

UTAH DIVISION OF WATER QUALITY
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Willard Bay Water Quality
Monitoring Proposal

Applicant Name: Tage I. Flint, General Manager

Co-Applicant Name(s) (if applicable): Scott

W. Paxman, Assistant General Manager Project Title: Willard Bay Water Quality Monitoring Proposal

Agency or Business Name (if applicable): Weber Basin Water Conservancy District

Mailing Address: 2837 East Highway 193 City: Layton State: UT

Zip: 84040 Phone: (801) 771 - 1677 E-mail: spaxman@weberbasin.com

Individual Non-Profit Govt. Agency Academic Commercial Other

1. Estimated Project Costs:

Labor	\$ 16,800
Materials/test	\$ 44,840
Equipment	\$ 8,600
Administration	\$ 2,800
Misc. Contract	\$ 63,000
TOTAL	\$ 136,040

Other sources of project funding:

District	\$ 5000	_____	\$ _____
Source	Amount	Source	Amount

Total project cost including other sources of funding: \$136,040

2. Describe the purpose and need of the project: To establish baseline water quality of the Bay and continue with routine water quality sampling and analysis in order to respond quickly when anomalies appear. This is requested as a direct result of the Chevron spill in the area, but has much more wide reaching benefits in the future of water quality assurance tracking at Willard Bay.

3. Estimated time frame of the project with significant milestones (Note: Project must be completed with final reports filed by January 1, 2018): Baseline water quality data would be established and completed within the timeframe mentioned, with a final report filed by January 1, 2018, but routine sampling would be continued by the District, in order to protect the public from changing water quality issues.

4. Describe the location of the project with attached location map, including details on the total area that will be directly enhanced by the project: The water quality testing would include the entire Willard Bay reservoir, as well as streams into the reservoir, with sampling locations well defined with GPS coordinates. A map with the approximate locations is attached.

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5. Describe how the project will specifically enhance and protect waterways affected by the Willard Bay diesel release and improve the conditions of one or more of the following: wildlife, habitat, natural vegetation, water quality or emergency response: The long-term routine water quality sampling and analysis will give a baseline against anomalies, such as happened with the diesel spill. This will not only protect the public that recreate at the Bay, but also the wildlife in and around the Bay, agricultural water users, and especially the general public, as this water supply will be used for a drinking water supply in only a few years from now.
 6. Describe project's connectivity to other natural areas or projects that further enhance wildlife, habitat, natural vegetation, water quality or emergency response: This proposal will assist in the protection of water quality by identifying any water quality anomalies that are observed, so that action can be taken before serious consequences arise.
 7. Describe any additional social benefits of implementing this project: There are numerous social benefits resulting from the monitoring of water quality parameters of Willard Bay. Since this water is used by wildlife, for recreation, irrigation and drinking water, the protection and constant monitoring of this resource is a huge benefit to all that use the Bay as well as the water from the Bay. If the reservoir were to become contaminated, timely cleanup would be critical to all of the users.
 8. Project plans and details, including rights to work on specified piece of land: Weber Basin Water Conservancy District (WBWCD) is responsible for the operations and maintenance of this reservoir, dam and appurtenances. WBWCD also is responsible to deliver and treat this water for its customers. WBWCD is also very interested in protecting the water quality for current and future customers as well as for recreationists and wildlife. Back in 1950s, the Bureau of Reclamation entered into an operating and repayment contract with WBWCD for all of the Bureau Project facilities of the Weber Basin Project, of which Willard Bay is a part. WBWCD operates and maintains these facilities and is paying the federal government back for the original construction costs of all of the Project facilities.

The project plan is to use WBWCD personnel and equipment to get out on the reservoir and test the water quality using a portable hydro-lab which analyzes several different parameters in the water at different depths, including: dissolve oxygen, pH, temperature, and specific conductance. Samples are collected and taken to WBWCD's environmental laboratory to analyze for: turbidity, total suspended solids, total dissolved solids, total organic carbon and hardness. Additional samples will be collected to test for a suite of organic and inorganic compounds, which testing would be contracted with a commercial laboratory to perform.

It is proposed to sample at up to eight different locations in and around the Bay. Sampling and testing would take place at least 7 months of the year and would continue for a total of five years, although the final submitted report would be up to and including 2017.
 9. Describe your experience in implementing projects of similar scope and magnitude: WBWCD currently owns and operates a NELAC certified water quality laboratory for Bacteriological, Total Organic Compounds, Heterotrophic Plate Count, Nitrate, Total Dissolved Solids, turbidity, etc. The laboratory is operated by two full-time chemists and a professional sampler/lab technician and is supervised by an Environmental Engineer/Laboratory Director. More sophisticated analysis, especially for Volatile Organic Compounds (VOCs), would have to be done by a commercial laboratory. WBWCD's samplers and lab technicians are trained to follow strict protocols for the tasks they perform. WBWCD's laboratory performs over 100,000 water quality analyses each year for over 49 different parameters.
 10. Describe how ongoing maintenance of the project will be funded and carried out: WBWCD would be responsible for continuing the water quality sampling and analysis after this initial funding. The level of sampling may be reduced if little variation in results are noticed.

11. List consultants or agency partners that have participated in project development (below):

<u>U.S. Bureau of Reclamation</u>	<u>302 East 1860 South, Provo, UT 84606</u>	<u>801-379-1000</u>
Name/Company	Address	Phone
Signature <u>[Handwritten Signature]</u>	Applicant	Date <u>4/8/14</u>
Signature <u>Scott Puzman</u>	Co-Applicant (if applicable)	Date <u>4/8/14</u>



Mar

MN

Mid

ME

In

PH

Willard

South Willard

Willard Bay Reservoir

Willard Bay State Park

S Main St

W 8000 S

89

89

15

84

84

15



Sampling water in one of the reservoirs with the HydroLab



Collecting samples to take back to the Lab



Weber Basin's Water Quality Laboratory