

Painter's Riffle Anadromous Fish Habitat Enhancement Project



About the Project

As part of ongoing efforts to protect fisheries, GCID was part of a unique partnership that developed and designed the Painter's Riffle Anadromous Fish Habitat Enhancement Project to enhance salmon habitat that was obstructed by a major storm. The restoration project was designed to reopen Painter's Riffle, a historic salmonid spawning side channel on the Upper Sacramento River, downstream of the Highway 44/299 Bridge.

Agencies involved in the project included GCID, Bureau of Reclamation, U.S. Fish and Wildlife Service, Golden Gate Salmon Association, Northern California Water Association, and the California Department of Fish and Wildlife (CDFW), who worked together to develop and design the Painter's Riffle restoration project. With Reclamation staff's technical assistance and support from the Central Valley Project Improvement Act (CVPIA), GCID used its own staff and assets to obtain final permits and construct the proposed project.

The project was completed in December 2014.

Background on Painter's Riffle

Painter's Riffle was initially constructed in 1986 by CDFW Biologist Dick Painter, and was successful in producing 100 to 200 additional redds (fish nests), each of which contain an average of 5,000 eggs resulting in up to 750,000 salmon smolt in the Sacramento River system on an annual basis. For 25 years, Painter's Riffle assisted the survival of winter-run and spring-run Chinook salmon, as well as fall-run Chinook salmon, which are important to the commercial fishing industry.

In 2011, it was blocked and filled by approximately 11,000 cubic yards of gravel during a large storm event. The unstable gravel that filled the channel was originally placed in the Sacramento River as a construction work pad beneath the Highway 44 Bridge. When the gravel moved in 2011, it essentially buried the Painter's Riffle spawning habitat.



GCID staff spent over 500 hours preparing and moving approximately 8,000 cubic yards of gravel to reestablish the spawning habitat in the side channel.

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Painter's Riffle Project Details

Once the permits and agreements were received from numerous agencies, including the California Department of Fish and Wildlife, U.S. Army Corps of Engineers (in consultation with National Marine Fisheries Service and U.S. Fish and Wildlife Service), Central Valley Regional Water Quality Control Board, Central Valley Flood Protection Board, California State Lands Commission, and the City of Redding, GCID staff spent over 500 hours preparing and moving approximately 8,000 cubic yards of gravel to reestablish the spawning habitat in the side channel.

The fishery biologists involved with the project were very pleased with the results, and with the extremely dry conditions in 2015, the habitat was heavily utilized by the fishery for spawning. It is estimated that the costs of the project, including obtaining the permits, actual construction and completion tasks were approximately \$200,000.

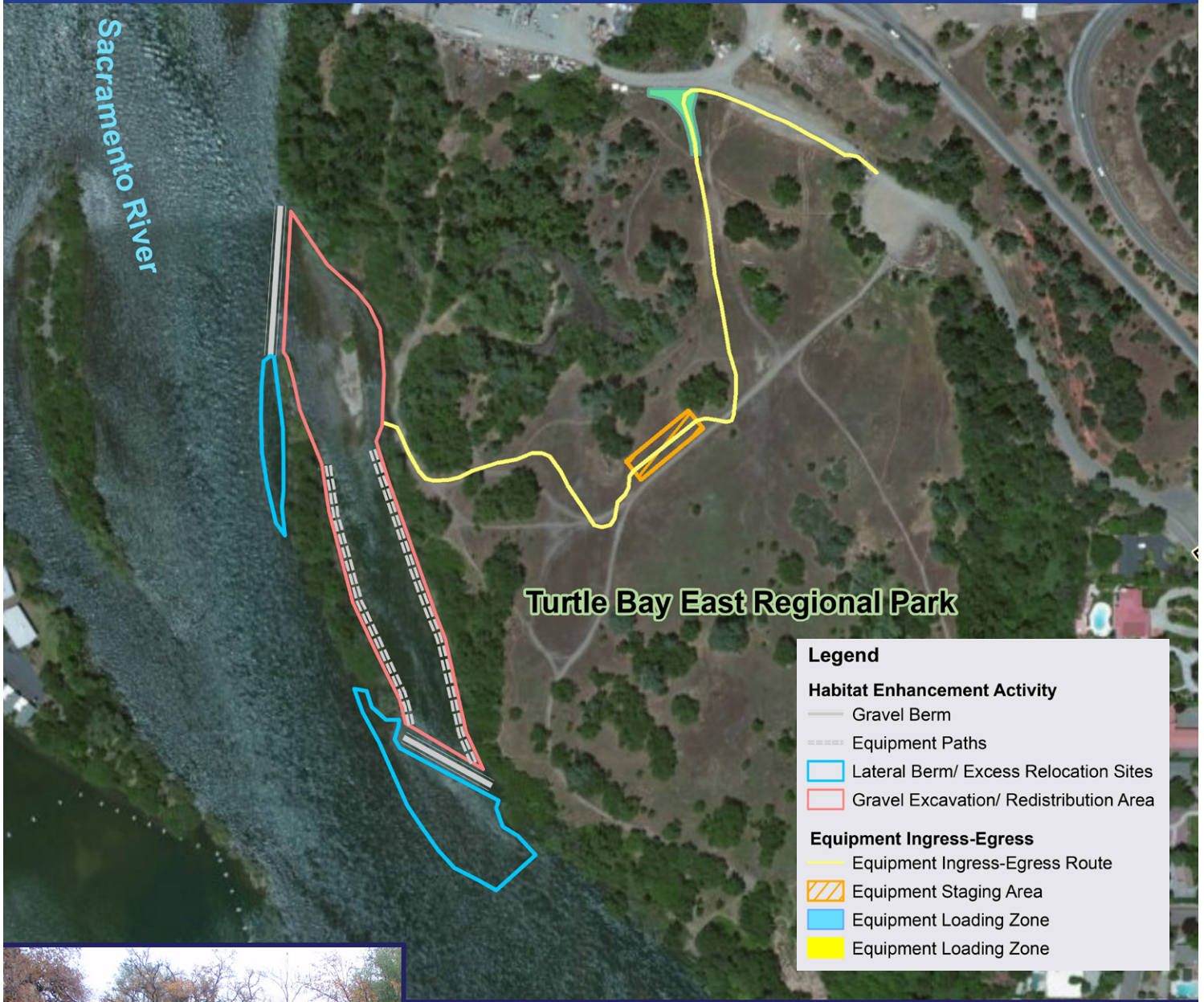


"[GCID has] helped Reclamation and the U.S. Fish and Wildlife services advance our obligations to improve anadromous fish habitat on the Sacramento River as we operate our facilities and implement the Central Valley Project Improvement Act. We will continue to benefit and apply lessons learned from our partnership to future Sacramento River anadromous fish improvements."

-David Murillo, Regional Director, Bureau of Reclamation



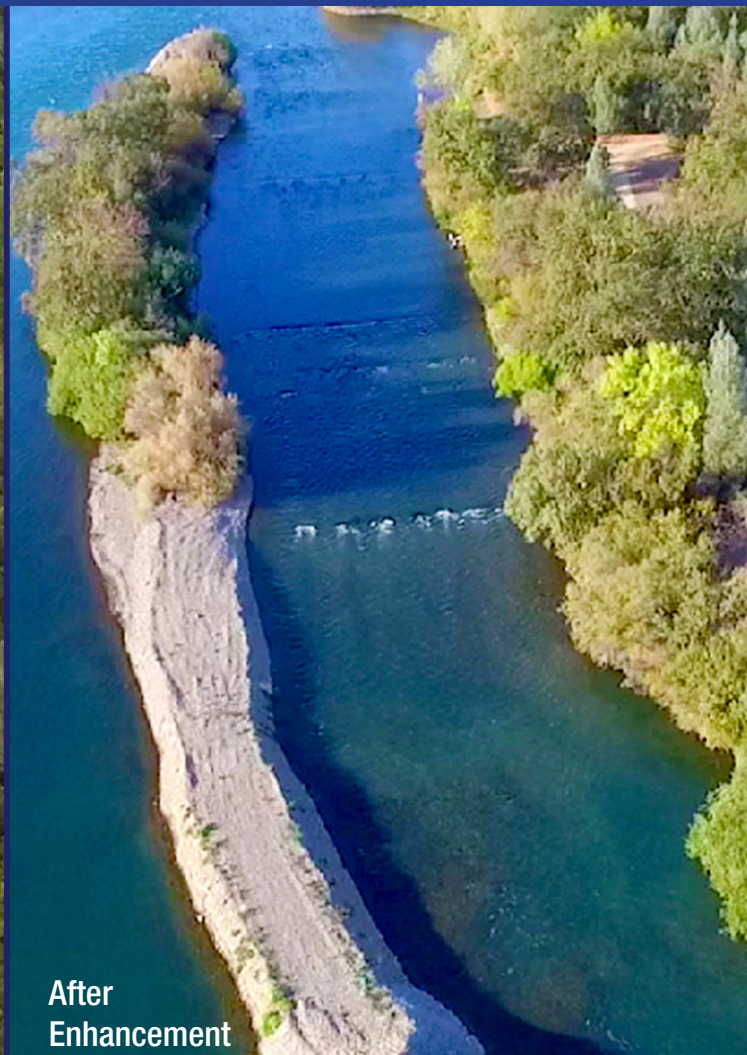
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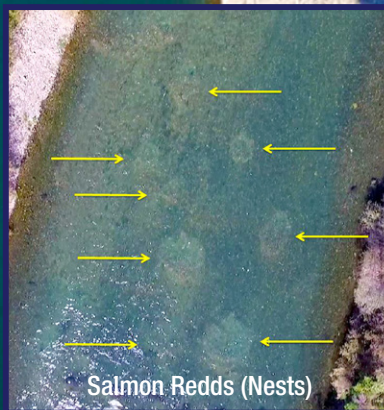
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Before Enhancement



After Enhancement



For more information and to view a video and photos of the project, visit:
<http://www.gcid.net/painters-riffle-project>