

**Bureau of Reclamation**  
U.S. Department of Interior  
Policy and Administration  
Denver, Colorado

**WaterSMART**  
Water and Energy Efficiency Grants for FY 2015  
FOA No. R15AS00002

**Weber River Flow Measurement  
Project**

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**January 19, 2015**

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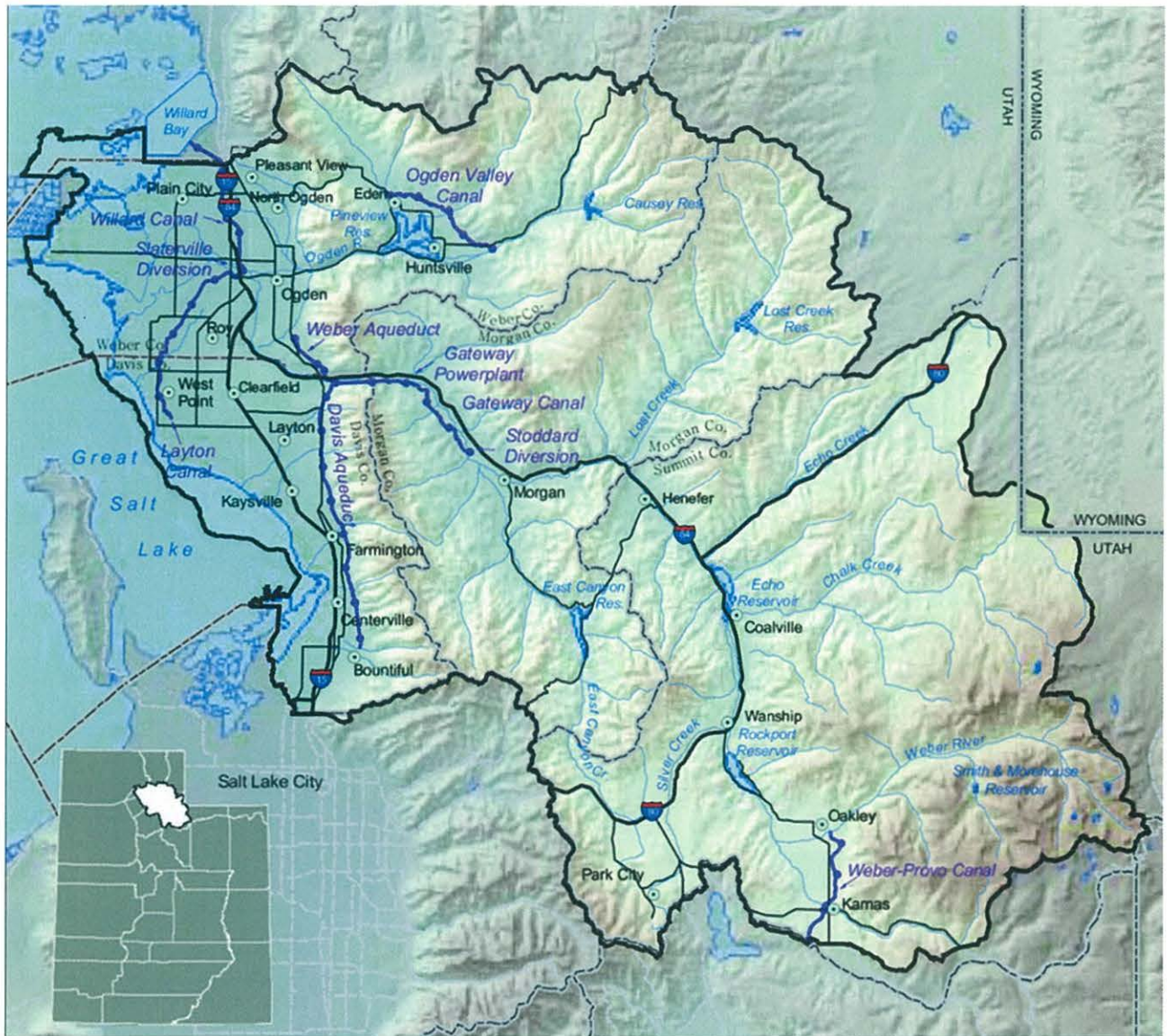
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# Project Map Weber River Drainage Basin



# **WEBER RIVER FLOW MEASUREMENT PROJECT**

## **EXECUTIVE SUMMARY**

The Weber River and its tributaries provide water for four Reclamation projects and numerous private water developments. Reclamation projects that use water from the Weber River include: the Weber River Project (1927-1931) constructed on the Weber River; the Ogden River Project (1941-1947) constructed on the Ogden River (a tributary of the Weber River); the Provo River Project (1938 to 1941) constructed on the Provo River (receives water through trans-mountain diversion); and the Weber Basin Project (1954-1966) constructed on the Weber and Ogden Rivers. Improving flow measurement on the Weber River system would have a positive effect on the operation of each of these four Reclamation projects.

### **NEED**

Operation of the Weber River is a complicated due to its many tributaries, multiple reservoirs, and numerous water projects and water rights. The two most challenging aspects to operating the system are; 1) balancing the rights between the direct flow users and the water storage entities on a real-time basis, and 2) operating the Weber-Provo Canal. Meeting these challenges requires a considerable amount of data on a near real-time basis. There simply is not enough flow measurement data on the river to make the critical management decisions required in operating the system.

In addition, the Weber River basin area has suffered from one of the worst drought periods on record (2012 to 2014). Drought years remind water managers of the limitations of their water supplies and the need for improved water conservation and development. They also create conflict among water users who are trying to minimize the adverse effects of the drought. This has proven to be the case over the past several years. Also, population in the area continues to grow, creating an even greater demand on the limited water supply.

Additional flow measurement on the Weber River is critically needed in order to provide the Weber River Commissioner (Commissioner) with the data he needs to manage the system. Additional data would also enhance transparency in operations and help reduce conflicts among water users. The Commissioner has identified and prioritized flow measurement station needs on the Weber River as described in this project proposal.

### **OBJECTIVE**

The objective of the project is to install flow measurement stations at key locations within the Weber River basin to provide the Weber River Commissioner with the data he needs to accurately and efficiently distribute the waters of the Weber River. Improved flow measurement will also help minimize or avoid future conflict among water users affected by the operation of the river.

## SCOPE OF WORK

The Commissioner has identified seven locations within the Weber River system where additional flow measurement stations should be added. The proposed action is to install new flow measurement at each of the seven sites listed below.

**Flow Measurement Station Installation List**

<b>No.</b>	<b>River or Creek</b>	<b>Location</b>
1	Weber River	At 89 crossing below Gateway Canal diversion
2	Weber River	Above Ogden River below Wilson Canal div
3	Weber River	Above Rockport Reservoir
4	Weber River	Weber-Provo Diversion Dam (flow over spillway)
5	Smith Morehouse	Below Smith and Morehouse Dam
6	East Canyon	Canal diversions telemetry
7	Ogden Valley Canal	Inflow into canal

## SCHEDULE

The project would begin upon approval of the grant, anticipated by July 1, 2015, and be completed by March 31, 2017.

## PROJECT FUNDING

Funding for the project is as follows:

**Project Cost and Funding Sources**

<b>Funding Sources</b>	<b>Funding Amount</b>
<b>Non-Federal Entities</b>	
Weber River Water Users Association	\$2,475
Weber River Water Rights Committee	\$5,400
Weber Basin Water Conservancy District	\$12,990
Utah Division of Water Rights	\$22,000
Utah Division of Wildlife Resources	\$5,400
Weber County	\$5,400
<b>Non-Federal Subtotal</b>	<b>\$53,665</b>
<b>Requested Reclamation Funding</b>	<b>\$53,665</b>
<b>Total Project Funding</b>	<b>\$107,330</b>

## ANTICIPATED BENEFITS

The project would enhance the Weber River Commissioner's ability to operate the Weber River and more particularly the Weber Provo Canal, conserve an estimated 4,635 ac-ft per year of water, assist with the protecting the Bluehead Sucker and other ecological values, assist Weber County with flood control, and help reduce conflict over the operation of the Weber River.

## **I. BACKGROUND**

This section describes the location of the project, the history of water development and projects within the project area, water facilities, and water supply.

### **A. PROJECT LOCATION**

The Project boundary is the entire Weber River drainage area as shown on Figure 1. Major tributaries to the Weber River include the Ogden River, Chalk Creek, Lost Creek, East Canyon Creek, Hardscrabble Creek, and Smith and Morehouse Creek.

### **B. WATER DEVELOPMENT AND PROJECTS**

Weber River water was first used by new settlers in the area in about 1848. By 1896 when Utah became a state, more than 100 canal companies had begun to divert water from the river and its tributaries establishing rights to all of the normal summer flows. On January 3, 1922, Reclamation (then Reclamation Service) signed a contract with the Utah Water Storage Commission that provided for Federal investigations of irrigation projects in the Weber River basin. Today, the Weber River supplies water to four Reclamation projects, each operated by a different water user entity, and numerous private developments. The water from these projects is used to satisfy agricultural, municipal, industrial, and environmental needs within the Weber River and Provo River drainage basins. The major storage projects that depend on Weber River water are described below.

**Davis and Weber Counties Canal Company Project** – The Davis and Weber Counties Canal Company (DWCCC) delivers agricultural water to over 41,000 acres of land and secondary irrigation water to about 31,430 households in Davis and Weber Counties in northern Utah. DWCCC constructed the original East Canyon Dam and Reservoir to a capacity of 3,850 ac-ft in 1884. The capacity was enlarged to 8,500 ac-ft in 1900, to 13,800 ac-ft in 1902, and to 28,000 ac-ft in 1916. A new dam immediately downstream from the existing dam was constructed as part of the Weber Basin Project increasing the capacity again to its present capacity of 51,200 ac-ft. DWCCC has rights to the first 28,000 ac-ft yield of the reservoir. The principle features of the project are East Canyon Dam and Reservoir and the Davis and Weber Canal (D&W Canal).

**Weber River Project** – The Weber River Project (WRP) was constructed by Reclamation from 1927 to 1931 and is managed by the Weber River Water Users Association (WRWUA). Project facilities include Echo Dam and Reservoir (capacity 74,000 ac-ft) and the Weber Provo Canal. The Weber Provo Canal was later enlarged as part of the Provo River Project and transferred to the Provo River Water Users Association (PRWUA) for operation and maintenance. The project provides supplemental irrigation water to about 109,000 acres of land east of the Great Salt Lake. Today, approximately 80% of WRP water is used for commercial agriculture and 20% for secondary irrigation purposes.

**Ogden River Project** – Reclamation’s Ogden River Project (ORP) was constructed from 1934 to 1937 and is managed by the Ogden River Water Users Association (ORWUA). Project facilities include Pineview Dam and Reservoir (capacity 44,175 ac-ft), Ogden Canyon Conduit, Ogden-Brigham Canal, South Ogden Highline Canal, and the original portion of the South Ogden Highline Canal Distribution System. The reservoir was enlarged to a capacity of 110,150 ac-ft under the Weber Basin Project. ORWUA has rights to the first 44,175 ac-ft yield of the reservoir. The project provides irrigation water to about 25,000 acres in the Ogden Valley and supplemental water to the City of Ogden.

**Provo River Project** – Reclamation’s Provo River Project (PRP) on the Provo River was constructed from about 1938 to 1947. It is a multi-purpose project managed by the Provo River Water Users Association (PRWUA). Weber River water is delivered to the Provo River through the Weber-Provo Canal. Reclamation studies anticipated a diversion of about 59,300 ac-ft of water per year or about 50-percent of PRP’s full water supply. PRP facilities include Deer Creek Dam and Reservoir (capacity 153,445 ac-ft), Weber-Provo Canal System, Duchesne River Collection System, Provo River Aqueduct System, Salt Lake Aqueduct System (title recently transferred to the Metropolitan Water District of Salt Lake and Sandy) and Jordan Narrows/Point of Mountain Facilities. The project provides supplemental irrigation water to farmland in Utah, Summit, Salt Lake, and Wasatch Counties; a domestic water supply to the Metropolitan Water Districts of Salt Lake & Sandy, Provo, Orem, Pleasant Grove, and American Fork; and municipal water to Lindon City, Lehi City and the Jordan Valley Water Conservancy District.

**Weber Basin Project** - The Weber Basin Project (WBP) was constructed by Reclamation from about 1957 to 1969 and is managed by the Weber Basin Water Conservancy District (WBWCD). An objective of the WBP was to integrate its operations with all of these earlier Reclamation and private projects in approaching full development of the Weber River basin’s water resources. WBP facilities include six major reservoirs (Wanship, Lost Creek, enlarged East Canyon, Causey, enlarged Pineview, and Willard Bay), a complex transmission and delivery system (Gateway Canal and Tunnel system, Weber and Davis Aqueducts, Ogden Valley Canal and Diversion Dam, Slaterville Diversion Dam, and Stoddard Diversion Dam), hydropower stations at Wanship Dam, Causey Dam, and Gateway Canal, and many miles of irrigation laterals, agricultural drain systems, and secondary distribution reservoirs. WBWCD is the largest drinking water provider in northern Utah, making wholesale deliveries to more than 50 municipal customer entities as well as providing for thousands of individual well customers. They also deliver agricultural water to over 50 canal companies and municipalities.

**Smith Morehouse Dam and Reservoir** – In 1987, WBWCD enlarged a private Smith and Morehouse Reservoir Company reservoir located in the upper reaches of the Weber River drainage to its current capacity of 8,350 ac-ft. WBWCD has the rights to yield from the enlarged capacity of 6,560 ac-ft. The reservoir is operated and maintained by WBWCD.

### **C. PROJECT FACILITIES**

As stated above, four Reclamation projects and numerous private water developments receive water from the Weber River. Major storage, conveyance, and power facilities on the Weber River are listed in Table 1.



**Table 1  
Major Facilities on the Weber River**

<b>Facility</b>	<b>Location</b>	<b>Capacity (ac-ft)</b>	<b>Project</b>	<b>Managing Entity</b>
<b>Storage Facilities</b>				
Echo	Weber River	74,000 af	WRP	WRWUA
East Canyon	Weber River	51,200 af	DWCCC/WBP	DWCCC
Wanship/Rockport	Weber River	62,120 af	WBP	WBWCD
Lost Creek	Weber River	25,000 af	WBP	WBWCD
Willard Bay	Weber River	227,000 af	WBP	WBWCD
Smith Morehouse	Weber River	8,350 af	WBWCD	WBWCD
Causey	Ogden River	7,870 af	WBP	WBWCD
Pineview	Ogden River	110,150 af	ORP/WBP	ORWUA
Deer Creek	Provo River	152,564 af	PRP	PRWUA
<b>Conveyance Facilities</b>				
D&W Canal	D&W Canal	300 cfs	DWCCC	DWCCC
Gateway Canal	Stoddard	700 cfs	WBP	WBWCD
Gateway Tunnel	Gateway Canal	435 cfs	WBP	WBWCD
Weber Aqueduct	Gateway Tunnel	80 cfs	WBP	WBWCD
Davis Aqueduct	Gateway Tunnel	355 cfs	WBP	WBWCD
Willard Canal	Slaterville Div	1,050 cfs	WBP	WBWCD
Layton Canal	Layton Pump Plant	180 cfs	WBP	WBWCD
Ogden Valley Canal	Ogden Valley Div	35 cfs	WBP	WBWCD
M&I Pipelines	Various	1 - 40 cfs	WBP	WBWCD
Ogden Canyon Conduit	Pineview Dam	35 cfs	ORP	ORP
South Ogden Highline C	Ogden Can Conduit	35 cfs	ORP	ORP
Ogden Brigham Canal	Ogden Can Conduit	120 cfs	ORP	ORP
Weber-Provo Canal	Weber-Provo Div	1,000 cfs	PRP	PRP
<b>Power Facilities</b>				
Wanship Powerplant	Wanship Dam	1,950 kw	WBP	
Gateway Powerplant	Gateway Canal	4,275 kw	WBP	
Causey Powerplant	Causey Dam	2,100 kw	WBP	
Echo Powerplant	Echo Dam	5,200 kw	Private	Bountiful
Pioneer Powerplant	below Pineview	5,000 kw	Private	UP&L
Weber Powerplant	below Echo		Private	UP&L

#### **D. WATER SUPPLY**

As described above, the Weber River is a complicated system of intertwined Federal and private water projects operated by numerous different water companies and districts. Water managed by the five major water projects is shown in Table 2.

**Table 2**  
**Water Deliveries by Project**

Project	Water Managed (af/ year)
Weber River Project	73,997
DWCCC Project	60,546
Weber Basin Project	221,118
Ogden River Project	47,878
Provo River Project	42,453
<b>Total</b>	<b>445,992</b>

## II. PROJECT DESCRIPTION

The proposed project is described under the following headings: A) Need, B) Objective, C) Scope of Work, D) Approach, E) Schedule, F) Required Permits and Approvals, and G) Environmental and Cultural Resource Compliance.

### A. NEED

Need for the project is described under four sub-headings.

**Inadequate Flow Measurement Data** - The Weber River is a complicated system with its many tributaries, multiple reservoirs, and numerous water projects and water rights. Good management requires access to a considerable amount of data on a near real-time basis. One particular challenge is balancing the rights between the direct flow users and the water storage entities and making the appropriate water right priority cuts necessary to satisfy both rights. Another challenge is operating the Weber-Provo Canal, which is often a source of conflict as it affects the water supply for three Reclamation projects and direct flow rights on both the Weber and Provo Rivers. There simply is not enough data on the river to make these critical decisions.

**Recent Drought** - The Weber River basin area has suffered the worst two consecutive drought years on record (2012 and 2013) and the water supply outlook for 2014 (as of Jan 21, 2014) doesn't look much better.

**Water User Conflict** – There was considerable conflict over the operation of the Weber River during the most recent drought year of 2013, particularly with the operation of the Weber-Provo Canal. Water users on the Provo River side, as with most years but more intense this year, suspected that much of their Weber River water was held for use on the Weber River side. And those on the Weber River side couldn't understand why water was being diverted to the Provo River when their rights had been cut. To help resolve these issues, Reclamation and the Utah Division of Water Rights spent considerable time meeting with the various water user entities to better understand their concerns and find ways to resolve them for future years. As a result of these meetings, Reclamation issued two letters; an August 30, 2013 letter describing operating guidelines to be used in future operations, and a December 24, 2013 letter answering specific questions asked by the Utah Division of Water Rights and the Weber River Commissioner.

**Increasing Demand** - Population in the Weber River basin area has increased significantly in the several decades since the projects described above were constructed. This growth is expected to continue into the future, placing increasing demands on the limited water supply. Because of the importance of the Weber River to the multiple agricultural, municipal, industrial, power, recreational, and environmental interests in the area, good water management and planning are not only a good idea but have become a critical need.

**B. OBJECTIVE**

The objective of the project is to install flow measurement stations at seven key locations within the Weber River basin to provide the Weber River Commissioner with the data he needs to accurately and efficiently distribute the waters of the Weber River. Improved flow measurement will also help minimize or avoid future conflict among water users affected by the operation of the river.

**C. SCOPE OF WORK**

The Commissioner has identified seven locations on the Weber River where additional flow measurement stations should be added. The proposed action is to install new flow measurement at each of the seven sites listed in Table 3.

**Table 3  
Flow Measurement Station Installation List**

No.	Operator	River or Creek	Location
1	USGS	Weber River	At 89 crossing below Gateway Canal diversion
2	USGS	Weber River	Above Ogden River below Wilson Canal div
3	USGS	Weber River	Above Rockport Reservoir
4	UDWRi	Weber River	Weber-Provo Diversion Dam (flow over spillway)
5	WBWCD	Smith Morehouse	Below Smith and Morehouse Dam
6	UDWRi	East Canyon	Canal diversions telemetry
7	WBWCD	Ogden Valley Canal	Inflow into canal

The need for and proposed action for each of the flow stations is described below.

**Station 1 - Weber River below Gateway (US 89 crossing of river below D&W Canal)**

- **Need** - This measurement station is needed to ensure that proper flows are available in the river for both conservation flows i.e., fish flows, and the irrigation needs downstream of the D&W Canal headworks and the Slaterville diversion structure. Extremely low flows in in this stretch of the river are a persistent threat to the ecology and the irrigation needs in this area, and the installation of a gage would help mitigate these problems. It is especially important to the Utah Division of Wildlife Resources because...
- **Proposed Action** – This station would be installed and operated by USGS under a cost-share agreement with the Utah Division of Water Rights

### **Station 2 - Weber River above Ogden River (below Wilson Canal diversion)**

- **Need** - This structure is one of the more complex features of the Weber Basin Project; utilizing the waters of the Weber and Ogden Rivers as well as those of Willard Bay. It therefore serves as the primary hub for many of the water deliveries made in western Weber County. Installing this gage would increase the overall efficiency in the water delivery to the Slaterville diversion by alerting the operators if there is too much, or too little, Weber River water entering at any given time.
- **Proposed Action** – This station would be installed and operated by USGS under a cost-share agreement with the Utah Division of Water Rights

### **Station 3 - Weber River above Rockport Reservoir (below Beaver Creek confluence)**

- **Need** - This gaging station was used from 1960 to 1999. Reinstalling this gage would show what the inflows to Rockport reservoir are, and would provide a good indication of how much water Beaver Creek and other inflow sources are contributing to the flow of the Weber River. Data from this gage would be especially useful in determining the amount of water divertible through the Weber Provo Canal.
- **Proposed Action** – This station would be installed and operated by USGS under a cost-share agreement with the Utah Division of Water Rights

### **Station 4 – Weber-Provo Diversion Dam (flow over spillway)**

- **Need** - Knowing the flow of water bypassing the diversion dam (spilling over the spillway) would help the Commissioner ensure that the flow of the Weber River near the town of Oakley is sufficient to serve the water rights in this area. It would also help determine the amount of water divertible through the Weber-Provo Canal.
- **Proposed Action** – Rating and maintaining accurate flow measurement at this location would be managed by the Utah Division of Water Rights

### **Station 5 - Smith and Morehouse Creek below Smith and Morehouse Reservoir**

- **Need** - Outflow from Smith and Morehouse Creek is currently determined by applying the gate's percent-open reading and the elevation reading to a rating curve. An accurate real-time flow reading at this location would help ensure the proper delivery of water in the upper reaches of the Weber River.
- **Proposed Action** – A flume and telemetry equipment would be installed in Smith and Morehouse Creek below the dam to measure releases from Smith and Morehouse Reservoir. This station would be installed and operated by the Weber Basin Water Conservancy District (WBWCD).

### Station 6 - East Canyon Creek Canal Diversions Telemetry

- **Need** - East Canyon Reservoir is one of the largest reservoirs on the Weber River system, operated for the benefit of DWCCC and WBWCD. Both of these agencies release a portion of their storage water from the reservoir into East Canyon Creek, and then divert it from the main stem of the Weber River. Having diversion flow records at the critical canal diversions in this area would help ensure the proper delivery of this storage water.
- **Proposed Action** – Telemetry at the six major diversion structures on East Canyon Creek would be installed, operated, and maintained by UDWRi.

### Station 7 – Ogden Valley Canal Diversion

- **Need** – Ogden River flow diverted into the Ogden Valley Canal is measured by a flume as it enters the canal but the flow must be manually read. Having access to this flow on a real-time basis would help the Commissioner ensure the proper diversions are being made.
- **Proposed Action** – The proposed action is to install the necessary equipment at the site to gather the data and transmit it to UDWRi database. The equipment would be installed and maintained by WBWCD.

### D. APPROACH

The project would be implemented under the following two tasks:

**Task 1 – Flow Measurement Station Installation** – As shown in Table 3, three gages would be installed and operated by USGS (gages 1, 2, and 3), two would be installed and operated by UDWRi (gages 4 and 6), and two by WBWCD (gages 5 and 7). Real-time data from all seven of the sites would be transmitted to UDWR and made available to all water users and the public.

**Task 2 – Administration and Reporting** – This task includes administration and coordination activities to ensure environmental compliance is met and the project is implemented to meet the project objectives. It also includes preparing the Reclamation-required semiannual financial and performance reports and the final closeout documents. Work would be performed by UDWRi or a contractor.

### E. SCHEDULE

As shown in Table 4, the project would be completed by March 31, 2017.

**Table 4  
Project Schedule**

<b>Task No.</b>	<b>Description</b>	<b>Start</b>	<b>Complete</b>
1	Project Installation	Sept 1, 2015	March 31, 2017
2	Coordination and Reporting	July 1, 2015	March 31, 2017

## **F. REQUIRED PERMITS AND APPROVALS**

Compliance with the National Environmental Policy Act (NEPA) will be required. No other permits or approvals are necessary for the project. The Utah Division of Water Rights will work closely with Reclamation, the Utah Division of Water Rights, and the Weber River water user entities during the project implementation processes.

## **G. ENVIRONMENTAL AND CULTURAL RESOURCE COMPLIANCE**

### **1. Will the project impact the surrounding environment?**

The project consists of installing stream gage stations and is not expected to have any long-term effect on the environment. Minor temporary site disturbance would take place during installation of the stream gages. Care will be taken to keep earth material or other debris from entering the river. Also, all disturbed areas will be restored to their pre-construction condition.

### **2. Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activity associated with the Project?**

There are no known threatened or endangered species in the area. However, the Bonneville cutthroat trout and the bluehead sucker are native fish species to the Weber River that are covered by conservation agreements between the State of Utah and the U.S. Fish and Wildlife Service. The proposed project is expected to benefit these species (See letter of support from the Utah Division of Wildlife Resources in Section VI).

### **3. Are there wetlands or other surface waters inside the project boundaries that potentially could fall within the CWA jurisdiction of "waters of the United States? If so, please describe and estimate any impacts the project might have.**

There are numerous wetlands in the project area that could fall under CWA jurisdiction. Care will be taken, however, to avoid wetlands as much as possible. If wetlands can't be avoided, an analysis will be made, necessary permits acquired, and all wetland values will be replaced as part of the project. It is anticipated that there would be no impacts on jurisdictional wetlands.

### **4. When was the water delivery system constructed?**

Facilities on the Weber River were constructed as early as the late 1800's with most constructed from 1930 to 1970. The project will not have any effect on project facilities, however.

### **5. Will the project result in any modifications of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.**

No

6. **Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.**

No

7. **Are there any known archeological sites in the proposed project area?**

No

8. **Will the project have a disproportionately high and adverse effect on low income or minority populations?**

No

9. **Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?**

No

10. **Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?**

No

### **III. EVALUATION CRITERIA**

#### **CRITERION A. WATER CONSERVATION**

##### **Subcriterion A.1 – Water Conservation**

**Quantifiable Water Savings** – The 1903 Weber River Decree gives direct flow users the right to divert water under three flow rates – flood, high, and low. The limits of these flow rates are 1 cfs for each 60 acres (flood), 70 acres (high), and 80 acres (low). Allowing the water users to take flood flow rights made sense in 1903 when there were no reservoirs to capture the excess water. Now that there are multiple reservoirs on the Weber River, however, it doesn't make sense from a water conservation standpoint to grant flood flow rights. Since the "low" flow rate is generally considered to be a full water supply (3.75 af/acre assuming a 150 day irrigation season) all water diverted under the high and flood flow rights is excess to the needs of the crop.

While the problem is bigger than flow measurement, the lack of flow measurement makes it difficult for the river commissioner to compute natural flows in the timely manner that is needed to make the critical "flood-to-high" and "high-to-low" priority cuts. His current method is to use

“large-scale” assumptions based on measured flows and reservoir filling rates. Since this method lacks accuracy, he is somewhat hesitant to make cuts until he is confident that they are needed. New flow measurement stations would allow him to more accurately compute natural flows rather than depend on the current large-scale estimating method. He would then have greater confidence and data to justify cutting a questioning water user’s rights. This saved water would then be stored in the reservoirs.

As shown in Table 5, flood flow rights are typically “on” from the beginning of the irrigation season until early July.

**Table 5  
Typical “Flood” Flow Period**

<b>Water Year</b>	<b>Start</b>	<b>End</b>	<b>Days</b>
Dry Year (2013)	April 15	May 1	14
Wet Year (2011)	April 15	July 20	64
Average Year (2008)	April 15	July 9	53

Acres Served on the Weber River as per the decree are shown in Table 6.

**Table 6  
Irrigated Acres on Weber River**

<b>Weber River District</b>	<b>Acres Irrigated</b>
Upper District	28,860.59
Middle District	13,886.77
Lower District	68,421.65
<b>Total</b>	<b>111,169.01</b>

Potential water savings by cutting from “flood-to-high” and from “high-to-low” is shown in Table 7. As shown, each day diversions are cut from flood to high saves 527 acre-feet of water. The savings are 400 for each day cuts are made from high to low.

**Table 7  
Water Savings Computation based on Priority Cuts**

<b>Right</b>	<b>cfs</b>	<b>Acres</b>	<b>Use Rate af/acre/day</b>	<b>Acres</b>	<b>Diverted (af/day)</b>	<b>Savings (af/day)</b>
Flood	1	60	.0333	111,169	3,706	
						<b>527</b>
High	1	70	.0286	111,169	3,179	
						<b>400</b>
Low	1	80	.0250	111,169	2,779	

The river commissioner estimates that integrating the additional data made available from the new stations into his current cutoff schedules will reduce the number of days on “flood” rate by 5 per year and the number of days on “high” rate by 5 per year. The computed quantifiable water savings is shown in Table 8.



**Table 8  
Quantifiable Water Savings**

<b>Flow Rate</b>	<b>Days Reduced (days)</b>	<b>Water Saved (af/day)</b>	<b>Saved Water (af/year)</b>
Flood	5	527	2,635
High	5	400	2,000
<b>Total</b>			<b>4,635</b>

This savings represents a significant amount of water that heretofore has not been available to the water users. This additional water would be especially valuable during extended drought periods such as has occurred the past two years.

**Improved Water Management** – As shown in Table 4, the total water supply managed by the five major water projects on the Weber River is 445,992 acre-feet per year. This does not include the direct flow water that would also benefit from improved flow measurement. Since the flow measurement stations are located throughout the basin and there are numerous exchanges involving all the two major rivers and tributary streams in the basin, 100% of the water on the Weber River would be better managed.

$$\frac{\text{Estimated Amount of Water Better Managed}}{\text{Average Annual Water Supply}} = \frac{445,992}{445,992} = 100.0\%$$

**Subcriterion A.2 – Percentage of Total Supply**

The full allocation of water for the five major water projects is estimated at 450,000 ac-ft per year. The estimated quantifiable amount of water saved (see table 10) is 4,635 ac-ft per year. This represents an increase in water supply of about 3.1 percent as shown below.

$$\frac{\text{Estimated Amount of Water Conserved}}{\text{Average Annual Water Supply}} = \frac{4,635}{450,000} = 1.0\%$$

**CRITERION B. ENERGY-WATER NEXUS**

The additional flow measurement stations would help the river commissioner and power plant better manage the power water rights as well as the other rights on the river. No direct benefit to power generation, however, is anticipated.

**Subcriterion B.1 – Implementing Renewable Energy Projects**

Not applicable

**Subcriterion B.2 – Increasing Energy Efficiency in Water Management**

Not applicable

### **CRITERION C. BENEFITS TO ENDANGERED SPECIES**

The Bonneville cutthroat trout and the bluehead sucker are native fish species found in portions of the Weber River. Both species are covered by conservation agreements between the State of Utah and the U.S. Fish and Wildlife Service and other parties. The Utah Division of Wildlife Resources approach to the conservation and management of these species, in part, focuses on reconnecting and maintaining connectivity of priority habitats to allow upstream movement of these species. The proposed new flow measurement stations would enhance the efforts to maintain the connectivity in the Weber River and help protect against de-watering events occurring in the future. See letter of support from the Utah Division of Wildlife Resources in Section VI.

### **CRITERION D. WATER MARKETING**

Not applicable.

### **CRITERION E. OTHER CONTRIBUTIONS TO WATER SUPPLY SUSTAINABILITY**

#### **Subcriterion E.1: Addressing Adaptation Strategies in a WaterSmart Basin Study**

Not applicable as a WaterSmart study has not been completed in the area.

#### **Subcriterion E.2: Expediting Future On-Farm Irrigation Improvements**

Not applicable

#### **Subcriterion E.3: Building Drought Resiliency**

Added flow measurement would improve the management of all the water in the Weber River system which would improve the efficiency on the system, provide more water for storage in the multiple system reservoirs, and thus yield a greater water supply during drought years.

#### **Subcriterion E.4: Other Water Supply Sustainability Benefits**

**Assist in the Operation of Reclamation Projects** - As mentioned above, Reclamation has four projects that receive water from the Weber River. Implementing the project would assist Reclamation in their oversight role of ensuring each project gets its proper share of the river.

**Encourage Collaboration and reduce conflict among Parties** - The Project will encourage collaboration among parties and reduce conflict and concern over the operation of the Weber Provo Canal. Affected parties include the managers of the four Reclamation projects mentioned above, the river commissioners on both the Provo and Weber Rivers, the Provo River Water Users Company who holds water rights in the Weber River and capacity rights in the Weber Provo Canal, and Reclamation.

**Weber County Flood Control Operation** - Additional flow measurement on the Weber River, especially Station 1 (Weber River at the Highway 89 crossing), would assist Weber County in their flood control efforts. For this reason, Weber County has agreed (see letter of commitment) to fund it's installation.

**CRITERION F. IMPLEMENTATION AND RESULTS**

**Subcriterion F.1 – Project Planning**

A “Weber River Water Management Plan” (Management Plan) sponsored by the Weber River Water Users Association with partial funding from a Water Conservation Field Services Grant was completed in April 2014. The top (number one) priority among the fourteen management enhancement measures identified in the Management Plan was to install additional flow measurement stations on the Weber River. The proposed project would facilitate the installation of 7 of the 10 flow measurement stations recommended in the Management Plan.

**Subcriterion F.2 – Readiness to Proceed**

The Utah Division of Water Rights has an existing agreement with USGS for installing flow measurement stations. USGS and others are ready to install their stations and UDWRi is prepared and willing to include these new stations into their system for implementation and maintenance.

**Subcriterion F.3 – Performance Measures**

Performance is measured and considered completed when all the stations are installed and the data is transmitted to the UDWRi database and published on their website. Actual water savings would be measured by the managers of the various Reclamation and private water companies.

**Subcriterion F.4 – Reasonableness of Cost**

The total project cost as shown in Table 15 is \$105,750. The average life-expectancy of the improvements is estimated at 25 years.

$$\frac{\text{Total Project Cost}}{\text{Acre-feet Conserved x 25 years}} = \frac{\$107,330}{4,635 \times 25} = \$0.93$$

The cost per acre-foot of water better managed is estimated to be \$0.01 per acre-foot as shown below.

$$\frac{\text{Total Project Cost}}{\text{Ac-ft Better Managed x Improvement Life}} = \frac{\$107,330}{445,992 \times 25} = \$0.01$$

**CRITERION G. ADDITIONAL NON-FEDERAL FUNDING**

Not applicable

## CRITERION H. CONNECTION TO RECLAMATION PROJECT ACTIVITIES

As already stated, four Reclamation Projects receive water from the Weber River as shown in Table 9. Reclamation is heavily involved in the operation of these projects and is supportive of the project.

**Table 9**  
**Reclamation Projects in Project Area**

<b>Project Name</b>	<b>Location of Facilities</b>	<b>Date Constructed</b>
Weber River Project	Weber River	1927-1931
Ogden River Project	Ogden River	1934-1937
Provo River Project	Provo River	1938-1947
Weber Basin Project	Weber & Ogden Rivers	1957-1969

## IV. FUNDING PLAN AND LETTERS OF COMMITMENT

### A. FUNDING PLAN

The estimated cost of the project is \$107,330 (see Table 18) to be funded as shown in Table 10.

**Table 10**  
**Summary of Project Funding Sources**

<b>Funding Sources</b>	<b>Funding Amount</b>
<b>Non-Federal Entities</b>	
Weber River Water Users Association	\$2,475
Weber River Water Rights Committee	\$5,400
Weber Basin Water Conservancy District	\$12,990
Utah Division of Water Rights	\$22,000
Utah Division of Wildlife Resources	\$5,400
Weber County	\$5,400
<b>Non-Federal Subtotal</b>	<b>\$53,665</b>
<b>Requested Reclamation Funding</b>	<b>\$53,665</b>
<b>Total Project Funding</b>	<b>\$107,330</b>

### B. BOARD OF DIRECTORS RESOLUTION

A resolution from the WRWUA board of directors is attached in Section VI.

### C. LETTERS OF COMMITMENT

Letters of commitment from each non-federal entity listed above is attached in Section VI.

## V. BUDGET PROPOSAL AND NARRATIVE

### A. BUDGET PROPOSAL

This section describes the proposed costs for each of the two tasks described in the “Section II (E) Approach”.

#### Task 1 Flow Measurement Station Installation Costs

Estimated installation costs are shown in Table 11.

**Table 11**  
**Flow Measurement Station Installation Costs**

No.	River or Creek	Operator	Installation Cost (\$)
1	Weber River at 89 crossing below Gateway Canal	USGS	9,660
2	Weber River above Ogden River below Wilson Canal	USGS	9,660
3	Weber River above Rockport Reservoir	USGS	9,660
4	Weber-Provo Diversion Dam (flow over the spillway)	UDWRi	7,600
5	East Canyon Creek Canal Diversion Telemetry Stations	UDWRi	36,400
6	Smith Morehouse Below Smith Morehouse Dam	WBWCD	15,600
7	Ogden Valley Canal inflow	WBWCD	10,380
	<b>Total</b>		<b>98,960</b>

#### Task 2 Administration and Reporting Costs

Project administration and reporting (Task 2) would be performed by WRWUA staff and by contract with a consulting firm. Employee wages and fringe benefits are based on actual rates currently paid to staff. Mileage of 380 miles is for travel to inspect construction work. The engineering firm would be selected based on fee and qualifications. The total estimated administrative and reporting cost of \$6,370.00 is itemized in Table 12.

### B. NARRATIVE

**USGS Gages (1, 2, and 3)** – The installation cost of each USGS gage is \$16,100 is shown in Table 13. This cost was provided by Cory Angeroth, an employee in the USGS Salt Lake City office. Vehicle use assumes 10 trips of 139 miles each at a rate of \$0.32 per mile, plus two months car rental at \$313 per month. Facility costs and cost center overhead are an assessment of 10.258% and 21.870%, respectively, on on all direct costs (less SPN). Overhead is a 12.0% assessment on all costs. The state has a 60/40 cost-share agreement with USGS wherein the State provides 60-percent of the cost of installation and operation and maintenance of each gage. The cost of each gage to be reimbursed by the water users is therefore \$9,660 (60 % of \$16,096) as shown in Table 11. All USGS equipment would be installed, operated, and maintained by USGS staff.

**Table 12  
Administration Costs**

Budget Description	Item	Computation		Recipient Cost Share	Reclamation Funding	Total Cost
		Unit	Quantity			
<b><u>WRWUA</u></b>						
Salary and Wages						
	General Manager	\$52.50	36	\$945	\$945	\$1,890
	Admin Assistant	\$17.73	16	\$142	\$142	\$284
<b>Subtotal</b>				<b>\$1,087</b>	<b>\$1,087</b>	<b>\$2,174</b>
	Fringe Benefits	38%		\$413	\$413	\$826
<b>Total WRWUA</b>				<b>\$1,500</b>	<b>\$1,500</b>	<b>\$3,000</b>
<b><u>Contract</u></b>						
	Engineer	\$90.00	30	\$1,350	\$1,350	\$2,700
	Administrative	\$55.00	6	\$165	\$165	\$330
<b>Subtotal (labor)</b>				<b>\$1,515</b>	<b>\$1,515</b>	<b>\$3,030</b>
	Mileage	\$0.50	380	\$95	\$95	\$190
	Office Supplies	LS	1	\$75	\$75	\$150
<b>Total Contract</b>				<b>\$1,685</b>	<b>\$1,685</b>	<b>\$3,370</b>
<b>Total Admin</b>				<b>\$3,185</b>	<b>\$3,185</b>	<b>\$6,370</b>

**Table 13  
USGS Gage Installation Cost Breakdown**

Budget Item Description	Computation		Total Cost	
	Unit	Quantity		
Salary and Wages				
	Hydrotech GS-11	\$33.92	165	\$5,597
	Benefits	\$10.64	165	\$1,755
<b>Subtotal</b>			<b>\$7,352</b>	
	Vehicle	\$0.32	1390	\$445
	GSA car rental	2 Mo	\$313	\$626
	Equip/supplies	\$390	1	\$390
	Facility Cost	10.258%		\$1,175
	Cost center overhead	21.870%		\$4,384
	Bureau overhead	12.0%		\$1,724
<b>Total Expenses</b>			<b>\$16,096</b>	

**UDWRi Gages and Telemetry Stations (4 and 6)** – The cost estimate for rating the Weber-Provo Canal spillway (Station 4) is shown in Table 14. The estimate for the telemetry stations on the six East Canyon Creek canal diversions (Station 5) is shown in Table 15. These estimates were provided by Jared Manning (UDWRi office in Salt Lake City) and are based on actual costs of similar work performed by UDWRi. As stated before, these stations would be installed and operated by UDWRi staff.

**WBWCD Gages (5 and 7)** – The cost for installing the gage in Smith and Morehouse Creek below Smith and Morehouse Dam is estimated at \$15,600 as shown in Table 16. The cost for installing telemetry at the existing Ogden Valley Canal flume (Station 8) is estimated at \$10,380 as shown in Table 17. As stated before, the installation work for both gages would be performed by WBWCD.

**Environmental and Regulatory Costs** - Environmental compliance costs are estimated at \$2,000 for the analysis and preparation of a Categorical Exclusion Checklist. No issues are anticipated that would require preparation of an Environmental Assessment or greater compliance. This anticipated \$2,000 cost is included in Table 18.

<b>Table 14</b>				
<b>Weber-Provo Diversion Dam (flow over spillway)</b>				
<b>Description</b>	<b>Quantity</b>	<b>Units</b>	<b>Cost/Unit</b>	<b>Total</b>
<i>Contract</i>				
Rate Spillway	1	LS	\$ 4,000	\$ 4,000
<b>Subtotal</b>				<b>\$ 4,000</b>
<i>Direct Labor (UDWRi)</i>				
	20	hr	\$ 50	\$ 1,000
<b>Subtotal</b>				<b>\$ 1,000</b>
<i>Administrative (UDWRi)</i>				
Overhead	1	LS	\$ 2,200	\$ 2,200
Travel	1	LS	\$ 400	\$ 400
<b>Subtotal</b>				<b>\$ 2,600</b>
<b>Total</b>				<b>\$ 7,600</b>

Table 15				
East Canyon Creek Canal Diversions Telemetry				
Description	Quantity	Units	Cost/Unit	Total
<i>Equipment</i>				
Sensor	6	LS	\$ 1,400	\$ 8,400
Communication Equipment	6	LS	\$ 600	\$ 3,600
Power Supply	6	LS	\$ 400	\$ 2,400
Hardware	6	LS	\$ 600	\$ 3,600
<b>Subtotal</b>				<b>\$ 18,000</b>
<i>Direct Labor (UDWRi)</i>				
Six stilling wells (8 hr ea)	48	hr	\$ 50	\$ 2,400
Six telemetry stations (30 hr ea)	180	hr	\$ 50	\$ 9,000
<b>Subtotal</b>				<b>\$ 11,400</b>
<i>Administrative (UDWRi)</i>				
Overhead	1	LS	\$ 6,500	\$ 6,500
Travel	1	LS	\$ 500	\$ 500
<b>Subtotal</b>				<b>\$ 7,000</b>
<b>Total</b>				<b>\$ 36,400</b>

Table 16				
Smith & Morehouse Creek below Smith and Morehouse Dam				
Description	Quantity	Units	Cost/Unit	Total
	<i>Equipment</i>			
HydroRanger 200	1	LS	\$ 2,000	\$ 2,000
Hardware and Cable to PLC	1	LS	\$ 1,500	\$ 1,500
<b>Subtotal</b>				<b>\$ 3,500</b>
<i>Labor</i>				
Equipment Installation	20	hr	\$ 55	\$ 1,100
<b>Subtotal</b>				<b>\$ 1,100</b>
<i>Contract</i>				
Engineering design	1	LS	\$ 1,000	\$ 1,000
Construct/install flume	1	LS	\$ 10,000	\$ 10,000
<b>Subtotal</b>				<b>\$ 11,000</b>
<b>Total</b>				<b>\$ 15,600</b>



Description	Quantity	Units	Cost/Unit	Total
	<i>Equipment</i>			
Level Meter	1	LS	\$ 1,300	\$ 1,300
RTU	1	LS	\$ 6,000	\$ 6,000
Solar Panel	1	LS	\$ 2,200	\$ 2,200
<b>Subtotal</b>				<b>\$ 9,500</b>
<i>Labor (WBWCD)</i>				
Equipment Installation	16	hr	\$ 55	\$ 880
<b>Subtotal</b>				<b>\$ 880</b>
<b>Total</b>				<b>\$ 10,380</b>

**C. PROJECT COST SUMMARY**

Total Project costs are summarized in Table 18 below.

Budget Item Description	Computation		Recipient Cost Share	Reclamation Funding	Total Cost
	\$/Unit	Quantity			
<b>Task 1 – Flow Measurement Installation</b>					
Total Task 1 (Table 11)			\$49,480	\$49,480	\$98,960
<b>Task 2 – Coordination and Reporting</b>					
WRWUA Admin (Table 12)			\$3,185	\$3,185	\$6,370
Environmental and Regulatory			\$1,000	\$1,000	\$2,000
<b>TOTAL PROJECT COSTS</b>			<b>\$53,665</b>	<b>\$53,665</b>	<b>\$107,330</b>

## **VI. WRWUA BOARD RESOLUTION AND LETTERS OF SUPPORT**

Attached is a copy of the WRWUA Board Resolution.

Also attached are letters of commitment and support from the following entities:


- Weber Basin Water Conservancy District
- Utah Division of Water Rights
- Utah Division of Wildlife Resources
- Weber County
- Weber River Water Rights Committee
- Weber River Water Commissioner
- Provo River Water Users Association

Reclamation's Provo Area Office has also indicated strong support for the project.

**RESOLUTION 14-04**

**IT IS HEREBY RESOLVED** that at the December 18, 2014 meeting of the Board of Directors of the Weber River Water Users Association, the directors voted unanimously to sponsor and submit an application to the U. S. Bureau of Reclamation for a Water and Energy Efficiency Grant (FOA No. R15AS00002) to install flow measurement stations at key locations within the Weber River Basin to provide the Weber River Commissioner data necessary to more accurately and efficiently distribute the water for the Weber River.

Dated this 18<sup>th</sup> day of December, 2014

By:   
Theo G. Cox, President

Attest:   
Kayleen Meikle, Secretary



# WEBER BASIN WATER CONSERVANCY DISTRICT

2837 East Highway 193 • Layton, Utah 84040 • Phone (801) 771-1677 • (SLC) 359-4494 • Fax (801) 544-0103

December 22, 2014

Tage I. Flint  
General Manager/CEO

Board of Trustees:

Kym O. Buttschardt  
President  
Weber County

Jay V. Christensen  
Weber County

Kerry W. Gibson  
Weber County

John Petroff Jr.  
Davis County

Kyle R. Stephens  
Davis County

Eric B. Storey  
Weber County

Paul C. Summers  
Davis County

Dave Ure  
Summit County

Dee Alan Waldron  
Morgan County

Mr. Ivan Ray, Manager  
Weber River Water Users Association  
138 West 1300 North  
Sunset, UT 84015

**RE: Letter of Support for the "Weber River Flow Measurement Project"  
Water Smart Application**

Dear Ivan:

Weber Basin Water Conservancy District (WBWCD) would like to convey our support for the proposed "Weber River Flow Measurement Project" that Weber River Water Users Association is sponsoring and has submitted to the Bureau of Reclamation for WaterSmart grant. WBWCD is a sponsor of the Weber Basin Project, the largest Bureau of Reclamation project on the Weber River. Accurate measurement of all distributed flows on the river is extremely important to WBWCD, since this District is one of the junior appropriators on the river. This project has many supporters as well as proposed participants, and the WaterSmart application outlines the contributions of each participant. WBWCD hereby commits to help fund this project to the sum of \$12,990.00, as well as the time and resources to help make this a successful project.

If you have any questions or comments during the process, please contact Scott Paxman of our office.

Sincerely,

Tage I. Flint, PE  
General Manager/CEO

TIF/dh



GARY R. HERBERT  
*Governor*  
SPENCER J. COX  
*Lieutenant Governor*

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

### Division of Water Rights

MICHAEL R. STYLER      KENT L. JONES  
*Executive Director*      *State Engineer/Division Director*

January 14, 2015

Ivan Ray  
Weber River Water Users Association  
138 West 1300 North  
Sunset, UT 84015

Re: Commitment to participate in proposed Weber River Flow Measurement Project under WaterSMART Grant

Dear Ivan:

This letter affirms our agency's commitment to participate in the proposed Weber River Flow Measurement Project if funds become available, as is being requested, under a Bureau of Reclamation WaterSMART Grant. We anticipate participating in the installation of six telemetry stations on or near East Canyon Creek and in the rating of the Weber-Provo Canal spillway. The total estimated cost for these two components of the project is \$44,000, with our portion being \$22,000. Our portion will be supplied with in-kind labor and associated travel and overhead costs.

Sincerely,

Kent Jones, P.E.  
Utah State Engineer



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Wildlife Resources

GREGORY SHEEHAN  
*Division Director*

January 16, 2014

Jared Manning

Utah Department of Natural Resources Division of Water Rights  
1594 West North Temple  
Salt Lake City, UT 84116

Subject--U.S. Bureau of Reclamation Water and Energy Efficiency Grant-Weber River Flow  
Measurement Upgrade Project

Dear Mr. Manning:

As an Aquatic Habitat Restoration Biologist for the Utah Division of Wildlife Resources, I am pleased to write in support of the grant application being submitted to the Bureau of Reclamation Water and Energy Efficiency Grants Program. I applaud the efforts of the many partners involved in this proposed project to increase the efficiency and sustainability of water delivery throughout the Weber River watershed.

The Bonneville cutthroat trout and the bluehead sucker are native fish species found in portions of the Weber River. Both species are covered by conservation agreements the State of Utah has entered into with the U.S. Fish and Wildlife Service and other parties. The population status of these two sensitive species warrants additional conservation effort to diminish the likelihood of future listings under the Endangered Species Act. The conservation agreements and strategies stipulate how those measures should be implemented.

UDWR's approach to aquatic species conservation and management in the Weber River, in part, focuses on reconnecting and maintaining connectivity of priority habitats by removing unnecessary barriers to fish migration, or by modifying existing barriers to allow upstream movement of these species, particularly for Bonneville cutthroat trout and bluehead sucker. Naturally of course, stable and connecting flows between those habitats are a fundamental requirement for those conservation actions to be successful. Within that context, I believe that projects that enhance the continuity and maintenance of flows within the Weber River are significant steps in the right direction, as we work cooperatively to protect and conserve these native species.

To provide you with some background and history, during the summer of 2013 alone we identified, monitored and helped to rectify at least five inadvertent de-watering events of critically important reaches of the Weber River. These de-watering events occurred in habitats that support the largest remaining population of bluehead sucker in the Weber River, as well as a "conservation



Page 2

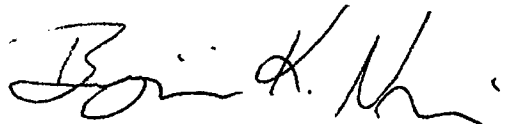
January 21, 2014

Subject-- U.S. Bureau of Reclamation Water and Energy Efficiency Grant-Weber River Flow  
Measurement Upgrade Project

population” of Bonneville cutthroat trout. These de-watering events are an obvious and significant threat to these important populations of native fish species, and I believe the proposed project is a significant step toward resolving this issue. For that reason, I fully support the efforts by those that seek to improve the delivery of irrigation water in the Weber River to ensure that the Weber River is no longer de-watered. I am not authorized to commit funding from the UWDR to this project at this time, but I am fully committed to working with our partners to identify funding needs, and to coordinate with my agencies administration to seek funding commitments in support of this project.

Thank you for considering the benefits of your actions on these species, and for the opportunity to collaborate with you and your many partners on this proposal. If you have any questions, please feel free to contact me at (801) 643-4953.

Sincerely,



Benjamin K. Nadolski  
Aquatic Habitat Restoration Biologist  
Assistant Regional Aquatics Program Manager  
UDWR Northern Regional Office

BKN



PUBLIC WORKS /ENGINEERING  
(801) 399-8374  
FAX: (801) 399-8862  
*Jared Andersen, P.E.*  
*County Engineer*

December 17, 2014

Ivan Ray  
Weber River Water Users Association  
138 West 1300 North  
Sunset, UT 84015

**RE: Weber River Flow Measurement Project**

Mr. Ray,

I am writing this letter concerning the Bureau of Reclamation WaterSmart grant program's Weber River Flow Measurement Project. I have been in contact with Jay Henrie of Henrie Engineering concerning Weber County's commitment towards a new gauge installation on the Weber River.

Weber County is willing to commit \$5,400 towards the installation of a new gauge. We have been committed to working with local agencies and programs to better understand beneficial use of the Weber River. Any placement of a gauge on the river will help Weber County monitor and understand flows of the river at critical times, in particular during flood events.

We appreciate the opportunity to be a part of this project.

Thank you.

Sincerely,

Jared Andersen, P.E.  
Weber County Engineer



# Weber River Water Rights Committee

2837 EAST HIGHWAY 193 • LAYTON, UTAH 84040 • (801) 771-1677

January 7, 2015

Mr. Ivan Ray, Manager  
Weber River Water Users Association  
138 West 1300 North  
Sunset, UT 84015

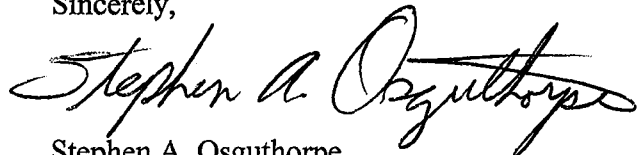
RE: Letter of Support - Weber River Flow Measurement Project  
WaterSmart Grant Application

Dear Ivan:

The Weber River Water Rights Committee (WRWRC) would like to extend our support of the WaterSmart grant application entitled "Weber River Flow Measurement Project" sponsored by the Weber River Water Users Association. The WRWRC is responsible for proper distribution of the Weber River and feels the above referenced project would provide more accurate measurement of the river flows. This accurate measurement of the flows will help ensure fair distribution to all right holders.

Should you have any questions on the above, feel free to contact us.

Sincerely,



Stephen A. Osguthorpe  
Chairman

SAO:sm

---

Cole Panter  
Weber & Ogden River Water Commissioner  
P.O. Box 741  
Ogden, UT 84402

WRWUA  
Theo Cox, Chairman  
138 West 1300 North  
Sunset UT, 84015

RE: Weber River Flow Measurement Project, WaterSMART Grant

12/22/2014

**Mr. Chairman**

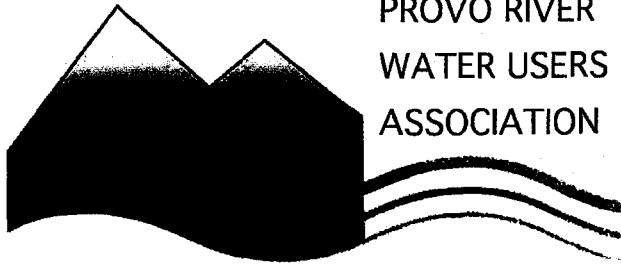
I am sending this letter to show my support for the Weber River Flow Measurement Project, WaterSMART Grant. As the need for water continually increases, I believe that this project will be essential for improvements on water management and deliveries within the Weber River system. The project will provide more pertinent data to a vast array of entities allowing the Weber River system to be operated more efficiently. Please contact me for any further assistance.

Sincerely,



Cole Panter  
Weber & Ogden River Water Commissioner

---



PROVO RIVER  
WATER USERS  
ASSOCIATION

BOARD OF DIRECTORS  
MICHAEL L. WILSON, PRESIDENT  
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JEFF NIERMEYER  
SHANE E. PACE  
CHRISTOPHER R. TSCHIRKI

January 12, 2015

G. KEITH DENOS, GENERAL MANAGER

Mr. Ivan Ray, Manager  
Weber River Water Users Association  
138 West 1300 North  
Sunset, UT 84015

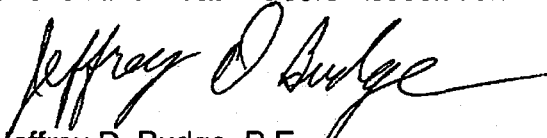
**RE: Letter of Support for the "Weber River Flow Measurement Project"  
WaterSmart Application**

Dear Ivan:

Provo River Water Users Association ("the Association") would like to express support for the proposed "Weber River Flow Measurement Project" WaterSmart Grant request. As the project O&M entity for the Provo River Project which includes the Weber-Provo diversion on the Weber River as a project feature, the Association feels that this is a very needed and worthwhile project. Accurate and timely measurements will greatly enhance the ability of the Weber River Commissioner to appropriately monitor and control the Weber River System. The Association is committed to provide access and information as necessary and to lend financial support through the annual assessment paid to the Weber River Water Rights Committee.

If you have any questions or comments please feel free to contact me at 801.796.8770.

Sincerely:  
Provo River Water Users Association

  
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