

Seeing the Past, Envisioning the Future Portneuf River:

Repeat Photography, Cultural Historical Geography, Environmental Perception

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Abstract:

This collaborative, transdisciplinary and interdisciplinary project between Idaho State University and the City of Pocatello explores innovative new ways of understanding, interpreting, and visualizing how environmental perception of the Portneuf River has shaped river management, development, and historic landscape change over time.

Our project aims to visually reconstruct cultural and historical landscapes through popular visual representations of the river found in photographs and postcards from the 1890s to 2016. We are in the process of conducting a visual content analysis of 70 years of historical photographs and postcards of the Portneuf River. We will use a select set of historic images as baseline data for a repeat photography project of these same locations, in the present era. We aim to “see the past” but also help the community of Pocatello envision the present and future of the river.

The project will be of interest to social and ecological scientists, cyberinfrastructure technicians and researchers, and stakeholder. Our initial effort looks at the Portneuf River during an era of channelization and redevelopment in the 1960s aimed at controlling flooding through the historic urban core of Pocatello.

Background/ Literature Review:

Ecosystem services may be divided into four types; provisioning, regulating, cultural, and supporting. This project focuses on the cultural category, which includes recreation, tourism, aesthetics, and spiritual experience. Geography is an inherently interdisciplinary field that integrates cultural, social, and physical perspectives on the environment. By examining ecosystem services from a cultural, environmental and historical geography viewpoint, we can better understand the complex spatial relationships and changing landscapes created by human-environment interactions over time.

Landscape is a key concept in cultural geography. Landscapes are material and visual representations of past human actions and environmental change that may be “read” through a closer look at the contemporary landscape. Repeat photography is a method used by both cultural and physical geographers to better understand landscape change over time. By comparing historic photographs with similar images taken of the contemporary landscape from the same location and perspective, both subtle and dramatic changes are evident. These changes may also give us clues to changing ideas and values of ecosystem services.

Historic Photographs of the Portneuf River through Pocatello Idaho



Figure 1 : A 1967 photograph looking towards the Veteran's Memorial Building in Pocatello (right side of image), Idaho with the Portneuf River in the foreground. Source: U.S. Army Corps of Engineers. “Portneuf Basics” of Portneuf Visioning Study website.

Repeat Photographs of same location in 2016



Figure 2. A repeat photo from 2016 of the same scene. Dramatic changes in the cultural landscape here including the construction of a concrete channel for the Portneuf River, fence, paving on either side of river, and visual aesthetics of separated residential areas and river channel.

Research Questions:

- How have environmental perceptions shaped river management and ecosystem services in the past, present, and future?
- How can repeat photography and cultural landscape interpretation inform contemporary decision making related to the Portneuf River redevelopment for recreation potential, aesthetic appeal, sustainable riparian habitat?



Figure 3. A 1966 photograph looking towards Freemont Street and the Veteran's Memorial Building in Pocatello, Idaho. Note the channel under construction with tree stumps lining the edges of the riverbed. Source: U.S. Army Corps of Engineers. “Portneuf Basics” of Portneuf Visioning Study website.

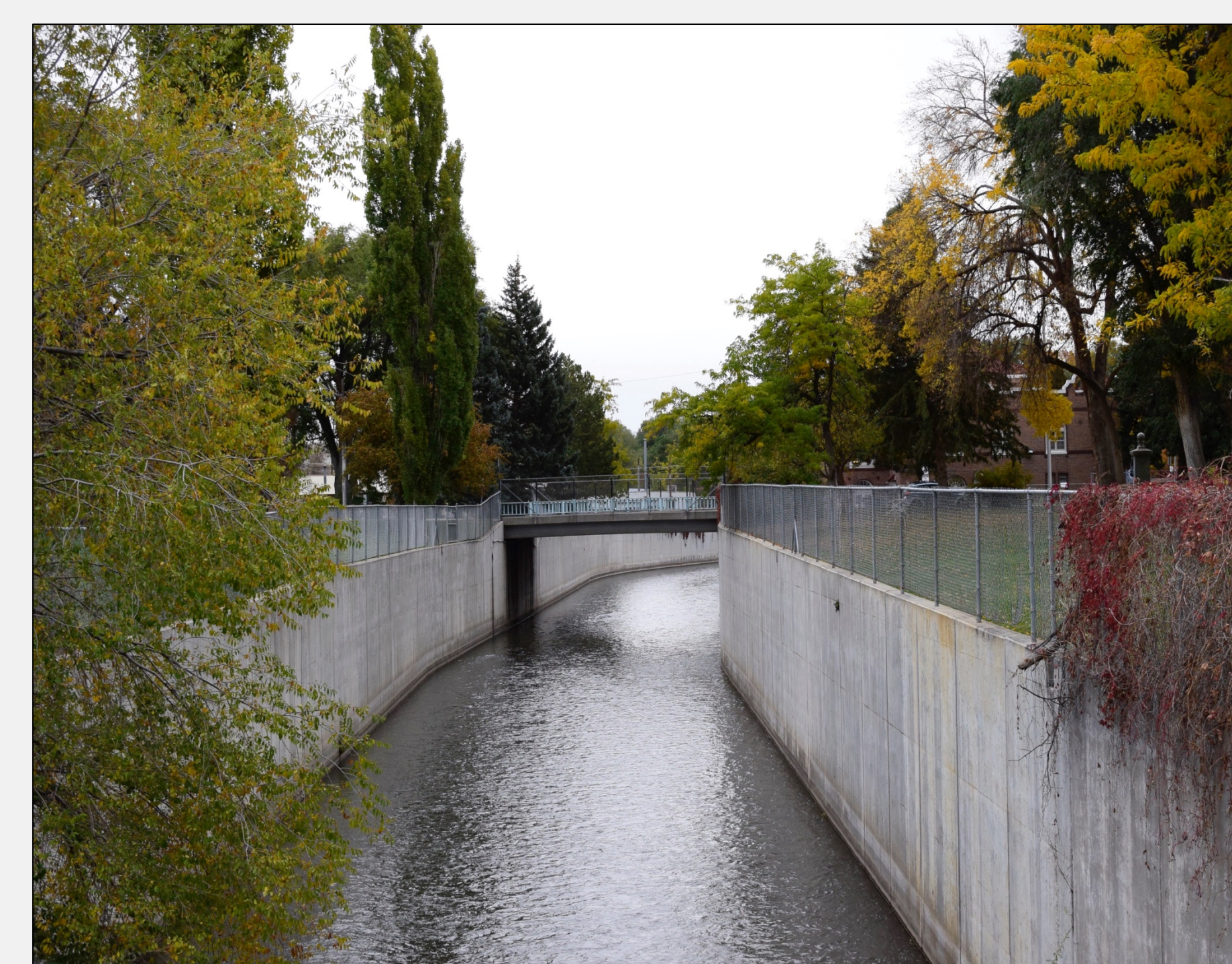


Figure 4. A 2016 photograph of the same location. Dramatic changes in the cultural landscape here separate residential areas, city park, and pedestrians from the river. The Bannock County Veterans Memorial Building is barely visible on the far right in image, behind mature deciduous trees in Memorial Park. Note the bridge move and the vegetation that has replaced the bare riverbank and trees stumps.

Methods:

To better assess historic riparian landscapes in Pocatello and understand changing ecosystem services over time, we created an initial set of repeat photographs along the Portneuf River using historic imagery (Figure 1 & 2) and contemporary photographs of the same location (Figure 3 & 4). We then compared the images of landscape change along a section of the river under consideration for redevelopment as part of the Portneuf Visioning Study.

Results/Conclusions:

Our preliminary findings show incremental yet dramatic changes in the riparian and urban landscape from the 1960s to present day. This includes changes in the Portneuf River's course and riverbed through channelization, vegetation disturbance, and viewshed changes that created separation of pedestrians and recreationalists from the Portneuf River.

Future Directions: We are creating a series of innovative hybrid research products that combine repeat photographs of historic and contemporary images of buildings, streets, and parks along the Portneuf River with augmented reality visualizations that allow users to see and interact with the past and the present river and Pocatello downtown landscapes in tandem. This poster presents some of our early research findings of historic images and repeat photograph sets. In the future, we will continue to collect additional historic images through archival research, create repeat photo sets, analyze historical landscape change, and create augmented reality visualizations.

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