,530,000	1,800,000
15 New Fayette Irrigation Co	E360	C&D	850,000	1,000,000
16 Wellsville-Mendon Conservation District	E364	C&D	680,000	800,000
17 Washington County Flood Control Authority	C049	RCF	970,000	3,077,000
18 Washington County Flood Control Authority	C050	RCF	582,000	1,847,000
19 Washington County Flood Control Authority	C051	RCF	473,000	1,500,000
20 Highline Canal Co	E372	C&D	3,087,000	13,942,000
21 Ashley Upper Irrigation Co	E373	C&D	5,255,000	13,942,000
22 Mosby Irrigation Co	E374	RCF	331,000	4,379,000
23 Silver Creek Reservoir Co	E381	RCF	500,000	1,090,000
24 Spanish Fork South Irrigation Co	E382	RCF	885,000	1,185,000
25 O.T. Hicken Ditch Co	E383	RCF	430,000	990,000
26 Woodruff Irrigation Co	E385	C&D	5,000,000	6,885,000
27 North Elwood Ditch Co	E386	RCF	170,000	200,000
28 West Warren and Warren Water Imp. Dist.	E387	C&D	2,975,000	3,500,000
Subtotal			\$179,004,000	\$ 241,667,000

\* New Application

**INACTIVE PROJECTS**

Long Term Large Water Conservation Projects

1 Wayne County WCD	D494
2 Cedar City Valley Water Users	D584
3 Bear River WCD	D738
4 Central Utah WCD (Prepay FY98,99,00)	D960
5 Woodruff Irr Co (Woodruff Cr Dam Enlargement)	E059

BOARD OF WATER RESOURCES

Feasibility Report

Revolving Construction Fund

Appl. No.: **E-379**  
Received: 1/15/16  
Approved: 2/11/16

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: ***EAST WANSHIP IRRIGATION COMPANY***

President: D.A. Pace

LOCATION: The proposed project is located three miles south of Coalville in Summit County.

EXISTING CONDITIONS & PROBLEMS: The sponsor delivers irrigation water to 25 shareholders irrigating 298 acres of agricultural land. The sponsor's ditch was constructed in 1861 and contains very porous soil that leads to significant water loss throughout the system. A 2015 water loss study conducted by the NRCS determined that segments of the ditch lose up to 68% of the ditch flow. The ditch broke in two locations in 2015, causing interrupted water delivery and damage to adjacent fields. The sponsor is responsible for maintenance of the ditch, which requires the use of chemical treatment for grass and algae during the irrigation season.

PROPOSED PROJECT: The sponsor is requesting financial assistance from the board to replace approximately 3.2 miles of open ditch with 16-inch pressurized pipe beginning at the base of Rockport Reservoir. The project will conserve about 915 acre-feet annually. J-U-B Engineers, Inc. will provide design and construction engineering services.

The project fits in Prioritization Category 3 (agricultural water projects that provide a significant economic benefit for the local area).

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

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u> <u>Price</u>	<u>Amount</u>
1.	Mobilization	LS	\$50,000	\$ 50,000
2.	16" HDPE DR26 Pipe	13,700 LF	41	561,700
3.	16" HDPE DR21 Pipe	3,000 LF	44	132,000
4.	Connection	1 EA	5,000	5,000
5.	Turnouts	17 EA	2,000	34,000
6.	Imported Backfill	1,000 TN	20	<u>20,000</u>
Construction Cost				\$ 802,700
Contingencies				80,300
NEPA Compliance				20,000
Legal and Administrative				9,000
Design and Construction Engineering				<u>112,000</u>
TOTAL				\$1,024,000

COST SHARING & REPAYMENT: The recommended cost sharing and repayment are:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$ 616,000	60.2%
WaterSMART Grant	300,000	29.3
Sponsor	<u>108,000</u>	<u>10.5</u>
TOTAL	\$1,024,000	100%

If the board authorizes the project, it is suggested it be purchased at 0% interest over approximately 25 years with annual payments of \$24,700.

FINANCIAL FEASIBILITY: It is estimated that construction of the project will save 915 acre-feet currently lost through the system, which would result in an increased annual income of \$8,400. Some pumps will also be removed at a savings of \$377 annually, plus a \$7,000 reduction of ditch maintenance would total a net benefit of \$15,777 annually.

With the proposed board cost share of the project being 60.2%, the sponsor's repayment ability could be calculated as 60.2% of the net annual benefit calculated above, or approximately \$9,500. This payment is not realistic as it would require a term of 64 years.

The current annual share assessment is \$25/share. A repayment term of 25 years at 0% interest would increase the annual share assessment by approximately \$83/share. This assessment increase is over the \$75/share maximum increase the sponsor discussed in a shareholder meeting.

**BENEFITS:** The proposed project will conserve approximately 915 acre-feet currently lost through the system, increase efficiency, and reduce maintenance costs.

**PROJECT SPONSOR:** The East Wanship Irrigation Company is currently registered and in good standing with the state Department of Commerce. The sponsor has 25 shareholders holding 298 shares, with one share equivalent to one acre. The sponsor has not received assistance from the board in the past.

**WATER RIGHTS & SUPPLY:** The sponsor holds Water Right #35-8533 (3.64822 cfs) for storage rights in Rockport Reservoir. The average annual demand is 1,568 acre-feet.

**EASEMENTS:** All work will be done within the existing canal right-of-way.

**ENVIRONMENTAL:** The proposed project is not expected to have any detrimental effects on the environment beyond the usual dust and noise of the construction phase.

**WATER CONSERVATION:** The sponsor will be required to submit a Water Management and Conservation Plan. Construction of the project will save an estimated 915 acre-feet annually that is currently lost to seepage through the existing open ditch.

**SPONSOR'S RESPONSIBILITIES:** If the board authorizes the proposed project, the sponsor must do the following before construction can begin:

1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.

2. Pass a resolution by the appropriate (as defined in the company's Articles of Incorporation and

Bylaws) majority of company stock 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 Section 73-10-33, Section 10-9a-211, and Section 17-27a-211 of the Utah Code.

4. Obtain approval of final plans and specifications from the Division of Water Resources.

5. Prepare a Water Management and Conservation Plan for its service area, and obtain approval of it from the Division of Water Resources.

6. Provide written justification satisfactory to the board as to why the sponsor was unable to adopt a

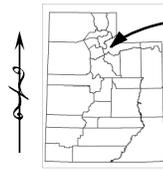
Water Conveyance Facilities Management Plan during the time period provided in accordance with Section 73-10-33 of the Utah Code (if the sponsor owns or operates a water conveyance facility that has a potential risk location and has not adopted a management plan as required).

7. Obtain letters from all outside financing agencies establishing their commitment of funds to the project.

PROJECT CONTACT PEOPLE:	President:	D.A. Pace 2034 South Wanship Road Coalville, UT 84107 Phone: 435-729-0591
	Secretary:	Michelle Williams 2034 South Wanship Road Coalville, UT 84107 Phone: 801-230-1268
	Engineer:	Brian Deeter J-U-B Engineers, Inc. 466 North 900 West Kaysville, UT 84037 Phone: 801-547-0393

# East Wanship Irrigation Co. Proposed Pipeline Project

Summit County

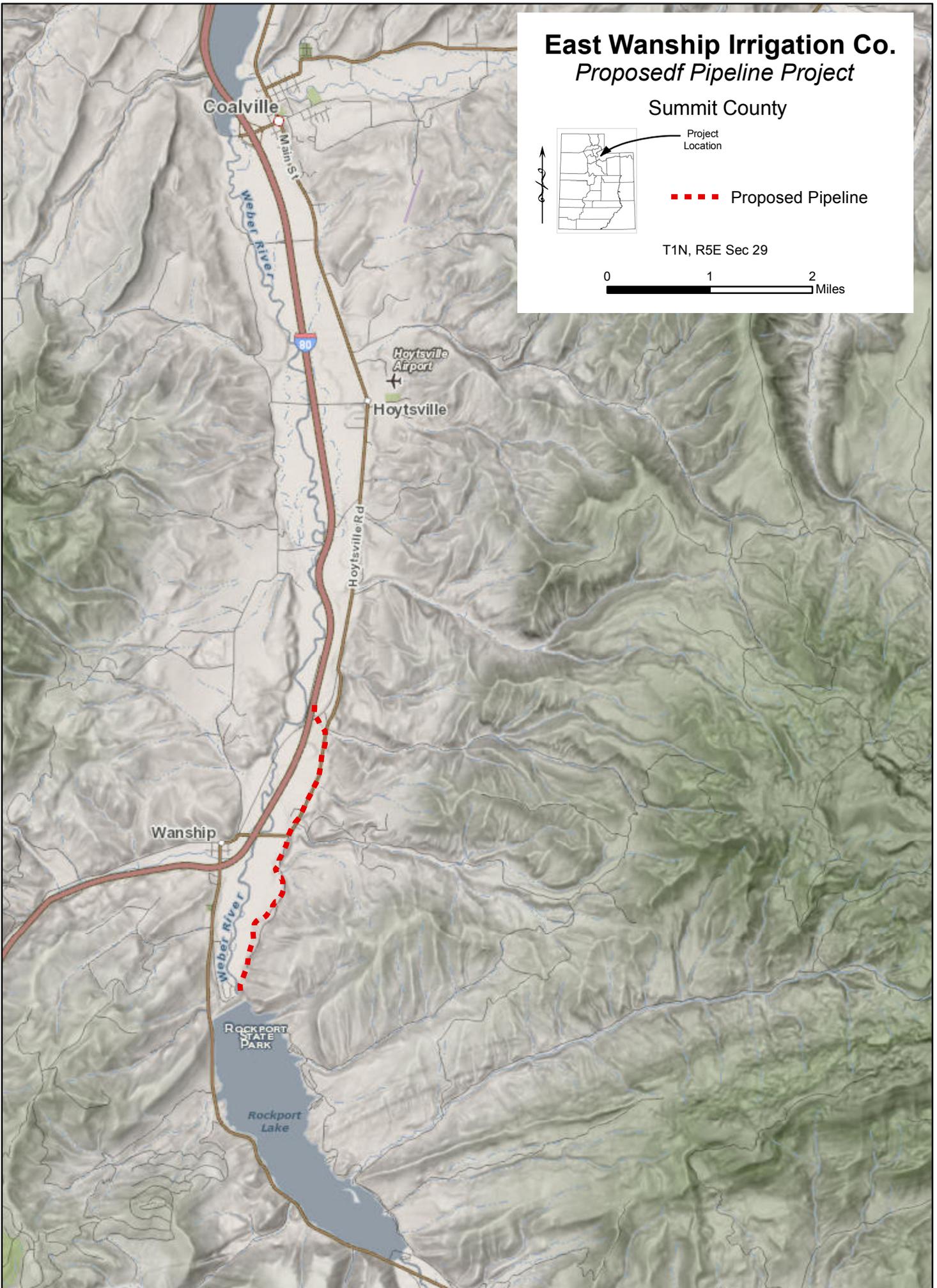


Project Location

Proposed Pipeline

T1N, R5E Sec 29

0 1 2 Miles



BOARD OF WATER RESOURCES

Feasibility Report

Revolving Construction Fund

Appl. No.: **E-380**  
Received: 1/20/16  
Approved: 2/11/16

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: **BLANDING IRRIGATION COMPANY**

President: Shane Shumway

LOCATION: Dry Wash Canal and Johnson Creek Ditch are located approximately 12 and five miles north of Blanding City, respectively, in San Juan County.

EXISTING CONDITIONS PROBLEMS: The sponsor collects water from the Abajo Mountains in the Manti-LaSal National Forest in southeast Utah. A series of canals, pipelines, and reservoirs have been constructed to deliver water to both municipal and agricultural users in the area. The sponsor operates the system and delivers water to approximately 4,600 acres of agricultural land.

The two-mile long Dry Wash Canal conveys two to eight cfs of runoff water to Dry Wash Reservoir from the Dry Wash drainage through both pipe and unlined earthen canal. The unlined portion of the canal allows substantial seepage losses, with efficiency estimated to be approximately 60%. Trickling springs are visible in multiple locations just below the canal.

Approximately 2,000 feet of the canal is on a narrow ledge carved into the mountainside, just wide enough to allow for the canal and ATV access. Slopes adjacent to this section of canal are steep and rocky. Seepage from the canal in conjunction with the rocky, porous soil and steep slopes increases the probability of slope failure, which could disrupt the water supply and compromise local agriculture.

Johnson Creek Ditch is an unlined earthen canal with significant seepage losses. Approximately 3,100 feet of the canal is located on a steep rocky slope similar to Dry Wash Canal described above. The probability of slope failure below Johnson Creek Ditch is increased by the rocky, porous soil and steep slopes.

The steep, rocky slopes around both areas increase the cost of canal maintenance. Rocks and debris frequently enter the canals, partially blocking the passage of water. A blocked canal could run over its banks and rapidly cause catastrophic failure.

The risk of loss of life in the event of canal failure would be minimal due to the remoteness of the proposed project location; however, a disruption in the water supply could be economically disastrous for shareholders. Furthermore, a catastrophic failure of either canal would be extremely difficult, time consuming, and expensive to repair due to the nature of the slope and narrow passage over which the canals flow. Because of these conditions, the sponsor is forced to devote considerable resources to patrol the canals and ensure that blockages are not preventing the flow of water.

PROPOSED PROJECT:

The sponsor is requesting financial assistance from the board to pipe approximately 2,000 feet of the Dry Wash Canal and approximately 3,100 feet of the Johnson Creek Ditch. HDPE pipe, ranging in size from 24-36 inches, will be bedded in the existing canal and buried.

The project fits in Prioritization Category 1 (project which involves public health problems, safety problems, or emergencies).

COST ESTIMATE:

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

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
1.	Mobilization	LS	\$9,000	\$ 9,000
2.	SDR 21 HDPE Pipe			
	a. 24-inch	2,000 LF	40	80,000
	b. 30-inch	2,780 LF	75	208,500

c. 30-inch thru tunnel	385 LF	90	34,650
3. Embankment Work	2,000 LF	5	10,000
4. Gooseneck Valve	4 EA	2,000	8,000
5. Thrust Block	14 EA	525	7,350
6. Staking	LS	4,000	4,000
7. Rock Excavation	20 LF	11	2,200
8. Johnson Cr. Div.	LS	10,000	<u>10,000</u>
Construction Cost			\$374,000
Contingencies			44,000
Legal and Administrative			15,000
Design and Construction Engineering			<u>42,000</u>
TOTAL			\$475,000

COST SHARING  
& REPAYMENT:

The recommended cost sharing and repayment are:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$404,000	85%
Sponsor	<u>71,000</u>	<u>15</u>
TOTAL	\$475,000	100%

If the board authorizes the project and commits funds for 85% of the project cost up to \$404,000, it is suggested it be purchased at 0% interest over 25 years with annual payments of approximately \$16,200.

FINANCIAL  
FEASIBILITY:

It is estimated the project will decrease operation and maintenance costs by approximately \$4,000 annually. These savings will be realized through a reduction in efforts to patrol, repair, and clear debris out of the Dry Wash and Johnson Creek canal sections located on steep slopes.

The sponsor has been unable to provide irrigation water for the last four irrigation seasons due to drought. Although the project is expected to conserve approximately 1,400 acre-feet annually, the conserved water will be stored to reduce the likelihood of dry irrigation seasons in the future.

The main purpose and justification of the project is to prevent failure of both the Dry Wash Canal and the Johnson Creek Ditch. These canals are essential to providing a reliable water supply to stakeholders.

The sponsor will raise annual assessments to provide the necessary funds for project repayment. An annual payment of \$16,200 amounts to an increase of \$0.06 per share based on 264,000 shares in the company. The sponsor's current assessment is \$0.32/share.

**BENEFITS:** Water loss through seepage will be reduced by an estimated 1,400 acre-feet per year. Water shortages in the area have been severe in recent years; water conserved by the project will be used to bolster the water security of the sponsor.

The project is also expected to reduce operation and maintenance expenses from approximately \$5,000 annually to \$1,000 annually. In addition to conserving water and reducing operation and maintenance expenses, the project will safeguard the irrigation company's infrastructure and ability to reliably deliver water to shareholders.

**PROJECT SPONSOR:** The Blanding Irrigation Company was incorporated October 22, 1921, and is currently in good standing with the state Department of Commerce.

The sponsor has received financial assistance from the board six times previously, with funds for the most recent project being committed in 1993. This project is currently being repaid to the board with payments of \$12,000 per year with the final payment due in 2017.

**WATER RIGHTS & SUPPLY:** The sponsor has water rights for approximately 33,100 acre-feet annually. The Board of Water Resources currently holds title to Water Rights 09-4, 09-125, and 05-672 from previous projects. These water rights will be retained throughout the repayment term of this proposed project.

**EASEMENTS:** The project will be installed in existing canal rights-of-way.

**ENVIRONMENTAL:** The proposed project is not expected to have any detrimental effects on the environment beyond the usual dust and noise of the construction phase.

WATER CONSERVATION: An estimated 1,400 acre-feet will be conserved by the project. The sponsor will need to complete a Water Management & Conservation Plan.

SPONSOR'S RESPONSIBILITIES: If the board authorizes the proposed project, the sponsor must do the following before construction can begin:

1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.
2. Pass a resolution by the appropriate (as defined in the company's Articles of Incorporation and Bylaws) majority of company stock 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 Section 73-10-33, Section 10-9a-211, and Section 17-27a-211 of the Utah Code.

4. Obtain approval of final plans and specifications from the Division of Water Resources.

5. Prepare a water management and conservation plan for the service area, and obtain approval of it from the Division of Water Resources.

PROJECT CONTACT PEOPLE:	President:	Shane Shumway 2949 North Blue Mountain Rd Blanding, UT 84511 Phone: 435-459-1738
	Secretary:	Pete Black 1454 Harris Lane Blanding, UT 84511 Phone: 435-979-2027
	Engineer:	Danny "Scoot" Flannery Jones & DeMille Engineering 1535 South 100 West Richfield, UT 84701 Phone: 435-896-8266

# Blanding Irrigation Co. Proposed Pipeline Project

San Juan County



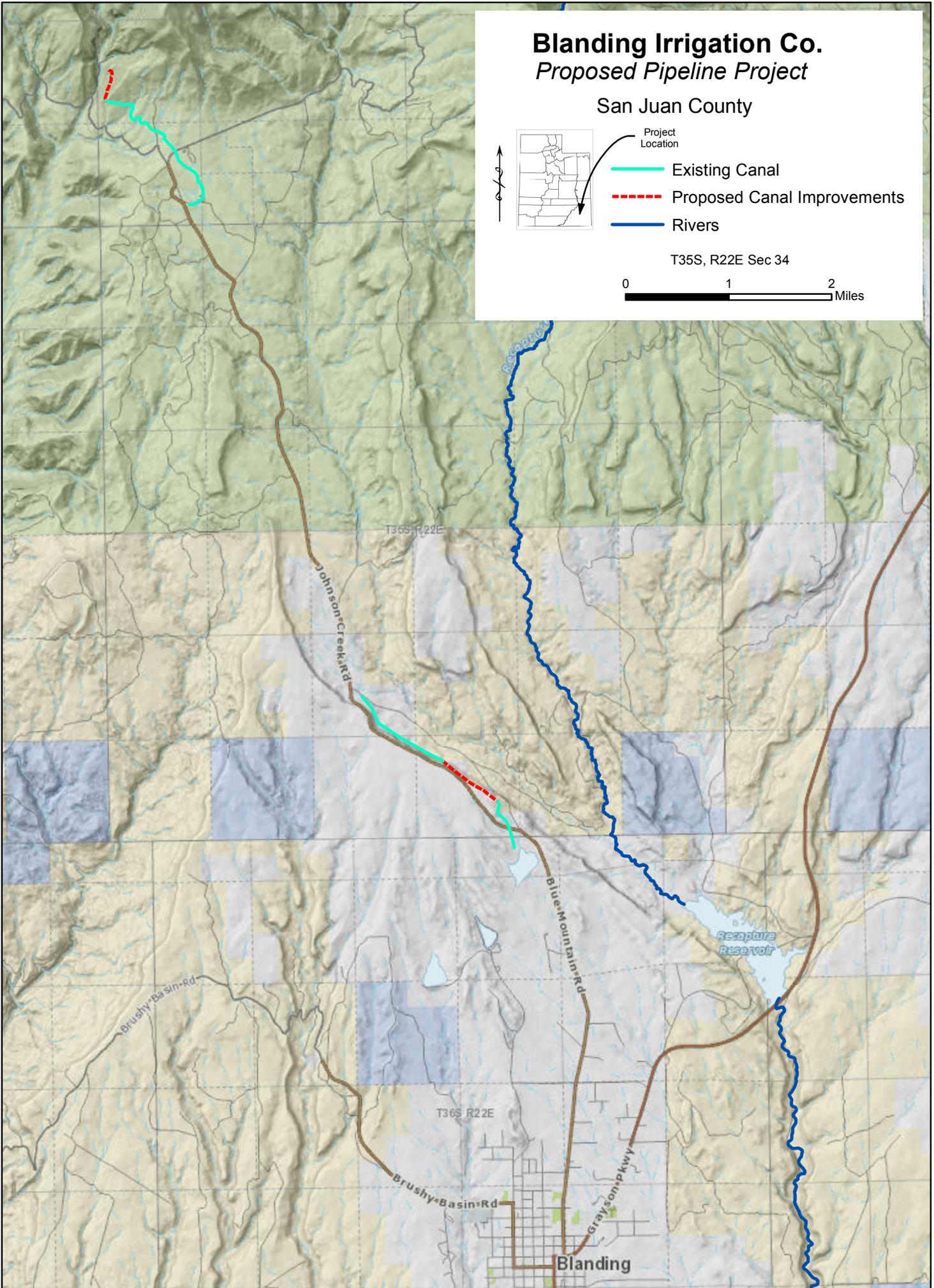
Project Location

- Existing Canal
- Proposed Canal Improvements
- Rivers

T35S, R22E Sec 34



0 1 2 Miles



BOARD OF WATER RESOURCES

Feasibility Report

Conservation and Development Fund

Appl. No.: **E-384**  
Received: 3/7/16  
Approved: 3/16/16

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: **SCIPPIO IRRIGATION COMPANY**

President: Dallen Quarnberg

LOCATION: The proposed project is located south of Scipio in Millard County.

EXISTING CONDITIONS & PROBLEMS: The sponsor's water rights entitle it to irrigate nearly 5,000 acres in and around the community of Scipio. However, with the available water supply only around 2,200 acres are typically irrigated each year. Water from runoff, springs, and flowing wells is captured in Scipio Lake Reservoir about nine miles south of town. Although the reservoir has a capacity of about 9,500 acre-feet, less than half of that is typically stored and nearly all of it is used by the middle of July. The last two years the irrigation season has ended the first part of June.

Water is released from the reservoir and flows over four miles in Ivie Creek, then is diverted into the over five mile-long earthen Highline Canal. Water is delivered from the canal to several regulating ponds that serve gravity-pressurized sprinkle irrigation systems installed with funding from the board over the years. Seepage losses from the reservoir to the regulating ponds has been measured at approximately 51 percent. This amounts to about 4,100 acre-feet, of which about 1,700 is lost through the Ivie Creek stretch.

PROPOSED PROJECT: The sponsor is requesting financial assistance from the board to install approximately 3.5 miles of 36-inch HDPE pipe along the Ivie Creek stretch, starting

from about 1/2 mile below the dam to just past the diversion into Highline Canal. It is anticipated the Highline Canal will be piped in the future if additional grant funds are obtained. Conserved water will be utilized on existing farm ground.

Technical assistance is being provided by Franson Civil Engineers in American Fork.

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

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
1.	Mobilization	LS	\$155,000	\$ 155,000
2.	30" HDPE Pipe	18,600 LF	98	1,822,800
3.	Structures	LS	124,000	124,000
4.	PRV	LS	100,000	100,000
5.	Valves	LS	51,000	51,000
6.	Drains	LS	45,000	45,000
7.	Creek Crossing	LS	10,000	10,000
8.	Reseeding	LS	20,000	<u>20,000</u>
Construction Cost				\$2,327,800
Contingencies				230,200
Environmental & Cultural Resource Compliance				60,000
Legal and Administrative				37,000
Design and Construction Engineering				<u>345,000</u>
TOTAL				\$3,000,000

COST SHARING & REPAYMENT: The recommended cost sharing and repayment are:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$1,700,000	56.7%
WaterSMART Grant	1,000,000	33.3
Sponsor	<u>300,000</u>	<u>10.0</u>
TOTAL	\$3,000,000	100%

If the board authorizes the project, it is suggested it be purchased at 1% interest over 21 years with annual payments of approximately \$93,500.

The sponsor has been approved for a WaterSmart grant and hopes to sign the grant contract this fall.

ECONOMIC  
FEASIBILITY:

A project is economically feasible if its benefits outweigh its costs. In this case the primary benefit is increased crop yield, with a slight decrease in operation and maintenance costs as a secondary benefit. When the value of these benefits over the 50-year life of the project are discounted to present worth and compared to total project construction costs, the benefit to cost ratio is 1.06.

FINANCIAL  
FEASIBILITY:

Benefits will include increased crop yields and reduction in operation and maintenance costs, as follows:

Annual Net Increased Crop Income	\$160,800
Reduced Operation & Maintenance Costs	<u>4,000</u>
NET ANNUAL BENEFIT	\$164,800

With the proposed board cost share of the project being 56.7%, it is suggested the sponsor's repayment ability be calculated as 56.7% of the net annual benefit calculated above, or approximately \$93,500 (\$42.50 per acre based on the 2,200 acres typically irrigated, or \$31.99 per share). Recent assessments have been \$8 per share.

BENEFITS:

Piping the stretch of Ivie Creek below Scipio Lake Reservoir will conserve approximately 1,700 acre-feet annually, which will be utilized in the sponsor's service area or stored in the reservoir for future use. Operation and maintenance of the system will be enhanced and costs reduced.

PROJECT  
SPONSOR:

The Scipio Irrigation Company was originally organized in 1949 and includes approximately 160 stockholders holding 2,923 shares. The sponsor is registered in good standing with the state Department of Commerce.

The sponsor has received financial assistance from the board on six previous occasions for drilling wells, installing pressurized irrigation systems, and making improvements to Scipio Lake Reservoir Dam. It will make its final payment this year on the most recent project.

WATER RIGHTS  
& SUPPLY:

The sponsor holds Water Rights #66-55 and 66-173 for 14.25 cfs from wells, and 66-1011 for 83.09 cfs from Round Valley (Ivie) Creek. Typically, the water

supply has not provided enough to irrigate the nearly 5,000 acres listed under the rights and the water users face shortages.

EASEMENTS: The proposed pipeline will primarily be constructed out of Ivie Creek and private and SITLA easements will be necessary.

ENVIRONMENTAL: The project will involve the usual dust and noise of the construction phase as well as crossing Ivie Creek. Irrigation water will be taken from the creek approximately 1/2 mile below Scipio Lake Reservoir. An environmental study will be made in connection with the WaterSMART grant.

WATER CONSERVATION: The project will conserve approximately 1,700 acre-feet annually, which will be used in the sponsor's service area or stored in Scipio Lake Reservoir for future use. The sponsor will be required to update its Water Management and Conservation Plan and have it approved by the division.

SPONSOR'S RESPONSIBILITIES: If the board authorizes the proposed project, the sponsor must do the following before a funding 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 (as defined in the company's Articles of Incorporation and Bylaws) majority of company stock 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.

4. Obtain approval of final plans and specifications from the Division of Water Resources.

5. Update its Water Management and Conservation Plan for its service area, and obtain approval of it from the Division of Water Resources.

6. Provide written justification satisfactory to the Board as to why the sponsor was unable to adopt a water conveyance facilities management plan during the time period provided in accordance with Section 73-10-33 of the Utah Code (if the sponsor owns or operates a water conveyance facility that has a potential risk location and has not adopted a management plan as required).

7. Obtain letters from all outside financing agencies establishing their commitment of funds to the project.

8. Be in compliance with Section 73-10-33, Section 10-9a-211, and Section 17-27a-211 of the Utah Code.

PROJECT  
CONTACT  
PEOPLE:

President:

Dallen Quarnberg  
P.O. Box 560121  
Scipio, UT 84656  
Phone: 435-201-2299

Secretary:

Royce Memmott  
P.O. Box 560057  
Scipio, UT 84656  
Phone: 435-864-8929

Engineer:

Franson Civil Engineers  
1276 South 820 East, Ste 100  
American Fork, UT 84003  
Phone: 801-756-0309

# Scipio Irrigation Company

## Proposed Pipeline Project

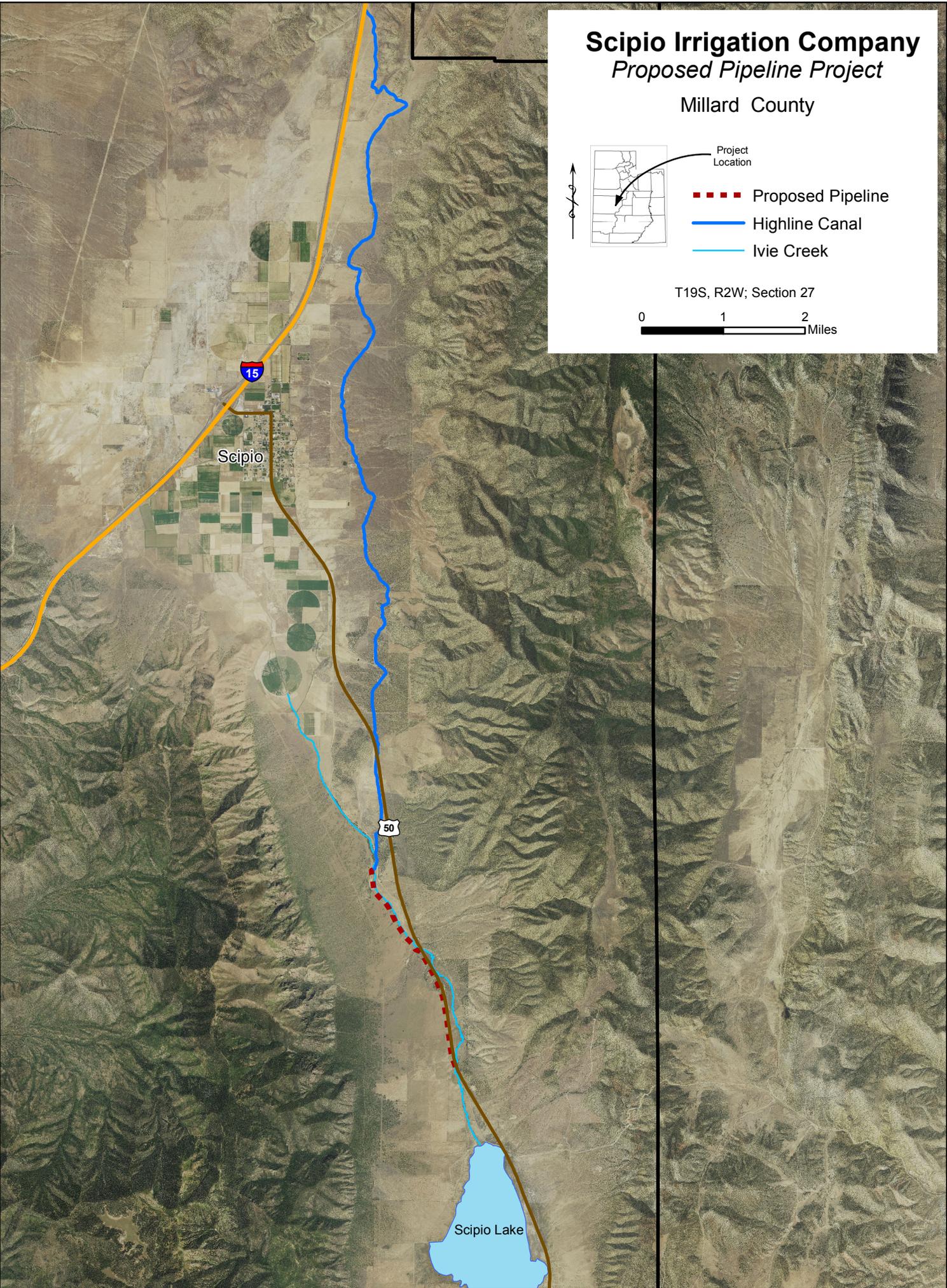
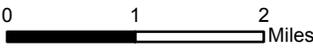
Millard County



Project Location

- Proposed Pipeline (red dashed line)
- Highline Canal (blue line)
- Ivie Creek (light blue line)

T19S, R2W; Section 27



Scipio

50

Scipio Lake

BOARD OF WATER RESOURCES

Committal of Funds

Cities Water Loan Fund

Appl. No.: **L-575**  
Received: 5/26/16  
Approved: 6/23/16  
Authorized: 6/23/16

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: **BEAVER CITY**

Mayor: Craig Wright  
Box 271  
Beaver, UT 84713  
Phone: 435-438-2451

LOCATION: The proposed project is located in Beaver City in Beaver County.

PROJECT SUMMARY: The sponsor's secondary lawn and garden system is supplied by the Mammoth Canal located above the city. There are numerous safety concerns about the canal diversion structure; those concerns will be remedied by construction of this project. An improved diversion structure, sluicing structure, and improvements to the canal overflow system will be constructed.

COST SHARING & REPAYMENT: The cost sharing and repayment remain as authorized:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$315,000	85%
Sponsor	55,000	15
TOTAL	\$370,000	100%

If the board commits funds to the project, it is proposed the bonded indebtedness of \$315,000 be returned over 15 years at 0% interest with payments of approximately \$23,000 (includes reserves).

BOARD OF WATER RESOURCES

Committal of Funds

Revolving Construction Fund

Appl. No.: **E-362**  
Received: 9/30/14  
Approved: 10/9/14  
Authorized: 5/12/16

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: **MOON LAKE WATER USERS ASSOCIATION**

President: Shawn McConkie  
P.O. Box 235  
Roosevelt, UT 84066  
Phone: 435-722-2002

LOCATION: The proposed project is located about 20 miles northwest of Roosevelt in Duchesne County.

PROJECT SUMMARY: The sponsor is requesting financial assistance from the board to install a geomembrane liner with a shotcrete cover along approximately 5,100 feet of the Yellowstone Feeder Canal.

COST ESTIMATE & SHARING: The cost estimate and sharing remain as authorized:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$403,000	53.0%
WaterSMART Grant	287,000	37.8
Sponsor	<u>70,000</u>	<u>9.2</u>
TOTAL	\$760,000	100%

PURCHASE AGREEMENT: If the board commits 53% of the project cost up to \$403,000, it is suggested the project be purchased at 0% interest over approximately 15 years with annual payments of \$26,900.

BOARD OF WATER RESOURCES

Committal of Funds

Revolving Construction Fund

Appl. No.: **E-367**  
Received: 1/20/15  
Approved: 3/18/15  
Authorized: 8/13/15

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: **LOWER MARION PIPELINE COMPANY**

President: Jack Clegg  
1715 North State Road 32  
Marion, UT 84036  
Phone: 435-783-4680

LOCATION: The proposed project is located east and southeast of Oakley in Summit County.

PROJECT SUMMARY: The Marion Upper Ditch and Marion Lower Ditch companies provide irrigation water from the Weber River to 90 shareholders irrigating 1,060 acres, split almost equally between the two companies. The companies operate a diversion on the Weber River and share a 2,400-foot ditch before the flow is divided into the Upper Ditch (4.2 miles long) and the Lower Ditch (3.6 miles long).

In August 2015 the board authorized \$1,462,000 from the Conservation and Development Fund for a project to replace 7.8 miles of open ditch with 6.25 miles of pipe (14-inch to 32-inch) and install four flow meters and a micro-hydropower system. The project was sponsored by the Marion Upper Ditch Company and included the Marion Lower Ditch Company. In October 2015 the Upper Ditch shareholders voted against the project and the Lower Ditch shareholders voted to modify the project scope. A new company was formed, the Lower Marion Pipeline Company, which includes the shareholders between the companies that support the pipeline project (mostly Lower Ditch shareholders). The project will replace 3.7 miles of open ditch with pressurized pipe (22-inch to 26-inch), install four meters, and install a micro-hydropower generation

unit on one of the center pivot irrigation systems. The total project cost went from \$2.72 million to 2.16 million. The sponsor has been awarded a \$1,000,000 WaterSMART grant from the Bureau of Reclamation.

COST ESTIMATE  
& SHARING:

The cost estimate and sharing for the authorized project and that proposed are as follows:

<u>Agency</u>	<u>Authorized Cost Sharing</u>	<u>% of Total</u>	<u>Proposed Cost Sharing</u>	<u>% of Total</u>
BWRe	\$1,462,000	53.7%	\$ 986,000	45.6%
USBR Grant	1,000,000	36.8	1,000,000	46.3
Sponsor	<u>258,000</u>	<u>9.5</u>	<u>174,000</u>	<u>8.1</u>
TOTAL	\$2,720,000	100%	\$2,160,000	100%

PURCHASE  
AGREEMENT:

If the board commits funds to the project from the Revolving Construction Fund, it is suggested it be purchased at 0% interest over 24 years with annual payments of approximately \$41,100.

BOARD OF WATER RESOURCES

Special Item

Withdrawal

Appl. No.: **E-340**

Received: 6/6/13

Approved: 8/8/13

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: **CO-OP FARM IRRIGATION COMPANY, INC.**

President: Ed Rich  
P.O. Box 231  
Huntsville, UT 84317  
Phone: 801-745-2215

LOCATION: The proposed project is located near Huntsville in Weber County.

SUMMARY: The sponsor applied to the board for funding to pipe a section of its canal in an effort to eliminate safety concerns and improve efficiency; however, supplemental funding has not been obtained for the project in the three years since it was approved and application details have changed significantly.

The sponsor intends to apply for a WaterSMART Grant and continue with the project in the future, and will submit a new, updated application at that time. Staff therefore recommends this application be withdrawn from further consideration by the board.

BOARD OF WATER RESOURCES

Dam Safety Report

Additional Funds

Appl. No.: **C-048**  
Committed: 3/18/15

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: ***NORTH UTAH COUNTY WATER CONSERVANCY DISTRICT***

Chairman: Hunt Willoughby  
75 North Center Street  
American Fork, UT 84003  
Phone: 801-420-2979

LOCATION: The proposed project is located about 11 miles northeast of American Fork in Utah County.

SUMMARY: In March 2015 the board committed \$1,480,000 in dam safety grant funds for upgrades to Silver Lake Flat Dam. Enough of the project was completed last year (including construction of a new spillway, outlet extension, and drains and embankment work) that the sponsor was allowed to store water. Earlier this year, after the reservoir had filled, seeps were discovered in the hill slopes surrounding the stilling basin, which the Division of Water Rights Dam Safety Office requires to be captured, monitored, and safely discharged. This will require additional blanket drains. This work, along with the work remaining from the original project, will be completed this fall.

In addition to Silver Lake Flat Dam, the sponsor owns and operates Tibble Fork, Battle Creek, Grove Creek, and Dry Creek dams. Tibble Fork is currently under dam safety upgrade construction and it is anticipated Battle and Grove Creek dams will be ready for upgrade work this fall.

The sponsor is requesting \$134,000 in additional dam safety funds to complete the required minimum standards work at Silver Lake Flat Dam.

COST SHARING  
& REPAYMENT:

The committed and proposed cost sharing and repayment are:

<u>Agency</u>	<u>Committed Cost Sharing</u>	<u>%of Total</u>	<u>Proposed Cost Sharing</u>	<u>%of Total</u>
NRCS-Grant	\$3,055,000	65.0%	\$3,332,000	65.0%
BWRe-Grant	1,480,500	31.5	1,615,000	31.5
Sponsor	<u>164,500</u>	<u>3.5</u>	<u>178,000</u>	<u>3.5</u>
TOTAL	\$4,700,000	100%	\$5,125,000	100%

If the board commits the additional \$134,000, it is proposed the board increase the dam safety grant to \$1,615,000.

BOARD OF WATER RESOURCES

Dam Safety Report

Additional Funds

Appl. No.: **C-052**  
Committed: 3/18/15

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: ***NORTH UTAH COUNTY WATER CONSERVANCY DISTRICT***

Chairman: Hunt Willoughby  
75 North Center Street  
American Fork, UT 84003  
Phone: 801-420-2979

LOCATION: The proposed project is located about 7 1/2 miles northeast of American Fork in Utah County.

SUMMARY: In February 2016 the board committed \$1,512,000 in dam safety grant funds for minimum dam safety standard upgrades to Tibble Fork Dam. The project also includes aspects not associated with minimum standard requirements that are not covered under the committed funding but will be paid for by NRCS grant and local funds.

Bids came in much higher than anticipated. It was also discovered that the cost for the proposed grout curtain had been left out of staff's estimate at the time of committal of funds.

In addition to Tibble Fork Dam, the sponsor owns and operates Silver Lake Flat, Battle Creek, Grove Creek, and Dry Creek dams. Silver Lake Flat is currently under dam safety upgrade work and it is anticipated Battle and Grove Creek dams will be ready for upgrade work this fall.

The sponsor is requesting \$488,000 in additional dam safety grant funds to pay for the minimum standards work at Tibble Fork Dam.

COST SHARING  
& REPAYMENT:

The committed and proposed cost sharing and repayment for state minimum dam safety standards are:

<u>Agency</u>	<u>Committed Cost Sharing</u>	<u>% of Total</u>	<u>Proposed Cost Sharing</u>	<u>% of Total</u>
NRCS-Grant	\$3,120,000	65.0%	\$4,128,000	65.0%
BWRe-Grant	1,512,000	31.5	2,000,000	31.5
Sponsor	<u>168,000</u>	<u>3.5</u>	<u>222,000</u>	<u>3.5</u>
TOTAL	\$4,800,000	100%	\$6,350,000	100%

If the board commits the additional \$488,000, it is proposed the board increase the dam safety grant to \$2,000,000.

It is anticipated the total project cost will be over \$8.8 million, of which the NRCS will pay 65% (\$5,720,000), with Water Resources (\$2,000,000) and the sponsor (\$1,080,000) paying the remaining 35%.

BOARD OF WATER RESOURCES

Dam Safety Report

Appl. No.: **C-053**

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: **NORTH UTAH COUNTY WATER CONSERVANCY DISTRICT**

Chairman: Hunt Willoughby

LOCATION: The proposed project is located on the eastern boundary of Pleasant Grove City in Utah County.

SUMMARY: The North Utah County Water Conservancy District was organized in 1959 and operates and maintains five dams in northern Utah County: Silver Lake Flat, Tibble Fork, Dry Creek, Battle Creek, and Grove Creek. The primary purpose of these dams is flood control, with water storage and recreation as secondary purposes of Silver Lake Flat and Tibble Fork. Plans are currently underway to rehabilitate all five dams with help from the Natural Resources Conservation Service (NRCS) to bring them up to dam safety standards. The NRCS has committed to funding 65% of the cost to repair these dams and for this reason the dams have been moved up on the priority list. Silver Lake Flat and Tibble Fork are currently under construction and should be completed this year.

Battle Creek Dam was constructed in 1962 and is classified as a high-hazard dam by state dam safety officials. The zoned earthfill dam sits at an elevation of 5166 feet, is 940 feet long, and 47 feet tall.

The proposed rehabilitation includes raising the embankment two feet to route the inflow design flood, reconstructing the spillway and outlet intake structure, and installing toe drains. It should be noted that the Division of Water Rights, Dam Safety Office has not received detailed information on the proposal and therefore a determination has not been made whether all of the project items fall under state minimum dam safety requirements.

Engineering services are being provided by RB&G Engineering of Provo.

COST SHARING  
& REPAYMENT:

The recommended cost sharing and repayment of the proposed project are:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
NRCS - Grant	\$1,625,000	65.0%
BWRe - Grant	788,000	31.5
Sponsor	<u>87,000</u>	<u>3.5</u>
TOTAL	\$2,500,000	100%

If the board commits dam safety funds to the project, it is proposed it provide a grant of \$788,000 to the sponsor.

Funds are being requested at this time to allow the sponsor to begin construction (after receiving all necessary governmental agency approvals) prior to the next board meeting in October. If it is found some of the proposed items are not required by state minimum dam safety requirements, the board's grant will be reduced to exclude those items.

PROJECT  
CONTACT  
PEOPLE:

Chairman: Hunt Willoughby  
75 North Center Street  
American Fork, UT 84003  
Phone: 801-420-2979

Secretary: Ron Stewart  
190 West 800 North  
Provo, UT 84601  
Phone: 801-377-5300

Engineer: RB&G Engineering  
1435 West 820 North  
Provo, UT 84601  
Phone: 801-374-5771

BOARD OF WATER RESOURCES

Dam Safety Report

Appl. No.: **C-054**

To be Presented at the August 11, 2016 Board Meeting

SPONSOR: **NORTH UTAH COUNTY WATER CONSERVANCY DISTRICT**

Chairman: Hunt Willoughby

LOCATION: The proposed project is located on the eastern boundary of Pleasant Grove City in Utah County.

SUMMARY: The North Utah County Water Conservancy District was organized in 1959 and operates and maintains five dams in northern Utah County: Silver Lake Flat, Tibble Fork, Dry Creek, Battle Creek, and Grove Creek. The primary purpose of these dams is flood control, with water storage and recreation as secondary purposes of Silver Lake Flat and Tibble Fork. Plans are currently underway to rehabilitate all five dams with help from the Natural Resources Conservation Service (NRCS) to bring them up to dam safety standards. The NRCS has committed to funding 65% of the cost to repair these dams and for this reason the dams have been moved up on the priority list. Silver Lake Flat and Tibble Fork are currently under construction and should be completed this year.

Grove Creek Dam was constructed in 1964 and is classified as a high-hazard dam by state dam safety officials. The zoned earthfill dam sits at an elevation of 5100 feet, and is 1,300 feet long and 44 feet tall.

The proposed rehabilitation includes reconstruction of the spillway, replacement of the outlet intake structure, and installation of toe drains and liner on the dam face and a portion of the reservoir basin. It should be noted that the Division of Water Rights, Dam Safety Office has not received detailed information on the proposal and therefore a determination has not been made whether all of the project items fall under state minimum dam safety requirements.

Engineering services are being provided by RB&G Engineering of Provo.

COST SHARING  
& REPAYMENT:

The recommended cost sharing and repayment of the proposed project are:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
NRCS - Grant	\$1,316,000	65.0%
BWRe - Grant	638,000	31.5
Sponsor	<u>71,000</u>	<u>3.5</u>
TOTAL	\$2,025,000	100%

If the board commits dam safety funds to the project, it is proposed it provide a grant of \$638,000 to the sponsor.

Funds are being requested at this time to allow the sponsor to begin construction (after receiving all necessary governmental agency approvals) prior to the next board meeting in October. If it is found some of the proposed items are not required by state minimum dam safety requirements, the board's grant will be reduced to exclude those items.

PROJECT  
CONTACT  
PEOPLE:

Chairman: Hunt Willoughby  
75 North Center Street  
American Fork, UT 84003  
Phone: 801-420-2979

Secretary: Ron Stewart  
190 West 800 North  
Provo, UT 84601  
Phone: 801-377-5300

Engineer: RB&G Engineering  
1435 West 820 North  
Provo, UT 84601  
Phone: 801-374-5771