

CVP Cost Allocation Study Water Quality Benefits

Date:

February 3, 2015

Purpose of Paper:

Water quality is included in the CVP CAS as an authorized project purpose.

Background:

The California State Water Resources Control Board (SWRCB) is responsible for setting water quality standards which governs the operations of both the CVP and the SWP for the San Francisco Bay/Sacramento-San Joaquin Delta and Estuary. Under Public Law 99-546, both the CVP and SWP were authorized to operate in close coordination pursuant to a (Delta) Coordinated Operations Agreement (COA). The COA also authorized the CVP to be specifically operated to meet SWRCB's D-1485 water outflow standard. P.L. 99-546 states "The costs associated with providing Central Valley project water supplies for the purpose of salinity control and for complying with State water quality standards identified in exhibit A of the Agreement Between the United States of America and the Department of Water Resources of the State of California for the Coordinated Operations of the Central Valley Project and the State Water Project, dated May 20, 1985, shall be allocated among the project purposes and shall be reimbursed in accordance with existing Reclamation law and policy. The costs of providing water for salinity control and for complying with State water quality standards above those standards identified in the previous sentence shall be nonreimbursable."

To date, Reclamation has no data identifying any additional costs which may have been incurred providing water in excess of the D-1485 requirement. CVP operations typically release water for several purposes simultaneously and has no tracking mechanism which may either monitor or account for any releases specifically to exceed D-1485. The net result is that no explicit or measurable costs associated with exceeding D-1485 are currently available.

However, recent experience and advances in hydrologic modeling (e.g., CalSim) have raised the possibility of being able to more reliably identify and account for the water releases and associated storage requirements needed by the CVP to meet and exceed the D-1485 water quality requirement. CalSim has the ability to measure how much storage space is required to meet modeled water quality standards in excess of D-1485. Meeting standards in excess of D-1485 can be achieved with river free flow, SWP releases, and CVP releases; all proportions would be based on the COA. Therefore, the necessary storage space identified through CalSim is dependent on the current joint operations for water quality.

Considerations:

Water quality can be included in the CVP cost allocation as an authorized project purpose during this cost allocation update. Information associated with this purpose can be estimated by using the CalSim model to identify the quantity of water stored specifically to exceed the standards in D-1485. The economic benefits attributed to water quality can be estimated by various methods, including, but not limited to, agricultural salinity models (for agricultural water quality benefits), avoided cost models at the household or industry level (for M&I water quality benefits), and fishery population models (for fishery water quality benefits). However, measurement of water quality benefits attributed to exceeding D-1485 may not be feasible, and therefore, water quality benefits will likely be based on the benefits foregone in the next best use of the stored water (i.e., irrigation). From a cost perspective, a single purpose alternate cost for water quality can be estimated based on water storage requirements.

Consistent with Reclamation's current interpretation, there may be no significant specific costs associated with water quality. However, water quality will have separable costs allocated and will share in the allocation of joint costs through the Separable Cost Remaining Benefit cost allocation approach. All costs allocated to water quality benefits will be considered nonreimbursable.

If you have questions, please contact Brooke Miller-Levy at (916) 978-5296, or bmillerlevy@usbr.gov.