
North Coast Regional Water Quality Control Board

Date: August 23, 2013

To: File

From: Thomas R. Williams, P.G., Engineering Geologist, RWB

Subject: KNF Kegg Meadow Wetlands Restoration Project Inspection

I. INTRODUCTION

An inspection of the Klamath National Forest (KNF) Kegg Meadow Wetlands Restoration Project (Project) was conducted on May 23, 2013. KNF is preparing an Environmental Assessment for the proposed Kegg Meadow Wetlands Restoration Project. The objective of the project is to return streamflow to the original channel, leading to a rewetting of the overall meadow plus restoration of riparian habitat. This would involve plugging the current channel and related manmade channels and returning the flow to the natural meadow channel. About 2,000 feet of the historic channel will then become the primary flow path of Butte Creek, while about 1,400 feet of the existing channel will be abandoned to passively become a permanent wetland feature. The project would treat approximately 3,500 feet of channel and 80 acres of meadow. A limited amount of revegetation using willow cuttings will occur at selected areas along the rewetted historic channel following construction. Grazing will not occur in the Project area for three to five years post implementation.

This Project does not qualify for coverage under Category B of the California Regional Water Quality Control Board, North Coast Region (RWB) Order No. R1-2010-0029 titled, *"Waiver of Waste Discharge Requirements for Nonpoint Source Discharges Related to Certain Federal Land Management Activities on National Forest System Lands in the North Coast Region"* (USFS Waiver). The USFS Waiver does not apply to waste discharges that require a separate permit from the State or Regional Water Board, such as activities that require a Clean Water Act 404/401 permit (USFS Waiver, page 3, condition 5). A Notice of Intent (NOI) for a 401 certification for a small habitat restoration project for the Project was submitted to the RWB by KNF on July 18, 2013.

According to information provided in the Project NOI, the meadow was acquired by the U.S. Department of Agriculture in 1998 and 1999 and is managed by the KNF Goosenest Ranger

District. There are two channel features in the meadow, the existing channel and the historic channel. The existing channel currently carries the flow of Butte Creek through the meadow and the historic channel does not currently carry stream flow except under rare peak flow events. Soils within the meadow area are characterized as loamy and are underlain by a soil layer that retards downward groundwater flow generally three to four feet below the surface which creates a perched water table.

Cartographic evidence indicates that the channel was moved from the historic channel into the existing channel sometime between 1927 and 1933. The existing channel of Butte Creek has incised up to six vertical feet or more in the section that flows along the eastern margin of Kegg Meadow. It rarely, if ever, overflows onto the meadow surface during high flow, and then only in the lower portion of the meadow. The existing channel has established a lower floodplain within its entrenched channel that has little to no connection to the valley floodplain. Riparian shade establishment is minimal along the existing channel as a result of channel instability.

The Butte Creek watershed is over 11,000 acres in size, although only about half of those acres contribute surface flow to Butte Creek. Water is diverted from Butte Creek to the wetlands south of Bray and to a seasonal water body referred to as Cedar Lake. Water reaching Cedar Lake flows into a bedrock fracture that feeds the aquifer that supplies ground water to farms in Butte Valley north of Mount Hebron. Butte Creek ceases to be a stream about seven miles north of Kegg Meadow. Butte Creek through Kegg Meadow rarely exceeds a flow of 25 cubic feet per second because nearly all higher flows in Butte Creek above the diversion are diverted to Cedar Lake.

II. INSPECTION PARTICIPANTS

Greg Laurie, KNF Forest Hydrologist
Laura Allen, KNF Gooseneast District Ranger
Tom Williams, RWB

III. INSPECTION OBSERVATIONS AND CONCLUSIONS

The inspection consisted of parking along the USFS 44N30Y Road and walking to the area along Butte Creek where the flow was diverted from the historic channel to the existing channel. We then walked downstream and observed the existing and historic channel and Kegg Meadow. The condition of the existing and historic channel and Kegg Meadow appear to have been accurately described in the NOI for a 401 certification.

The Project objectives to restore the historic hydrologic conditions to a portion of Kegg Meadow will most likely not be fully realized. While limited meadow restoration and wetland establishment is possible and advisable, the limitation that peak flows of Butte

Creek through Kegg Meadow rarely exceed a flow of 25 cubic feet per second will not allow for full restoration of the meadow. The limited flow will not be sufficient to allow the stream to regularly flood outside of its banks. These overbank flows are a necessary condition for full meadow and wetlands restoration.

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