



**DOCUMENTATION OF 2016 VIOLATIONS
OF BAY-DELTA WQCP OBJECTIVES
AND WATER RIGHTS ORDER 90-5 CONDITIONS
BY THE U.S. BUREAU OF RECLAMATION**

May 23, 2016

Violation 1 concerns the water quality objectives in the Bay-Delta Water Quality Control Plan for San Joaquin River inflow at Vernalis to protect fish and wildlife beneficial uses and consists of 47 days of violations of the minimum monthly average flow rate in the San Joaquin River at Vernalis, and 40 days of violations of the 7-day average, by the U.S. Bureau of Reclamation. The violations began on February 9th and ended on March 8th for the 7-day average objective and ended March 9th for the monthly average objective. USBR was in violation of the monthly average objective again starting April 1st until the TUCP Order took effect with the beginning of the pulse flow period on April 18th, and the 7-day standard was also in violation April 7-17th.

Violation 2 also concerns the WQCP Vernalis flow objectives and consists of 31 days of violations of the minimum 31-day average pulse flow rate in the San Joaquin River at Vernalis, as modified by the April 19, 2016, Order by the Executive Director of the State Water Resources Control Board. This is the entire pulse flow period from approximately April 18 to May 18 (Starting the averaging on April 19, the date of the Order, may be appropriate, however it results in an even worse average). Since the last day of the averaging period was below 3000 cfs, the entire 31 days is out of compliance with the terms of the Order.

Violations 3 through 6 concern the water quality objectives in the Bay-Delta WQCP for salinity in the southern Delta to protect agricultural beneficial uses and consist of 140 days of exceedances of these requirements by Reclamation. The objective is a 30-day running average of 1.0 ms/cm from September through March and 0.7 ms/cm from April through August. The objective was violated at Old River at Tracy station from February 26 to March 17 and again from April 1 to May 23). All four stations were in violation when the standard changed on April 1, 2016. San Joaquin River at Brandt Bridge was in violation through April 29th. Old River Near Middle River was in violation through April 28th. The San Joaquin River at Vernalis was in violation through April 24th.

Violation 7 concerns the temperature requirements for protection of winter-run Chinook salmon in the Upper Sacramento River in Water Rights Order 90-5 and consists of 21 days and counting of exceedances of these requirements. WR 90-5 states: "Permittee shall operate Shasta Dam,

Keswick Dam, and the Spring Creek Power Plant to meet a daily average water temperature of 56 degrees F in the Sacramento River at Red Bluff Diversion Dam during periods when higher temperatures will be detrimental to the fishery" (at p. 54). We are not aware of any permitted modification of the temperature control point in 2016. Winter-run Chinook salmon adults and eggs are now in the river above Red Bluff. The first report of winter-run Chinook salmon spawning in the Sacramento River this year was relayed to Reclamation on May 9; spawning was likely to have occurred as many as 10 days earlier than this initial report. Furthermore, adults migrated into the Sacramento past Red Bluff at an unspecified date prior to May 1. The temperatures observed at Red Bluff so far are those associated with "reduced viability of gametes in holding adults" and "elevated disease risk" among migrating adults (EPA 2003). As a result, temperatures since May 1 have been detrimental to the fishery, which has suffered massive egg mortality in each of the last two years due to Reclamation's failure to maintain adequate temperatures during migration, spawning, and incubation. In addition, NMFS notified Reclamation on May 9 that protection of winter-run Chinook salmon under the federal Endangered Species Act would require the 7 day average of daily maximum temperatures (7DADM) to remain at or below 55oF at Clear Creek gage. As of this date, the 55 degree F 7DADM has not been attained.

Violation 1

Complaint Description: Violation of the Bay-Delta WQCP Vernalis flow objectives, both the minimum monthly average flow rate and the 7-day average. The days immediately prior to the April 19, 2016 TUCP order were in violation since 1) flows on the days immediately prior to the 4/19 order were below the required base flows (for both the 7-day and monthly averages) and 2) the 4/19/16 order's discussion stated: "This Order does not retroactively approve changes to the spring base flow requirements prior to the pulse flow period since that period passed prior to the issuance of this Order."

Complaint Location: San Joaquin River at Airport Way Bridge, Vernalis.

Responsible Party: USBR

Date/Time of Violation: 2/9/16-3/8/16 (29 days 7-day average), 2/9/16-3/9/16 (30 days monthly average), 4/1/16-4/17/16 (17 days monthly average), 4/7/16-4/17/16 (11 days 7-day average).

Attachments: SanJoaquinRiveratVernalis.xlsx; See TUC order at

http://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/transfers_tu_notices/2016/sjr_tucp_order_041916.pdf

Violation 2

Complaint Description: Violation of the Bay-Delta WQCP Vernalis flow objectives, minimum 31-day average pulse flow rate, as modified by the April 19, 2016 TUCP order. USBR did not meet the required 31-day average pulse flow of 3000 cfs on or about May 18th, the last day of the averaging period, which means that all 31 days of the pulse flow were in violation (only a single day exceeded 3000 cfs on a daily average basis).

Complaint Location: San Joaquin River at Airport Way Bridge, Vernalis.

Responsible Party: USBR

Date/Time of Violation: 4/18/16-5/18/16 (31 days). **Attachments:**

SanJoaquinRiveratVernalis.xlsx; See TUCP order at

http://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/transfers_tu_notices/2016/sjr_tucp_order_041916.pdf

Violation 3

Complaint Description: Exceedance of Bay-Delta WQCP southern Delta agricultural salinity objectives, maximum 30-day running average of mean daily EC.

Complaint Location: Old River at Tracy Road Bridge

Responsible Party: USBR

Date/Time of Violation: 2/26/16-3/17/16 and 4/1/16 to 5/23/16 (74 days)

Attachments: SouthernDeltaSalinityViolations.xlsx

Violation 4

Complaint Description: Exceedance of Bay-Delta WQCP southern Delta agricultural salinity objectives, maximum 30-day running average of mean daily EC.

Complaint Location: San Joaquin River at Brandt Bridge

Responsible Party: USBR

Date/Time of Violation: 4/1/16-4/29/16 (29 days)

Attachments: SouthernDeltaSalinityViolations.xlsx

Violation 5

Complaint Description: Exceedance of Bay-Delta WQCP southern Delta agricultural salinity objectives, maximum 30-day running average of mean daily EC.

Complaint Location: Old River Near Middle River

Responsible Party: USBR

Date/Time of Violation: 4/1/16-4/28/16 (28 days)

Attachments: SouthernDeltaSalinityViolations.xlsx

Violation 6

Complaint Description: Exceedance of Bay-Delta WQCP southern Delta agricultural salinity objectives, maximum 30-day running average of mean daily EC.

Complaint Location: San Joaquin River at Airport Way Bridge, Vernalis

Responsible Party: USBR

Date/Time of Violation: 4/1/16-4/24/16 (24 days)

Attachments: SouthernDeltaSalinityViolations.xlsx

Violation 7

Complaint Description: Exceedance of WR 90-5 requirement to maintain 56 degrees F in the Sacramento River at Red Bluff Diversion Dam.

Complaint Location: Sacramento River at Red Bluff Diversion Dam (and upstream, at least as far as Clear Creek)

Responsible Party: USBR

Date/Time of Violation: 5/1/16-5/22/16 (21 days, at least)

Attachments: Upper Sacramento River Temperatures May 2016.xlsx