San Francisco Bay Regional Water Enhancement Program

Attachment 13

IRWM Plan – Reduced Delta Water Dependence

Association of Bay Area Governments

Proposition 84

Integrated Regional Water Management

Round 2, Implementation Grant Application

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Introduction

The Bay Area depends on the Sacramento–San Joaquin Delta (Delta) and its tributaries for surface water supplies. About 70% of the region's urban water supply is derived from the Delta and major tributary sources to the Delta, including the Tuolumne and Mokelumne Rivers. About half of that surface water is withdrawn from Delta water projects (the State Water Project, Federal Central Valley Project, and other U.S. Bureau of Reclamation facilities), with the balance coming from upstream of the Delta, specifically the Tuolumne River (San Francisco Public Utilities Commission [SFPUC] and its contractors) and the Mokelumne River (East Bay Municipal Utilities District [EBMUD] and its contractors).

San Francisco Estuary Partnership's 2011 State of San Francisco Bay Report states: "Based on the results of the Freshwater Inflow Index, the health of the San Francisco Estuary is critically impaired." Land managers and those tasked with protecting the health of San Francisco Bay have been concerned for many years that reduced delta dependency is cornerstone of protecting the San Francisco Bay. The 2006 Bay Area Integrated Regional Water Management (IRWM) Plan and the 2013 IRWM Plan Update both acknowledge the need for Delta water supply and the need to minimize take from the Delta.

This attachment describes the Bay Area IRWM Plan commitment to reducing Delta water dependence, provides excerpts from the 2006 Bay Area IRWM Plan demonstrating a commitment to reducing reliance on Delta water, describes projects in the San Francisco Bay Regional Water Enhancement Program Proposition 84, Round 2 Implementation Grant Application that reduce Delta water dependence, and describes future Bay Area IRWM Plan Update efforts to continue reducing dependence on imported water.

1. IRWM Plan Commitment to Reduce Delta Water Dependence

The 2006 Bay Area IRWM Plan is founded on the principle of "Sustainable Water Resources Management," which includes protecting the resources of the Bay-Delta, diversifying the portfolio of water resources for the Bay Area, and reducing the vulnerability of the region's water resources infrastructure, much of which is located in the Delta.

The 2006 Bay Area IRWM Plan reflects the Bay Area's commitment to reducing the region's dependence on the Delta for its water supply in the following ways:

- The 2006 Bay Area IRWM Plan identifies one of the main "Common Bay Area Water Resources Management Interests" as "Protecting the Bay-Delta Watershed" (see section C. Objectives, page ES-12).
- Its vision, goals and objectives support sustainable water resources management.
- The Plan's "Water Management Strategies" include a wide variety of strategies designed to diversify the region's portfolio of water supply options, in addition to local and imported surface water supplies (conservation, recycling, groundwater, desalination, etc). The strategies also address reducing infrastructure vulnerability through "interties, infrastructure reliability, and groundwater banking."
- This Proposal contains a suite of projects that are aligned with the water management strategies above and address the Bay Area IWMP Plan's commitment to reducing Delta water dependence. These projects are described in **Table 13-3**, below.

The vision for the Bay Area IRWM Plan is described as "Working together to enhance sustainable water resources management to support a high quality of life in the Bay Area." Sustainable Water Resources management is translated in the 2006 Bay Area IRWM Plan through the goals and objectives in terms of environmental sustainability, watershed protection, water supply reliability, diversifying the water supply portfolio, and habitat protection. The key goals and objectives that relate to Reducing Delta Water Dependence are listed in **Table 13-1**, below, and are in **boldface** for emphasis.

Table 13-1: Key Goals and Objectives in the 2006 Bay Area IRWM Plan that Relate to Reducing Delta Water Dependence

Regional Goal	Objectives
Contribute to the promotion of economic, social and environmental sustainability	▪ Maintaining and promoting economic and environmental sustainability through **sound water resource management practices**
Contribute to improved supply reliability	▪ Minimizing **vulnerability of infrastructure** to catastrophes and security breaches ▪ Increasing opportunities for **recycled water use** consistent with health and safety ▪ Maintaining a **diverse portfolio of water supplies** to maximize flexibility
Contribute to the creation, protection, enhancement, and maintenance of environmental resources and habitats	▪ Providing net benefits to the environment ▪ Conserving and restoring **habitat for species protection** ▪ Protecting and recovering **fisheries** (natural habitat and harvesting)

2. IRWM Plan Excerpts Demonstrating Commitment to Reduce Delta Water Dependence

Table 13-2 shows excerpts from the 2006 Bay Area IRWM Plan that demonstrate a commitment to reducing reliance on Delta water, as well as to the related issues of preserving and enhancing Bay-Delta water quality and habitats. **Boldface** is used for emphasis, with text added in *italics* for context and clarification.

Table 13-2: Excerpts from the 2006 Bay Area IRWM Plan that Demonstrate a Commitment to Reducing Reliance on Delta Supplies

Section (Page Number)	**2006 Bay Area IRWM Plan Excerpt**
C.2.1 Water Supply Challenges (C-3)	Threats to Baseline Supplies: Protecting existing baseline supplies is of critical importance for **ensuring reliable water supplies** for the Bay Area. A variety of external constraints threaten to reduce or eliminate these supplies in the future. ▪ ***Delta supplies* are threatened by regulatory constraints on Delta exports, risk of catastrophic failure, and local facilities operations** (e.g., fish flows, temperature requirements, diversions, dam safety)

Table 13-2: Excerpts from the 2006 Bay Area IRWM Plan that Demonstrate a Commitment to Reducing Reliance on Delta Supplies

Section (Page Number)	**2006 Bay Area IRWM Plan Excerpt**
Table C-1 Relationship between Common Interests and Regional Goals (C-13)	Common Interest: Protecting the **Bay-Delta Watershed**. Goals: ▪ Protect and improve hydrologic function ▪ Protect and enhance environmental resources and habitat ▪ Protect and improve quality of water resources ▪ Promote economic, social, and environmental sustainability
D.3.3 Water Supply Reliability (D-7)	Strategies that contribute to improved water supply reliability, a stated goal of the CALFED Bay-Delta Program, the Integrated Regional Water Management grant program, and this IRWMP, are of important consideration given the various challenges faced by the Bay Area, such as the following: **Threats to baseline supplies.** A variety of external constraints threaten to reduce or eliminate existing baseline supplies, currently used in the Bay Area. These threats include, but are not limited to, **regulatory constraints on Delta exports,** reductions in local surface water storage capacity due to seismic activity and sedimentation, and potential pollution or overdraft of groundwater supplies. Protecting existing water supplies is a resource-intensive process that requires large investments from the Federal and state governments, in addition to local agencies in the Bay Area.
D.3.14 Imported Water (D-24)	Most of the Bay Area water agencies rely upon **imported water from the Delta or Sierra Nevada** *(upstream of statutory Delta)* to meet demands. Because imported water constitutes such a critical component of the agencies' baseline supplies, significant resources are invested to protect and ensure the continued delivery and viability of imported supplies. Bay Area agencies are active proponents of the CALFED Bay-Delta Program and continue to support and participate in program implementation to address CALFED and statewide priorities.
L.2 Reduce Conflict between Water Users (L-2)	**Balancing Delta Water Supply Allocations with Beneficial Uses:** The Delta provides drinking water to over two-thirds of California, and irrigation water for more than 7 million acres of the most productive agricultural land in the world. Several water agencies within this region (e.g. ACWD, CCWD, City of Napa, SCVWD, Solano CWA, and Zone 7) rely upon Delta water supplies. Projects that **reduce demands on the Delta also reduce conflicts from competing uses by leaving additional water in the Delta for environmental and other purposes.**

3. Projects in this Application that Reduce Delta Water Dependence

Table 13-3 lists the projects in this Proposal that will reduce reliance on Delta water supplies and describes how these projects will accomplish this goal. These projects reduce Delta water dependence through conservation, recycled water use, groundwater storage, and

infrastructure upgrades designed to reduce water system inefficiencies. The list is divided into projects that will directly reduce Delta water demand and those that will indirectly reduce dependence on Delta water.

Table 13-3: Projects in the Proposal that Reduce Delta Water Dependence

ID #	Project	How Project Will Reduce Delta Water Dependence
Delta Water Demand Reduction		
1	Bay Area Regional Conservation and Education Program	This program will improve water supply reliability and reduce strain on Bay Area water supplies and the Delta through water conservation efforts. Water agencies included in this program (e.g., Alameda County Water District, Contra Costa Water District, City of Napa, Santa Clara Valley Water District (SCVWD), Solano County Water Agency, and Zone 7) will reduce Delta water demands through implementation of water conservation efforts. As described above, the Bay Area is highly dependent on the Delta for its water supplies. More efficient use of water supply will improve flows for aquatic ecosystems and help habitat restoration. The resulting water savings from this program will translate directly into reduced diversions from the Bay-Delta and the watershed draining to the Bay-Delta.
13	Roseview Heights Mutual Water Company – Roseview Heights Mutual Water Tanks and Main Upgrades	This project shall reduce potable water supply demand from the Delta through an increase in water savings of up to 25% systemwide by replacing existing leaking tanks and pipelines. Roseview Heights Mutual Water Company (RHMWC) purchases water from the San José Water Company (SJWC). SJWC's water sources are a mix of 40% groundwater, 10% local surface runoff from the Santa Cruz Mountains, and 50% purchased supply from the SCVWD. A portion of SCVWD's water supply is from the Delta. The water that RHMWC purchases from SJWC in the Alum Rock area of San José is imported surface water from the Delta that is treated at the Penitencia Water Treatment Plant. Overall, reducing RHMWC demand for water will result in a reduction in demand for Delta water sources.
Sacramento-San Joaquin Delta Watershed Water Demand Reduction		
2	East Bayshore Recycled Water Project Phase 1A (Emeryville)	This program will offset demands for potable water in portions of Emeryville by substituting recycled water for beneficial landscape, commercial, and industrial water uses currently served by EBMUD's supplies drawn from the Mokelumne River, a tributary to the Delta. The Phase 1A (Emeryville) Project will offset potable water use with recycled water for primarily irrigation in Emeryville. During dry and critically dry years, the project will reduce EBMUD diversion from the Mokelumne and/or Sacramento Rivers (Freeport), and thereby potentially increase flows to the Delta. The project will reduce the amount of water that must otherwise be delivered from the Mokelumne River to EBMUD's service area, and maximize local resources. Reducing deliveries can result in higher reservoir storage levels in EBMUD reservoirs in the Sierra Nevada foothills and increased reservoir releases to the lower Mokelumne River. These operational improvements and the ability to potentially increase flows to the lower Mokelumne River can result in additional benefits for Delta resources and water users.
11	Regional Groundwater Storage and Recovery Project Phase 1A – South Westside Basin, Northern San Mateo County	The SFPUC and the Cities of Daly City and San Bruno receive water from the Hetch Hetchy Regional Water System, which primarily draws from the Upper Tuolumne River watershed. The Tuolumne River drains to the San Joaquin River, which ultimately feeds into the Sacramento–San Joaquin Delta. This project could lead to greater flows of the Tuolumne River into the Delta, as it would provide a local supply of water for use in times of drought. During wet years, when water supply is plentiful, water would be stored in the basin. During periods of insufficient surface

Table 13-3: Projects in the Proposal that Reduce Delta Water Dependence

ID #	Project	How Project Will Reduce Delta Water Dependence
		water supplies, stored water would be recaptured by pumping groundwater supplies from the basin.
15	San Francisco International Airport Reclaimed Water Facility	San Francisco International Airport receives its supply from the SFPUC through the Hetch Hetchy Regional Water System. The project would use 100% treated effluent at the airport terminals for non-potable reuse, and would reduce water demand on the Hetch Hetchy Regional Water System, which could lead to greater flows of the Tuolumne River into the Delta.

4. Future IRWM Plan Efforts to Reduce Delta Water Dependence

As the 2013 Bay Area IRWM Plan Update is being prepared, reducing the dependence on Delta water supply will remain a cornerstone of the Plan. The vision of the Bay Area IRWM Plan continues to be centered on "Sustainable Water Resources Management."

Evidence of the region's continued reliance on this direction was provided by the group's submittal of the Region Acceptance Process (RAP). The RAP identifies the growing uncertainty of deliveries from the Delta resulting from pumping restrictions imposed as a threat to baseline supplies for the Bay Area region and reiterates the need for regional efforts among Bay Area agencies to capitalize on collective resources, expertise, and knowledge to achieve water quality and supply reliability goals. This Proposal is developed on the basis of regional projects, and the 2013 Bay Area Plan Update will continue to include regional efforts as an effective means of reducing Delta water supply dependence.

The 2013 Bay Area IRWM Plan Update will remain committed to goals and objectives that improve water supply quality, reliability, and diversity. The Plan will include an updated Impacts and Benefits chapter that identifies the potential benefits and impacts of the various categories of water management programs. For instance, Water Conservation and Demand Management projects, specifically agricultural and urban water-use efficiency projects, have the benefit of reducing demands on imported water, including that from the Delta. Water Supply Enhancement projects, specifically projects that create interties within or between systems to improve infrastructure reliability, might be beneficial to Delta resources because interregional projects could decrease construction and footprint impacts compared with individual projects. Water Reuse projects, those that involve development of treatment, storage, and conveyance facilities to serve appropriate water uses — including landscaping and crop irrigation, industrial uses, groundwater recharge, and wetland/habitat creation — would reduce demand on imported water from the Delta and elsewhere. Conversely, planning documents for the 2013 Bay Area IRWM Plan recognize that Surface Water Supply and Desalination projects, neither of which is currently in the Bay Area IRWM Plan, could adversely impact Delta resources.

Project review and prioritization criteria in the 2013 Bay Area IRWM Plan Update will provide for long-term drought preparedness, as well as promote water use efficiency and water reuse, which will ensure the prioritization of projects that will lead to reduced Delta water supply dependence.