RECLAMATION

Managing Water in the West

Draft – Environmental Assessment – Long-Term Transfer of Water From the Anderson-Cottonwood Irrigation District to the Bella Vista Water District

Central Valley Project, CA
Mid-Pacific Region

U.S. Department of the Interior
Bureau of Reclamation

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Introduction

The Bureau of Reclamation proposes to approve a long-term transfer of Central Valley Project (CVP) water from the Anderson-Cottonwood Irrigation District (ACID), a Sacramento River Settlement Contractor, to the Bella Vista Water District (District), a water service contractor. This transfer is being undertaken pursuant to, and will be in full compliance with, Section 3405(a) of Public Law 102-575, Title 34, of the Central Valley Project Improvement Act (CVPIA).

Purpose and Need

The purpose of the transfer is to guard against possible multi-year droughts and to secure water supplies for existing developments.

The need for the transfer arises from shortages caused by a relatively inelastic demand and potential future reduced allocations due to natural or regulatory-induced changes in hydrology.

Alternatives

Proposed Action

The proposed action is approval of a transfer of up to 1,536 acre-feet (af) of CVP water during the April through October period from the ACID to the District beginning April 1, 2010, and continuing through October 31, 2044.

The water would be made available from the ACID's CVP water supply and diverted through existing diversion facilities for application to existing and anticipated demand. The District currently has a water service contract for 24,578 af of water per year, which is projected to be fully used by roughly 2025. The District also has groundwater wells capable of producing 2,762 af annually (based on 180 days of operation per year) and has contracted on a year-by-year basis for about 4,800 af of supplemental water. The proposed long-term transfer of 1,536 af would result in a portion of that supplemental supply being available on a more reliable basis.

The CVP water to be transferred would originate at the Shasta Reservoir and then be diverted by the District at the Wintu Pumping Plant on the Sacramento River rather than being diverted by the ACID at either its main diversion facility, about 2 miles upstream of the Wintu Pumping Plant, or its Bonnyview Pumping Plant, about 5 miles downstream of the Wintu Pumping Plant. The water would then be treated and distributed to the District's 53-square-mile service area through approximately 220 miles of water mains, with the aid of 10 pump stations.

The District is divided into 10 pressure zones, two of which (the Old Oregon Trail and Simpson zones) are expected to experience the bulk of the anticipated growth (see Figure 1).

No Action Alternative

Under the no action alternative, Reclamation would not approve the proposed action. The District would be required to operate within the confines of the water supply under its water service contract. This alternative was eliminated from further consideration because Reclamation is mandated, under Section 3405(a) of the CVPIA, to facilitate water transfers to assist California urban areas, agricultural water users, and others in meeting their future water needs.

Affected Environment and Environmental Consequences

Physical Resources

The existing environments of interest are the Sacramento River and the District's service area. The river segment of concern is the 7-mile reach between the ACID Diversion Dam and the Bonnyview Pumping Plant in the heart of the prime spawning grounds for Chinook salmon in the Sacramento River. With respect to this proposal, the only physical feature of this reach that is of interest is the temperature of the water, as this is a reach which can be reliably kept cold enough for spawning salmon. The District's service area is less distinctive, although it, too, has a feature of special interest in the occurrence in portions of the District of extensive vernal pools, some of which provide habitat for protected species of plants and invertebrate animals. The District is otherwise not unique. It consists of gently rolling terrain covered with the oak-pine forests of the lower foothills and contains perennial, warm water steams.

No adverse impacts on CVP water delivery are anticipated as a result of this transfer on either the river or the uplands and warm water streams within the District.

The proposed action would not affect CVP operations. Because, on the one hand, the points of diversion of the two districts are both downstream of the Keswick Dam, so cold water storage in the Shasta-Trinity-Whiskeytown complex would not be directly affected. On the other hand, all the points of diversion are upstream of the temperature compliance points, so there would be no change in the temperature measurements affecting releases from the reservoirs.

The only change would be a very small increase in flows for approximately 2 miles and an even smaller decrease in flows for 5 miles. About 95 percent of the water that would be transferred is water normally diverted at the ACID's main diversion, 2 miles upstream of the District's diversion. The other 5 percent is normally removed at the ACID's Bonnyview diversion. Thus, most of the water would remain in the river slightly longer than under the no action alternative. The total volume involved would be only 0.1 percent to 0.7 percent of the minimum flow of 3,000 cubic feet per second, depending on whether the water was diverted over 6 months or 1 month respectively. The percentages would be about four times smaller at normal summer flows. Roughly, the changes would involve a 0.095 percent increase in flows over 2 miles and a roughly 0.05 percent decrease in flows over 5 miles, with the net effect being equivalent to a slight increase in the amount of water in the river for about 1.6 miles. These changes are too small to measure, even though the calculations would indicate a net benefit if there were an affect on the habitat. Given the absence of a habitat change, there will be no affect on listed species.

The transferred CVP water would be applied to existing and anticipated agricultural, residential, and industrial areas. It would be conveyed through existing facilities to meet existing demands throughout the District, as well as anticipated future needs in the pressure zone areas adjacent to the city of Redding, where the presence of sewer systems permit more concentrated development. The portions of the District with low-density, multi-acre, rural residential housing would be little affected. Therefore, this action would involve only incremental extensions of current land uses within areas lacking vernal pools.

The anticipated developments would lie entirely, or nearly so, outside the areas known to contain numerous vernal pools: the only unique geologic features of the area. However, the presence of vernal pools and their significance is well known locally, and they are carefully protected by the local planning agencies under agreements between the City of Redding and the U.S. Fish and Wildlife Service. Thus, any affect on these features, unlikely though it would be, would occur only after case-by-case environmental review under the local and state land use permitting processes and state and Federal endangered species reviews. Therefore, no adverse affects on unique geological or biological features are expected from this proposed transfer.

Biological Resources

No negative impacts to plants or wildlife within the river are expected because the small shifts in the timing and locations of diversions that can be computed would be immeasurable. No new construction would be required and, as noted above, the development which this action would help support would be in or next to current high-density development where existing agreements between the City of Redding and the Service serve to prevent development affecting vernal pools. Moreover, even such development could occur in the absence of this action because abundant groundwater resources are available from areas a few miles to the south in the Churn Creek bottom. Under the proposed action, CVP water would mainly be used to support existing irrigation and municipal and industrial (M&I) uses or limited in-fill development.

Given the lack of construction attributable to the proposal itself, the presence of protections for vernal pools already in place, and the fact that further residential and commercial developments could occur without this proposed transfer, the proposed action would not affect listed vernal pool species within the District's service area.

Similarly, given the absence of measureable changes to the salmon habitat in the Sacramento River, no affects on fisheries would occur. There would be changes, mostly increases in water flow that can be computed but not measured, that would, if large enough, be beneficial to the fishery. Based on computations, the increase in water volume downstream of the ACID Diversion Dam would range between 0.2 percent of the typical October flow and 0.8 percent of the minimum flow allowed under current operating conditions.

Therefore, no affects on either threatened or endangered species would occur because the transfer would be too small to measure.

Cultural Resources

No negative impacts to cultural resources are anticipated because no new or additional land would be placed under irrigation or converted to M&I purposes, nor any new facilities expected to be constructed that would not otherwise be built, given the current need to purchase additional water each year. Therefore, no properties listed or eligible to be listed in the National Register of Historical Places would be affected by the transfer.

The transfer would be consistent with the Department of the Interior environmental justice guidelines. It would not preferentially favor nor discriminate against any socioeconomic groups.

Socioeconomic Resources

Under the terms of the proposed action, the transfer would not adversely affect the quality of human environment, involve unresolved conflicts concerning alternative uses of available resources, or have adverse effects on public health or safety. It would support predominantly anticipated growth of relatively high-density housing along the eastern edge of the city of Redding, a relatively efficient means of providing housing.

Indian Trust Assets

No Indian Trust Assets (ITAs) are served by the water to be transferred under the proposed action. While there are ITAs adjacent to the ACID's Bonnyview Pumping Plant, those ITAs are currently served by the city of Redding, not the ACID or the District. Therefore, no ITAs would be affected.

CVP Operations

There would be no identifiable impacts to CVP operations as a result of the transfer because the transfer would involve minute or no change in water use prior to the annual, winter period of isothermal conditions in the Shasta Reservoir. Therefore, no impacts associated with water delivery or other impacts to CVP operations affecting the cold water pool in Shasta Reservoir are anticipated as a result of the proposed transfer.

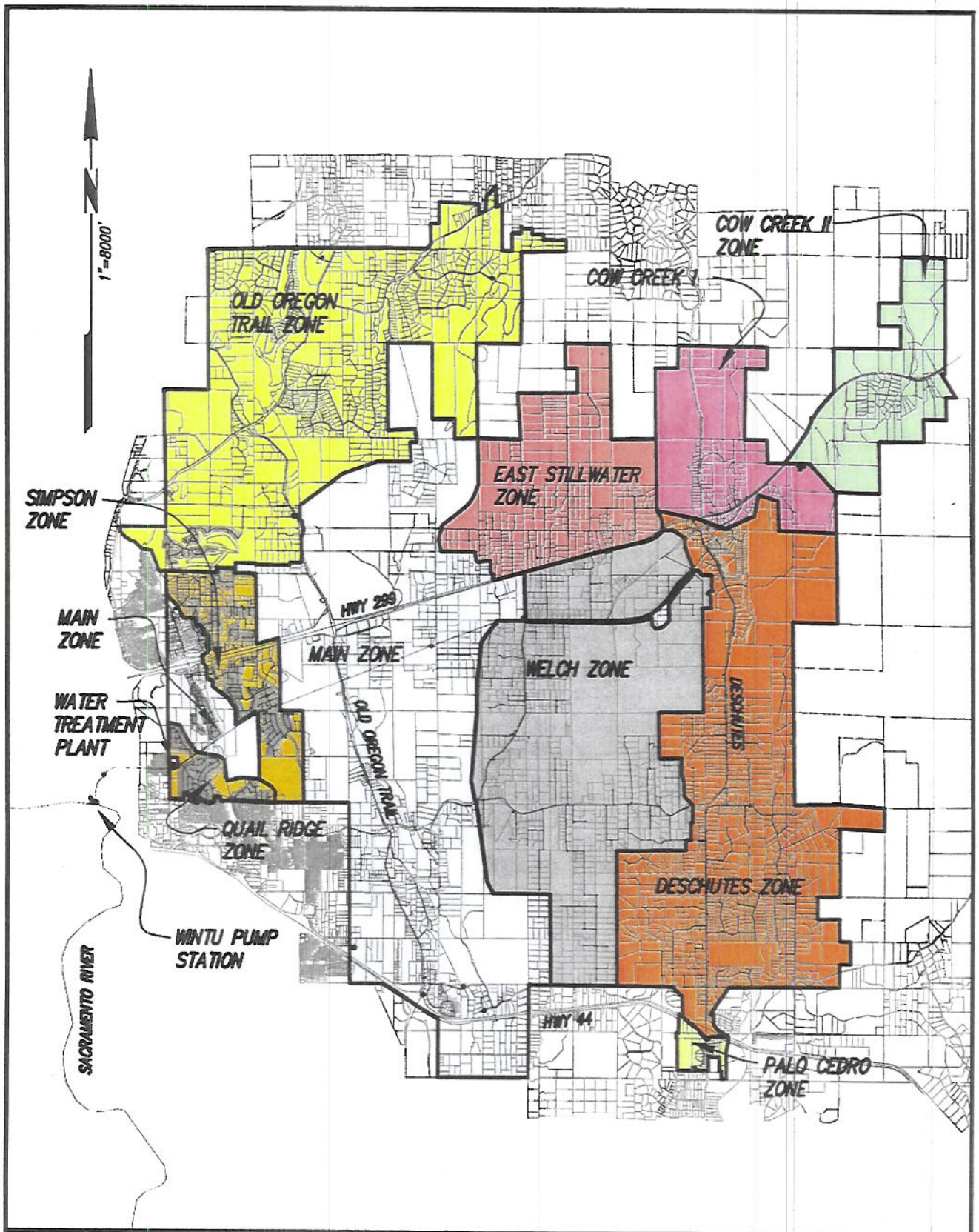
Cumulative Impacts

The proposed transfer will not result in any adverse cumulative impacts. The water would be transferred pursuant to valid Sacramento River Settlement and Water Service Contracts and would be distributed using existing diversion and conveyance facilities. The transfer would not have highly controversial or uncertain environmental effects or involve unique or unknown environmental risks, nor would the transfer be related to other actions with individually insignificant, but cumulatively significant, environmental effects.

Consultation and Coordination

No consultation was required under the Endangered Species Act because Reclamation determined there would be no affect on protected riverine species, which, in this case, would be the winter-run and spring-run Chinook salmon, steelhead, green sturgeon, and the bald eagle, due to changes in water flows. Upland and riparian species, such as the Valley Elderberry Longhorn Beetle, and

vernal pool species, such as fairy shrimp, would not be affected because no habitat conversions affecting these species would result from the action, nor would any facilities be constructed or altered.



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9/05	PACE CIVIL, INC. REDDING, CALIFORNIA	BELLA VISTA WATER DISTRICT PRESSURE ZONE MAP	FIGURE 1 JOB # 453.91