

Memorandum

Date: April 21, 2015

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

From: Neil Manji, Regional Manager 
Region 1 - Northern

Subject: **Request to Provide Pulse Flow on Deer Creek, Tehama County, for Central Valley Spring-Run Chinook Salmon**

Current monitoring of Deer Creek's Central Valley spring-run Chinook salmon (spring run) population indicates that the combined irrigation diversions by Deer Creek Irrigation Company (DCID) and Stanford Vina Ranch Irrigation Company (SVRIC) are leaving insufficient flows in the lower five miles of Deer Creek between SVRIC Dam and the confluence of the Sacramento River to attract spring run. While the current 50 cubic feet per second (cfs) minimum base flow in lower Deer Creek is passing small numbers of spring run daily, an April pulse flow should attract greater numbers of fish, maximizing the opportunity for spring run to access the high quality habitat available in Deer Creek's upper watershed.

A pulse flow will mimic the sudden increase in base flow which follows a snow melt or rain event. This should attract adult spring run potentially holding in lower Deer Creek and/or the Sacramento River near the confluence, allowing them to quickly transit shallow riffles and diversion structures, and will aid in moving juvenile salmonids downstream. Real-time monitoring of Deer Creek spring run in 2014 showed that peak entry of spring run into Deer Creek occurred over the period April 6 through April 17 (**Attachment**). Due to a fourth year of drought and lack of significant spring storms, flows in lower Deer Creek are unusually low at a time when large numbers of spring run would typically be entering Deer Creek.

After discussing the request with SVRIC & DCID, the Department of Fish and Wildlife requests a 36-hour pulse flow of 100 cfs or full flows without diversions (whichever is less) on Deer Creek to begin April 27, 2015, at 5:00 pm, to attract greater numbers of spring run into Deer Creek. The Department also requests a ramp down period following the pulse flow such that each adjustment in flow reduction will not exceed 10 cfs, with a minimum 3-hour period between adjustments until a return to base flow level. This pulse flow will correspond with a projected low-pressure weather event.

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If you have any questions, please contact Curtis Milliron, the Department's Northern Region Fisheries Program Manager, at (530) 225-2280 or curtis.milliron@wildlife.ca.gov.

cc: Ms. Barbara Evoy and Mr. Daniel Schultz
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Attachment

Daily passage of spring-run Chinook salmon and average daily post-diversion flow
February 20, 2014 through June 30, 2014.

