Merlin Olsen Summer Classic
Gifts at Work

2025 Highlights
- Eighteen Projects Funded
- Fifteen Projects Completed
- Eurasian Watermilfoil Scientific Symposium Convened
- Bear Lake Initiative Launched – Sediment & Nutrient Reduction

Bear Lake Science Library

Assembled all known studies about Bear Lake and Mud Lake in a special collection hosted at the Quinney Natural Resources Library at Utah State University. This was the first project funded by BLW. It is on-going as new studies are still being added to the collection. It helps BLW to know what's already been studied before embarking on another study. **BLW investment of $3,900.00** to date.

LIDAR Flight

Obtained data for high resolution contour mapping of Bear Lake & NWR. Data is used to delineate the Ordinary High-Water Mark and to establish accurate capacities of Bear Lake and Mud Lake. Completed in the fall 2017. (Data is available to the public). **BLW investment of $1,000.00**. Partners included Idaho Dept. of Lands and US Fish & Wildlife (Bear Lake National Wildlife Refuge). Partners provided an additional $34,448.00 to help fund the project. Completed in fall 2017.

Mud Lake Symposium

Brought together Utah & Idaho DEQs, Water Resources, Bear River Commissioners, PacifiCorp and Bear Lakers for a symposium in May 2014 to gain a common understanding of how Bear River, Mud Lake and Bear Lake function. BLW has been requested to repeat this symposium. **BLW investment of $570.00**.

Mud Lake Bathymetry

A Utah State University study that replicated a 2009 study to ascertain if the extremely high-water flows in 2011 changed the bathymetry and functionality of Mud Lake. Completed in 2014. **BLW investment of $5,236.00**. Completed in June 2014.

Sediment Dynamics in the Bear River–Mud Lake–Bear Lake System

A two-year study by Utah State University examined changes in sediment rates and sources in Mud Lake cores, changes in Mud Lake water quality, changes in Bear Lake shorelines and changes in vegetation along Bear Lake shorelines. Understanding sedimentation in Mud Lake will help us understand sedimentation in Bear Lake. The study was completed in late 2018. **BLW investment of $29,767.00**. Partners US F&WS contributed $17,000, and Utah State University, $39,000.00. Completed in late 2018.

Dietrial Zircon Study

A joint study with Idaho State University examining the effects of shoreline sand erosion and displacement and the origin of Bear Lake sand. **BLW investment of $3,200.00**.

Native Vegetation Study & Report

This in-depth literature study of native vegetation will establish a historical baseline for comparison to what is growing in the lake now. **BLW investment of $5,000.00**. USGS, PacifiCorp and The Bear River Commission contributing $27,935.00.

Water Quality Profiling and Weather Monitoring Platforms on Bear Lake

This study began in 2018 and has collected seven years of data. The platforms gather a near-continuous data set of water quality parameters and weather information at two floating locations on Bear Lake (The platforms are removed from the lake in the winter). The water quality measurements are taken every meter of depth from the surface to the lake bottom 4 times each day. The weather data is compiled every 5 minutes. This information is available to the public on the USGS NWIS web site. In addition to creating a robust data set on Bear Lake water quality, this study will refine evaporation estimates. **BLW investment of $177,703**. Partners USGS, PacifiCorp, Idaho & Utah DEQ have contributed $715,561. Completed in 2024.

Nutrient, Suspended Sediment and Total Dissolved Solids at Bear Lake Causeway

This 2-year study, funded by BLW in partnership with USGS, measured data related to nutrients, suspended sediment and total dissolved solids at the Causeway where Bear River water enters Bear Lake. Sediment entering Bear Lake is a major concern and this study will quantify how much is coming into the lake. There were 9 samplings in 2019 and 12 in 2022. **BLW investment of $58,100.00** and USGS funding $38,730.00. The study was continued and expanded in 2023 with funding from Idaho DEQ for $35,000.

Real-Time Stage Monitoring on Bear Lake

This state-of-the-art depth gauge installed in late 2019 provides real-time data about the elevation of Bear Lake. The accuracy and reliability of this data is important to the Bear River Commission, the Compact States as well as to Bear Lakers. **BLW investment to date of $8,000** and partners with the USGS, PacifiCorp and The Bear River Commission contributing $27,935.00. Completed in 2019.

Economic Value of Bear Lake

Economic value is the language understood by legislatures, governors, and grantors. This study will help determine the value of Clean, Deep and Blue as well as determine the value of recreation, aesthetics, etc. A $97,000.00 study with partners BRAG, Utah FFSL, Utah State Parks, the Community Impact Board, Idaho Water Resource Board and Idaho Parks & Rec. **BLW commitment is $5,000** with partners contributing $92,000.00.

Bear Lake's Environmental Data Accessibility and Preservation

The Bear Lake data repository enhances the accessibility and preservation of the invaluable datasets collected at Bear Lake over the last century. It provides unprecedented, convenient, and open access to modern and historic chemical, biological, and physical datasets. This repository provides the foundation for advancing science at Bear Lake, and it is a critical step for well-informed decision making and sustainable management. **BLW investment of $22,412.50**. Completed in 2024.

Improving the Understanding of High-Dimensional Lake State Transitions in Bear Lake Idaho-Utah Using Machine Learning

Led by Utah State University mathematics/statistics faculty members Brennan Bean, PhD and Kevin Moon, PhD, this unprecedented project consists of the collection and collation of existing high-dimensional data and its subsequent analysis through the use of machine learning algorithms to determine the dynamic changes that have historically occurred in Bear Lake. The data from these analyses helps to predict outcomes at Bear Lake both before and as they develop, which enables Bear Lake Watch to impact the future state of the lake by providing specific insights to policymakers and legislators and by better informing the general public. **BLW investment of $25,544**. Completed in 2024.

Eurasian Watermilfoil Scientific Symposium

In October of 2024, Bear Lake Watch, together with the Utah State University Janet Quinney Lawson Institute of Land, Water, and Air; the Aquatic Ecosystem Restoration Foundation, and the Aquatic Plant Management Society sponsored a virtual scientific symposium to inform stakeholders of Bear Lake (UT/ID) on up-to-date Eurasian Watermilfoil science and best practices for management of invasive species. This outstanding group included top scientists and organizations whose work and experience protects lakes from threats such as Eurasian Watermilfoil and other invasive species.

Bear Lake Initiative – Sediment & Nutrient Reduction

Bear Lake Watch participated in the Bear Lake Initiative Sediment and Nutrient Reduction Workshop in October of 2024. This collaborative meeting was focused on developing a strategic action plan to mitigate the excessive sediment and nutrient inflows into Bear Lake. These inflows are harming water quality, reducing usable shoreline, escalating invasive species, and threatening endemic species as well as the unique chemical balance of Bear Lake. Presented by the partners of the USGS Platform Study: USGS, Utah DEQ, Idaho DEQ, Bear Lake Watch, and PacifiCorp; in collaboration with Utah State University, USFWS Bear Lake Refuge, Bear River Water Users Association, and other agencies and policymakers.

Economic and Environmental Impacts of the Bear Lake Regional Economy

This study, led by Evan Hierpe, Ph.D. of Conservation Economics Institute, compares the environmental impacts—specifically water usage and water quality impairments—of three major economic sectors in the Bear Lake region: tourism, crop production, and cattle production. Using new methodologies, the research aims to provide insights into how these industries affect local water resources amid ongoing development and agricultural activity. The findings are expected to be published in a peer-reviewed journal by the end of 2025. **BLW investment of $12,000**. To be completed in 2025.

Characterizing the Hydrodynamics of Bear Lake

Led by Jeff Nielson, Ph.D., Utah State University, this project aims to develop detailed profiles of water velocity and temperature to better understand the hydrodynamics of Bear Lake—key factors influencing its iconic color, clarity, and aquatic health. Utilizing high-resolution equipment (provided at no cost) and with $10,000 in matching funds from Washington State University, the study will generate a substantial and publicly accessible dataset. The data will be housed in the Bear Lake Data Repository and will support a wide range of future scientific research. **BLW investment of $73,950**. To be completed in 2026.

Investigating the Influence of Sediment on Eurasian Watermilfoil Growth and Herbicide Efficacy in Bear Lake

Led by Mirella Ortiz, Ph.D., Utah State University, this study focuses on Eurasian Watermilfoil, an invasive aquatic plant present in Bear Lake. Researchers will investigate how sediment and water chemistry influence the plant's growth and the effectiveness of chemical treatments. The findings aim to improve strategies for controlling milfoil and inform broader efforts to manage future invasive species. The results will be valuable to state agencies, marina operators, and applicators. **BLW investment of $45,850**. To be completed in 2026.

Summary

- Total net funds raised with the Merlin Olsen Summer Classic in 12 years: $826,030
- Value of projects and studies implemented to date: $1,424,071
- MOSC funds expended to date: $474,832
- Investment Match to date from BLW Partners: $959,239

Your contributions enable us to fund critical scientific research, expand advocacy efforts, and carry out projects that keep Bear Lake healthy. Visit bearlakewatch.org to learn more about the work we're doing and ways to support our efforts through online donations, designated gifts, appreciated stock, trusts, bequests and endowment funds.

Together, we will ensure that Bear Lake remains CLEAN, DEEP, and BLUE for future generations.

BEAR LAKE WATCH
www.bearlakewatch.org

Together we're keeping Bear Lake CLEAN, DEEP, & BLUE.