Boise River at Eagle Island Ecosystem Restoration Project

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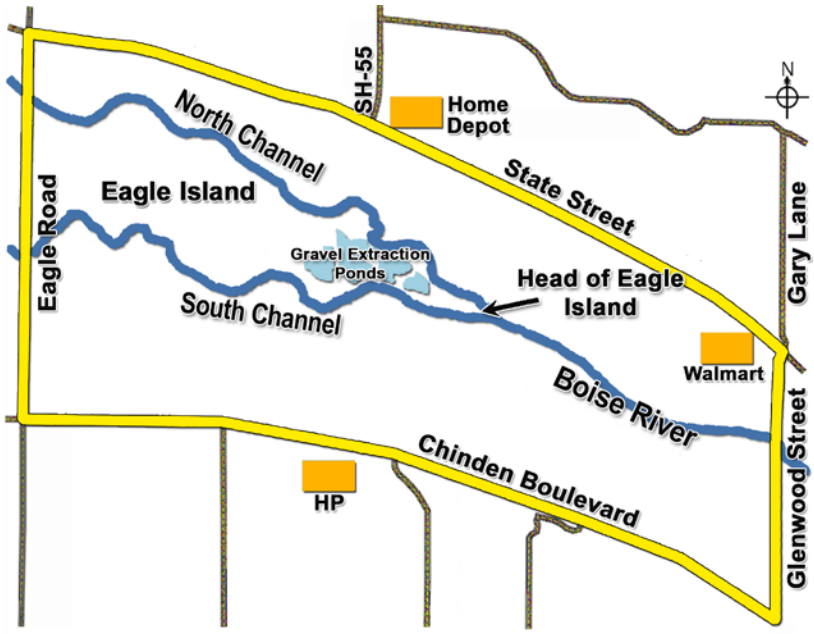
BACKGROUND

The Boise River at Eagle Island Ecosystem Restoration Project will determine the feasibility of restoring or enhancing environmental quality at or near the head of Eagle Island on the Boise River. The study area is located within the Boise River floodplain between Glenwood Street and Eagle Road, near the cities of Eagle, Garden City and Boise, in Ada County, Idaho. Study activities are focused from the head of Eagle Island, downstream along both the north and south channels, to approximately the west end of the gravel extraction ponds.



Project Area

Boise River flows are regulated by three upstream federal dams operated by the Corps and the Bureau of Reclamation (Reclamation) as a system. Reclamation operates Arrowrock and Anderson Ranch dams, the two facilities located farthest upstream. The Corps operates Lucky Peak Dam. The resulting flows from operation of these facilities have contributed to riparian and aquatic ecosystem degradation in and along the Boise River.

The feasibility study will identify strategies to restore biological (aquatic and riparian communities) and physical (floodplain functions, sediment transport and channel hydraulics) components to a more naturally functioning and sustaining state. The area has been affected by flow regulation, irrigation diversion, flood control projects, gravel mining and land development encroachment.

SPONSOR

The Boise River Flood Control District #10 (FCD10) is the non-federal sponsor. The sponsor would provide 25 percent of the total project costs and would be responsible for operation and maintenance of the project when completed.

STUDY AUTHORITY

The Corps is conducting the study in accordance with Section 1135 of the Water Resource Development Act (WRDA) of 1986, as amended by section 204 of WRDA 1996 (Project Modifications for Improvement of Environment). The Act authorizes the Corps to modify existing Corps projects to restore the environment or construct new projects to restore areas where Corps projects have contributed to degradation of environmental quality. Any environmental improvements cannot conflict with authorized Corps project purposes. The Boise River at Eagle Island Ecosystem Restoration Project will not consider physical or operational changes to the Corps' or Reclamation's projects.

STUDY OVERVIEW

The Corps initiated the study in 2002. From 2002 to 2004, the Corps conducted baseline studies, including hydrology studies, and began to develop a plan to address identified water resources and associated land problems and opportunities. Feasibility study activities were suspended in 2005 due to Corps program funding shortages.

The Corps received federal funding in 2009 to reinitiate the study and additional funds in 2010 and 2011 to complete the feasibility study. In 2010, the Corps conducted studies to characterize and assess existing conditions in the project area and to assist with forecasts of the most probable "without-project" condition (or no action). Studies included a characterization of in-stream ecological and physical conditions; wetland delineation; cultural resource assessment; hydraulic modeling of river flow dynamics; and vegetation, wildlife and aquatic surveys. Resource inventories will help further define the ecological problems in the study area and identify opportunities to address these problems.

Ecological problems initially identified in the study area include:

- **Decline in Fish and Wildlife Habitat Diversity and Quality -** Habitat diversity and quality has declined due to regulated river flows and land use development in the river corridor. Many wetland communities are reduced to thin strips along the Boise River. Black cottonwood trees do not naturally regenerate because of the reduced peak flows needed to create seed beds. Wetland and riparian habitats provide important ecological functions, including flood storage, sediment trapping and wildlife habitat.
- **Floodplain Fragmentation -** The floodplain is fragmented (segmented) and discontinuous. Gravel extraction ponds, berms and land use development have contributed to fragmentation of the floodplain ecosystem. Fragmentation decreases floodplain functions such as its ability to store and convey floodwater and reduces fish and wildlife habitat quality and quantity.
- **Sediment Movement and Accumulation –** Sediment deposition and channel manipulation at the head of Eagle Island results in variable flow distribution into the north and south channels. The gravel accumulation is a result of nature- and human-induced activities, including regulated flows, and in-stream berm placement and manipulation to meet irrigation needs. These conditions result in streambank and bed instability, habitat loss, water quality impacts and increased flood risk.
- **Risk of Pit Capture -** Gravel extraction and residential ponds are susceptible to pit capture. Pit capture occurs when an active river channel erodes a strip of land separating the river from a pit. This causes the river to migrate into the pit and convert the off-channel pit into a part of the river. Pit capture can create severe stream channel erosion, degrade water quality and result in loss of riparian and aquatic habitat.

Aerial view looking north toward Boise River and Eagle Island

Photo provided by Ada County Highway District - taken by Idaho Airships, Inc., 2002

ONGOING ACTIVITIES

Input from the public and agencies will be used by the Corps and FCD10 to refine the problem statements and develop planning objectives that describe the desired future condition. Measures or strategies to address the problems and achieve planning objectives will be identified. These measures will be combined into alternative plans. The Corps will evaluate and compare alternative plans. A plan will be selected that provides the greatest increase in environmental benefits at the least cost.

The Corps will prepare a feasibility report documenting the process and plan selection rationale. If a feasible plan is not identified, the selected plan would be the no action alternative. An environmental assessment (EA) will also be prepared to satisfy National Environmental Policy Act requirements and other applicable laws and regulations. The Corps anticipates having the draft feasibility report, an EA and a draft Finding of No Significant Impact available for public review and comment in spring 2012. The study is scheduled for completion at the end of 2012.

FOR MORE INFORMATION

Contact Ellen Berggren, Project Manager, with questions about the study, or visit the Corps website at www.nww.usace.army.mil/boise/breier/default.asp.

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July 2011