



California Department of  
Fish and Wildlife



## Memorandum

Date: October 10, 2014

To: Ms. Barbara Evoy, Deputy Director  
Division of Water Rights  
State Water Resources Control Board  
P.O. Box 2000  
Sacramento, CA 95812-200

From: NEIL MANJI, Regional Manager   
California Department of Fish and Wildlife  
Region 1 – Northern

 MARIA REA, Assistant Regional Administrator   
National Marine Fisheries Service  
California Central Valley Office

Subject: **Historical and Recent Steelhead Presence Data in the Upper Sacramento River Basin in the Vicinity of Deer Creek**

Current agricultural diversions on Deer Creek are resulting in insufficient flows in the lower five miles of Deer Creek between Stanford Vina Ranch Irrigation Company (SVRIC) Dam and the confluence of the Sacramento River (River Mile 220) to attract Central Valley steelhead (steelhead) currently migrating in the Sacramento River in the vicinity of Deer Creek, and allow them to pass critical riffles and diversion structures. The emergency regulation to curtail Deer Creek diversions to provide 50 cfs below SVRIC should remedy this situation.

Historical data demonstrates steelhead are usually present in the Upper Sacramento River Basin as early as August, with steelhead numbers in the Sacramento River and tributaries such as Mill Creek (River Mile 230) increasing substantially after mid-September. Historical steelhead trapping data (1953-59) on the Sacramento River above the Feather River confluence shows that steelhead migration begins in July and peaks in late September and early October (Hallock and Van Woert 1961). Cumulative data obtained from trapping operations during 1970-1988 at the Red Bluff Diversion Dam (RBDD), located on the Sacramento River (River Mile 243) shows that 32% of the run had reached RBDD by the last week in September (Killam and Johnson 2013).

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Van Woert (1964) summarized steelhead presence data from trapping studies conducted at Clough Dam on Mill Creek 1953-1963. This study showed that steelhead were detected at Clough Dam as early as the week of September 17-23. Recent video fish passage data collected by the California Department of Fish and Wildlife (Department) at Ward Dam on Mill Creek between 2009 and 2013 shows that steelhead were detected between one and four days following the termination of agricultural diversions and restoration of flow in Mill Creek, creating connectivity to the Sacramento River. Historical and current fishery monitoring efforts show that Mill Creek and Deer Creek contain similar Chinook salmon and steelhead stocks, based on presence and life history characteristics, including adult and juvenile migration and emigration timing. The confluence of Mill Creek is 10 river miles upstream of Deer Creek's confluence with the Sacramento River. Based on this close proximity, it is reasonable to assume that Mill and Deer Creek steelhead fall-entry stocks reach the confluence of both creeks at a similar time.

Recent data also demonstrates steelhead presence in the Upper Sacramento River Basin beginning in late August. Battle Creek, a tributary of the Sacramento River located at River Mile 271, has a video station positioned upstream of the confluence with the Sacramento River and is cooperatively operated by the Department and the United States Fish and Wildlife Service (USFWS). Video station data reviewed by USFWS staff through September 25, 2014 shows the first steelhead migrating past the video station on August 26, 2014, with a total of 58 steelhead documented entering Battle Creek through September 25, 2014. Clear Creek, a tributary to the Sacramento River located at River Mile 289 has a video station positioned upstream of the confluence with the Sacramento River and is cooperatively operated by the Department and USFWS. Clear Creek video station data reviewed by Department staff through September 26, 2014 shows the first steelhead migrating past the video station on August 13, 2014, with a total of 48 steelhead documented entering Clear Creek through September 26, 2014. Additionally, reports through the Department's Angler Creel Survey indicate the presence of steelhead in the main stem Sacramento River near Deer Creek. Between September 17, 2014 and September 29, 2014 a total of eight steelhead were reported by anglers fishing between River Mile 237 and 258 on the Sacramento River, which is within 17 river miles of the confluence of the main stem Sacramento River and Deer Creek.

If you have any questions, please contact California Department of Fish and Game, Northern Region Fisheries Program Manager, Curtis Milliron at (530) 225-2280 or National Marine Fisheries Service, Sacramento River Basin Branch Chief, Howard Brown at (916) 930-3608.

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