

Mid Klamath Restoration Tour

August 26th & 27th, 2010 * Happy Camp, California

Thompson Creek Channel Reconfiguration Project

Presentation by Will Harling, MKWC

Funded by
BELLA VISTA FOUNDATION

The mouth of Thompson Creek has a history of shifting drastically up or downstream in relation to the mainstem Klamath River during flood events. Historic photos indicate that the Thompson Creek channel historically connected to the Klamath River upstream of a riffle in the mainstem, entering with little gradient into a backwater eddy (Figure 1). After the 1997 flood event when the creek shifted wildly across the floodplain, CalTrans used excavators to define a straight channel out to the Klamath River. This channel was less conducive to fish passage. Surveys in 2006 showed the formation of a large alluvial sill at the mouth (Figure 1). This sill caused a 30% gradient over the first eight meters of the creek, significantly impeding juvenile and adult fish passage.

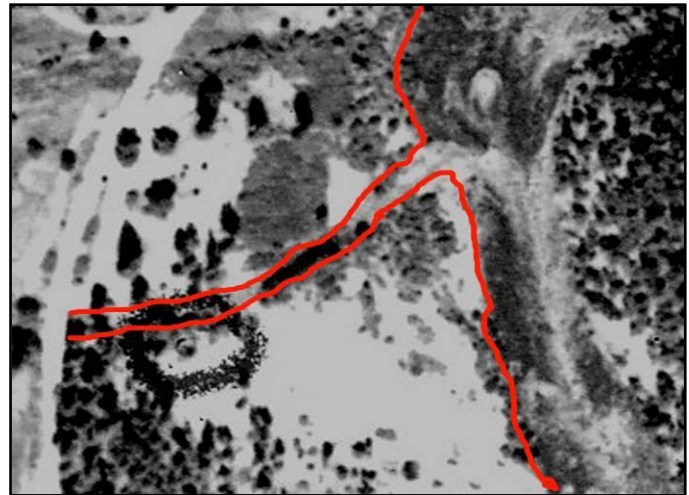
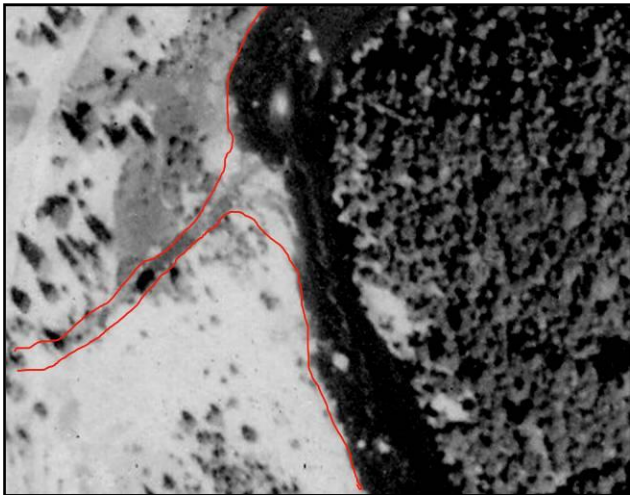


Figure 1. 1944 and 1955 Aerial Photos of Thompson Creek Mouth, respectively

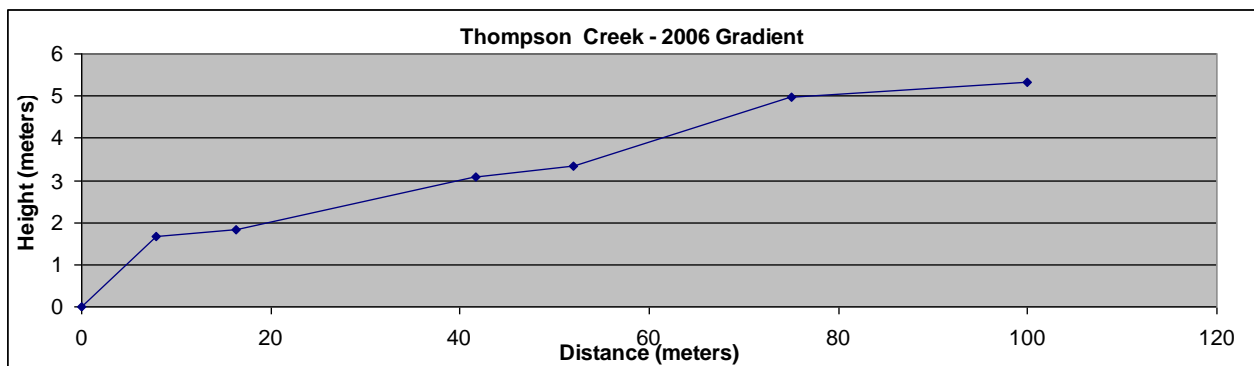


Figure 2. 2006 Gradient at Thompson Creek Mouth

After a 1997 flood event, most of the riparian vegetation below the Hwy 96 bridge crossing was removed by scouring flows, and the mouth was subsequently channelized by a bulldozer to restore some semblance of a channel. It remained in this relative configuration until 2009.



Figure 3. Excavation Plan of Thompson Creek Mouth and Implementation in 2009

Based on aerial photos of the mouth of Thompson Creek (Figure 1) and existing dry channels today, the channel has been reconfigured to an earlier flow pattern that enters the Klamath upstream of the rapid in the Klamath River into a large eddy (Figure 3) on river right. This configuration increases the benefits of the thermal refugia by creating a large area with relatively cold water, riparian cover, and low stream velocity.

Fort Goff Culvert Removal Project



The California Department of Transportation (Caltrans), California Department of Fish and Game (DFG), the United States Fishery and Wildlife Service (USFWS) and the Karuk Tribe of California have been working together to improve fish passage at road crossings on the Klamath River and it's tributaries in Northern California. Funding for these types of projects is difficult as the Department of Transportation does not have a specific program for this type of project. These projects must compete with projects with much higher average daily traffic (ADT) and traffic congestion. We are requesting the Aquatic Passage Program consider funding a portion of this project. This brief description can be supplemented with additional detail should the program have an interest in funding the project.

Description	Commitments	Estimated Cost *
Habitat and fish passage assessment (by Karuk Tribe funded by \$30,000 USFWS Grant)	\$30,000	\$30,000
Project Development Support (Survey, Design, Contract/Construction Management by CALTRANS with input from stakeholders)	\$500,000	\$500,000
Environmental Document and Permitting (by USFWS and CA DFG)	\$170,000	\$170,000
Construction Contract (\$100,000 by CALTRANS)	\$100,000	\$1,680,000
Total:	\$800,000	\$2,380,000

* Estimate most items escalated 5% from previous preliminary estimate of 10/2006.
Commitments are tentative and subject to revision and approval

Seiad Creek Projects

Funded by:

U.S. Fish and Wildlife Service, PacifiCorp and National Fish and Wildlife Foundation



Seiad Creek is currently one of the most productive tributaries in the Middle Klamath subbasin for coho salmon, and the topography of lower Seiad Creek supports features conducive to stream habitat preferred by rearing coho (including a low gradient stream profile, a wide floodplain along the lower four stream miles before meeting the Klamath River, and ground water seeps having stable water temperatures)(Figure 1). While still productive relative to the other Mid Klamath tributaries, the habitat in the lower four miles of Seiad Creek has been greatly impaired over more than a century of mechanical alteration, including large scale dredging and construction of gravel push-up levees following major flood events in 1964, 1997, and 2006 (Figure 2). The following projects were designed to return the landscape back to one more similar to the historical floodplain created by a migrating creek by removing levees and creating off-channel/side channel ponds.

Seiad Creek Channel Reconfiguration Project Presentation by Toz Soto, Karuk Tribe Fisheries Department

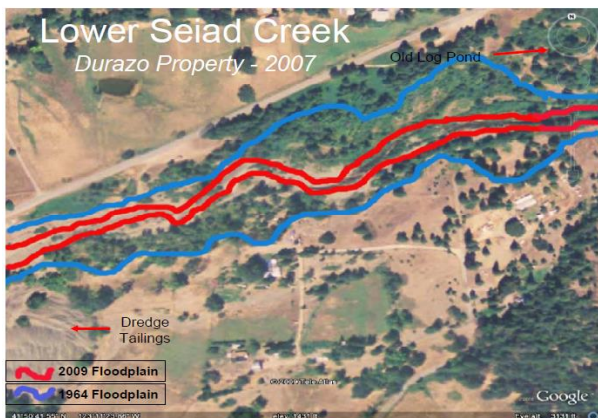
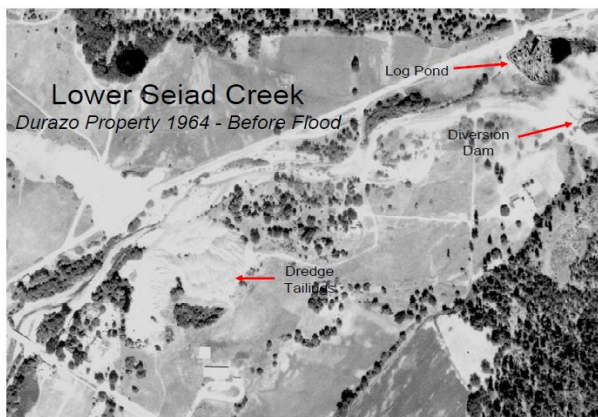


Figure 1. Aerial photographs of Lower Seiad Creek in 1964 (upper image) and in 2007 (lower image). Lines on lower image indicate approximate floodplain widths in 1964, and in 2007 when levees present.

Figure 2. The Durazo Property during the 2006 Flood (upper image) and the levee built afterwards (lower image).

Off-Channel Coho Pond Project on Seiad Creek

Presented by Will Harling, MKWC

Excavation has begun to create off-channel ponds in alluvial bars and existing side channels on Seiad Creek on properties owned by Laura and Bill Stender, Harold and Annie Buma, Jim Ludwig, and Tom Alexander. The projects are located on a section of Seiad Creek below and above the mouth of Canyon Creek where recent surveys have identified limited, but densely occupied high quality Coho summer and winter habitat (Figures 1 and 2). The ponds will be fed by subsurface flow from and subsurface flow from Seiad Creek, perennial streams and springs, and intermittent tributaries. The primary focus of these ponds is to increase winter rearing habitat in Seiad Creek, which has been significantly reduced through road construction, and channelization after past flood events.



Figure 1. Excavation plan map for Stender pond.

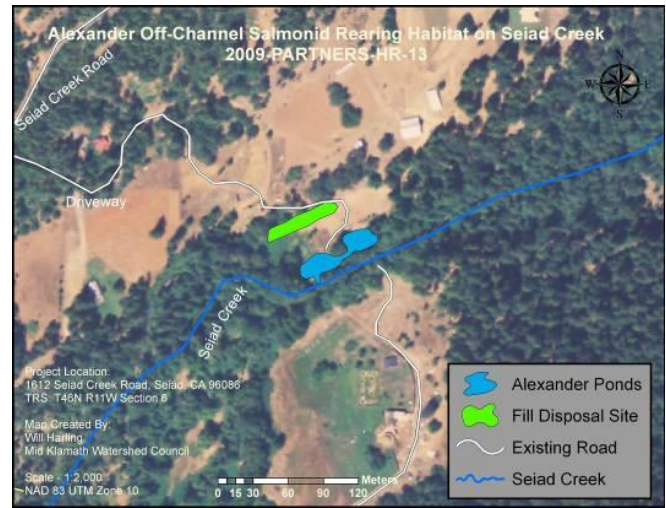


Figure 2. Excavation plan map for Alexander pond

Stender Pond Transect #1 (Well Transect)

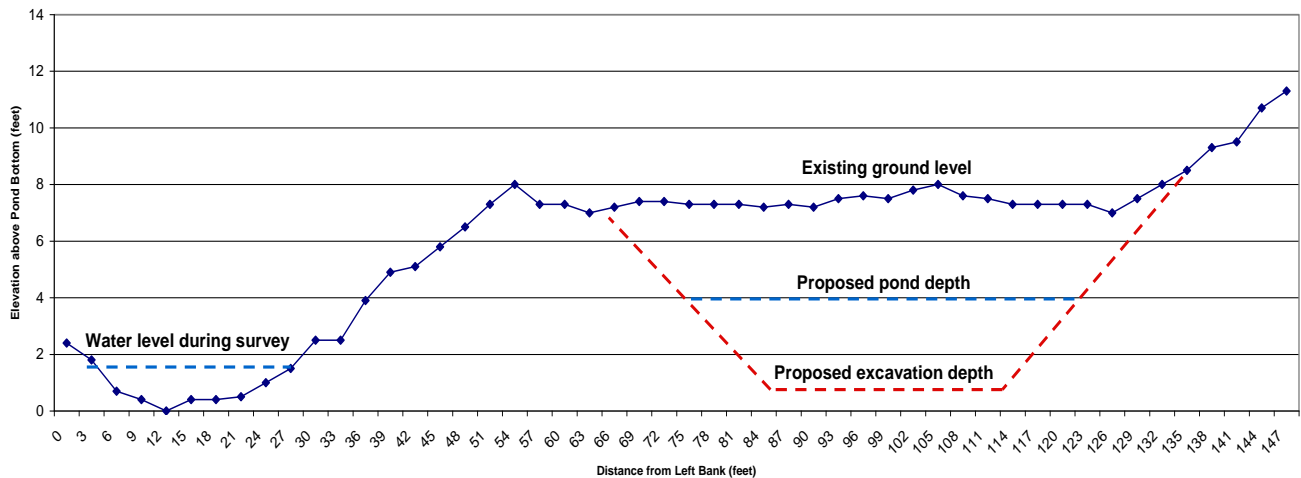


Table 1. Based on existing ground monitoring well, groundwater at the pond site is approximately two feet higher than creek level. Step pools with log or boulder grade controls less than one foot per step will be installed on pond channel connecting to Seiad Creek to allow for unimpeded passage of juvenile coho.