

WATER YEAR 2000 – NEAR-TERM MEASURES TO AVOID UNANTICIPATED FISHERY AND WATER SUPPLY CONFLICTS

INCREASE BANKS PUMPING

Priority: 2

Description: During August and September of 1999, the State Water Project moved an additional 38,000 AF of SWP water from Lake Oroville into San Luis Reservoir by obtaining approval to exceed the allowable export rate. Although the SWP is capable of pumping 10,300 cfs at its Banks Pumping Plant, it is constrained to a lower pumping rate because the inflow to Clifton Court Forebay is constrained to 6,680¹ cfs from mid-March to mid-December by an agreement with the U.S. Army Corps of Engineers. Outside that window, the inflow to Clifton Court Forebay may be increased by an amount equal to one-third of Vernalis flow when it is 1,000 cfs or higher. This summer, the USACE approved an increase of 500 cfs to allow the Clifton Court Forebay inflow to be 7,180 cfs from August 6 to September 30. Next year, a similar proposal should be developed to allow the additional 500 cfs pumping from July 1 through the end of September in the event the added capacity could be used to fill San Luis Reservoir.

This measure, by itself, does not increase total water supply. However, under specific conditions it may allow the Central Valley Project and SWP to move more water from northern California reservoirs into San Luis Reservoir, leaving additional space in those upstream reservoirs to capture extra winter runoff. Under dry hydrologic conditions, there already exists sufficient capacity at Banks to move SWP water. However, under wet conditions the pumping capacity is fully utilized; increasing Banks pumping in this case may provide additional flexibility.

Financial Terms: For the SWP, there are no direct costs associated with this measure. However, there would be costs for using this measure, in conjunction with joint point of diversion, to move CVP supplies (see the discussion of Joint Point of Diversion for costs to move CVP water).

Implementation Issues: This year, the fisheries agencies and the USACE indicated that approval for the increased pumping was a one-year action. To obtain approval for the future, DWR may have to pursue a permit through a formal process². Also, increased pumping during the irrigation season could exacerbate water level conditions in the South Delta. In addition to placing and operating the three temporary rock agricultural barriers, it may be necessary to investigate the need to improve diversion capability for those water users located downstream of the barriers. The USACE will also require consultation with fishery agencies on potential endangered species concerns.

¹ This maximum is based on a 3-day running average inflow to Clifton Court Forebay.

² If it is necessary to seek a permit from USACE, then DWR should consider other adjustments such as a longer average period for the maximum inflow.

October 12, 1999

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Recommendations: It is recommended that DWR pursue obtaining approval from the USACE to increase the allowable inflow to Clifton Court Forebay by 500 cfs from July through September.

CALFED Member Agency Leads: Lowell Ploss (USBR) and Larry Gage (DWR)

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FLEXING THE E/I RATIO

Priority: 3

Description: The CALFED Ops Group can recommend to the Executive Director of the State Water Resources Control Board variations in the allowable percent of inflow that may be diverted by the Central Valley Project and State Water Project. Also known as the export-to-inflow ratio, this standard applies to the entire year, but may only limit exports under specific conditions. Generally, during dry periods, the CVP and SWP may be limited in the amount of water they may export or move from north of Delta storage. The 1995 Water Quality Control Plan and SWRCB Order WR 98-9 provide for flexing the E/I ratio to avoid annual water supply impacts associated with implementing fishery measures.

Financial Terms: Not applicable.

Implementation Issues: Based on current forecasted operations, the E/I ratio will not be a limiting factor under normal (50 percent exceedance) hydrologic conditions. Under the dry (90 percent exceedance) conditions, the limitation of the 35 percent E/I will not limit the export operations since the Department of Water Resources will have already filled the SWP share of San Luis Reservoir and the CVP Tracy Pumping Plant will be operating at plant capacity.

Flexing the E/I ratio may be necessary if the U.S. Bureau of Reclamation is permitted to use the joint point of diversion. This would permit Tracy Pumping Plant to continue operating at the plant capacity and pump additional water at the State facilities. Flexing may also be needed next June if exports are reduced in the spring due to salvage of delta smelt. A higher E/I ratio could allow the CVP and SWP to transfer water from north of the Delta storage to San Luis Reservoir.

Recommendations: Work through the CALFED Ops Group process to identify periods when flexing the E/I ratio may be beneficial. The Ops Group is currently investigating measures that may be implemented in 2000 and will continue to explore options to reduce conflicts between fish and water supplies throughout the year.

CALFED Member Agency Leads: Lowell Ploss (USBR) and Larry Gage (DWR)

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LEASE STORAGE SPACE

Priority: 4

Description: A number of entities including Kern County Water Agency, Metropolitan Water District of Southern California, Santa Clara Valley Water District, Alameda County, and Vidler Water Company, Incorporated have storage accounts in water banks located south of the Delta. Vidler Water Company, Incorporated has indicated a willingness to lease a portion of its water storage rights in its Semitropic storage account. The other parties have not expressed a willingness at this time due to the possibility of being able to store their own water supplies during Water Year 2000. Based on preliminary investigations, about 45,000 AF could be stored in Semitropic between October 1999 and April 2000.

Financial Terms: The terms must still be negotiated, however, an initial offer is included in the attached matrix.

Implementation Issues: Environmental documentation may be required.

Recommendations: It is recommended that discussions be initiated with Vidler Water Company, Incorporated and Kern County interests to lease groundwater storage space in Semitropic Water Bank.

CALFED Member Agency Leads: Curtis Creel (DWR) and Steve Hirsch (USBR)

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WATER ACQUISITIONS

Priority: 5

Description: The impact on water supplies caused by the delta smelt take in 1999 was partially offset by water acquisitions the U.S. Bureau of Reclamation pursued to provide benefits in upstream tributaries. During 1999, USBR purchased 50,000 AF from South San Joaquin Irrigation District and Oakdale Irrigation District. This water was retained in New Melones Reservoir as Central Valley Project water and released as necessary to provide benefits to steelhead. Although it did not result in any direct change in exports, it allowed the CVP and State Water Project to maintain the projected level of pumping without making additional releases from north of the Delta reservoirs. The water stored upstream, as a result of this action, may be released later in the year and moved into San Luis Reservoir. In addition, USBR has recently pursued acquiring water from interested sellers representing Yuba County Water Authority, and Kern County Water Agency.

Two parties have been identified who are willing to sell south of the Delta water supplies in Water Year 2000. These parties are Vidler Water Company, Incorporated and Kern County Interests with 6,300 AF and 100,000 AF, respectively.

Financial Terms: Purchase prices would need to be negotiated, however initial offers are presented in the attached matrix.

Implementation Issues: Environmental documentation will be required and consultation on endangered species may also be required.

Recommendations: Due to environmental permitting requirements and Delta pumping constraints, it is recommended that discussions be initiated with Kern County Interests and Vidler Water Company, Incorporated. Discussions should focus on purchasing options for water supplies that could be exercised in Water Year 2000 and beyond. It might be desirable to earmark the down payment to secure the right to call on the option in exchange for refurbishing existing wells or constructing additional wells. This approach could help with securing funding sources, since increasing the ability to extract water in Kern County is looked upon by many as desirable.

CALFED Member Agency Leads: Curtis Creel (DWR) and Steve Hirsch (USBR)

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SOURCE SHIFTING

Priority: 6

Description: The impact caused by the delta smelt take, as well as other export reductions, is a conflict between the demand for water deliveries and the inability to meet the demands through direct export pumping and storage withdrawals from San Luis Reservoir. A method to resolve this conflict is to manage the demand placed on San Luis Reservoir by shifting deliveries to alternate sources. These sources may be other surface water supplies, groundwater banks, or local groundwater pumping.

During 1997, the Department of Interior compensated the Metropolitan Water District of Southern California to shift up to 60,000 acre-feet of demands to non-State Water Project supplies during the period June through August. MWDSC was compensated for the risk imposed on its local supplies and the U.S. Bureau of Reclamation returned an equivalent amount of water to MWDSC once San Luis Reservoir storage began to recover. A similar arrangement was negotiated with the Santa Clara Valley Water District. MWDSC and Kern County interests have indicated a willingness to participate in demand shifting in Water Year 2000 under appropriate hydrologic conditions. MWDSC would shift 60,000 AF of deliveries from San Luis Reservoir to Castaic Lake and Lake Perris. Water would be replaced after end of 2000. Kern County interests would shift between 50,000 - 90,000 AF of deliveries from San Luis Reservoir to groundwater. Water could either be paid back prior to the end of Water Year 2000 or over a 5-year period, depending on storage rate charged.

Another approach is to offer willing sellers a special water rate or incentive payment in return for the ability to interrupt deliveries. Numerous water users throughout the San Joaquin Valley have the ability to pump groundwater. As long as surface supplies are available, it may not be economic to activate wells or install the necessary conveyance systems. With an incentive or reduced water rate, the economics of activating wells becomes viable. Such incentives will allow water users to take the necessary steps to reactivate wells and to install the needed conveyance facilities. When the export delivery system is not adequate to meet the demands, the surface deliveries to participating water users could be interrupted. Similar arrangements are already common practice within the electric utility industry to assist in meeting peak demands. Utility companies commonly offer special incentive rates to customers. With these special rates customers allow the utility companies to shut off non-essential equipment and to "cycle" residential air conditioning units.

Financial Terms: The special water rates or incentives will need to be negotiated. The price per AF for exchanges discussed in 1999 varied from \$0-\$180.

Implementation Issues: Environmental documentation may be required and an analysis be will needed to determine what is necessary to establish an equitable incentive payment.

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Recommendations: It is recommended that discussions be initiated with MWD and Kern County interests to develop the appropriate contractual arrangements to interrupt their respective water supplies during the period of April through August 2000.

CALFED Member Agency Leads: Curtis Creel (DWR) and Steve Hirsch (USBR)