Program Preferences

Anderson-Cottonwood Irrigation District Main Canal Lining Project

The Northern Sacramento Valley Anderson-Cottonwood Irrigation District Main Canal Lining Project will assist in meeting the following Program Preferences:

Effectively integrate water management programs and projects within a hydrologic region identified in the California Water Plan: This project has been developed in conjunction with, and in support of, construction of a water supply intertie system by the City of Shasta Lake. The City has a long-term water agreement with the District whereby the District makes up to 2,000 acre feet of water available each year; however, cold water pool conservation in Lake Shasta has constrained the City's ability to divert this water directly from Lake Shasta. Their proposed intertie would allow for downstream diversion of such water, and the District's lining project would help ensure the availability of water to be diverted by the City.

Effectively resolve significant water-related conflicts within or between regions: This project would eliminate or reduce the impacts of sheet flows resulting from seepage from an earthen canal; residents of the adjacent Verde Vale subdivision have experienced significant flooding of yards, driveways, streets, and septic systems. This is a significant conflict that resulted in widespread television and newspaper coverage in April and May 2014.

Contribute to attainment of one or more of the objectives of the CALFED Bay-Delta Program: This project would enhance water use efficiency by conserving up to 891 acre feet of water annually. This water would increase stored water and thereby enhance the timing and flexibility of releases for instream benefits including those for riparian habitat, aquatic species, temperature control, water quality in the Delta and Delta outflow requirements.

The Main Canal Lining Project would also assist in meeting the following Statewide Priorities:

Drought Preparedness: This project would promote water conservation, improve agricultural irrigation efficiencies, and achieve long term reduction of water use. It would also contribute to efficient groundwater basin management by reducing agricultural producers' reliance on groundwater by enhancing surface water supplies within the region. These benefits would be provided by the conservation of up to 891 acre feet of water each year resulting from project implementation.

Use and Reuse Water More Efficiently: This project would enhance agricultural water use efficiency by eliminating or reducing seepage from a reach of main canal constructed over an alluvial deposit. Water lost to seepage from the conveyance system becomes unavailable for its intended use of agricultural irrigation; such losses would be eliminated or reduced in the project area, resulting in the conservation of up to 891 acre feet of water per year.

City of Live Oak Water Supply Reliability Well

1) Address critical water supply or water quality needs of DACs within the region

The City's project addresses a critical water supply and water quality need of a significant sized DAC in the NSV IRWM region. The entire City, with population around 8,500, is considered a disadvantaged community (see Attachment 8) – making Live Oak one of the region's largest DACs that is not part of or adjacent to a larger non-DAC area. The project will supply an additional 2,000 gpm of capacity to the City of Live Oak which will help this DAC have adequate and reliable water supply. Furthermore, this project will provide improved water quality to the City water customers as this project will provide a superior water quality to that which is currently provided.

This project specifically addresses the Critical Water Supply Need Program Preference as it falls within SRF Priority List Ranking Criteria E which is for "water systems with water outages, significant water quantity problems caused by source water capacity, or water delivery capability that is insufficient to supply current demand." The City's water system both has insufficient water quantity to supply its required source capacity and has insufficient water delivery capability to supply its current demand.

2) Addresses statewide priorities (including Protect Groundwater Quality and Ensure Equitable Distribution of Benefits)
Protect Groundwater Quality:

The City of Live Oak is located in a nitrate high-risk area as it is surrounded entirely by agricultural operations. One of the City's newest wells, Well #6, was abandoned in 1995 and later in 2009 Well #5 was also abandoned due to nitrate levels consistently exceeding the MCL. The City's water supply reliability well project will help address the statewide priority to protect groundwater quality by ensuring that the members of the Live Oak community, a small DAC, will have access to safe drinking water.

Ensure Equitable Distribution of Benefits: The City's project contributes to the statewide priority to ensure equitable distribution of benefits by increasing the participation of a DAC (Live Oak) in the NSV IRWM process, addressing safe drinking water needs of a DAC (Live Oak), and addressing the Human Right to Water needs within the NSV region by providing access to safe, clean, and affordable water, adequate for human consumption, cooking and sanitary purposes.

Summary: If this project is implemented, there is 100% certainty that it will meet the listed Program Preferences. The NSV IRWM region has not specifically addressed the Human Right to Water Policy. However, the IRWMP does include several projects that will help ensure that more people in the region will have access to safe, clean, affordable, and accessible water adequate for human consumption. For example, the implementation of the City's project will help address the goal of the Human Right to Water Policy by increasing the total water supply of the City so that the City can meet its required source capacity and keep a water quality that meets all MCLs.

City of Shasta Lake Water Supply Reliability Project

1. Include regional projects or programs: The project is a partnership between the City and Bella Vista Water District (BVWD), and includes coordination with the Anderson-Cottonwood Irrigation District and U.S. Bureau of Reclamation (BOR).
2. Effectively integrate water management programs/projects: The project furthers Upper Sacramento River Temperature Objectives by allowing the City to obtain additional water supply while avoiding adverse impacts on anadromous fish species in the Sacramento River due to increased water temperatures downstream.
3. Effectively resolve significant water-related conflicts within or between regions**:** In drought years, the City is unable to obtain additional water because diverting water from the existing diversion point impacts the CWP. Winter-run Chinook are particularly susceptible to drought; spawning in the upper Sacramento River is completely dependent on cold water releases from Shasta Dam. The project would provide sufficient water for current customers while avoiding impacts to the CWP, thereby resolving this water-related conflict.
4. Address critical water supply or water quality needs of DACs within the region: In 2014, BOR reduced the City's water allocation by 50%, resulting in 1,291 AF available for the current water year, which is not sufficient to supply current customers. The project would allow the City, a DAC, an adequate water supply for current customers while eliminating impacts to the CWP.
5. Effectively integrate water management with land use planning: The project maintains the City's autonomy and allows the City to partner with BVWD to implement a project that fulfills this objective. The City will assist BVWD and potentially other neighboring water districts with water supply in drought years, providing conjunctive water management. Information obtained through development of the project will be incorporated into the City's General Plan and Master Water Plan.
6. Address Statewide Priorities (Table 1 of 2014 IRWM Drought Solicitation Guidelines)
   - Drought Preparedness: The project establishes a system intertie with BVWD to provide a sustainable water supply during drought years.
   - Use and Reuse Water More Efficiently: The project implements expanded water supply reliability consistent with the Urban Water Management Plan and the IRWM Plan.
   - Climate Change Response Actions: Water temperature in the upper Sacramento River is recognized as a key factor of the habitat needs for Chinook salmon inhabiting the River. Water temperature is influenced by several factors, including drought conditions and the relative water temperatures from Shasta Dam. The project would secure an additional water supply while avoiding CWP impacts on Sacramento River fisheries.
   - Expand Environmental Stewardship: The project reduces impacts to listed fish species in the Sacramento River by allowing the City to obtain additional water supply through an alternative diversion point.
   - Protect Surface Water and Groundwater Quality: The project will result in a new transmission and distribution system and upgraded pumping facilities, reducing water loss in both systems. BVWD's water intakes are located in the Sacramento River south of the Dam. The CWP issues at the Dam will not be relevant at this location, which will result in habitat improvement in the Sacramento River.
   - Human Right to Water; Ensure Equitable Distribution of Benefits: The project addresses the Human Right to Water by providing adequate infrastructure to allow safe, affordable water for personal and domestic use within the City. The City, a DAC, does not have sufficient water adequate for human consumption, cooking and sanitary purposes during drought years. In 2014, the reduction of 50% resulted in approximately 1,291 AF available to the City, which is not enough to supply current customers. The City's only current option is to purchase water from a private entity on a short-term basis at five times the price of our BOR allocation, and these increased costs become the burden of the City's current customers. The cost of supplemental water is not stable and has the potential to become even more of a significant burden to ratepayers as drought conditions continue.

PROGRAM PREFERENCES

The Rio Alto Water District Wastewater Treatment Plant Improvements and Constructed Wetlands Project meets the following program preferences as described in Section II.F of the 2014 IRWM Drought Guidelines:

- The elimination of our direct discharge of secondary effluent containing water quality contaminants to the Sacramento River (A federally protected River) will effectively resolve significant water-related conflicts within or between regions by improving, protecting and enhancing riparian habitat and special status wildlife and fish species and improve surface water to downstream users.

- This project will address the statewide priority of drought preparedness by the efficient reuse of wastewater effluent to create a wetland which will return 78 acres of star thistle covered pasture into 39 wetted acres consisting of ponds with riparian habitat adjacent to the Sacramento River located within the Pacific Flyway. The created wetland could receive up to a maximum of 1 million gallons per day of recycled wastewater effluent. The created wetlands will be maintained in perpetuity by the Rio Alto Water District and provide a wetland not dependent on Central Valley Project water deliveries for sustenance which are subject to drought reduction deliveries.

This project will address the statewide priority of improving the water supply reliability of the Sacramento-San Joaquin Delta because this project will increase available clean water to downstream users including the Sacramento-San Joaquin Delta effected by pollutants in the Sacramento River by removing direct discharge of effluent containing water quality contaminants.

This project will expand environmental stewardship to protect and enhance the environment by improving the regional watershed by creating a wetland adjacent to the Sacramento River and the Lake California recreational lake in the Eastern Tehama watershed. Central Valley's historic wetlands have been destroyed and those that remain dependent on water from the Central Valley Project. This project will provide food, water and breeding areas for wildlife and birds and waterfowl.

This project addresses the protect surface water and groundwater quality priority by removing our wastewater contaminants in our discharge from the Sacramento River. We currently have a cease and desist order because the District is unable to meet the new effluent limits for zinc, dichlorobromomethane and chlorodibromomethane as a result of the California Toxics Rule and the National Toxics Rule. The Sacramento River provides water to farms and cities downstream from our effluent discharge. Our project will remove the discharge of these contaminants and future contaminants of concern in the river, therefore, protecting the surface water users and improving the accessibility of safe, clean, and affordable water for human consumption, cooking and sanitary purposes to all water users downstream from our current point of discharge. In addition, our wetlands will further polish the effluent water before it returns for groundwater recharge. This assists our IRWM regional effort to meet the goals of the Human Right to Water Policy.