

Trinity River Restoration Program's Online Data Portal (ODP)

New website allows agencies to share data for improved river system management efficiency and productivity

Bottom Line

ODP provides a framework for a multidisciplinary scientific database.

Better, Faster, Cheaper

Users can quickly retrieve and share scientific data needed on a daily basis without having to repeatedly search for the same data.

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Collaborators

Reclamation:

- Science and Technology Program
- Mid-Pacific Region: TRRP, SJRRP, and Klamath Basin Area Office

Utah State University's Water
Research Laboratory

ESSA Technologies

Problem

The Trinity River Restoration Program (TRRP) is a collaborative program among Federal, State, County, and Tribal government agencies that work to restore the Trinity River and its associated Tribal and non-Tribal fisheries. These agencies must work together to share and analyze data. The TRRP is designed to adaptively manage the Trinity River restoration actions as scientific knowledge of the river advances.

Adaptive management is a systematic process of learning from the outcomes of management actions, making adjustments based upon new data, and thereby improving management. For effective adaptive management, technical analysts and decisionmakers must evaluate enormous amounts of data and information. Managing data involves much more than organizing numbers into tables. The significance and meaning of data depend on collection purposes and methods and the sampling design. This information about the data is referred to as the "meta-data" and is critical to understanding and using the data for management purposes.

Too often, however, data are stored on individual computers inaccessible to team members or cooperating agencies and do not have the associated meta-data. Given these weaknesses, and the need to efficiently maintain data quality and share the data, centralized information systems and active data management are needed for most large river restoration programs.

Solution

This Science and Technology Program research project partnered with Reclamation's TRRP Office, Klamath Basin Area Office, San Joaquin River Restoration Program (SJRRP), and other staff of the Mid-Pacific and Pacific-Northwest Regions, plus Utah State University's Water Research Laboratory and ESSA Technologies to develop an integrated information management system (then known as IIMS). Founded upon IIMS, but more flexible to the varied needs of collaborative adaptive management, the system has become the ODP. This web-based system allows all members of the TRRP to:

1. **Store data.** The ODP is a flexible information repository with storage and search capabilities for data packages, reports, meeting minutes, and other information.
2. **Share data.** The ODP enables all TRRP member agencies and organizations to access the program data within a secure and quality-controlled system.
3. **Inform the public and stakeholders.** The ODP (in conjunction with the TRRP website) provides an access point for stakeholders and the public to obtain information about TRRP and its activities.

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The ODP includes data visualization, summary statistics, and regulatory compliance tools. The ODP is a web-based suite of tools including a data package library, document library, meeting materials library, time-series data modules for point and depth data, an online map driven by ArcServer, web services for automated data queries, and a search interface that includes searching meta-data. Internal data structure is flexible to the addition of further data modules.

Benefits

Scientific analysis and decisionmaking in TRRP will improve as a result of more accurate and timely information available to water and natural resource science staff and managers through the ODP. Program stakeholders and the general public will also benefit from the easy access to information. The benefits reach far beyond the TRRP; the ODP system and protocols can be used for many river restoration and other adaptive management programs.

Application

This ODP is being used extensively for the TRRP (<http://odp.trrp.net>). The ODP is highly portable, and Reclamation is considering using the system for other river systems. The ODP is based upon general modules that are independent of location and, thus, can be applied to any river basin.

Future Development Plans

Additional planned data modules include a simple but flexible table for reporting performance metrics and a project proposal and management tool. Further planned extensions of ODP capabilities include data viewing for river and reservoir depth-related data as well as longitudinal changes along river courses.

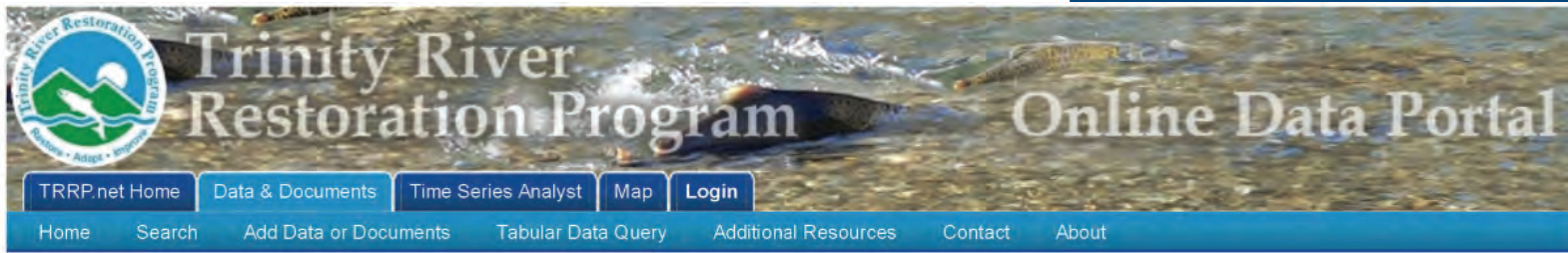
“The TRRP has been successful in linking the theory and practice of data stewardship in an efficient data portal. The TRRP system documents, preserves, and makes available valuable data collected by the program. By doing so, in a manner that is both user friendly and accessible to all interested parties, it has increased the value and utility of the datasets now and for years to come.”

Eric Peterson,
Data Steward for the Trinity River
Restoration Program

More Information

Trinity River Restoration Program:
www.trrp.net

Online Data Portal:
<http://odp.trrp.net>



Welcome to the TRRP Online Data Portal, a repository of information for the Trinity River watershed. You may search for documents, meetings and data by entering your keywords below.

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Documents Meeting Materials Data Online Map



U.S. Department of the Interior
Bureau of Reclamation