STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – DIVISION OF WATER RIGHTS
MAY 20, 2014

ITEM 13

SUBJECT

WORKSHOP TO RECEIVE COMMENTS REGARDING OPTIONS FOR DROUGHT RELATED CURTAILMENTS OF POST-1914 WATER RIGHTS IN THE SACRAMENTO-SAN JOAQUIN RIVER DELTA

DISCUSSION

The purpose of this workshop is to discuss potential options for curtailing water use in the Sacramento-San Joaquin River Delta (Delta) Watershed during the current drought when natural flows in the Delta Watershed are inadequate to support all diversions and instream beneficial uses. Curtailments are necessary so that previously stored water is not illegally diverted and water is available for: (1) senior water right users; (2) minimal public trust water uses, such as fish and wildlife protection; and (3) minimum health and safety and other critical water uses.

Background

California is currently in the third year of a significant drought resulting in severe impacts to California's water supplies and its ability to meet all of the demands for water in the State. The Delta Watershed is of particular concern due to its importance to water supplies for the State and its importance to other beneficial uses, including fish and wildlife. The Delta Watershed receives inflows from California's two largest rivers, the Sacramento and the San Joaquin, which account for 40 percent of the State's stream flows. The two rivers converge in the Delta and meet incoming seawater from the Pacific Ocean in San Francisco Bay (Bay). The Bay-Delta Estuary is one of the largest ecosystems for fish and wildlife habitat and production in the United States and is critical habitat for numerous threatened or endangered fish and wildlife species that are highly dependent on flow conditions in the watershed. Water diversions from the Delta supply a portion of the drinking water to over two thirds of Californians and millions of acres of farmland, including the water supplies for California's two major water supply projects, the federal Central Valley Project (CVP) operated by the U.S. Bureau of Reclamation (Reclamation) and the State Water Project (SWP) operated by the Department of Water Resources (DWR). The CVP and SWP provide water for irrigation, and municipal and industrial uses, and are the State's largest hydropower producers. In addition, the CVP and SWP provide water to maintain salinity control in the Delta to protect a variety of uses, including in-Delta water uses and exports of water from the Delta by the CVP and SWP. Without providing that salinity control, water from the ocean would intrude into the Delta, and salinity conditions for diversions from the Delta would not be adequate for agricultural or municipal and industrial uses in dry years like this one. In addition, the CVP and SWP provide flow conditions necessary to protect fish and wildlife, including critical temperature control for species listed as threatened or endangered under the Endangered Species Act (ESA).

Due to limited water supplies resulting from the drought, Reclamation and DWR have had difficulty meeting all of the demands for water placed upon the CVP and SWP, and have significantly reduced water supply contract deliveries to near historic low levels. Beginning in January of this year, Reclamation and DWR requested and received various approvals from the Executive Director of the State Water Board for Temporary Urgency Changes (TUC) of their water right requirements to meet water quality and flow levels in the Delta in order to preserve storage and maximize beneficial use of water while providing minimal protection to fish and wildlife. Associated with these requests, on April 8, 2014, Reclamation and DWR released a Drought Operations Plan (DOP). The DOP lays out Reclamation's and DWR's proposed range of coordinated operations from April through mid-November. The DOP includes proposed operations assuming an average and a very dry hydrology. Under the drier hydrology, the DOP lays out proposed operations with and without temporary rock barriers in the Delta to reduce the need for upstream releases to repel salinity. Following release of the DOP, DWR announced on April 18, 2014, that the temporary rock barriers would not be needed this summer, but may be needed later in the year to assure that sea water does not intrude into the Delta and jeopardize water supplies.

The DOP proposes end of month storage levels that Reclamation and DWR believe would be adequate to provide minimal temperature control for fisheries purposes and minimum supplies for health and safety, salinity control and other critical needs going into next water year assuming next year is also dry. However, Reclamation's and DWR's abilities to provide the proposed storage levels is dependent on assumptions regarding diversions and other water losses in the Delta Watershed that may be much higher than anticipated due to the dry conditions. Water losses, known as depletions, include losses to groundwater, evaporation, and transpiration. Further, this year it is projected that natural inflows will be inadequate to support many water diversions, including all post-1914 appropriative water right holders. In April, the State Water Board posted information on projected water supply, demand and availability for the Stanislaus, Tuolumne, Upper San Joaquin, Merced, Yuba, Kern, Kings, Kaweah and Tule rivers and the Delta indicating that curtailments are expected in these watersheds in the near future. For the Delta, the projection is that water will not be available as early as May 15 for all post-1914 water right holders, as soon as June 1 for all junior pre-1914 water right holders, and after June 16 for additional pre-1914 water rights, with any remaining supply to be shared on a correlative basis among riparian users. While water will not be available for certain diverters under their priority of right, DWR and Reclamation will continue to make storage releases to meet Delta outflow and other requirements. If diverters continue to divert after water is no longer available under their priority of right, they will effectively be diverting previously stored water to which they do not have a right unless they have a contract with Reclamation or DWR. This is the case even in stream systems or reaches of streams where Reclamation and DWR are not making releases because their need to make releases is increased by diversions elsewhere in the watershed where hydrologic continuity with the Delta exists.

Curtailment Options

Based on the above, the State Water Board anticipates needing to take action to curtail water use in the Delta Watershed during the current drought. There are several options available for curtailing diversions. Following is a summary of these options.

Curtailments to Protect Senior Rights and Stored Water Releases Based on Reported Water Use Under Existing Authorities

One option for curtailing water diversions in the Delta Watershed to protect senior water users and stored water releases to meet Delta water quality and flow requirements is for the State Water Board to use existing authorities to issue curtailment notices to diverters when water is found to be unavailable under their priority of right. This method would only curtail diversions of flows needed for senior water rights and previously stored water released to meet Delta outflows and other requirements. It would not result in any curtailments of diversions of natural flows needed to meet Delta outflow and other requirements.

In order to determine which diverters should be curtailed and when, the State Water Board would use the most current hydrologic information on full natural flows (the flow available to a basin in the absence of any diversions) provided by DWR and compare that to reported water use information. Because the State Water Board does not have a real-time system for reporting water use information, the use information would be based on the best available estimates of water use based on previous monthly reported levels of use corrected for known errors. Curtailments would be issued starting with the most junior diverters following the priority system until the available supply and demand estimates were equal. Those diverters for which water was found to be unavailable would be issued notices of curtailment. Curtailment notices issued for diverters without a permit/license condition or a regulation are not enforceable orders of the State Water Board. In order to ensure curtailment under this approach, further investigation and findings may be required, followed by issuance of an Administrative Liability Complaint (ACL) proposing liability or a Cease and Desist Order (CDO). In drought conditions that liability would be up to $1,000 per day and $2,500 for each acre-foot of water diverted or used in excess of a diverter's water right. Individual diverters subject to enforcement action may request a hearing, and may challenge the underlying factual determination that water was not available for a particular diverter on a particular day. Accordingly, this option would require significant staffing resources to enforce each individual curtailment. This option would also not include specific provisions for health and safety exceptions that the following options would provide.

Curtailment to Protect Senior Rights and Stored Water Releases Based on Reported Water Use Through Emergency Regulations

Another option for curtailing water diversions in the Delta Watershed is for the State Water Board to adopt an emergency regulation under Water Code section 1058.5 that requires water right holders to curtail their diversions when natural flows in the Delta Watershed are inadequate to support their priority of right, unless those diversions are needed for minimum health and safety purposes or other critical purposes and alternative water supplies are not available. This method would only curtail diversions of flows needed for senior water rights and previously stored water released to meet Delta Outflows and other requirements. It would not result in any curtailments of natural flows needed to meet Delta Outflows and other requirements.

The process for determining when water is not available would be the same as described above except that the process would be defined in the regulation. Violation of the emergency regulation would be immediately enforceable by ACL of up to $500 for each day of violation or by issuance of a CDO. Potential fines for violation of the CDO would be up to $10,000 for each day in which the violation occurs. Enforcement cases would only need to show that the conditions of the regulation were violated rather than reestablishing the factual case on which the regulation was based for each enforcement case.

Curtailment Based on a Term 91 Approach Requiring Diverters in Addition to Reclamation and DWR to Bypass Flows to Provide for Delta Outflows and Water Quality Requirements

The State Water Board could also adopt an emergency regulation that adds a permit or license condition similar to existing Term 91 to all post-1914 water rights in the Delta Watershed that curtails diversions when natural flows are inadequate to meet prior water rights and Delta outflow requirements, unless those diversions are needed for minimum health and safety purposes or other critical purposes, and alternate water supplies are not available. Term 91 is currently included in post-1965 water right permits and licenses in the Delta Watershed. The term prohibits diversions under the water rights with this term when the Delta is determined to be in balanced conditions[1] and the CVP and SWP are releasing supplemental imported or previously stored water to meet Delta outflow requirements or other water quality requirements in the Delta and senior demands for water in the Delta Watershed. The Term 91 method treats the Delta watershed as if it is a fully interconnected basin below the foothill reservoirs. Water availability is assumed to be the same throughout the basin. When natural and abandoned flow in the basin is greater than the inbasin demand plus Delta outflow requirements, water is available for appropriation. When natural and abandoned flows are insufficient to supply inbasin needs and Delta outflow and other water quality requirements, the CVP and SWP must release stored water to ensure that inbasin entitlements are met, and Term 91 is triggered.

Term 91 can be expressed as follows:

SPW = SR - (EX + CW) (Equation 1)

Where: SPW => Supplemental project water, which is the water imported to the basin by the projects and water released from project storage which is in excess of export diversions, project carriage water, and project Inbasin deliveries.

SR => Project storage releases from Shasta, Oroville and Folsom Reservoirs, plus imports from the Trinity River.

EX => Export diversions into the California Aqueduct, the Delta-Mendota Canal, the Contra Costa Canal, and the North Bay Aqueduct.

CW => Carriage water required to repel seawater due to operation of the export pumps.

The State Water Board approved Term 91 as the best method for determining water availability in the Delta Watershed on a real-time basis in Decision 1594 and Order WR 84-02. Reclamation calculates Supplemental Project Water (or SPW) daily and posts the information on Reclamation's website. Given the legal requirement that a valid water right does not allow the holder to divert water that has been stored upstream and released after seasonal storage, it can be fairly argued that Term 91-like restrictions should be applied to all post-1914 water rights. In order to do so, a modified version of Term 91 would be developed that accounts for Reclamation's and DWR's obligations to provide water to inbasin water supply contractors. The Term 91 approach would be similar to the regulation described above with regard to notification and enforcement. The Term 91 approach, however, would determine curtailments based on real-time information rather than previous reported water use. It would also protect natural flows needed to meet Delta outflows and other water quality requirements, thereby

[1] Balanced water conditions" are specifically defined as periods when it is agreed by DWR and Reclamation that releases from upstream reservoirs plus unregulated flow approximately equal the water supply needed to meet Sacramento Valley inbasin uses, plus exports.

reducing the need for the CVP and SWP to release previously stored water for that purpose further conserving storage in upstream reservoirs. Curtailments would only be implemented to the extent needed to achieve the relaxed requirements approved in the TUC Order.

Curtailment Based on an Approach Similar to Term 91 Requiring Reclamation and DWR to Meet Delta Outflow Requirements Without Contributions from Other Diverters

Another option for curtailing diversions in the Delta during the drought would be for the State Water Board to adopt a Term 91-like emergency regulation as described above, but instead of curtailing diversions of natural flows needed to meet Delta Outflows and other Delta water quality requirements, those flows would remain the responsibility of the CVP and SWP. The Term 91 equation would be modified to account for this responsibility and inbasin obligations as discussed above. Current water rights with Term 91 would still be curtailed under the existing formula. This approach would allow for diversions to be curtailed based on real-time information rather than previously reported water use, but would not reduce the obligations of the CVP and SWP to release stored water to meet Delta water quality requirements. This would result in less benefit to SWP and CVP storage levels and less interruption of water use by other senior water right holders than the other Term 91 approach. The health and safety exceptions would be the same under this option.

ISSUES FOR DISCUSSION AT THE WORKSHOP

Following are the specific questions for discussion at the workshop. Other topics may also be discussed.

1. Which curtailment option would be the most effective and enforceable?

2. Are there any other curtailment options that should be considered?

3. How can human health and safety needs be addressed under the various approaches to curtailments?

4. How can the State Water Board ensure that Delta needs will be met? The needs of fish and wildlife? The needs to maintain adequate end of month storage levels?

5. How can voluntary water-sharing agreements be accommodated? What criteria should be used to determine whether voluntary agreements are viable alternatives to mandatory curtailments?

6. Which curtailment option would be the most responsive to changing conditions?

POLICY ISSUE

Not applicable. This is a workshop and no formal action will be taken.

FISCAL IMPACT

Not applicable. This is a workshop and no formal action will be taken.

REGIONAL BOARD IMPACT

Not applicable. This is a workshop and no formal action will be taken.

STAFF RECOMMENDATION

Not applicable. This is a workshop and no formal action will be taken.

State Water Board action on this item will assist the Water Boards in reaching Goal 6 of the Strategic Plan Update: 2008-2012 to enhance consistency across the Water boards, on an ongoing basis, to ensure our processes are effective, efficient, and predictable, and to promote fair and equitable application of laws, regulations, policies and procedures.