

**U.S. Bureau of Reclamation and
California Department of Water Resources
Water Quality Response Plan for use of Joint Points of Diversion under
Water Right Decision 1641**

The State Water Resources Control Board (SWRCB) Water Right Decision 1641 (D-1641) establishes three stages under which Joint Points of Diversion (JPOD) can be used by either the Department of Water Resources (Department) or the United States Bureau of Reclamation (Reclamation) for diversions of Delta water supplies at the State Water Project (SWP) Banks pumping plant and Central Valley Project (CVP) Tracy pumping plant, respectively. Stage 1 allows JPOD use for selected purposes including the recovery of export reductions taken to benefit fish. Stage 2 allows JPOD use for any authorized purpose up to the current regulatory capacity of these facilities. Stage 3 allows JPOD use up to the physical capacity of these facilities authorized under their water right permits. The use of the JPOD in each of these stages requires among other things the development of a Water Quality Response Plan (Plan).

This plan does not address stage 3 use of JPOD as such use is not contemplated at this time, however Reclamation and the Department acknowledge that stage 3 is subject to the D-1641 permit term,

Permittee shall protect water levels in the southern Delta through measures to maintain water levels at elevations adequate for diversion of water for agricultural uses. This requirement can be satisfied through construction and operation of three permanent tidal barriers in the southern Delta or through other measures that protect water quality in the southern and central Delta and protect water levels at elevations adequate to maintain agricultural diversions. If construction and operation of tidal barriers is used as a basis for Stage 3 operation, such construction and operation shall be subject to certification of a project-level Environmental Impact Report by Permittee that discloses the impacts of tidal barriers. (Page 153)

Reclamation and the Department will need to submit to the Executive Director an operations plan consistent with Stage 3 requirements at a future date based on information and analysis to address permanent tidal barriers or other measures.

The use of JPOD for all stages is subject to several D-1641 terms and conditions relating to Contra Costa Water District's (CCWD) Los Vaqueros Project operations and CCWD water right Permits 20749 and 20750. The first term and condition in D-1641 reads (Page 150):

- (1) Diversion by the USBR at Banks Pumping Plant is not authorized when the Delta is in excess condition and such diversion causes the location of X2 to shift upstream so far that:
 - (a) It is east of Chipps Island (75 river kilometers upstream of the Golden Gate Bridge) during the months of February through May, or
 - (b) It is east of Collinsville (81 kilometers upstream of the Golden Gate Bridge) during the months of January, June, July, and August, or
 - (c) During December it is east of Collinsville and delta smelt are present at Contra Costa Water District's point of diversion under Permits 20749 and 20750 (Application 20245).

A similar permit term applies for diversion by the Department at Tracy Pumping Plant.

Reclamation and the Department recognize that this permit term and condition has its genesis from conditions in the 1993 biological opinion by the U.S. Fish and Wildlife Service addressing the impact of the Los Vaqueros Project operations on delta smelt. Recently, at the request of CCWD, the applicable conditions in that biological opinion were modified for a three year trial period. The modification will bring the terms of the biological opinion into closer conformance with D-1641 criteria for X2. Therefore, the modified terms and conditions in the biological opinion for this trial period, CCWD may divert water to Los Vaqueros storage under less stringent X2 conditions than applies to JPOD under D-1641.

Reclamation and the Department recognize that JPOD export is not authorized, and will not pursue such an operation when the Delta is in excess conditions, until the location of X2 is west of Chipps Island in February through May, west of Collinsville in January, June, July, or August, or during December X2 is west of Collinsville and no delta smelt are present at CCWD's point of diversions under Permits 20749 and 20750 (Application 20245).

As you are aware, Reclamation and the Department monitor water quality at these locations and estimate the current location of X2. Reclamation and the Department will use EC measurements taken at their Collinsville and Mallard Slough continuous monitoring stations to determine when X2 is downstream of the permit term locations. Reclamation and the Department will comply with the permit term by monitoring when the daily average or 14-day running average EC at Collinsville is at or below 2.64 mmhos/cm, then X2 is west of Collinsville. Similarly, when the daily average or 14-day running average EC for Chipps Island (as estimated from the Mallard Slough station) is 2.64 mmhos/cm or less, then X2 is west of Chipps Island.

The second permit term and condition reads (Page 150):

- (2) Any diversion by Permittee at the Banks Pumping Plant that causes the Delta to change from excess to balanced conditions shall be junior in priority to Permits 20749 and 20750 of the Contra Costa Water District.

A similar permit term applies to the use at Tracy Pumping Plant by the Department.

The plain meaning of this term is that the water right permits held by CCWD are senior in priority to the use of JPOD during the **transition period from excess to balanced conditions** in the Delta. Reclamation and the Department will coordinate with CCWD on a timely basis to determine the extent to which the quantities of water diverted by CCWD pursuant to its water service contract with Reclamation should be adjusted to recognize the senior priority of CCWD's permits during this transition period. Reclamation and the Department assert that there is no issue of priority between JPOD operation and CCWD permits 20749 and 20750 under excess conditions in the Delta.

Under the combination of all the below listed project operational conditions, an accounting adjustment is appropriate during the transition period from excess to balanced conditions in the Delta to recognize CCWD's senior water permits: (Refer to attached hypothetical scenario as an example illustration of project operations records and the water rights/contractual adjustment process)

- (a) The Delta changes from excess conditions to balanced conditions in order to meet a D-1641 beneficial use standard and to account for the relative CVP and SWP water responsibilities in the Coordinated Operations Agreement (COA) process. (Generally, the COA directs which project needs to first modify reservoir releases or exports in order to continue meeting D-1641 beneficial use standards)
- (b) CCWD continues to exercise water right permits 20749 and 20750 by diverting available water supplies to Los Vaqueros storage.
- (c) JPOD export continues at a recorded rate per day.

An accounting adjustment is made to credit CCWD for LosVaqueros water right diversion under balanced conditions rather than CVP contract water on a daily basis for the minimum of either:

- (a) The daily rate of JPOD export.
- (b) The CCWD diversion to Los Vaqueros storage.

The water right crediting continues until one of the following conditions is met:

- (a) JPOD has ceased on a daily basis.
- (b) CVP or SWP reservoir release increases by an amount equal to or exceeding the JPOD export rate enter the Delta to support the JPOD under balanced water conditions.

The fifth term and condition of D-1641 reads (Page 150):

- (3) Permittee shall develop a response plan to ensure that water quality in the southern and central Delta will not be significantly degraded through operations

of the JPOD to the injury of water users in the southern and central Delta. Such a plan shall be prepared with input from the designated representative of the Contra Costa Water District (CCWD) and approved by the Chief, Division of Water Rights.

Reclamation and Department operations staff, have met with representatives of CCWD. The parties differ on the interpretation and determination of significant degradation to water quality and injury to legal users within the context of the 1995 Bay Delta Plan and D-1641 water quality standards for the protection of beneficial uses.

In addition to operating JPOD for the CVP and the SWP consistent with this Plan, Reclamation and the Department will also follow this Water Quality Response Plan when operating the Delta pumping facilities to facilitate potential water transfers of their own, and water transfers of third parties.

Delta Conditions Applicable to the Plan

The use of JPOD by the Department or Reclamation occurs during two distinct types of water balance conditions in the Delta:

(1) "excess conditions" when releases from upstream reservoirs plus unregulated flow exceed Sacramento Valley inbasin uses plus exports. Inbasin uses in this definition include western Delta salinity standards and fishery beneficial use standards contained in D-1641.

(2) "balanced conditions" when both Projects agree that releases from upstream reservoirs plus unregulated flow approximately equal the water supply needed to meet inbasin uses (including D-1641 standards) plus exports.¹

During excess conditions water quality in the Delta is by definition better than that required by D-1641 standards. Reclamation and the Department, per SWRCB staff request in a March 19th 2004 letter, modeled CVP-SWP operations under D-1485 criteria and D-1641 criteria with JPOD in use under excess conditions. Reclamation and the Department, also modeled water quality in the Delta for both operations. The results of the analysis are attached to this draft plan.

Additionally, Reclamation and the Department recognize that JPOD export is not authorized under excess conditions until the location of X2 is west of Chipps Island in February through May, west of Collinsville in January, June, July, or August, or during December X2 is west of Collinsville and no delta smelt are present at CCWD's point of diversions under Permits 20749 and 20750 (Application 20245).

¹ Excess and Balanced Conditions in the Delta are defined on page 4 of the Agreement between the U.S. and California for the Coordinated Operation of the CVP and SWP (Nov. 24, 1986).

The attached analysis shows that when JPOD is used (excess conditions, X2 location west of requirements), the water quality conditions in the interior Delta are well below the M&I beneficial use standard and therefore JPOD use would not cause significant injury to any other legal user including CCWD. Due to the X2 condition permit requirement, (genesis from the Los Vaqueros Project B.O.), the SWRCB has mandated that water quality conditions in the Delta be essentially identical for CCWD to utilize Permits 20749 and 20750 and for the projects to utilize JPOD under excess conditions.

During the transition from excess to balanced conditions, the applicable terms and conditions in D-1641 have protected CCWD from injury by requiring that any diversion by the Department and Reclamation for JPOD that causes a change from excess to balanced conditions is junior in priority to the CCWD Permits 20749 and 20750 (Los Vaqueros Project). Under balanced conditions, CCWD Permits 20749 and 20750 do not have an unappropriated water to support the permits. Although it is unlikely that JPOD would cause a distinct transition from excess to balanced conditions, if this occurred, Reclamation and the Department would meet with CCWD to agree on the water right adjustment associated with the quantity impact to CCWD's senior water rights. In such a transition period, CCWD would likely continue to divert water to Los Vaqueros storage, because the interior water quality is generally very good.

During balanced conditions, Reclamation and the Department operate the CVP and SWP to meet the standards in D-1641. Under balanced conditions and during most of the summer/fall period when water quality concerns for M&I beneficial uses typically occur in the Delta, CCWD diverts water from the Delta under a water supply contract with Reclamation (Amendatory Contract No. I75r-3401) utilizing water rights held by Reclamation. The water supply contract does not guarantee any water quality better than that required by Reclamation's water right permits (ie. D-1641 standards).² Therefore, changes in water quality during balanced conditions and periods when CCWD obtains water under its contract with Reclamation will not affect CCWD's water rights or cause CCWD injury to their water rights.

Transfers by Third Parties

Reclamation and the Department coordinate and facilitate water transfers through the Delta to project export facilities, under balanced conditions. As part of CVP-SWP operations to meet water quality beneficial use standards, Reclamation and the Department assess a water cost to third party water transfers, known as "carriage water", in order to offset any added water costs of implementing the water transfer to the CVP-SWP water supplies in order to maintain compliance with water quality standards. When

² The actual operation of CCWD's Los Vaqueros Project is highly influenced by the availability of high quality water in the Delta at CCWD's Old River Intake, not just the water right permit under which the water is diverted. There will be times when CCWD will not divert under Permit 20749 because the salinity of the water at the Old River intake is not suitable to be used as blending water later in the year. There will be other times when CCWD will divert to Los Vaqueros storage under Reclamation water rights because the salinity is suitable to be used as blending water later in the year. The determination of water quality suitability of the available water supplies is at the discretion of CCWD.

Reclamation and the Department utilize each other's project facility under JPOD authority under balanced conditions, "carriage water" costs are met by the party using the JPOD.

Response Plan Actions

As discussed, some minor degradation in Delta water quality could be caused from JPOD operations during excess conditions when water quality is better than that required by D-1641 standards. However, during balanced conditions, Reclamation and the Department are responsible to maintain D-1641 water quality standards with or without the use of JPOD operations. Therefore, Reclamation and the Department will take the following actions to address JPOD and water transfers at the CVP and SWP in order to assure that these operations will not injure any legal user of water in the southern and central Delta and to meet requirements of D-1641 and Water Code Section 1702:

- Reclamation and the Department will meet D-1641 standards required by their water right permits for western Delta agricultural beneficial uses and for Delta municipal and industrial beneficial uses assuring that no change in water quality will rise to the level that would cause injury to water users in the southern and central Delta.
- Reclamation and the Department will assess carriage water costs to third parties for water transfers to maintain D-1641 water quality standards and to protect the SWP and CVP water supplies from the increased water costs associated with facilitating the transfer.

(When JPOD operations is performed by Reclamation and the Department, the CVP and SWP supply the carriage water from their own resources to meet the cost of JPOD use.)

- Reclamation and the Department will provide to CCWD seasonal forecasts of use of CVP and SWP Delta export facilities for JPOD and water transfers.
- Reclamation and the Department will meet with CCWD to determine the extent to which the quantities of water diverted by CCWD pursuant to its water service contract with Reclamation should be adjusted.

Example - Hypothetical Adjustment to CCWD WR Permits Diversion Accounting while JPOD is in use during an Excess to Balanced Delta Conditions transition period.

Day	Delta Condition	JPOD Export Rate CFS	CCWD Permit to LV storage CFS	USBR Permit to LV storage CFS	Increased Reservoir Release to support Delta Exports CFS	Adjustment to CCWD Permit CFS
1	Excess	500	200	0	No	0
2	Excess	500	200	0	No	0
3	Balanced	300	0	200	No	200
4	Balanced	200	0	200	No	200
5	Balanced	100	0	200	No	100
6	Balanced	100	0	200	Yes-100	0
7	Balanced	500	0	200	Yes-500	0
8	Balanced	500	0	200	Yes-500	0

Total Adjustment to CCWD
 WR Permit Use (TAF) = 1.0

Note: Days 3 & 4 diversion accounting are adjusted due to the senior priority of CCWD permit and JPOD continues at a rate greater than diversion to LV storage.

Note: Day 5 diversion accounting is adjusted to match JPOD diversion rate due to senior priority of CCWD permit.

Note: Days 6,7 & 8 diversion accounting are not adjusted due to CVP/SWP increasing reservoir releases to compensate for desired JPOD export under balanced conditions.