The Western Waters Digital Library:

Building a Resource Through Multi-State Collaboration and Technology

http://westernwaters.org

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Overview

- Led by Greater Western Library Alliance (GWLA)
- Funded by IMLS (2003-2005) and NEH (2007-2010) grants
- Objectives:
  - Begin developing comprehensive information resource
  - Establish a viable technical infrastructure
  - Serve as a collaborative model
- Initial river basins focus:
  - Platte, Colorado, Rio Grande, and Columbia
Overview (cont’d.)

• Geographically distributed collections
  – 12 of 30 GWLA institutions participated in IMLS grant
  – 4 of those 12 plus Water Resources Center Archives (Berkeley) participated in NEH grant ($338,444)

• Harvesting metadata to central server at Utah
  – PKP harvester
    • Sites using mostly CONTENTdm
  – Creates aggregated index for virtual, seamless searching of all collections from single website

• Balancing local control vs. central usability
Opportunities

• Develop collections, solve technological issues collaboratively
• Digitize more types of material
• Widen use of metadata standards
  – Testing, refining
• Facilitate publicity to end-users and stakeholders
NEH Grant Participants

- Brigham Young U.
- Water Resources Center Archives
- Colorado State U.
- University of Utah
- Washington State U.
NEH Grant Participants

- Engaged team of 16 archivists, librarians, technical experts
- Faculty advisors with expertise in western water issues
  - Recommended content based on research value, uniqueness, demand by faculty, other scholars
  - Guided by collection development policy
NEH Project Outcomes

- Expanded collaborative relationships established in 2003-2005
- Exceeded objective to digitize 20,000 pages related to water policy and environmental history by digitizing or making accessible some 47,739 manuscript pages, legal documents, and photographic images (now over 75,000 in total)
- Redesigned and enhanced the WWDL web site
NEH Project Outcomes

- Added initial repository of 30 Encoded Archival Description (EAD) finding aids
- Provided multiple ways to retrieve finding aids
- Linked finding aid entries to corresponding digital objects for easy access by users
Welcome to Western Waters Digital Library

The Western Waters Digital Library (WWDL) provides free public access to digital collections of significant primary and secondary resources on water in the western United States. These collections have been made available by research libraries belonging to the Greater Western Library Alliance (GWLA) and other academic library partners. The WWDL is a valuable resource for researchers, policy makers, scholars, Native American tribes, professionals working in various fields, and others interested in contemporary and historic water issues.
Advanced Search

All Fields

All Archives
Arizona State University
Brigham Young University
Brigham Young University - Finding Aid OAI Repository
California Institute of Technology - KHR

Archives

Title

Subject

Description

Creator

Type

Search tips:
Search terms are case-insensitive
Common words are ignored
By default only entries containing all terms in the query are returned (i.e., AND is implied)
Combine multiple words with OR to find articles containing either term; e.g., education OR research
Use parentheses to create more complex queries; e.g., archive ((journal OR conference) NOT theses)
Search for an exact phrase by putting it in quotes; e.g., "open access publishing"
Exclude a word by prefixing it with - or NOT; e.g. online -politics or online NOT politics
Use * in a term as a wildcard to match any sequence of characters; e.g., soci* morality would match documents containing "sociological" or "societal"

Note: After selecting a search result item (thumbnail) you will leave the WWDL site and go directly to the institutional site where the item is held. In order to return to the WWDL site, it will be necessary to utilize the "Back" function on the browser.
Collections

The following descriptions provide a brief overview of some of the featured collections.

Arizona State University:

**Colorado River/Central Arizona Project Records Collection**
The Records of the Central Arizona and Boulder Canyon Project is comprised of selections from the Carl T. Hayden Papers and other sources. As Arizona Congressman from 1911-1970, Hayden influenced natural resource development, water reclamation, and land-use management, culminating in 1968 with the Central Arizona Project (CAP) to transport Colorado River water to Phoenix and Tucson via a series of aqueducts.

Brigham Young University:

**Central Utah Project Records**
The Central Utah Project, planned and constructed by the Bureau of Reclamation, is the most significant water resource development program in the state. The Project enables Utah to use most of her share of Colorado River water. The collection includes information about the Colorado River and its tributaries as well as documentation relative to the Center Utah Project, including annual reports, news reports, and other material dating from 1964.

**Wallace Foster Bennett Papers**
During his tenure in the United States Senate (1951 – 1974), Wallace Foster Bennett was deeply involved in water issues in the West and helped pass legislation for the creation of the Central Utah Project. The Bennett Papers reveal his concern for the conservation and proper use of natural resources. Senator Bennett played a key role in approval of the Upper Colorado River Act, in addition to the passage of the Small Reclamation Projects Act, the Watershed Act of 1954, and the Dixie Reclamation Project.

**Arthur V. Watkins Papers**
Arthur V. Watkins was elected to the United States Senate in November 1946 and represented the state of Utah until 1959. Between 1954 and 1957, Watkins sponsored legislation supporting the Upper Colorado River Storage Project. The project included the construction of many reservoirs for water storage and conservation. These smaller projects helped bring more water to Utah, benefiting agriculture by providing a reliable source of

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**Land Classification Map of Northeastern Utah and Southeastern Idaho**

**Featured**

**Finding Aids**

**Grand Coulee Dam Collection - University of Washington**
This collection contains photographs and pamphlets of the construction of the Grand Coulee Dam built during 1933 to 1942...

**Hoover Dam Collection - University of Nevada - Las Vegas**
The Hoover Dam Collection is comprised of photographs and documentary videos about the construction of Hoover Dam in the early 1930s...

**Native American Water Rights in Arizona - University of Arizona**
This collection of federal government documents pertains to the water rights of Navajo, Hopi, and Pima tribes in Arizona.
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Collection Guide

Collection Title: Inventory of the James D. Schuyler Papers, bulk 1886-1912

Collection Number: SCHU

Get Items:
- Offline. Contact UC Berkeley: Water Resources Center Archives
- Online items available

Collection Overview

Description: The James Dix Schuyler Papers consist of unpublished reports, correspondence, and other documents. The reports cover Schuyler's work as a consulting engineer in the Western U.S., Brazil, Canada, Japan, Mexico, Panama, and Puerto Rico. Photographs are included in many reports and they depict public buildings, private residences, street scenes, and landscapes along with images of dams, canals, and other hydraulic structures.

Background: James Dix Schuyler was born May 11, 1848, in Ithaca, New York, the son of Philip C. and Lucy M. (Dix) Schuyler. He was educated at Friend's College, 1863.
### John S. Boyden papers

**Title:** The John S. Boyden papers (1929-1980) contain correspondence, biographical information, and documents relating to his dealings with Native American issues, Utah water issues, and politics. He was an attorney in Salt Lake City, Utah; The John S. Boyden papers (1929-1980) consist of personal and...  

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### Letter, Keith W. Kintigh to Richard Hart, June 27, 1986

**Description:** Letter about an area near the Zuni River in Apache County, Arizona; includes copy of an Arizona State Museum Zuni River survey form from 1984 and three maps.  
**Date:** 1986-06-27

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### Zuni Indian Tribe lands bill; hearing before the Select Committee on Indian Affairs, United States Senate, Ninety-eighth Congress, second session, on s. 2201 ... April 9, 1984, Washington, D.C.

**Description:** Religious Significance of Kolhu/wala:wa to the Zuni People; Statement by Zuni Religious Leaders on Kolhu/wala:wa; Statement of Stephen G. Boyden, Attorney for the Zuni Indian Tribe; Zuni Indian Tribe and Title to Kolhu/Wala:Wa (Kachina Village); Statement of Edison Laselute, Former Governor of the Zuni Indian Tribe; Statement of Robert E. Lewis, Former Governor of the Zuni Indian Tribe; Statement of Alfonso Ortiz, President of the Association on American Indian Affairs, Inc.; Draft—Archaeological Assessment of Pothunting Damages at the Bean Patch Ruin, near St. Johns, Arizona; Letter from Arthur N. Lee, chairman, board of supervisors, Apache County, AZ, to Senator Andrews; Letter from Peterson Zahn, chairman, Navajo Tribal Council, to Senator Andrews; Letter...  
**Date:** 1984-04-09

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### 115 page bill to convey certain lands to the Zuni Indian Tribe for religious purposes, including the area in Arizona called Kolhu/wala:wa.

**Date:** 1984-04-09
June 27, 1986

Department of Anthropology
University of California
Santa Barbara, CA 93106

Dr. E. Richard Hart
5901 Flor del Rey, NW
Albuquerque, NM 87120

Dear Richard:

Please accept my apologies for taking so long to reply to your April letter. I was really overwhelmed with work when it came, and I put it aside because I thought it would take a little time to dig up the answer. As it turned out it took only a few minutes, which makes the delay even worse. Thank you for the information on Crouch and Pedro Pino.

In any case, that inscription was a part of LZ43 = AZ Q:4:113(ASM), a long rock art panel above the spring that forms a big marsh on the north bank of the Zuni River. I have sent you a copy of our survey form, and full sized copies of the map. I can't tell you exactly where, within the stretch of cliff identified as LZ 43, that particular inscription is, but I don't think it would
<table>
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<th>No</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>[Owyhee Dam] - Owyhee analysis. 1930. e120pp.</td>
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<td>2</td>
<td>Owyhee Project. 1934-1940. e50pp. Includes photographs.</td>
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<tr>
<td>5</td>
<td>Provo River Project. 1937. 4pp.</td>
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<tr>
<td>13</td>
<td>Snowy Mountains hydro-electric scheme. 1951. 1p.</td>
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<tr>
<td>14</td>
<td>South Platte. 1959-1977. e350pp. VIEW</td>
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<tr>
<td>15</td>
<td>[South Platte River]. 1958-1979, undated. e80pp. VIEW</td>
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<tr>
<td>16</td>
<td>[South Platte River]. 1966-1978, undated. e40pp. VIEW</td>
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<tr>
<td>1</td>
<td>[South Platte River]. 1967-1975, undated. e40pp. VIEW</td>
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<tr>
<td>3</td>
<td>[South Platte River - Computations]. 1977, undated. 3 envelopes</td>
</tr>
<tr>
<td>6</td>
<td>[South Platte River - District 64]. 1976. e30pp.</td>
</tr>
</tbody>
</table>
2,785 visits came from 47 countries/territories

Site Usage

Visits: 2,785
Pages/Visit: 3.34
Avg. Time on Site: 00:01:06
% New Visits: 93.29%
Bounce Rate: 17.31%

Views:
Current Activity Outside of NEH Grant

- A dozen institutions (some outside GWLA) are contributing content to the WWDL via harvesting of metadata:
  - Texas A&M University
  - University of Texas at Austin
  - Iowa State University
  - Utah State University
  - California Institute of Technology
  - University of Idaho
Challenges

- Content selection
- Metadata
- Technology
- Communication
- Funding
Metadata

- Project participants have agreed to follow the *Western States Dublin Core Metadata Best Practices*, version 2.0
  - The standards provide considerable latitude for some elements
- Some participants are harvesting from legacy collections that were created without adherence to these standards
- Aggregation of metadata reduces search granularity
Technology

• Harvesting and delivery of content have been a challenge
  – Tweaks to metadata necessary to facilitate harvesting
  – Local changes in technology affect PKP harvester

• Must adapt to new and evolving technology
  – Should we use something other than CONTENTdm, PKP harvester?
    – Harvesting metadata vs. central server with content

• Who monitors and maintains the web site?
Communication

- GWLA direction and oversight
  - Executive Board/Library directors (30)
  - WWDL Deans Advisory Board

- WWDL communication forums
  - Monthly reports and conference calls with project coordinators
  - Semi-annual meetings at ALA
  - Online repository for reports, standards, minutes, etc.
    - Electronic discussion list

- Consortia are fragile
  - Misunderstandings arise as result of misinformation
  - Competing priorities at local institutions
Funding

• Funding of public universities is shrinking
• Costs are increasing
• Digital projects typically reliant on reallocation of existing resources
• Collaborative projects have become more attractive to funding organizations
  – Indirect costs of lead university for administration can significantly reduce funds distributed to each participant
Where Do We Go From Here?

• Who will conduct usability studies?
• Who should initiate next development phase?
• What content should be added next?
• Where should we seek funding?
• How do we keep abreast of developing technology and remain user-focused?
Contact Information

Website – [http://westernwaters.org](http://westernwaters.org)

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