

Chapter 7

Summary of Findings

Reclamation initiated this Special Study to determine if there is a potential Federal Interest for participation in the CCWD AIP. This report documents the Plan Formulation, Economics Evaluation, and cost allocation for the CCWD AIP. This chapter summarizes the major findings of this Special Study.

Federal Interest

Federal interest in the AIP is established by the CVPIA, Title 34 of Public Law 102-575, Section 3402(a), which requires protection, restoration, and enhancement of fish, wildlife and associated habitats in the Central Valley and Trinity River basins of California.

Plan Formulation

Resources management measures and comprehensive plans were formulated to address the following study planning objectives:

- Improve the reliability of water supplies that meet CCWD's water quality objectives.
- To the extent possible, improve protection of sensitive Delta fisheries impacted by CCWD's Delta intakes operations.
- To the extent possible, improve reliability of CCWD water supplies during emergencies.

In addition to the No-Action Plan alternative, three action alternatives were formulated:

- Alternative Plan 1 would add a new intake on Victoria Canal that would replace some of CCWD's existing diversions at the Old River and Rock Slough intakes.
- Alternative Plan 2 would install a desalination facility at the existing Bollman WTP to treat increased diversions from the Mallard Slough intake.

- Alternative Plan 3 would add a new screened intake on Middle River to replace the Rock Slough intake.

Accomplishment of Objectives

- **Water Quality Improvement** – All three action plans would improve water quality for CCWD’s customers. Plans 1 and 3 would generate the greatest benefits to the entire CCWD service area by reducing average delivered chloride by 16 and 22 percent, respectively. Plan 2 would reduce average delivered chloride by about 27 percent for the area served by the Bollman WTP (30 percent of CCWD deliveries).
- **Fisheries Protection** – All three action plans would produce benefits to fisheries at the unscreened Rock Slough intake because of the reduced diversions. Plans 1, 2, and 3 would result in 21, 9, and 100 percent reduction in fisheries losses at the intake, respectively.
- **Reliability During Emergencies** – All three plans would contribute to increased storage in Los Vaqueros Reservoir as a result of reduced demands on blending releases. Plans 1, 2, and 3 would result in 9, 3, and 12 TAF of increased storage in Los Vaqueros Reservoir, respectively.

Engineering Feasibility

Physical features associated with the alternative plans include levee improvement work, intake structures, pumping stations, conveyance pipelines, and desalination treatment facilities. Engineering feasibility and implementability of these physical features are well demonstrated by similar projects within the study area and the region.

Environmental Impacts

Significant environmental impacts of the alternative plans are generally short-term impacts associated with construction activities related to local water quality, aquatic resources, air quality, and noise.

Plans 1 and 3 would result in minor long-term impacts related to the permanent loss of some agricultural lands (6 to 10 acres).

Plan 2 would result in long-term impacts on aquatic resources due to the discharge of desalination by-product in the form of saline concentrate into Suisun Bay.

Total Estimated Construction Cost

The total estimated Project costs for the three action alternatives are:

- Alternative Plan 1: \$103,260,000
- Alternative Plan 2: \$483,630,000
- Alternative Plan 3: \$194,950,000

The total estimated construction costs are not considered to be at full feasibility levels for Alternative Plans 2 and 3 because some features of the plans have not been fully developed. Alternative Plan 1 costs are primarily based on CCWD cost estimates for the Project, which is currently in design phase.

Economics

The potential range of net NED benefits (per year) for the three action alternatives are as follows:

- Alternative Plan 1: \$1,400,000 to \$10,500,000
- Alternative Plan 2: (-\$47,450,000) to (-\$38,470,000)
- Alternative Plan 3: (-\$1,170,000) to \$9,440,000

Alternative Plan 1 is the NED Plan because it maximizes net benefits for the considered range of benefits.

NED and Locally Preferred Plan

Based on engineering, operational, environmental, and economic evaluation of the Project alternative plans, Alternative Plan 1 (the NED Plan) is the overall superior plan. Plan 1 is also the locally preferred plan.

Cost Allocation and Repayment

Reclamation uses the SCRB method to allocate project costs. Accordingly, project costs would be allocated to water quality improvement purpose.

Under existing authorities, costs allocated to M&I purposes (including water quality) purposes are Federal reimbursable costs. Repayable costs include 100 percent of capital costs (including IDC), as well as interest accrued over the repayment period. 100 percent of O&M costs are non-Federal costs.

Because the Project would be a stewardship investment, repayment would occur in the year following the expense.

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