



BAWSCA-EBMUD Short-Term Pilot Water Transfer Plan

September 2013

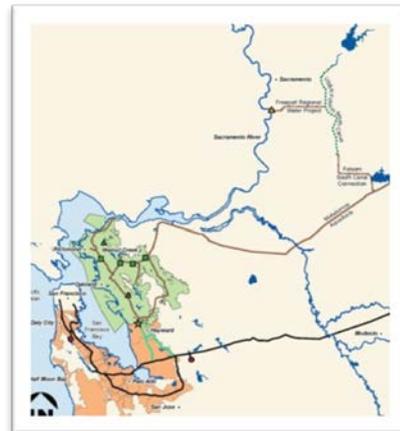
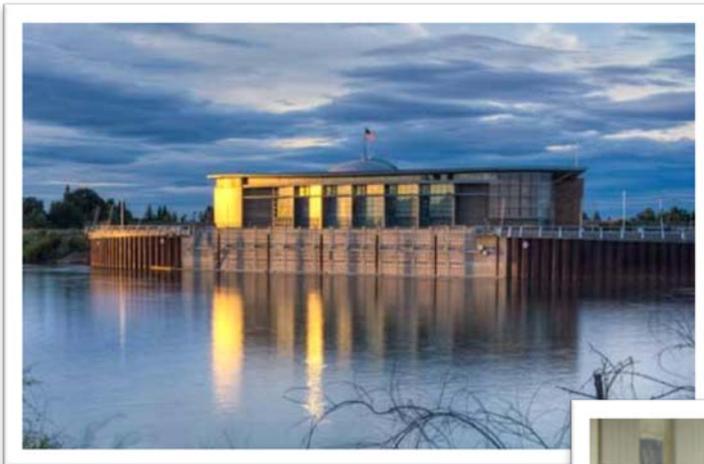


Table of Contents

List of Acronyms and Abbreviations

Executive Summary

Attachment A Technical Memorandum #1A - EBMUD Short-term Pilot Water Transfer Project Goals and Objectives

Technical Memorandum #1B - BAWSCA Short-term Pilot Water Transfer Project Goals and Objectives

Attachment B Technical Memorandum #2 - Potential Pilot Water Transfer Sources

Attachment C Technical Memorandum #3 - Ability to Convey Transfer Water to BAWSCA

Technical Memorandum #3A - Summary of Considerations for Conveying Water through the Hayward Intertie to the BAWSCA Service Area

Attachment D Technical Memorandum #4 - Approvals and Institutional Agreements

Technical Memorandum #4A - Approvals and Institutional Arrangements

Attachment E Technical Memorandum #5 - Pilot Water Transfer Recommendations

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List of Acronyms and Abbreviations

| | |
|-------------------|---|
| AF | acre-feet |
| AFA | acre-feet annually |
| Agreement | Pilot Water Transfer Agreement |
| BARDP | Bay Area Regional Desalination Project |
| BAWSCA | Bay Area Water Supply Conservation Agency |
| CCWD | Contra Costa Water District |
| CEQA | California Environmental Quality Act |
| cfs | cubic feet per second |
| COH | City of Hayward |
| Corps | United States Army Corps of Engineers |
| CVP | Central Valley Project |
| Delta | Sacramento-San Joaquin Delta |
| DSC | Delta Stewardship Council |
| DWR | Department of Water Resources |
| EA | Environmental Assessment |
| EBMUD, District | East Bay Municipal Utility District |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| ESA | Endangered Species Act |
| EWA | Environmental Water Account |
| EA/FONSI | Environmental Assessment/Finding of No Significant Impact |
| FERC | Federal Energy Regulatory Commission |
| FSC | Folsom South Canal |
| FSCC | Folsom South Canal Connection |
| FRWA | Freeport Regional Water Authority |
| FRWP, Freeport | Freeport Regional Water Project |
| Hayward Intertie | Emergency Intertie located in the City of Hayward |
| IS/MND | Initial Study/Mitigated Negative Declaration |
| ITP | Incidental Take Permit |
| JPA | Joint Powers Agreement |
| MAF | million acre-feet |
| MFP | Middle Fork Project |
| MGD | million gallons per day |
| MOA | Memorandum of Agreement |
| MUD Act | Municipal Utility District Act |
| NEPA | National Environmental Policy Act |
| NMFS | National Marine Fisheries Services |
| O&M | operation and maintenance |
| PCWA | Placer County Water Agency |
| PEIR | Programmatic Environmental Impact Report |
| PG&E | Pacific Gas & Electric Company |
| Pilot Plan, Plan | Short-term Pilot Water Transfer Plan |
| Reclamation, USBR | United States Bureau of Reclamation |
| SCADA | Supervisory Control and Data Acquisition |
| SCVWD | Santa Clara Valley Water District |
| SCWA | Sacramento County Water Agency |
| SF RWS | San Francisco Regional Water System |

| | |
|--------------|--|
| SFPUC | San Francisco Public Utility Commission |
| SLDMA | San Luis Delta Mendota Authority |
| Strategy | Long-term Reliable Water Supply Strategy |
| SWP | State Water Project |
| SWRCB | State Water Resources Control Board |
| TAF | thousand acre-feet |
| TM | Technical Memorandum |
| TSS | Total System Storage |
| UWMP | Urban Water Management Plan |
| USFWS | United States Fish and Wildlife Services |
| USL | Upper San Leandro (Reservoir) |
| WFA | Sacramento Water Forum Agreement |
| WSMP | Water Supply Management Program |
| YCWA | Yuba County Water Agency |
| Yuba Accord | Lower Yuba River Accord |
| Yuba Project | Yuba River Development Project |

BAWSCA-EBMUD Short-Term Pilot Water Transfer Plan

Executive Summary

Prepared by:

**Bay Area Water Supply and Conservation Agency
East Bay Municipal Utility District**

September 2013

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Executive Summary

Section ES-1: Introduction

In September 2012, the East Bay Municipal Utility District (EBMUD or District) and the Bay Area Water Supply and Conservation Agency (BAWSCA) entered into a Memorandum of Understanding to prepare a Short-term Pilot Water Transfer Plan (Pilot Plan). The purpose of the Pilot Plan was to evaluate the feasibility of partnering as buyers on long-term water transfer projects to improve future water supply reliability for the respective agencies. The Pilot Plan studied the potential to conduct a one-year pilot water transfer in a future dry-year when EBMUD is planning to operate the Freeport Regional Water Project (FRWP). For the purposes of this Pilot Plan, the term “one-year transfer” refers to a short-term water transfer that is completed within a one-year time period. EBMUD and BAWSCA have agreed that jointly conducting a one-year pilot water transfer with a willing seller would provide important information needed to evaluate the costs and benefits of a long-term water transfer partnership.

As shown on Figure ES-1, a water transfer involving EBMUD and BAWSCA would involve purchasing water from a willing seller, diverting the water using the FRWP intake, conveying the water through the FRWP facilities and EBMUD’s raw water and treated water distribution systems, and delivering the transfer water to the BAWSCA service area via the EBMUD/San Francisco Public Utilities Commission (SFPUC)/City of Hayward Intertie (Hayward Intertie) and potentially the San Francisco Regional Water System (SF RWS). Transfer water delivered from EBMUD through the Hayward Intertie would be directly used by the City of Hayward (COH) in lieu of taking delivery of water from the SF RWS. Deliveries through the Hayward Intertie in excess of COH’s demand could then be conveyed into the SF RWS.

As identified in the Pilot Plan, multiple parties other than BAWSCA and EBMUD will be involved and play critical decision-making roles in any pilot or long-term water transfer project. To distinguish the roles and responsibilities of the involved parties, BAWSCA and EBMUD are designated as the “Project Proponents” and other key decision makers or facility owners such as the COH and SFPUC are identified as “Project Stakeholders”.

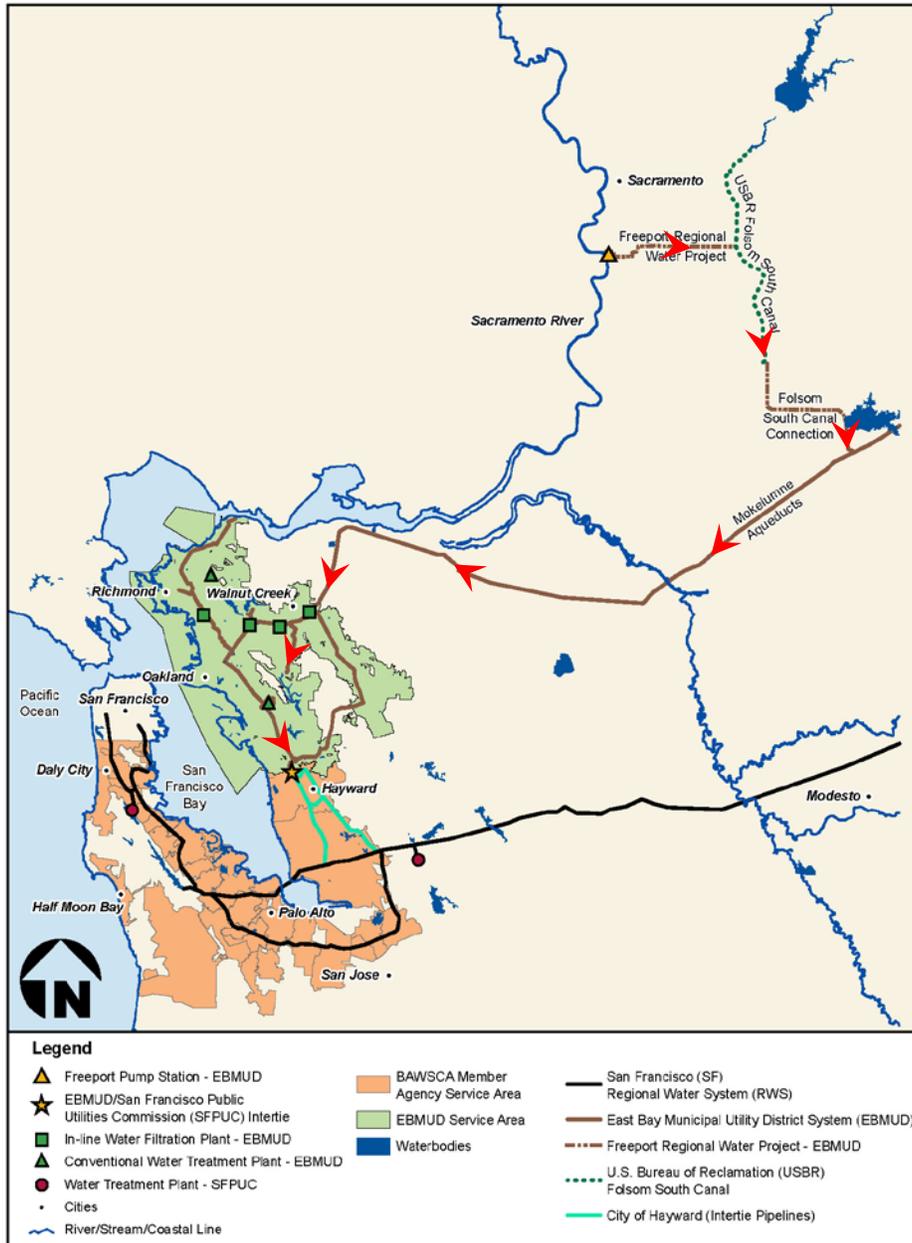
The Pilot Plan was developed as a series of detailed technical memorandums (TMs) which are listed below and attached hereto as Attachments A through E.

- TMs #1 and #1A - Pilot Plan Goals and Objectives
- TM #2 - Potential Pilot Water Transfer Sources

- TMs #3 and #3A - Ability to Convey Pilot Transfer Water to BAWSCA
- TM #4 and #4A - Approvals and Institutional Arrangements
- TM #5 - Pilot Water Transfer Recommendations

A summary of the Pilot Plan results and recommendations are presented in Section ES-2. In Section ES-3, each TM is briefly summarized, including the key findings and the additional information and actions needed to finalize a pilot transfer or a long-term transfer arrangement.

Figure ES-1: Facilities Used to Wheel Transfer Water to the BAWSCA Service Area



Section ES-2: Summary of Key Findings

Based on the work completed to date on the Pilot Plan, it appears that a short-term pilot water transfer (Pilot Transfer Project) would be both feasible and beneficial for BAWSCA and EBMUD. From BAWSCA's perspective, conducting a short-term pilot water transfer would meet the near-term objectives of gaining water transfer operational/institutional experience and determining whether a transfer partnership that involves the conveyance of water through EBMUD's water system into the BAWSCA service area is technically, politically, institutionally, and financially viable. If the Pilot Transfer Project is successfully implemented, that effort will support BAWSCA's consideration of investment in a long-term transfer arrangement to meet its objectives of increasing the dry-year reliability for its member agencies.

From EBMUD's perspective, conducting a short-term pilot water transfer will meet the objectives of developing buying partners to share in the costs for purchasing dry year water under future long-term transfer arrangements and providing opportunities for regional partners to maximize the use of existing EBMUD facilities while reducing District costs. Participating in a Pilot Transfer Project will test some of the institutional and operational elements of such partnerships.

Of importance to both BAWSCA and EBMUD is that implementation of the Pilot Transfer Project will support the implementation of regional solutions to increase dry year supply reliability, to the benefit of many.

ES-2.1 Pilot Water Transfer Timing, Rate and Duration

The Pilot Transfer Project would be implemented in a dry year when EBMUD is operating the FRWP to take delivery of Sacramento River water. It is anticipated that EBMUD's use of the FRWP would be coincident with a water shortage condition on the SF RWS. The transfer would most likely occur between July and December, subject to availability of the transfer water and coordination with the COH, SFPUC, BAWSCA, and EBMUD.

The proposed minimum transfer volume for the Pilot Transfer Project is 1,000 acre-feet (AF) and the transfer rate from EBMUD into the COH is expected to be 15 million gallons per day (MGD) (i.e., close to the average daily COH demand¹). The transfer of

¹ The preferred delivery mode would be to supply the entire COH's demand with a small excess being conveyed to the SF RWS. This scenario would ensure that water will continue to flow through the pipeline connecting the COH

1,000 AF at a 15 MGD rate would result in a total Pilot Transfer Project length of 22 days, or just over 3 weeks, not including project ramp up time.

The final Pilot Transfer Project transfer volume, delivery rate and duration will be determined by the affected transfer parties prior to project execution.

ES-2.2 Pilot Water Transfer Cost

The unit cost to BAWSCA for purchasing and wheeling the water to the Hayward Intertie as part of this Pilot Transfer Project is estimated to be between \$425 - \$750 / acre-foot (AF), assuming that 1,000 AF of water is transferred. The estimated unit cost includes an assumed purchased water cost and the administrative costs to obtain the approvals necessary to implement the pilot transfer. These administrative costs will be further refined once a seller is selected. Additional costs will be incurred by BAWSCA for the cost of COH operation of the Hayward Intertie and the water quality monitoring associated with the Pilot Transfer Project.²

For the purpose of the Pilot Transfer Project, fixed costs for wear and tear on EBMUD and COH facilities and system losses will not be assessed. However, EBMUD and COH will work with BAWSCA to develop and evaluate fair compensation for the wear and tear on EBMUD and COH facilities as part of any long-term transfer agreement.

ES-2.3 Institutional Arrangements, Agreements, and Regulatory Approvals

Implementation of the Pilot Transfer Project will be subject to both BAWSCA and EBMUD Board approval, as well as that of all Project Stakeholders (including SFPUC and COH in their unique roles as co-owners and operators of the Hayward Intertie, respectively). In addition, the BAWSCA Board and the member agencies will have to determine cost-allocation based on whether all or a subset of the BAWSCA agencies want to purchase the transfer water.

The arrangements discussed below are also likely necessary to facilitate the Pilot Transfer Project. Specifically, BAWSCA will have to enter into a purchase agreement

system with the Newark Turnout from the SF RWS, thereby preventing water quality concerns caused by stagnant water.

² The Wholesale Customers' contractual obligation to pay their share of the SF RWS capital and operating costs is detailed in the 2009 WSA. Consistent with the WSA and with SFPUC past practice with inter-agency water transfers, the September 20, 2012 Letter from BAWSCA to SFPUC summarizes the agreements between the agencies' General Managers that (1) all costs for moving potential pilot transfer water through the SF RWS would be allocated proportionate to metered usage and (2) BAWSCA will reimburse any specific, legitimate incremental SF RWS costs incurred as a result of a BAWSCA-initiated transfer.

with a seller of the water and a cost-allocation and wheeling agreement with EBMUD to use the EBMUD system to transport the water to BAWSCA member agencies³. Since the water purchased by BAWSCA will flow through facilities owned by the United States Bureau of Reclamation (USBR), BAWSCA and EBMUD will likely also need to negotiate an agreement with the USBR to convey non-Central Valley Project water through federal facilities. As the Hayward Intertie will need to be used to transport water purchased by BAWSCA into the SF RWS, it is likely that the existing Hayward Intertie Operating Agreement among and between EBMUD, SFPUC and COH will require some modification. Additionally, BAWSCA will continue working with COH and SFPUC to finalize a cost-allocation and wheeling agreement with each entity to move the transfer water to the COH and the SF RWS, respectively.

A number of regulatory approval processes will likely also apply, depending on the seller of the water and the structure of the final purchase arrangement. These regulatory approval processes may include State Water Resources Control Board (SWRCB) approval for diversion and use of the water purchased by BAWSCA within BAWSCA's service area and complying with applicable environmental review laws.

ES-2.4 Outstanding Items to Implement the Pilot Transfer Project

The following items would need to be completed prior to implementing the Pilot Transfer Project:

- Identify and negotiate a purchase agreement with a willing seller.
- Develop all applicable agreements, institutional arrangements, and operating and water quality monitoring plans identified in the Pilot Plan necessary to implement the project.
- Obtain required regulatory approvals and prepare environmental documents, as necessary, to comply with applicable environmental review laws.

³ The Municipal Utility District (MUD) Act allows EBMUD to sell surplus water outside its service area. Historically, EBMUD's drought management plans have included the imposition of rationing on its customers during dry years to ensure that scarce water supplies can be stretched to meet the requirements of its customers. EBMUD is reviewing how to structure a long-term transfer arrangement that would provide EBMUD with the ability to be the primary buyer for transfer water and to facilitate the purchase and use of a portion of the transfer water in dry years by BAWSCA. During the development of the Pilot Plan, EBMUD and BAWSCA discussed having BAWSCA directly purchase the pilot transfer water from the seller to ensure that the pilot transfer water could be delivered to BAWSCA even in a scenario where EBMUD is rationing its customers. Under this scenario, EBMUD and BAWSCA would enter into a wheeling arrangement where BAWSCA would purchase the pilot transfer water and EBMUD would wheel that water through its facilities to BAWSCA's service area. BAWSCA's role and responsibilities would include negotiating with the seller and working with EBMUD to secure the necessary approvals from the USBR to use federal facilities as part of wheeling water through the Freeport Project. In parallel, EBMUD and BAWSCA will continue to identify options for EBMUD to be the primary buyer for future water transfer projects.

Additionally, the COH has expressed concerns about singularly being affected as a result of the Pilot Transfer Project because the water supply source being delivered to them will change during a transfer (i.e., they will be served from the EBMUD system rather than the SF RWS). EBMUD and BAWSCA will monitor the quality of transfer water in the EBMUD, COH⁴ and SF RWS systems throughout the Pilot Transfer Project. The results of this monitoring will be used to support the analysis of the feasibility of a long-term transfer agreement.

ES-2.5 Recommended Next Steps

In order to be able to implement a Pilot Transfer Project, many of the outstanding items should be addressed prior to implementing the Pilot Transfer Project. As part of the next steps needed to work toward implementation of the Pilot Transfer Project, it is recommended that BAWSCA and EBMUD pursue the following actions during 2014:

- EBMUD and BAWSCA should approach Yuba County Water Agency (YCWA) and Placer County Water Agency (PCWA) to confirm their willingness to participate in the Pilot Transfer Project. Key terms to be negotiated for BAWSCA's purchase of the water include potential minimum quantities, costs, and the schedule for delivering water. The selection of a seller for the Pilot Transfer Project would not preclude the potential for a different seller or multiple sellers for a long-term transfer arrangement.
- EBMUD, BAWSCA, and the transfer water seller should jointly develop an outreach plan and engage key Project Stakeholders in the planning process for the Pilot Transfer Project. Key Project Stakeholders include the COH, SFPUC, regulatory agencies, resource agencies, and other agencies whose approval or cooperation is needed to successfully implement the pilot water transfer. Individual Project Stakeholders may also choose to engage in separate outreach efforts as part of their decision making on this project.
- As noted in Section ES-3.5, multiple agreements and approvals are likely necessary in order to implement the Pilot Transfer Project, depending on the final scope of the Pilot Transfer Project. Development and execution of these agreements and approvals may take significant time and resources. As such,

⁴ At present, the structure of the Pilot Transfer Project is such that the water purchased by BAWSCA will not enter directly into SF RWS. Rather, the water will first enter the COH distribution system, and then can be conveyed through the COH and pumped into the SF RWS if necessary. Because the COH would be directly served the transfer water, they would be the BAWSCA member agency most affected during the Pilot Transfer Project.

BAWSCA and EBMUD plan to develop a schedule to undertake these and other related efforts.

Based on the schedule developed as part of this Pilot Plan, it is anticipated that twelve to eighteen months of lead time is required to develop and execute all the agreements and other necessary institutional arrangements before the Pilot Transfer Project could commence.

Section ES-3: Summary of Technical Memoranda

This Executive Summary provides a brief summary of the major aspects and key findings of each of the TMs that were developed by BAWSCA and EBMUD as part of the Pilot Plan. The TMs also identify additional information or issues that will need to be addressed prior to implementing the Pilot Transfer Project and a potential long-term water transfer agreement between BAWSCA and EBMUD.

ES-3.1 TMs #1A and #1B - Pilot Plan Goals and Objectives

Summary

As the Project Proponents, EBMUD and BAWSCA developed objectives and goals for the Pilot Plan, including identifying the benefits of partnering on transfers, the rationales for piloting a transfer, and the information that would be gained by conducting the Pilot Transfer Project.

Key Findings

EBMUD's Goals and Objectives:

The District's goals for developing the Pilot Plan were as follows:

- Assess costs, benefits, and feasibility of partnering with BAWSCA on water transfers; and
- Evaluate whether BAWSCA would be a good match for partnering with EBMUD on long-term transfer projects.

The District's objectives in developing the Pilot Plan were as follows:

- Work with BAWSCA to develop a plan for executing a short-term pilot water transfer;
- Evaluate the technical, institutional, and economic feasibility of wheeling transfer water to BAWSCA via FRWP, EBMUD's raw water and treated water systems, and the Hayward Intertie;

- Identify agreements and other elements (e.g., permits, etc.) that need to be in place to implement a pilot transfer; and
- Identify additional information that would still be needed to assess the feasibility of partnering on a long-term water transfer project with BAWSCA.

BAWSCA's Goals and Objectives:

BAWSCA's goals for developing the Pilot Plan were as follows:

- Assess dry year water transfers for reliability, quality, and cost-effectiveness; and
- Identify all necessary state and federal regulatory and permit processes to facilitate a dry year transfer, and the timing and the coordination of these regulatory processes.

BAWSCA's objectives in developing the Pilot Plan were as follows:

- Demonstrate the feasibility of water transfers with EBMUD by implementing a one-year pilot water transfer;
- Gain operational and institutional experience by understanding the process for implementing a water transfer;
- Lay the foundation for approval of long-term water transfer agreements;
- Identify the regulatory agencies, and potential water transfer partners, that would be involved in a short-term and long-term water transfer;
- Confirm the commitment of BAWSCA and EBMUD to securing water transfers as a dry year supply solution;
- Determine whether a transfer partnership that involves the conveyance of water through EBMUD's water system into the BAWSCA service area is technically, politically, institutionally, and financially viable;
- Identify agreements and other elements (e.g., permits, etc.) that need to be in place to implement a short-term pilot water transfer; and
- Identify additional information that would be needed to assess the feasibility of partnering on a long-term water transfer project with EBMUD.

Outstanding Items Regarding a Long-Term Transfer Arrangement

The District is currently experiencing a decline in water demands due to the recent economic turndown and the residual drought effect. This decline in water demands has afforded EBMUD the flexibility to explore water supply projects with BAWSCA and other agencies that include wheeling water through unused capacity in EBMUD's facilities. In

the future, as EBMUD's demands recover to projected planning levels, capacity in EBMUD's water system will become more limited and the timing and ability to wheel water to other agencies will become more constrained. The ability to move water through the FRWP and EBMUD's raw and treated water systems under future conditions will require further evaluation, including more detailed consideration of the institutional, operational, and financial agreements that would need to be in place for a long-term water transfer partnership. EBMUD's future plans anticipate that the FRWP capacity will be fully needed by the District in dry years.

As part of its Long-Term Reliable Water Supply Strategy (Strategy), BAWSCA is evaluating whether water transfers are a viable alternative to achieve BAWSCA's goal of meeting the dry year supply needs of the BAWSCA member agencies in a cost-effective manner. Hence, following the successful execution of a short-term pilot water transfer, BAWSCA will likely conduct additional assessments to determine if a water transfer partnership with EBMUD creates a sufficiently reliable and cost-effective dry year supply to meet the BAWSCA member agency's water needs as identified through the Strategy. If so, BAWSCA would then have to develop the necessary agreements to support a long-term arrangement with EBMUD, COH, SFPUC and/or others, to purchase and convey the dry year transfer water to the BAWSCA member agencies.

ES-3.2 TM #2 - Potential Pilot Water Transfer Sources

Summary

EBMUD has completed significant work to identify water sellers that might be good partners for a long-term water transfer arrangement. Based on this information, and considering the specific goals and objectives of the Pilot Plan, EBMUD identified two potential sources of pilot transfer water: (1) the YCWA, and (2) the PCWA. As part of the description of these potential opportunities, the potential sellers were described, as well as the source water, the water rights, and the transfer mechanisms, including the transfer quantity, schedule and range of water purchase costs.

Key Findings

Potential Pilot Water Transfer Sources:

The YCWA and the PCWA were identified as potential transfer partners for the Pilot Transfer Project. See Figures ES-2 and ES-3 for maps of YCWA and PCWA, respectively.

Figure ES-2: Yuba County Water Agency Location Map

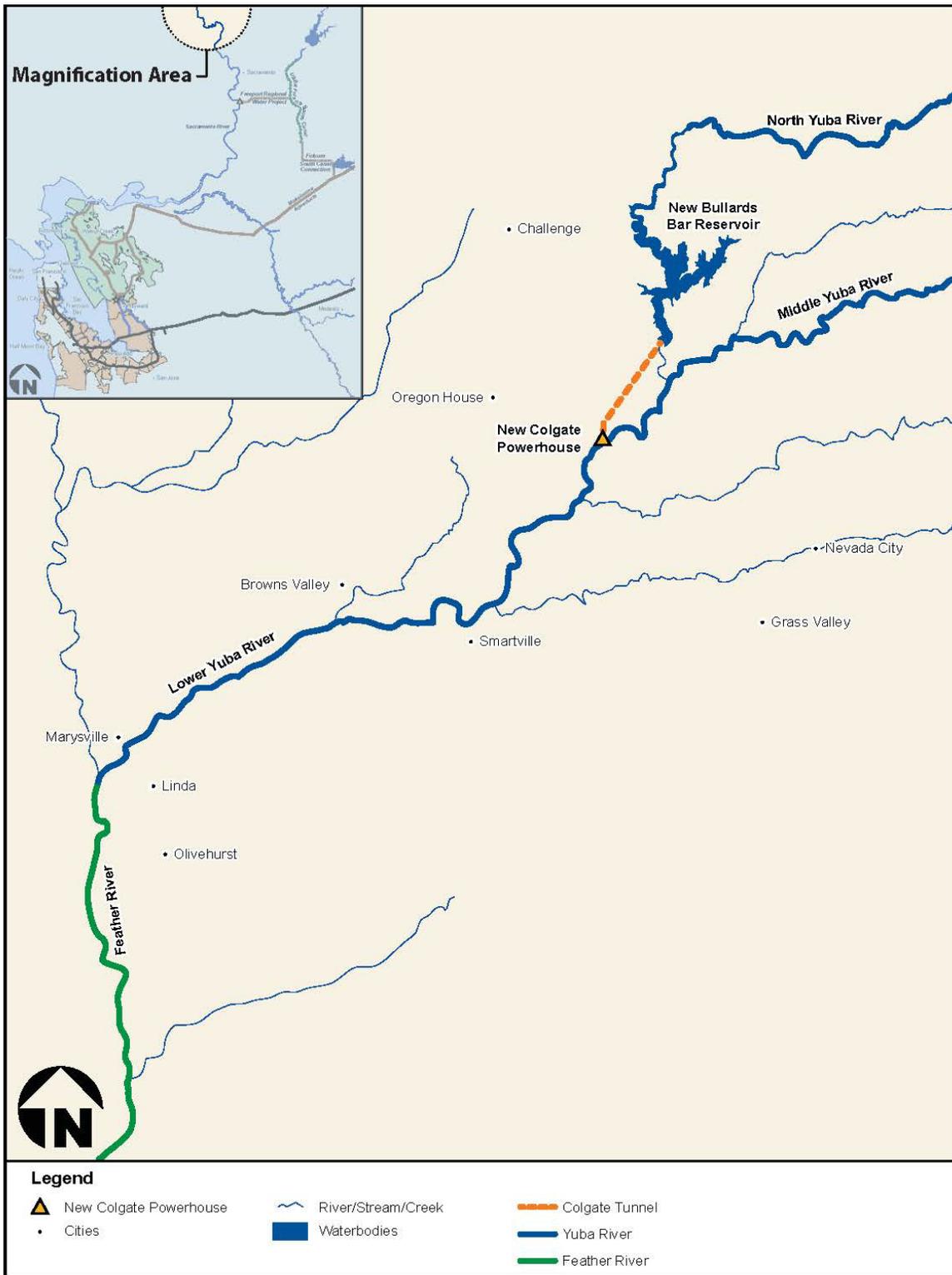
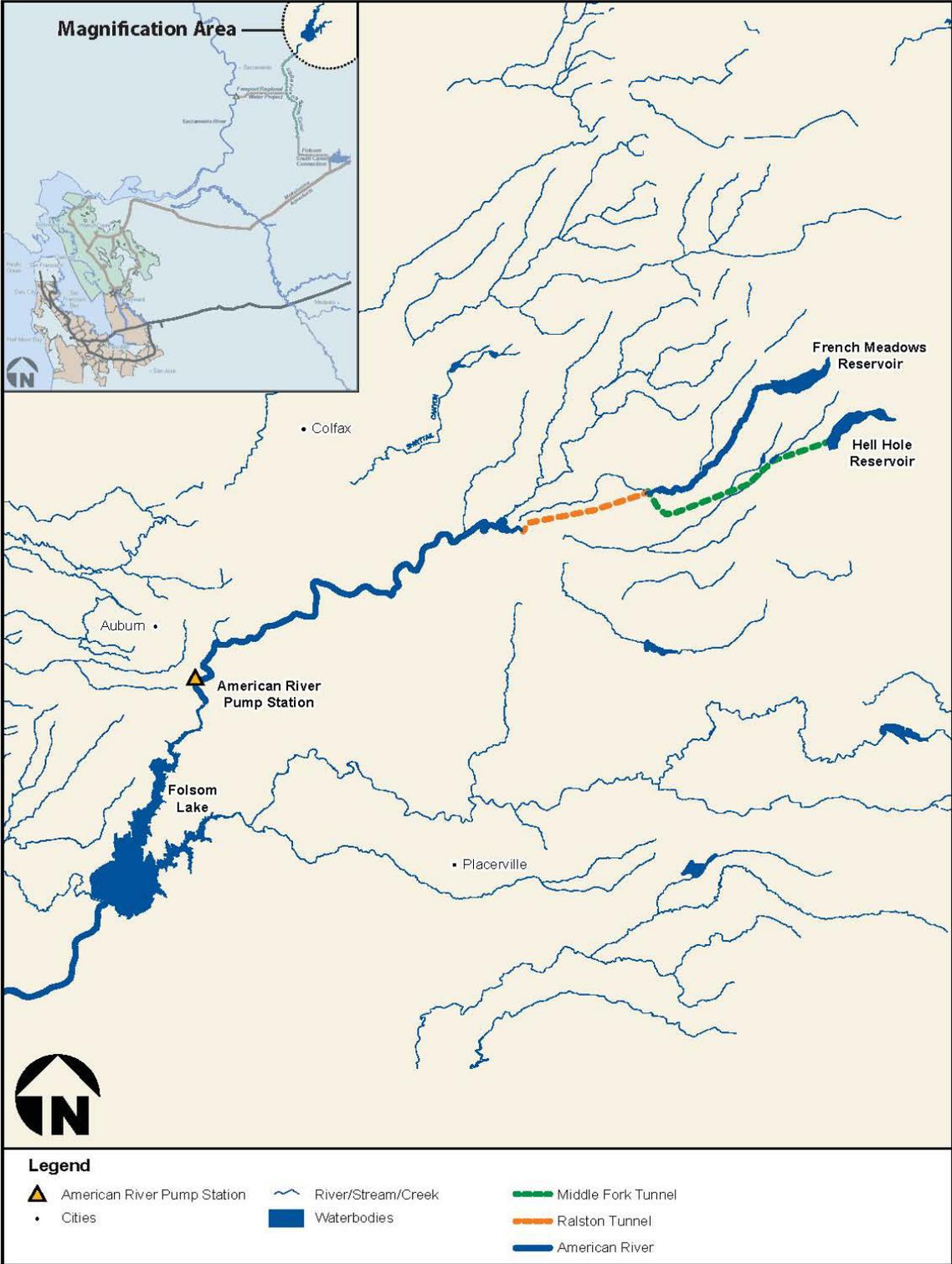


Figure ES-3: Placer County Water Agency Location Map



Summary of Transfer Water Characteristics:

Table ES-1 summarizes YCWA and PCWA water rights, schedules, rates of delivery, and estimated water purchase costs.

Table ES-1: Potential Sources of Supply for Pilot Water Transfer

| Supply Characteristics | YCWA | PCWA |
|------------------------|---------------------------------|-----------------------------------|
| Source of Supply | Yuba River | Middle Fork of the American River |
| Surface Water Rights | Post-1914 (1927, 1953) | Post-1914 (1958) |
| Transfer Method | Stored water releases | Stored water releases |
| Quantity | Up to 67 TAF ^{(a),(b)} | Up to 47 TAF ^{(a) (c)} |
| Schedule | Varies ^(d) | July - December |
| Rate of Delivery | < 100 MGD ^(e) | < 100 MGD ^(e) |
| Water Purchase Cost | \$75 - \$275 | \$75 - \$275 |

- (a) Minimum pilot transfer quantities will be discussed with sellers. BAWSCA anticipates a minimum pilot water transfer quantity of 1000 AF.
- (b) Based on modeling performed for Yuba Accord - Freeport Point of Rediversion Project (Feb., 2013).
- (c) Based on modeling performed for the Sacramento Water Forum Agreement (2000).
- (d) Under the Yuba Accord, the schedule and rate of stored water releases for transfer varies based on hydrologic year type and month. The transfer water that YCWA is seeking to sell to EBMUD are releases that cannot be delivered to existing buyers south of the Delta due to south Delta pumping restrictions. In dry years, transfer water for EBMUD would most likely be available outside the south Delta pumping window for transfers (July - September) in early spring or late fall.
- (e) Rate of delivery cannot exceed EBMUD's dedicated FRWP capacity. Rate of delivery will likely be based on recommended rates for operating the Hayward Intertie.

Summary of the Yuba County Water Agency Option:

YCWA's source of water supply is the Yuba River. The Yuba River is a tributary of the Feather River, which, in turn, is a tributary of the Sacramento River. The Yuba River Basin drains approximately 1,339 square miles of the western Sierra Nevada slope, including portions of Sierra, Placer, Yuba, and Nevada counties. The average annual unimpaired flow of the Yuba River at Smartville is 2.45 million acre-feet (MAF); however a significant portion of this water is diverted out of the watershed and is not available to the lower Yuba River. The annual unimpaired flow has ranged from a maximum of approximately 4.9 MAF in 1986 to a minimum of approximately 370 TAF in 1977.

In partnership with EBMUD, YCWA is proposing to add the FRWP intake as a point of rediversion to YCWA's water rights. EBMUD would become a back-up buyer for transfer water released under the terms of the Yuba Accord that cannot currently be delivered to existing Yuba Accord buyers. The proposed project to add the FRWP intake as a point of rediversion requires SWRCB approval. YCWA and EBMUD are seeking to receive SWRCB approval and complete the proposed project by the end of 2013. In discussions to date, the YCWA has indicated that it would be willing to partner with BAWSCA and EBMUD as part of a small volume, short-term pilot water transfer.

Summary of the Placer County Water Agency Option:

PCWA is a signatory to the Sacramento Water Forum Agreement (WFA). The WFA establishes the co-equal goals of preserving the Lower American River and providing a reliable and safe water supply for the region. As part of the WFA, PCWA has agreed to release additional water (maximum of 47,000 AFY) from its Middle Fork Project (MFP) reservoirs in dry and critically dry years to benefit the Lower American River. This obligation to make environmental releases is conditioned upon PCWA's ability find a buyer to purchase the water downstream of the confluence of the Sacramento and American Rivers. Hence, transfer water purchased in dry and critically dry years from the PCWA is available in dry years only.

PCWA is currently initiating work on a draft environment document to support its MFP water rights extension project. This project will review the potential environmental impacts of PCWA's full utilization of its 120,000 AFY of MFP water. PCWA's environmental document will include analysis of a long-term water transfer project between EBMUD and PCWA. PCWA also plans to petition the SWCRB to add the FRWP intake as a point of rediversion and EBMUD's service area to PCWA's place of use. EBMUD and PCWA currently anticipate SWRCB approval for these efforts by end of 2016. PCWA's completion of its MFP water rights extension project environmental document and SWRCB approval of both the MFP water rights extension and long-term transfer change petition would be needed before PCWA and EBMUD could enter into a long-term transfer agreement for PCWA to sell water to EBMUD in dry years consistent with the WFA. However, this does not preclude PCWA's ability to participate in interim transfers including a one-year pilot transfer.

Additional Information or Action Required for the Pilot Transfer Project

BAWSCA, in coordination with EBMUD, will need to obtain a water purchase contract with either PCWA or YCWA. Wheeling agreements between BAWSCA and EBMUD,

the USBR, COH and SFPUC are also required, as well as the necessary regulatory and environmental approvals.

Outstanding Items Regarding a Long-Term Transfer Arrangement:

EBMUD will need to formalize transfer agreements with YCWA and/or PCWA prior to committing to a long-term agreement with BAWSCA. Furthermore, YCWA and PCWA must obtain appropriate regulatory approval to change their water rights to allow transfer of water to EBMUD and BAWSCA.

Among other things, BAWSCA would have to be added to the place of use for both the YCWA and PCWA transfer supplies if BAWSCA were to enter into a long-term agreement with EBMUD and others for the purchase and/or wheeling of the transfer water from either seller

ES-3.4 TMs #3 and #3A - Ability to Convey Transfer Water to BAWSCA

Summary

A key element of the Pilot Plan was the evaluation of the conveyance of transfer water originating from the FRWP facilities through the EBMUD service area and delivered to BAWSCA via the Hayward Intertie (refer to earlier Figure ES-1 for map of conveyance facilities).

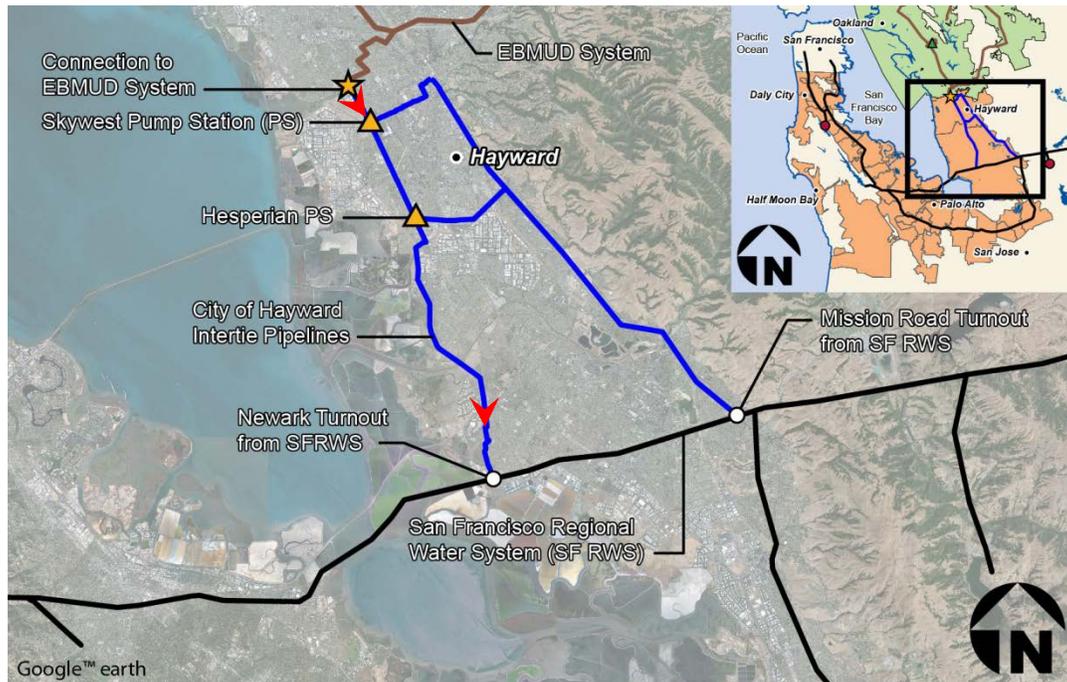
Specific evaluations were conducted for the FRWP, the Folsom South Canal Connection (FSCC), EBMUD's system, and the Hayward Intertie (see Figure ES-4 for the Hayward Intertie and surrounding facilities). Three different operational scenarios to transfer water through the Hayward Intertie were evaluated, potential water quality issues for the COH and the SF RWS were identified, and pre-transfer flushing options were developed.

Key Findings

The Pilot Water Transfer is Operationally Feasible:

There are no major operational impediments to conveying transfer water from the FRWP intake to the BAWSCA service area. However, close coordination between EBMUD, COH, and SFPUC will be required to ensure that the transfer operations are optimized to minimize impacts on all parties involved, and that use of the Hayward Intertie to respond to an emergency in either the SF RWS or EBMUD system remains a top priority.

Figure ES-4: Hayward Intertie Facilities



Pilot Water Transfer Timing:

The Pilot Transfer Project would be conducted during a dry year when EBMUD is utilizing the FRWP. Current plans are that in the first year of a drought EBMUD would begin taking delivery of its Central Valley Project (CVP) water from the FRWP no earlier than July 1. In the subsequent consecutive years of a drought, EBMUD may begin taking delivery of its CVP water as early as March 1, the beginning of the CVP contract year. The pilot transfer water purchased from YCWA or PCWA will likely be available in the fall or early winter (see Table ES-1), matching the timeframe in which EBMUD and BAWSCA anticipate conducting the pilot transfer. BAWSCA will coordinate with EBMUD, COH, and SFPUC to take delivery of the transfer water when it is available and on a mutually agreeable schedule.

Pilot Water Transfer Conveyance Path:

The anticipated Pilot Transfer Project includes BAWSCA's purchase of water from a seller in the Sacramento River basin, which will flow from the Sacramento River, through the FRWP, the Folsom South Canal owned and operated by the USBR, and the FSCC, into the EBMUD Mokelumne Aqueducts (see Figure ES-1). Once in the EBMUD system and service area, the water would then flow through existing EBMUD transmission facilities to the Hayward Intertie. Figure ES-4 shows the EBMUD system, the Hayward Intertie, the COH distribution system and pump stations, the COH

connections to the SF RWS at the Newark and Mission Road Turnouts, and the SF RWS in the South Bay.

It is anticipated that during the Pilot Transfer Project, water will be delivered to COH at a constant rate through the Hayward Intertie. Any incremental water delivered surplus to COH's demand would then be pumped into the SF RWS for delivery to the rest of the BAWSCA service area.

Pilot Water Transfer Quality and Treatment:

The source of the water transfer will be the Sacramento River at the FRWP. This location is in the northern end of the legal Delta, as the river is under tidal influence at low flows (see Figure ES-1). However, the quality of the water at the FRWP is distinctly different from that in the central portion of the Delta and is not influenced by the Delta wetlands and sea water that affect water quality in the central Delta.

During dry years when EBMUD utilizes the FRWP, the southwest portion of EBMUD's service district adjacent to the Hayward Intertie will be served by EBMUD's Upper San Leandro (USL) Water Treatment Plant. Therefore, it can be assumed that all water wheeled to BAWSCA will be pumped into USL Reservoir using Moraga Pumping Plant and treated at the USL Water Treatment Plant.

The USL Water Treatment Plant provides conventional treatment, including aeration, coagulation, flocculation, sedimentation, intermediate ozonation, dual-media filtration, fluoridation, and chloramination. Based on the quality of Sacramento River water at the FRWP intake it is anticipated that the quality of water exiting the EBMUD system during the pilot transfer will be between the quality currently produced by the Orinda Filter Plant and USL Water Treatment Plant.

The COH has expressed some concerns regarding potential water quality differences and other impacts to the City and its customers as a result of the Pilot Transfer Project. With the goal of optimizing operations and minimizing the staff burden for all participating agencies, BAWSCA and EBMUD have designed the Pilot Water Project to be short in duration and to reduce water quality variations within COH's service area by meeting 100 percent of COH's demand. In addition, BAWSCA and EBMUD have worked with the COH to develop a water quality monitoring plan to evaluate any water quality changes associated with the Pilot Transfer Project.

Summary of Prior Tests of the Hayward Intertie:

In July 2007, EBMUD, COH, and SFPUC conducted a joint operation to test the capacity of the Hayward Intertie. EBMUD water was conveyed at a rate of up to 30 MGD for 3.5 hours to the COH service area from EBMUD. During the water quality

monitoring, elevated turbidity levels, likely a result of the reverse flows in the Hayward Intertie pipelines, were noted for a short time at the initiation of the water transfer.

Between December 2009 and February 2010, approximately 1.3 billion gallons (4,000 acre-feet) were transferred from EBMUD via the COH to the SF RWS over a 66-day period. Transfer rates through the Hayward Intertie varied from 8.4 to 29.5 MGD. The extended test of the Hayward Intertie went without incident except for some short-duration water quality concerns related to turbidity at the beginning of the transfer.

Additional Information or Action Required for the Pilot Transfer Project

Prior to initiating the Pilot Transfer Project, additional close coordination between the operations departments of EBMUD, COH, and SFPUC is recommended, including the development of an operations and monitoring plan, and a more detailed assessment as to whether a pre-flushing program is warranted for the Hayward Intertie pipelines.

Outstanding Items Regarding a Long-Term Transfer Arrangement

Treatment and/or distribution system improvements are required to deliver EBMUD's projected supplemental water supply need in 2040. Several options are under consideration including a pretreatment plant near Camanche Pumping Plant for Sacramento River water and upgrades to one or more of EBMUD's direct filtration plants. These improvements will eliminate the current need to separate Mokelumne River water from Sacramento River water. While design and construction of these improvements will incur capital costs, the improvements will increase operational flexibility and likely will reduce pumping and treatment operating costs. The timing for adding these improvements is currently under study.

The Bay Area Regional Desalination Project (BARDP), among potential projects to supplement EBMUD's water supply, is currently in the planning phase. BARDP is a regional project being developed in partnership with EBMUD, Contra Costa Water Agency, Santa Clara Valley Water District, Zone 7 Water Agency, and SFPUC. As currently conceived, this project would include wheeling of water through EBMUD's raw water and treated water systems to the SFPUC and the SF RWS via the Hayward Intertie. SFPUC participation in the BARDP is for delivery of 9 MGD, in all years. If the BARDP is implemented, the capacity of the Hayward Intertie could become a constraint for meeting SFPUC's planned use of the water from the BARDP while also wheeling dry-year water to BAWSCA. Close coordination and scheduling of water passing through the Hayward Intertie would be required to maximize water deliveries to all parties. However, as co-owners of the Hayward Intertie, SFPUC and EBMUD would have priority over any other planned future uses of the Hayward Intertie.

The COH has expressed some concerns regarding potential water quality and other impacts to the COH and its customers as a result of any long-term transfer project. These issues will be addressed as part of any assessment of a long-term transfer option that uses the Hayward Intertie, including the BARDP.

As part of its Long-Term Reliable Water Supply Strategy, BAWSCA is evaluating whether water transfers are a viable alternative to achieve BAWSCA's goal of meeting the dry year supply needs of the BAWSCA member agencies in a reliable and cost-effective manner. Specifically, BAWSCA will evaluate whether a long-term water transfer arrangement with EBMUD is technically, politically, institutionally, and financially viable and whether it creates the level of certainty that the BAWSCA agencies need in terms of meeting their future water supply needs.

ES-3.5 TMs #4 and #4A - Approvals and Institutional Arrangements

Summary

BAWSCA and EBMUD worked jointly to determine the approvals and institutional arrangements necessary to implement the Pilot Transfer Project, as well as who the lead agency would be to secure the necessary approvals. In order to implement the transfer, BAWSCA and EBMUD identified the following potential compliance steps, regulatory approvals, and agreements, which are discussed below.

Key Findings

Potential Environmental Reviews, Approvals and Institutional Arrangements for a Pilot Water Transfer:

A summary of the key environmental reviews, approvals and institutional arrangements that were evaluated for this Pilot Transfer Project, and the lead agency responsible for securing the necessary approvals to conduct both a pilot water transfer and a long-term water transfer, is summarized in Table ES-2. As part of the Pilot Plan, a comprehensive review of existing environmental documents and agreements related to the FRWP and Hayward Intertie was performed to identify any potential requirements that would need to be addressed to implement the Pilot Transfer Project. TM#4 includes a more detailed list of existing documents that were reviewed for the Pilot Plan and a discussion of the potential relevancy of these documents to the Pilot Transfer Project.

Additional Information or Action Required for the Pilot Transfer Project

Several items requiring additional action or information are needed in advance of executing the Pilot Transfer Project:

- EBMUD and BAWSCA should approach YCWA and PCWA to confirm their willingness to participate in the Pilot Transfer Project. Key terms, including potential minimum quantities, costs, and schedule for delivering water would be negotiated so that EBMUD and BAWSCA can determine the most appropriate seller for the pilot transfer water. The selection of a seller for the Pilot Transfer Project would not preclude the potential for a different seller or multiple sellers for a long-term transfer arrangement.
- EBMUD, BAWSCA, and the transfer water seller should jointly develop an outreach plan and engage key Project Stakeholders in the planning process for the Pilot Transfer Project. Key Project Stakeholders include the COH, SFPUC, regulatory agencies, resource agencies, and other agencies whose approval or cooperation is needed to successfully implement the pilot water transfer. Individual Project Stakeholders may also choose to engage in separate outreach efforts as part of their decision making on this project.
- As noted in Tables ES-2, numerous agreements and approvals are needed in order to implement the Pilot Transfer Project. Development and execution of these agreements and approvals may take significant time and resources. As such, BAWSCA and EBMUD should develop a plan to secure the necessary agreements and approvals on a schedule that will support near-term implementation of a Pilot Transfer Project.

Outstanding Items Regarding a Long-Term Transfer Arrangement

For a long-term water transfer, the most effective means of processing a transfer may be for BAWSCA and EBMUD to work with USBR to prepare a joint document that complies with environmental resource laws and USBR requirements.

Table ES-2: Summary of Key Environmental Reviews, Approvals and Institutional Arrangements Needed to Conduct an EBMUD-BAWSCA Water Transfer⁽¹⁾

| | One-year Pilot Transfer Project | Proposed Primary Responsible Party | Long-term Water Transfer | Proposed Primary Responsible Party |
|---|--|------------------------------------|--|------------------------------------|
| Environmental Review | | | | |
| State Resource Laws | CEQA exemption(s) | Seller / BAWSCA | Compliance with CEQA, CESA | TBD |
| Federal Resource Laws | Compliance with NEPA, ESA ⁽²⁾ | USBR / BAWSCA / EBMUD | Compliance with NEPA, ESA ⁽²⁾ | USBR / BAWSCA / EBMUD |
| Regulatory Agency Approvals | | | | |
| SWRCB | Required ⁽³⁾ | Seller | Required ⁽³⁾ | Seller |
| USBR | Required for Warren Act contract and PCWA refill agreement ⁽⁴⁾ | USBR / BAWSCA / EBMUD | Required for Warren Act contract(s) and PCWA refill agreement ⁽⁴⁾ | USBR / BAWSCA / EBMUD |
| Delta Stewardship Council (future) | Likely not covered or exempt | TBD | TBD | TBD |
| Permits | | | | |
| FRWA Intake Incidental Take Permit (2011) | Potentially no changes required | EBMUD | Amendment may be required | EBMUD |
| Hayward Intertie | | | | |
| Hayward Intertie Operating Agreement (2007) | Amendment or other type of Agreement required to allow for one-year pilot test | EBMUD / SFPUC / COH | Amendment or other type of Agreement required | EBMUD / SFPUC / COH |
| Updated Operations Plan | Governs day-to-day operations | EBMUD / SFPUC / COH | Governs day-to-day operations | EBMUD / SFPUC / COH |
| Transfer Agreements | | | | |
| Water Purchase Agreement with Seller | Required | BAWSCA / Seller | Required | BAWSCA / Seller |
| EBMUD / BAWSCA Pilot Transfer Cost- | Required | EBMUD / BAWSCA | Required | EBMUD / BAWSCA |

| | One-year Pilot Transfer Project | Proposed Primary Responsible Party | Long-term Water Transfer | Proposed Primary Responsible Party |
|---|---------------------------------|------------------------------------|--------------------------|------------------------------------|
| Allocation and Wheeling Agreement | | | | |
| BAWSCA / SFPUC Cost Allocation and Wheeling Agreement | Required | BAWSCA / SFPUC | Required | BAWSCA / SFPUC |
| Internal Agreements and Arrangements to Distribute Water to BAWSCA Agencies | Required | BAWSCA | Required | BAWSCA |
| BAWSCA / COH Cost-Allocation Agreement | Required | BAWSCA / COH | Required | BAWSCA / COH |

- (1) TM#4 includes a more detailed list of existing documents that were reviewed for the Pilot Plan and a discussion of the potential relevancy of these documents to the Pilot Transfer Project. Information in this table assumes that the potential seller is either YCWA or PCWA. This information would need to be updated if a different seller is considered for the Pilot Transfer Project.
- (2) Compliance with NEPA and other federal environmental resource laws is required to execute a Warren Act contract to use the Folsom South Canal, a federally owned facility, to convey non-CVP water to EBMUD or BAWSCA service areas.
- (3) If YCWA is able to successfully petition the SWRCB to add the FRWP intake as a point of re-diversion to their water rights in advance of a one-year pilot test or long-term transfer, SWRCB approval may not be required for a transfer of water diverted from YCWA to a BAWSCA member agency who is a State Water Project (SWP) or CVP contractor utilizing the FRWP facilities. However, at present, BAWSCA does not anticipate structuring a transfer in this manner.
- (4) BAWSCA and EBMUD will work with the USBR to determine the appropriate applicant for the Warren Act contract. In either case, EBMUD would facilitate working with the USBR to obtain the required USBR approvals.

Similar to one-year transfers, the SWRCB must approve changes to a seller’s water rights that are necessary to undertake a long-term transfer of water. EBMUD and BAWSCA should work closely with the potential seller to evaluate the best approach for obtaining SWRCB approval if the parties elect to move forward with a long-term water transfer. Further, EBMUD and BAWSCA would need to evaluate whether future transfer water volumes wheeled to BAWSCA would require an amendment to the FRWA Incidental Take Permit to increase the maximum annual diversion volume.

In a long-term transfer arrangement, the purchaser of the transfer water may be BAWSCA or may be individual member agencies or groups of agencies. At this time,

there is no final decision on how the transfer water purchase would be structured or how costs and benefits would be allocated amongst the BAWSCA member agencies. Specific agreements that are necessary to allocate water among the BAWSCA agencies include arrangements between BAWSCA and its member agencies relating to the quantity of the water acquired, how the water is allocated among member agencies, as well as arrangements between the member agencies themselves, depending on how the water is allocated.

ES-3.6 TM #5 - Pilot Water Transfer Recommendations

Summary

Based on the information developed as part of the Pilot Plan, final recommendations were made regarding the timing of the pilot water transfer, the minimum quantity of water transferred, and the duration of the Pilot Transfer Project. Estimated costs for conducting the Pilot Transfer Project were developed. A proposed schedule outlining the regulatory, institutional, and operational components was developed.

Key Findings

Pilot Water Transfer Timing:

To reduce the cost of the Pilot Transfer Project, the transfer should be conducted in a year when EBMUD is taking delivery of Sacramento River water through the FRWP, which would typically occur in critically dry years where it is anticipated that a water shortage condition would also exist on the SF RWS. Based on EBMUD's Interim Drought Planning Guidelines, EBMUD expects to utilize the FRWP when its projected total system storage at the end of September is below 450 TAF. To accommodate EBMUD operations planning, the earliest diversion of Sacramento River water during the first year of a drought would begin in July. The timing of the actual Pilot Transfer Project also depends on when the transfer water is made available. For YCWA, water would most likely be available in September through December while for PCWA, the proposed period identified is July through December.

The preferred timing of the Pilot Transfer Project will need to be further reviewed with COH, SFPUC, BAWSCA, and EBMUD prior to implementation.

Pilot Water Transfer Quantity:

The proposed minimum transfer volume for the Pilot Transfer Project is 1,000 AF. Final total water volume, delivery rate and pilot duration will be determined by the affected transfer parties prior to the implementation of the Pilot Transfer Project.

Pilot Water Transfer Delivery Rate:

The average COH water demand is 15 MGD, varying seasonally. The preferred delivery mode during the Pilot Transfer Project would be to supply COH's entire demand, with a small excess being conveyed to the SF RWS. This scenario would also ensure that some water flows through the pipeline connecting the COH system with the Newark Turnout from the SF RWS, thereby preventing water quality concerns caused by stagnant water.

Pilot Water Transfer Duration:

Combining the assumed transfer quantity of 1,000 AF with an average delivery rate of 15 MGD, results in a likely minimum pilot transfer duration of 22 days, excluding ramp up time.

Estimated Pilot Water Transfer Costs:

Total cost for the Pilot Transfer Project is largely proportional to the volume of water wheeled and consists of costs for purchased water, conveyance through the FRWP and EBMUD systems, EBMUD treatment, and Hayward Intertie use. A summary of estimated costs is provided in Table ES-3. A long-term transfer could include additional costs for wear and tear on facilities and proportional share of labor costs.

Table ES-3. Estimated Total Cost for Pilot Transfer of 1,000 Acre-Feet of Water

| Component | Total Cost |
|--|--|
| Water Purchase | \$75,000 - \$275,000 ⁽¹⁾ |
| Administrative Costs | \$50,000 - \$100,000 ⁽²⁾ |
| Conveyance | |
| From Freeport to Mokelumne Aqueducts | \$155,000 |
| Through Mokelumne Aqueducts to USL Reservoir | \$36,000 - \$109,000 |
| Treatment | \$107,000 |
| Hayward Intertie | To be determined ⁽³⁾ |
| SF RWS | To be determined ⁽⁴⁾ |
| Total | \$425,000 - \$750,000⁽⁵⁾ |

⁽¹⁾ Actual costs to purchase transfer water would need to be negotiated with the seller and could range from \$75 - \$275/AF.

⁽²⁾ Administrative costs to conduct the pilot transfer could vary anywhere from \$50,000 - \$100,000 based on the level of effort required to obtain the necessary regulatory approvals. These costs could include costs to prepare environmental documents, perform environmental reviews, and USBR staff time to review and approve the Warren Act and SWCRB filing fees. Administrative costs do not include estimates for internal BAWSCA or EBMUD staff time to support the project.

⁽³⁾ These costs have been requested from COH.

⁽⁴⁾ The Wholesale Customers' contractual obligation to pay their share of the SF RWS capital and operating costs is detailed in the 2009 WSA. Consistent with the WSA and with SFPUC past practice with inter-agency water transfers, the September 20, 2012 Letter from BAWSCA to SFPUC summarizes the agreements between the agencies' General Managers that (1) all costs for moving potential pilot transfer water through the SF RWS would be allocated proportionate to metered usage and (2) BAWSCA will reimburse any specific, legitimate incremental SF RWS costs incurred as a result of a BAWSCA-initiated transfer.

⁽⁵⁾ Rounded to the nearest \$5,000.

Pilot Water Transfer Schedule:

The estimated timing for securing the likely institutional and environmental approvals associated with implementing a Pilot Transfer Project is shown on Figure ES-5. It is anticipated that six to twelve months of pre-pilot water transfer efforts will be required for BAWSCA and EBMUD to work with key stakeholders to develop or amend agreements needed to use the Hayward Intertie for the Pilot Transfer Project and for BAWSCA to work with SFPUC, COH, and its member agencies on other agreements that would be required before BAWSCA could fully commit to participating in the Pilot Transfer Project. The effort on these pre-pilot water transfer agreements would be expected to run in advance of or concurrently with other institutional arrangements, environmental reviews, and regulatory agency approvals that would be needed if BAWSCA and EBMUD jointly agree to move forward with the Pilot Transfer Project in 2014.

As shown on Figure ES-5, the lead time for completing all the other institutional arrangements, environmental reviews, and regulatory agency approvals for the Pilot

Transfer Project is expected to take approximately eight months, which includes preliminary discussions with the potential sellers and USBR in early spring if hydrologic conditions are dry. The decision by BAWSCA and EBMUD (as the Project Proponents) to move forward with the Pilot Transfer Project would likely occur in early May with final Board approval of the project by both agencies in June. Completion of applicable environmental reviews and regulatory approvals would be expected to occur in late summer to early fall and the pilot water transfer is estimated to commence in October. The entire lead time, including pre-water transfer efforts, before the pilot water transfer could commence is expected to take approximately twelve to eighteen months.

Additional Information or Action Required for Pilot Transfer Project

As additional information for the Pilot Transfer Project is developed related to anticipated supply shortfalls, and the costs and specifics of the transfer source and quantities, the pilot water transfer volume, delivery rate and duration may vary from what is presented here in the Pilot Plan.

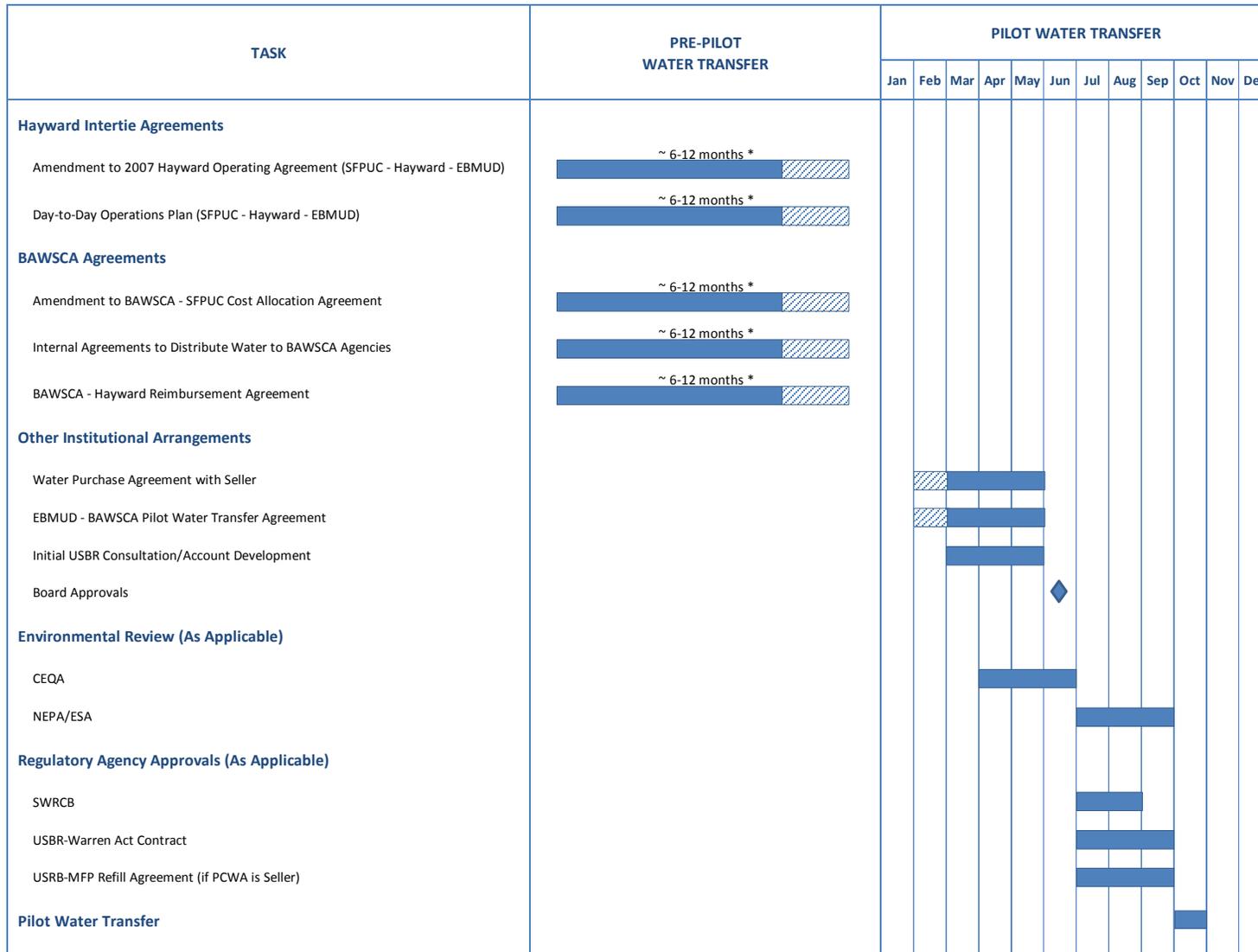
Prior to implementing the Pilot Transfer Project, close coordination between BAWSCA, EBMUD, COH, and SFPUC is recommended, including the development of an operations and monitoring plan and a more detailed assessment as to whether a pre-flushing program is needed for the Hayward Intertie pipelines.

In addition, BAWSCA and EBMUD will have to initiate work on all of the necessary agreements, arrangements and regulatory approvals that will need to be in place in order to implement the Pilot Transfer Project.

Outstanding Items Regarding a Long-Term Transfer Arrangement

While many of the same approvals and agreements that are identified for the Pilot Transfer Project will be the same or similar to those needed for a long-term transfer arrangement, it can be anticipated that the level of effort required to implement a longer term transfer will be significantly higher. It is BAWSCA and EBMUD's hope that the successful execution of the Pilot Transfer Project will lay the groundwork for a future regional long-term water transfer project.

Figure ES-5. Estimated Pilot Transfer Project



* Efforts could run concurrently with development of other institutional arrangements, environmental reviews, and regulatory agency approvals that would need to be completed before the pilot water transfer could commence.

ATTACHMENT A

- Technical Memorandum #1A - EBMUD Short-term Pilot Water Transfer Project Goals and Objectives
- Technical Memorandum #1B - BAWSCA Short-term Pilot Water Transfer Project Goals and Objectives

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*TECHNICAL MEMORANDUM #1A - EBMUD SHORT-TERM
PILOT WATER TRANSFER PROJECT GOALS AND OBJECTIVES*

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TECHNICAL MEMORANDUM #1A

EBMUD SHORT-TERM PILOT WATER TRANSFER

PROJECT GOALS AND OBJECTIVES

October 22, 2012, revised September 19, 2013

Section 1: Introduction

The East Bay Municipal Utility District (EBMUD or “District”) and the Bay Area Water Supply and Conservation Agency (BAWSCA) are developing a Short-term Pilot Water Transfer Plan (Pilot Plan) to evaluate the feasibility of partnering as buyers on long-term water transfer projects to improve future water supply reliability for the respective agencies. EBMUD and BAWSCA have agreed that jointly conducting a one-year¹, pilot water transfer with a willing seller would provide important information needed to evaluate the costs and benefits of a long-term buyer partnership. The pilot water transfer could include EBMUD and BAWSCA jointly purchasing and conveying transfer water from a willing seller for the pilot or EBMUD facilitating a transfer where BAWSCA would obtain water from a third-party seller and EBMUD would wheel the water through its system to BAWSCA’s service area. Technical Memorandum (TM) #1A outlines EBMUD’s goals and objectives for the proposed Pilot Plan and includes a preliminary discussion of the criteria under which EBMUD would likely operate facilities needed to conduct a pilot water transfer.

1.1 Background

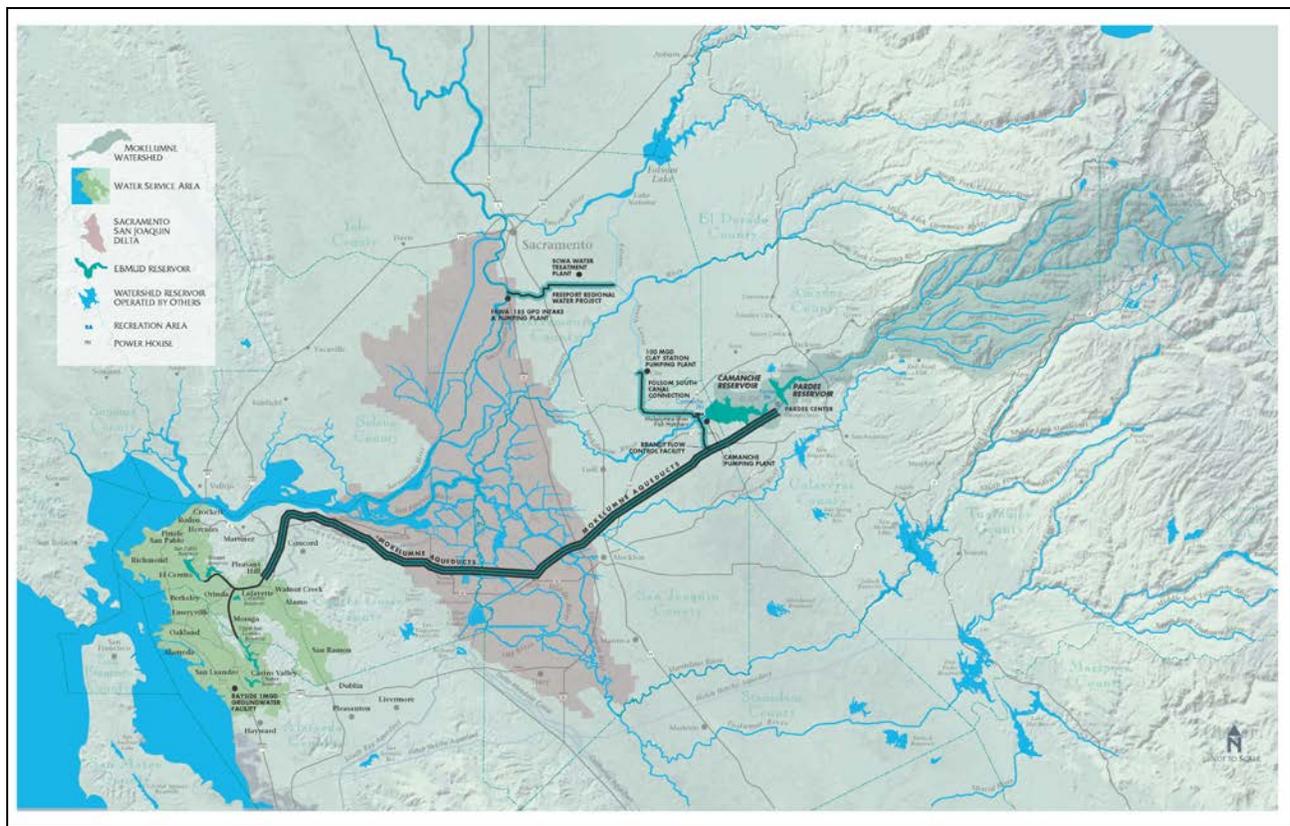
EBMUD provides water to an estimated 1.3 million people plus industrial, commercial, and institutional water users in the East Bay region of the San Francisco Bay Area (see Figure 1). EBMUD’s principal raw water source is the Mokelumne River in the Sierra Nevada, with a diversion point at Pardee Reservoir in Calaveras and Amador Counties. EBMUD’s existing water supplies are sufficient in non-drought years. In dry years, EBMUD’s supplies are augmented by access to Central Valley Project (CVP) water on the Sacramento River via the recently completed Freeport Regional Water Project (FRWP). In the future, even less Mokelumne water will be available in drought years due to increased use by others with senior water rights. As a result, EBMUD is seeking alternate dry year supplies to avoid water supply shortages and more severe customer rationing.

In April 2012, the Board certified a final Programmatic Environmental Impact Report (PEIR) for EBMUD’s Water Supply Management Program (WSMP) 2040, which identifies

¹ The term “one-year transfer” is an industry term referring to a short-term water transfer that is completed within a one-year time period.

solutions to meet EBMUD's dry year water supply needs through the year 2040 with the goal of limiting customer rationing to 15 percent in the worst year of a multi-year drought. The WSMP 2040 includes new conservation and recycled water targets, along with rationing and supplemental supply project components, including water transfers, which will allow the District to meet projected water demands through 2040. WSMP 2040 seeks to provide a diverse and robust water supply portfolio that ensures water reliability in an uncertain future while also protecting the environment. The WSMP 2040 recommends securing dry year water through voluntary water transfers.

Figure 1: Map of EBMUD Service Area, Mokelumne Aqueducts, and Upcountry Infrastructure



The WSMP 2040 identifies the Sacramento River Basin as a likely source of water transfers, with transfer water diverted in dry years at the FRWP intake along the Sacramento River, and conveyed to EBMUD's service area. EBMUD is seeking opportunities to partner with other potential buyers to maximize the quantity of dry year water available from water transfers and minimize costs. Potential buyer partnerships could include jointly purchasing water with another agency or back-up buyers who purchase the water when EBMUD does not have the need.

1.2 Pilot Plan

In September 2012, EBMUD and BAWSCA entered into a Memorandum of Understanding to prepare the Pilot Plan. The Pilot Plan will study the potential to conduct a one-year pilot water transfer in a future dry-year when EBMUD is planning to operate the FRWP. Water diverted at FRWP would be conveyed through the EBMUD system to the EBMUD/Hayward Intertie and potentially into the San Francisco Regional Water System. The results of the Pilot Plan will include recommendations and the framework of an agreement to implement a pilot transfer in a future dry-year. The primary tasks of the Pilot Plan include:

- Develop objectives and goals for the pilot transfer;
- Identify potential water transfer sources and the quantity to be transferred during the pilot;
- Evaluate the ability and costs to convey transfer water to the BAWSCA service area utilizing the FRWP and wheeling the transfer water via EBMUD's raw water and treated water systems and the Hayward Intertie;
- Identify approvals and institutional arrangements required to implement the pilot water transfer; and
- Propose recommendations for performing the pilot water transfer in a dry-year.

For each task, the Pilot Plan will also include a general discussion of additional information or requirements that may be needed to implement a long-term water transfer.

Section 2: Goals and Objectives

This section will discuss EBMUD's goals and objectives for the Pilot Plan and short-term pilot transfer project with BAWSCA. A general discussion of issues for a long-term transfer project that may require future resolution is also provided.

2.1 Goals

The District's primary goals for the Pilot Plan are as follows:

- Assess costs, benefits, and feasibility of partnering with BAWSCA on water transfers; and
- Evaluate whether BAWSCA would be a good match for partnering with EBMUD on long-term transfer projects.

2.2 Objectives

EBMUD has the following objectives for conducting the Pilot Plan:

- Work with BAWSCA to develop a plan for executing a short-term pilot water transfer;
- Evaluate the technical, institutional, and economic feasibility of wheeling transfer water to BAWSCA via Freeport, EBMUD's raw water and treated water systems, and the Hayward Intertie;
- Identify agreements and other elements (e.g., permits, etc.) that need to be in place to execute a pilot transfer as early as 2013; and
- Identify additional information that would still be needed to assess the feasibility of partnering on a long-term water transfer agreement with BAWSCA.

2.3 Benefits of Conducting a One-year Pilot Transfer

In the near-term, the combination of EBMUD's Mokelumne and CVP water supplies are sufficient to meet EBMUD's water supply needs. However, if transfer water can be secured at a reasonable purchase price, EBMUD is interested in conducting a pilot water transfer in the near-term. EBMUD believes that implementing a one-year pilot transfer in the near-term could provide the following benefits:

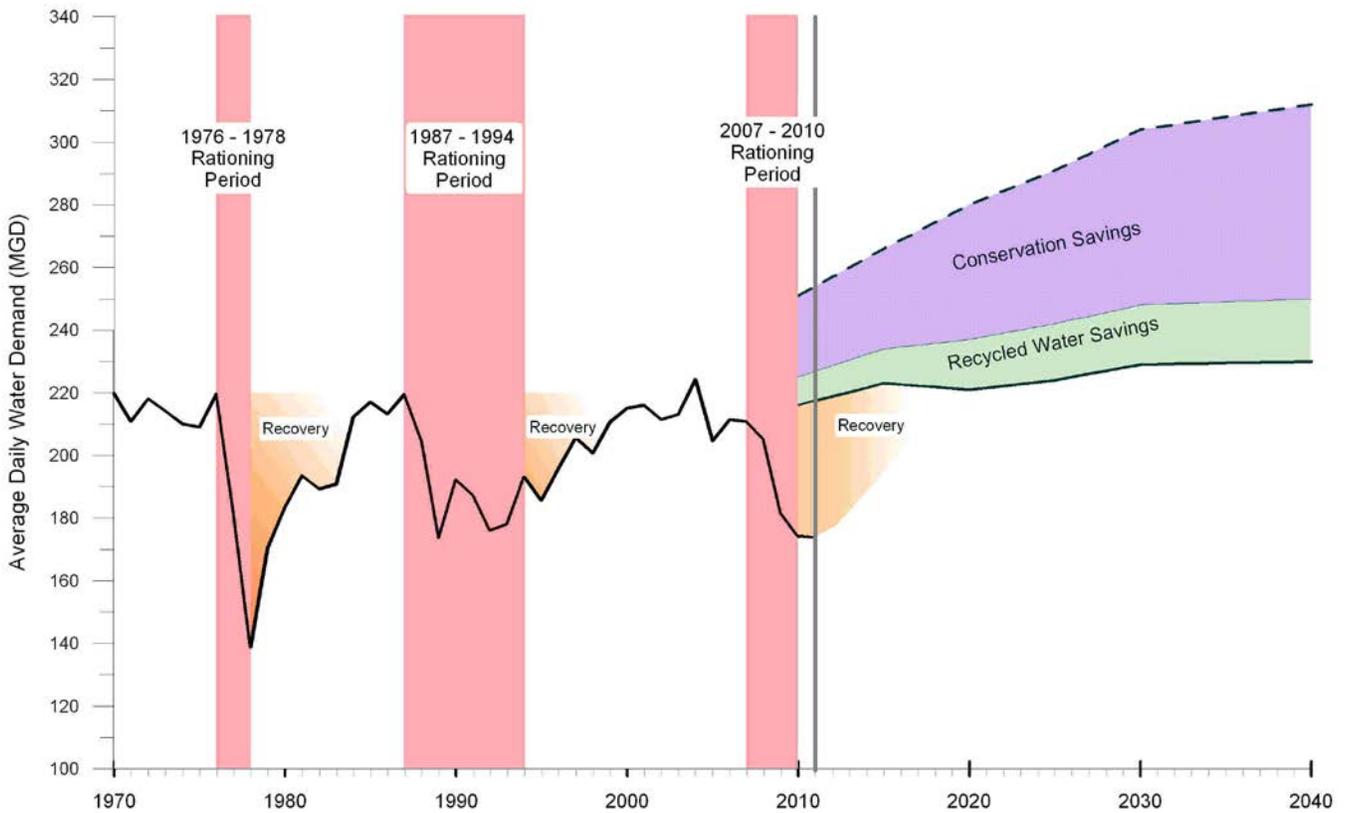
- Demonstrate that water transfers in partnership with BAWSCA are feasible by implementing a one-year pilot;
- Gain operational and institutional experience by implementing a transfer; and
- Strengthen relationships with long-term water transfer partners, regulators, permitting agencies, and partner agencies.

2.4 Long-term Issues

The District is currently experiencing a significant decline in water demands due to the recent economic turndown coupled with the residual drought effect (see Figure 2). This decline in water demands has afforded EBMUD the flexibility to explore water supply projects with BAWSCA and other agencies that include wheeling water through EBMUD's facilities. In the future, as EBMUD's demands recover to projected planning levels, capacity in EBMUD's water system will become more limited and the timing and ability to wheel water to other agencies will become more constrained. The ability to move water through the FRWP and EBMUD's raw and treated water systems under future conditions will require further evaluation, including more detailed consideration of the institutional,

operational, and financial agreements that would need to be in place for a long-term water transfer partnership.

Figure 2: Historical and Projected Demand²



Section 3: Pilot Water Transfer Trigger

In facilitating a water transfer to BAWSCA, EBMUD intends to utilize the FRWP to divert water from the Sacramento River and wheel water through EBMUD's raw and treated water systems and the Hayward Intertie to BAWSCA's service area. Therefore, currently EBMUD only anticipates conducting a joint pilot with BAWSCA in a year where EBMUD is planning to operate the FRWP to, at a minimum, take delivery of its CVP water in a drought year.

² Reference: 2012 Water Supply Availability and Deficiency Report adopted by the Board of Directors at the April 24, 2012 Regular Board meeting.

EBMUD's criteria for deciding when to turn on the FRWP and subsequently the trigger for deciding when to pilot a transfer with BAWSCA will be discussed in the following section. A general discussion of future water transfer triggers is also provided.

3.1 Background

Beginning in January of each year, EBMUD forecasts the volume of water it anticipates it will have stored at the end of the water year (September 30) in its Sierra and East Bay raw water reservoirs. This projection, which is updated biweekly through April, is based on precipitation in the watershed up to that date, expected additional rainfall through the rest of the year (based on historical records), and expected customer demand. Under its CVP contract, if the projected end-of-September Total System Storage (TSS) is less than 500 TAF, EBMUD is eligible to take delivery of CVP water. The contract allows for water deliveries to EBMUD at the FRWP if projected end-of-September TSS is less than 500 TAF. When this occurs, EBMUD may take delivery of up to 133 TAF of CVP water in a single year, beginning March 1. If contract deliveries are triggered, the decision whether and how much CVP water to divert is at the discretion of EBMUD (within the contractual quantities).

In the first year of a drought, it is expected that deliveries of Sacramento River water to the EBMUD service district would begin no earlier than July 1. This will provide time for EBMUD to confirm that it is a dry year, to give USBR the required two-month notice for delivery of CVP water, and to startup the FRWP. Startup of the FRWP involves draining and filling the Gerber Pipeline (3.9 miles of 72-inch pipeline) upstream of the Folsom South Canal (FSC); draining and filling the Folsom South Canal Connection (18.4 miles of 72-inch diameter pipeline) which connects the FSC to the Mokelumne Aqueducts; and starting up two pumping plants for the Folsom South Canal Connection. Startup of the FRWP requires considerable operational resources and is likely only to be undertaken if and when EBMUD has a need to utilize its CVP contract in dry years. Thus, any water transfers to BAWSCA via the FRWP will be contingent upon EBMUD operating its FRWP facilities.

3.2 Short-term Water Transfer Trigger for Operating FRWP

EBMUD's Drought Management Program guidelines, which include criteria for when to turn on the FRWP, were temporarily revised in 2012 to incorporate the revised 15% drought rationing levels and to account for reduced customer demands. The modified interim Drought Management Program guidelines for initiating FRWP deliveries to EBMUD and for determining customer rationing goals were presented to the EBMUD Board on March 27, 2012, and are shown in Table 1. These interim guidelines are expected to remain in effect until customer demands return to the normal historic planning levels (see Figure 2).



Table 1: Interim Drought Management Program Guidelines

| Stage | Projected Total System Storage (Thousand Acre Feet) ^(a) | % of Maximum TSS | Folsom South Canal Connection Status | CVP Import Quantity (Thousand Acre Feet) ^(b) | Rationing Reduction Goal |
|----------|--|------------------|--------------------------------------|---|--------------------------|
| Normal | > 500 | > 65% | Off | 0 | Wise Water Use |
| Moderate | 500-435 | 65 – 57% | Off | 0 | Wise Water Use |
| | 435-400 | 57 – 52% | On | 0 – 35 | 0-15% - voluntary |
| Severe | 400-350 | 52 – 46% | On | 35 – 65 | 15% - voluntary |

^(a) Without Freeport or rationing.

^(b) Could include transfer water from third parties in-lieu of CVP contract water to meet EBMUD’s supplemental water supply needs. Transfer water for an EBMUD-BAWSCA pilot water transfer could also be imported and wheeled through EBMUD’s system in addition to water secured (either transfer or CVP water) to meet EBMUD’s needs.

With the interim drought management program guidelines in effect, use of the FRWP for delivery of supplemental supplies to EBMUD would be triggered when the projected end-of-September TSS level is between 400 and 435 thousand acre-feet (TAF), although this trigger may be re-evaluated based on actual customer demands. For TSS levels below 400 TAF, the FRWP would likely already be operating as shown in Table 1. EBMUD’s decision to operate FRWP would be the basis to initiate a short-term pilot water transfer to BAWSCA.

3.3 Short-Term Water Transfer Quantity

As discussed in Section 2.4, EBMUD is currently experiencing a significant decline in water demands. For the next 5-7 years, it is anticipated that EBMUD’s CVP contract would be sufficient to meet its supplemental water supply needs during a drought. EBMUD is in discussions with several sellers to purchase transfer water under a long-term arrangement. As part of the overall approach to implementing these long-term arrangements, EBMUD is open to piloting a water transfer in the near-term in order to provide EBMUD with the opportunity to begin coordinating with key stakeholders to identify the process and institutional arrangements that would need to be in place to implement a long-term water transfer. EBMUD could take this water to meet its supplemental water supply needs in-lieu of taking CVP contract water. Under this scenario, EBMUD could secure transfer water for both EBMUD and BAWSCA.



If EBMUD opts not to take transfer water for a pilot in-lieu of its CVP contract, EBMUD is open to facilitating a third-party transfer between BAWSCA and a willing seller and wheeling water through its facilities for the pilot water transfer. In both scenarios (i.e. both EBMUD and BAWSCA take transfer water or only BAWSCA takes transfer water), the quantity of transfer water would be negotiated between the parties and could range from 1 – 5 TAF. Factors that would affect the transfer quantity include EBMUD and BAWSCA's water supply needs, price, timing and availability of the pilot transfer water, and monitoring and operational goals of the pilot. In general, both EBMUD and BAWSCA have expressed interest in maximizing their lower cost primary water supplies and minimizing the quantity of transfer water purchased for a pilot.

3.4 Long-Term Water Transfer Trigger

EBMUD's adopted Drought Management Program guidelines for long-range water supply planning, as published in EBMUD's 2010 Urban Water Management Plan (UWMP) are shown in Table 2. With the 2010 UWMP Drought Management Program guidelines in effect, use of the FRWP for delivery of CVP water to EBMUD could be triggered when the projected end-of-September TSS level is below 500 TAF, although this trigger may be re-evaluated based on actual customer demands. EBMUD's decision to operate FRWP could be the basis to initiate a long-term water transfer to BAWSCA in the future.

Table 2: Long-Term Drought Management Program Guidelines³

| Stage | April Projection of Total System Storage ^(a) on September 30 ^(b) (Thousand Acre Feet) | Percent of Maximum System Storage ^(c) | Rationing Reduction Goal | Voluntary / Mandatory |
|----------|---|--|--------------------------|-----------------------|
| Normal | 500 or more | 65% or greater | None | — |
| Moderate | 500 – 450 | 59% to 65% | 0 to 10% | Voluntary |
| Severe | 450 – 300 | 39% to 59% | 10 to 15% | Mandatory |
| Critical | < 300 | 39% or less | 15% | Mandatory |

(a) Total System Storage represents total storage in Pardee, Camanche, and Terminal reservoirs.

(b) Without consideration of supplemental supplies that may be available.

(c) Maximum system storage represents the maximum Total System Storage capacity of approximately 767 TAF.

³ Table 2 is from Table 3-2 of the 2010 UWMP.



*TECHNICAL MEMORANDUM #1B - BAWSCA SHORT-TERM
PILOT WATER TRANSFER PROJECT GOALS AND OBJECTIVES*

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TECHNICAL MEMORANDUM #1B

BAWSCA SHORT-TERM PILOT WATER TRANSFER

PROJECT GOALS AND OBJECTIVES

October 11, 2012, revised September 19, 2013

Section 1: Introduction

Both the Bay Area Water Supply and Conservation Agency (BAWSCA) and the East Bay Municipal Utility District (EBMUD) are interested in determining the feasibility of implementing long-term water transfers to meet the dry year water needs of their respective member agencies and customers. A first step in this assessment is to evaluate the feasibility of conducting a pilot water transfer.

BAWSCA represents the interests of 24 cities and water districts, and two private utilities, that purchase water wholesale from the San Francisco Regional Water System (SF RWS). These entities provide water to 1.7 million people, businesses and community organizations in Alameda, Santa Clara and San Mateo counties. BAWSCA's water management objective is to ensure that a reliable, high quality supply of water is available where and when people within the BAWSCA service area need it.

BAWSCA initiated the preparation of a Long-Term Reliable Water Supply Strategy (Strategy) in 2009 to address this objective. The purpose of the Strategy is to quantify the water supply need of the BAWSCA member agencies through 2035, identify the water supply management projects that could be developed to meet that need, and prepare the implementation plan for the Strategy. Successful completion of the Strategy is critical to ensuring that there will be sufficient and reliable water supplies for the BAWSCA member agencies and their customers through 2035.

The Phase II A Report for the Strategy was completed in July 2012. A key recommendation in this report is that the Strategy focus on dry year supply reliability for the BAWSCA member agencies. Water transfers from sources (sellers) outside the BAWSCA service area were identified as a promising option to address the dry year supply need. However, in order to convey water from these sellers into the BAWSCA service area, partnerships between BAWSCA and other regional water agencies that have the necessary conveyance infrastructure and connection to the SF RWS are needed.

EBMUD provides water to 1.3 million customers in Alameda and Contra Costa Counties. In May 2012, EBMUD adopted its Water Supply Management Program (WSMP) 2040 that identified a portfolio of potential water projects to meet its future dry year water supply needs. One such project is water transfers utilizing the existing Freeport Regional Water Project (FRWP) that diverts water from the Sacramento River and conveys it to EBMUD's service area. In addition, EBMUD has prioritized the development of regional projects that meet EBMUD's future water supply needs while maximizing the use of existing infrastructure (both EBMUD and regional investments) and allowing for partnerships to provide regional benefits and share costs.

One of those regional investments is the existing emergency intertie in the City of Hayward (Hayward Intertie) that connects the EBMUD and San Francisco Public Utilities Commission (SFPUC) systems through the City of Hayward's transmission facilities. Though currently permitted for use only during emergency or planned outages, the Hayward Intertie provides the potential for short-term pilot, and long-term water transfers between EBMUD and the BAWSCA member agencies.

In September 2012, BAWSCA and EBMUD entered into an Memorandum of Understanding (MOU) to develop a plan to execute a short-term pilot water transfer. Findings from this effort will assist both agencies in assessing whether a long-term transfer arrangement might be feasible.

This Technical Memorandum (TM) #1B discusses the goals and objectives identified by BAWSCA for a Short-term Water Transfer Pilot Plan (Plan), and the Pilot Water Transfer Agreement (Agreement). EBMUD's goals and objectives are described in a separate TM #1A which is also part of the Plan and Agreement.

Section 2: Goals and Objectives

This section presents the BAWSCA goals and objectives associated with the implementation of a short-term pilot water transfer between EBMUD and BAWSCA. In addition, BAWSCA's goals for potentially developing water transfers as a long-term water supply solution for its member agencies are presented.

These goals and objectives were refined and updated as the development of the Plan continued. These refinements and updates are incorporated into the Plan and the Agreement developed by BAWSCA and EBMUD as part of this joint effort.

2.1 Short-term Pilot Water Transfer

BAWSCA's goals for the short-term pilot water transfer between EBMUD and BAWSCA are to:

- Assess dry year water transfers for reliability, quality, and cost-effectiveness; and
- Identify all necessary state and federal regulatory and permit processes to facilitate the transfer, and the timing and the coordination of these regulatory processes.

BAWSCA's objectives for the short-term pilot water transfer between EBMUD and BAWSCA include:

- Demonstrate the feasibility of water transfers with EBMUD by implementing a one-year pilot water transfer;
- Gain operational and institutional experience by understanding the process for implementing a water transfer;
- Lay the foundation for approval of long-term water transfer agreements;
- Identify the regulatory agencies, and potential water transfer partners, that would be involved in a short-term and long-term water transfer;
- Confirm the commitment of BAWSCA and EBMUD to securing water transfers as a dry year supply solution;
- Determine whether a transfer partnership that involves the conveyance of water through EBMUD's water system into the BAWSCA service area is technically, politically, institutionally, and financially viable;
- Identify agreements and other elements (e.g., permits, etc.) that need to be in place to execute a short-term pilot water transfer; and
- Identify additional information that would be needed to assess the feasibility of partnering on a long-term water transfer agreement with EBMUD.

2.2 Long-term Water Transfers

As part of the Strategy, BAWSCA is evaluating whether water transfers will be a viable alternative to achieve BAWSCA's goal of meeting the dry year supply needs of the BAWSCA member agencies in a cost-effective manner.

BAWSCA's objectives for implementing a long-term water transfer include:

- Develop a reliable dry year supply to cost-effectively meet the BAWSCA member agency's water needs as identified through the Strategy; and

- Develop a long-term relationship with EBMUD, and/or others, to purchase and convey the dry year water transfer supply to the BAWSCA member agencies.

Section 3: Triggers for Executing a Water Transfer

There will be several factors which affect the need and ability to execute either the short-term pilot water transfer, or long-term water transfers. These factors could include the supply needs of BAWSCA or EBMUD, the availability and cost of supplies and conveyance, and the availability of transfer capacity to the BAWSCA member agencies.

EBMUD is interested in executing a pilot transfer associated with the operation of FRWP. EBMUD anticipates that operation of FRWP would most likely occur only during a dry year as defined by EBMUD's operational criteria.

This section presents the specific conditions (triggers) wherein, subject to all other appropriate agreements and approvals, BAWSCA would recommend implementing a short-term pilot water transfer. This section also presents a discussion of what triggers would impact execution of a long-term water transfer.

The triggers for initiating both a short-term pilot water transfer or a long-term water transfer were refined and updated as the development of the Plan continued. These refinements and updates are incorporated into the Plan and the Agreement developed by BAWSCA and EBMUD as part of this joint effort.

3.1 Short-term Pilot Water Transfer Triggers

The purpose of this short-term pilot water transfer is to demonstrate the ability of BAWSCA to partner with EBMUD to purchase and facilitate the transfer of dry year supply to the BAWSCA member agencies. Because of the high costs associated with the operation of FRWP and the other EBMUD facilities, BAWSCA is only interested in conducting a pilot transfer if it could be done in partnership with EBMUD and/or another agency. Specifically, BAWSCA would likely only implement a short-term pilot water transfer if EBMUD initiated dry year operation of FRWP to move transfer water into the EBMUD system.

There is a remote possibility that Contra Costa Water District (CCWD), as part of their settlement agreement with EBMUD, or another agency could request the use of FRWP independent of EBMUD. If this were the case, BAWSCA might pursue a joint effort with that agency and EBMUD to secure supply and transmit it through the EBMUD system to the BAWSCA service area. However, because of the additional complexity and costs

associated with this option, it is unlikely that BAWSCA would pursue this as a recommended action in the near-term.

3.2 Long-term Water Transfer Triggers

The decision as to whether BAWSCA will pursue long-term water transfers as a dry year solution will be dependent on several factors, including:

- Demand and estimated supply needs of the BAWSCA member agencies;
- Availability of supply from SFPUC during dry years; and
- Availability, quantity and cost of transfer supply to the BAWSCA member agencies.

These factors will continue to be developed as part of the Strategy.

If BAWSCA does decide to pursue a long-term transfer arrangement with EBMUD, the likely triggers for implementing a dry year transfer will include:

- Dry year cutbacks imposed by the SFPUC; and
- EBMUD (or another agency) use of FRWP to import transfer water.

Section 4: Water Transfer Quantity

There are several factors which affect how much water BAWSCA would request as part of a short-term pilot water transfer and a long-term water transfer. These factors could include the supply need of the BAWSCA member agencies or EBMUD, the availability and cost of supplies and conveyance, and the availability of transfer capacity to the BAWSCA service area. The BAWSCA transfer quantity will also be a function of the flow rate conveyed through the Hayward Intertie, and the duration of the transfer.

The short-term pilot and long-term transfer quantities were refined and updated as the development of the Plan continued. These refinements and updates are incorporated into the Plan and the Agreement developed by BAWSCA and EBMUD as part of this joint effort.

4.1 Short-term Pilot Water Transfer Quantity

Table 4-1 summarizes some key factors in determining how much water BAWSCA might want as part of a short-term pilot water transfer. Additional detail is provided in the section following.

Table 4-1 Short-term Pilot Water Transfer Scenarios and Quantities

| Transfer Scenario | Quantity (acre-feet) | Rate (MGD) | Considerations |
|--|----------------------|------------|--|
| EBMUD initiates dry year operation of FRWP | TBD ¹ | <1 - 17 | <ul style="list-style-type: none"> • Rate dependent on evaluation of City of Hayward system constraints. • Quantity dependent on: <ul style="list-style-type: none"> - Cost of transfer water. - If no SFPUC cutbacks, minimum quantity likely requested. |

¹ TBD – to be determined

As the supply needs during dry years may vary between EBMUD and BAWSCA there may be conditions wherein EBMUD operates FRWP, but BAWSCA does not have a supply cutback from SFPUC. Under this condition the BAWSCA member agencies would likely request the minimum quantity possible be delivered, or not request delivery of any transfer water at all.

The minimum quantity requested by BAWSCA may be a function of a minimum identified by EBMUD for operation of FRWP to the benefit of both parties. The minimum quantity requested by BAWSCA may also be a function of minimizing the water quality or other impacts to the City of Hayward. This is because, under the scenario envisioned for the pilot water transfer, the transfer water would be delivered to Hayward in-lieu of deliveries by the SFPUC (i.e., minimal pilot transfer water would be conveyed into the SF RWS).

BAWSCA worked with Hayward to evaluate the potential minimum and maximum pilot water transfer quantities and rates as part of the Plan development. Specific considerations that will impact BAWSCA's final requested transfer quantity with respect to Hayward are:

- In order to minimize water quality variation to Hayward's customers during the pilot transfer, the flow rate through the Hayward Intertie will ideally closely match Hayward's average daily water demand (currently 100 percent supplied by SFPUC), which may range from 12 to 17 million gallons per day (MGD) depending on the time of year.
- In order to minimize operational issues and costs incurred by Hayward as part of the pilot transfer, the transfer flow rate would ideally be closely match Hayward's water demand. If the flow rate exceeds Hayward's demand, then Hayward would have to

operate the Hesperian Pump Station to pump the surplus transfer water into the SF RWS.

If EBMUD is planning to operate FRWP, and SFPUC is instituting supply reductions to the BAWSCA member agencies, the maximum potential quantity requested by BAWSCA for the pilot transfer could be equal to the SFPUC supply cutback. That quantity will be determined by the level of drought cutbacks and the additional supply that the BAWSCA member agencies decide that they wish to purchase.

4.2 Long-term Water Transfer Quantity

BAWSCA, as part of the Strategy, is refining estimates of the BAWSCA member agency dry year supply needs through 2035. If the BAWSCA member agencies wanted to backstop all of their projected SFPUC shortfalls, it is currently estimated that they would need an additional 60 MGD of dry year supply by 2035. BAWSCA will be working with the member agencies to develop a regional level-of-service goal, but it is unlikely that they will select a goal of 100% supply reliability.

Based on current information, the long-term maximum transfer rate that BAWSCA would request is most likely the 30 MGD Hayward Intertie flow rate constraint, or about 30,600 acre-feet if delivered at that rate for an entire year. The minimum long-term transfer rate and quantity will be refined as part of the Strategy and is dependent, among other things, on the severity of the dry year cutbacks to the SFPUC supply.

The delivery rate for the BAWSCA transfer water to EBMUD through FRWP may be higher than 30 MGD during certain seasons if transfer water is only available during certain months of the year. If EBMUD has provisions to store that water in its system within the year, then the transfer water could be conveyed to BAWSCA at a more constant rate within the 30 MGD design capacity of the Hayward Intertie. If it is determined that EBMUD can store water for BAWSCA, the agencies will work together to determine the cost of providing such storage.

EBMUD is continuing to evaluate potential quantities of transfer water available from willing sellers as part of its ongoing efforts to secure water transfers to meet long-term water supply needs. EBMUD is also evaluating the conveyance capacity that may be available to transfer water to other Bay Area agencies through EBMUD's conveyance, storage and treatment facilities as part of the wheeling study currently underway for the Bay Area Regional Desalination Project. The wheeling study is based on anticipated EBMUD facilities and demands in 2040. Depending on the results of the Plan and potential pilot transfer project,

additional evaluations may be required to further define the timing and quantities of transfer water available to BAWSCA for a long-term transfer project.

ATTACHMENT B

- Technical Memorandum #2 - Potential Pilot Water Transfer Sources

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TECHNICAL MEMORANDUM #2

POTENTIAL PILOT WATER TRANSFER SOURCES

March 11, 2013, revised September 19, 2013

Section 1: Introduction

The East Bay Municipal Utility District (EBMUD or District) and the Bay Area Water Supply and Conservation Agency (BAWSCA) are developing a Short-term Pilot Water Transfer Plan (Pilot Plan) to evaluate the feasibility of partnering as buyers on long-term water transfer projects to improve future water supply reliability for their respective agencies. EBMUD and BAWSCA have agreed that jointly conducting a one-year¹ pilot water transfer with a willing seller would provide important information needed to evaluate the costs and benefits of a long-term buyer partnership. The purpose of this Technical Memorandum (TM) is to describe potential sellers that could provide transfer water for a one-year pilot water transfer and identify differences or issues that may require further evaluation when considering a future long-term water transfer arrangement versus a one-year pilot water transfer.

Section 2: Potential Pilot Water Transfer Sources

This section will identify potential supply sources for the pilot water transfer based on EBMUD's evaluation of water transfer opportunities. A brief description of the recommended transfer source will be provided, including background on the seller, source of supply, water rights, and method used to make water available for transfer. This section will also describe the potential quantity of water available for transfer, schedule and rate of delivery, and water purchase costs for the transfer. Information provided in this section is based on EBMUD's review of water transfer opportunities and preliminary discussions with sellers. The actual terms and conditions of an agreement to purchase transfer water for the pilot water transfer would need to be negotiated with the recommended seller.

On April 24, 2012, the EBMUD's Board certified a final Programmatic Environmental Impact Report (PEIR) for the Water Supply Management Program (WSMP) 2040 and adopted the WSMP 2040 Plan, which includes purchase of supplemental water supplies in dry years to meet the District's 2040 need for water in dry years. The WSMP 2040 identifies the Sacramento River Basin as a likely source of water transfers (see Figure 1). The transfer water would then be diverted at the Freeport Regional Water Authority

¹ The term "one-year transfer" is an industry term referring to a short-term water transfer that is completed within a one-year time period.

(FRWA) intake located on the Sacramento River and conveyed through the Freeport Regional Water Project (FRWP or Freeport) facilities to EBMUD's service area.

The pilot water transfer with BAWSCA would involve a diversion at Freeport, along with the additional conveyance or wheeling of transfer water through EBMUD's treated distribution system to BAWSCA's service area via the San Francisco Public Utilities Commission – City of Hayward-EBMUD Intertie (Hayward Intertie). Figure 2 shows the location of facilities that would be used to wheel transfer water to BAWSCA's service area.

EBMUD reviewed over 60 potential transfer or exchange opportunities and screened them for feasibility. A detailed review and outreach was conducted for approximately 30 potential sellers to learn more about the transfer opportunity and determine the seller's level of interest in partnering with EBMUD on transfer projects. As a result, a short list of recommended transfer opportunities was then developed that focused on sellers with (1) a history of successfully transferring water, (2) a record of working cooperatively with environmental and local community stakeholders and (3) a willingness to sell water in dry years only when it is needed by EBMUD.

In 2012, EBMUD initiated discussions with several sellers with transfer opportunities that best matched EBMUD's future dry year water supply needs. The most promising transfer opportunities appear to be with Yuba County Water Agency (YCWA) and Placer County Water Agency (PCWA). EBMUD is currently working to develop future long-term water transfer projects with both of these agencies. YCWA and PCWA also provide the most promising potential sources of supply for the one-year pilot water transfer. A description of the potential source of transfer water available from YCWA and PCWA is summarized in Table 1 and further described in the following sections.

Figure 1: Potential Water Transfer Source Areas and Conveyance

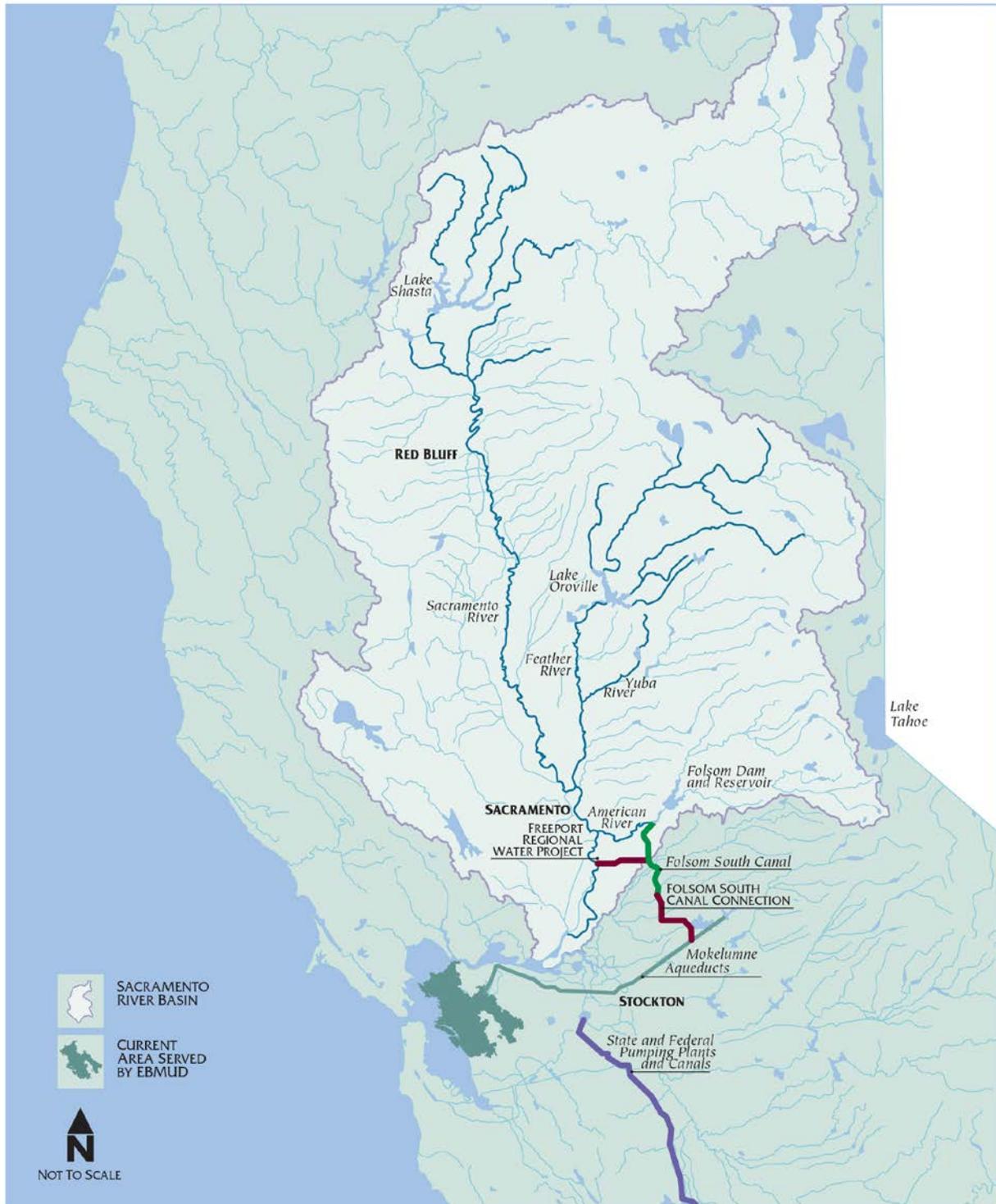


Figure 2: Location Map of Facilities used to Wheel Water to BAWSCA's Service Area

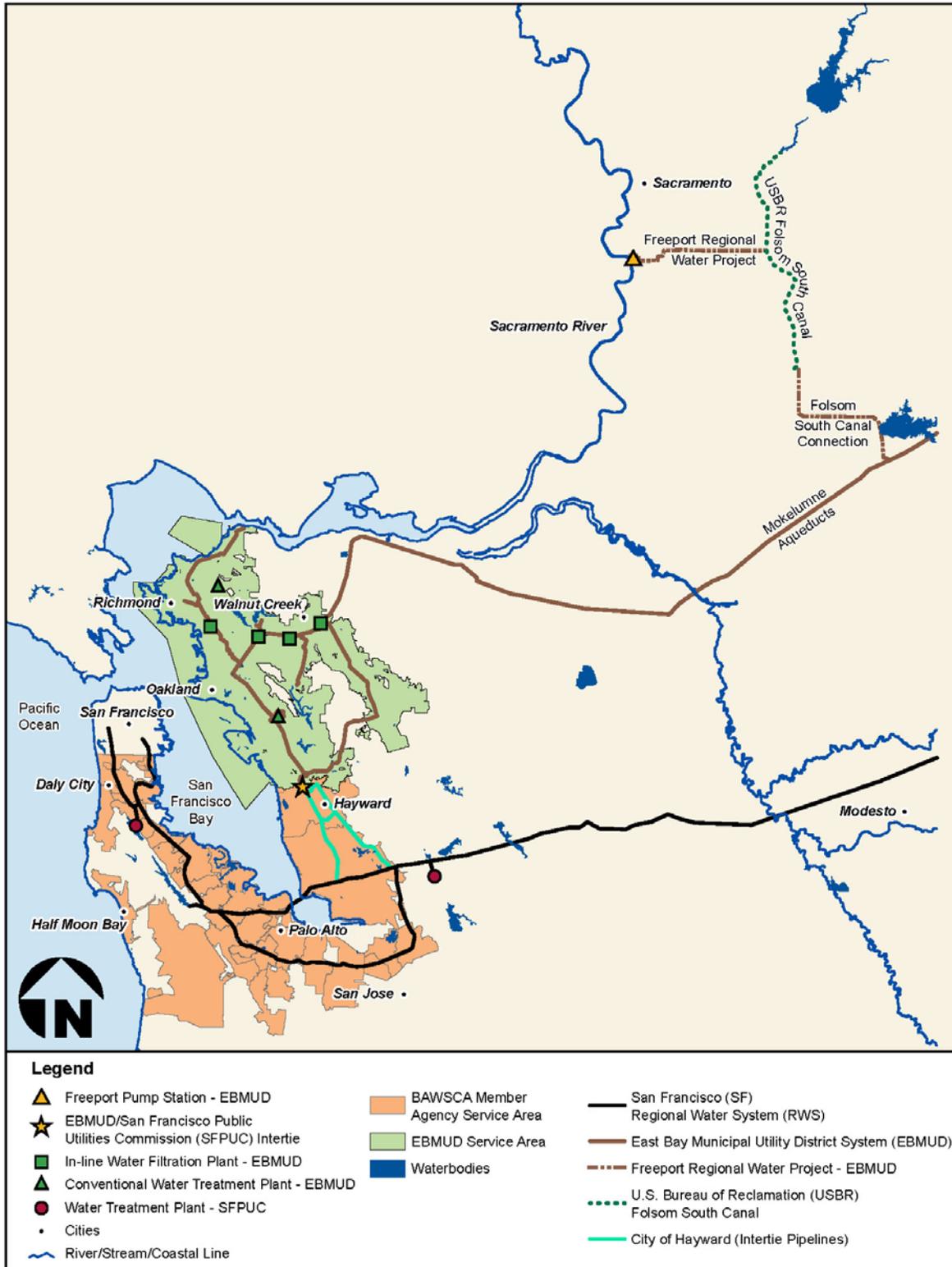


Table 1: Potential Sources of Supply for Pilot Water Transfer

| | YCWA | PCWA |
|----------------------|---------------------------------|-----------------------------------|
| Source of Supply | Yuba River | Middle Fork of the American River |
| Surface Water Rights | Post-1914 (1927, 1953) | Post-1914 (1958) |
| Transfer Method | Stored water releases | Stored water releases |
| Quantity | Up to 67 TAF ^{(a),(b)} | Up to 47 TAF ^{(a) (c)} |
| Schedule | Varies ^(d) | July - December |
| Rate of Delivery | < 100 MGD ^(e) | < 100 MGD ^(e) |
| Water Purchase Cost | \$75 - \$275 | \$75 - \$275 |

- (a) Minimum pilot transfer quantity would need to be discussed with seller. EBMUD anticipates a minimum pilot water transfer quantity of at least 1000 acre-feet (AF) to be able to conduct a two-week pilot at recommended rates through the Hayward Intertie. EBMUD and BAWSCA will meet with YCWA and PCWA together and begin discussing minimum quantities and undertaking a long-term project together.
- (b) Based on modeling performed for Yuba Accord – Freeport Point of Rediversion Project (February, 2013).
- (c) Based on modeling performed for the Sacramento Water Forum Agreement (2000).
- (d) Under the Yuba Accord, the schedule and rate of stored water releases for transfer varies based on hydrologic year type and month. The transfer water that YCWA is seeking to sell to EBMUD are releases that cannot be delivered to existing buyers south of the Delta due to south Delta pumping restrictions. In dry years, transfer water for EBMUD would most likely be available outside the south Delta pumping window for transfers (July – September) in early spring or late fall.
- (e) Rate of delivery cannot exceed EBMUD’s dedicated FRWP capacity. Rate of delivery will likely be based on recommended rates for operating the Hayward Intertie.

2.1 Yuba County Water Agency

2.1.1 Background

The YCWA is a Special District created by the California State Legislature in 1959 through the passage of the Yuba County Water Agency Act in order to develop and promote the beneficial use and regulation of the water resources of Yuba County. Yuba County has a population of roughly 75,000. The YCWA Board of Directors consists of the five members of the Yuba County Board of Supervisors and two at-large members, one elected from the area north of the Yuba River and one south of the Yuba River.

In the late 1960s, to reduce the risk of flooding in Yuba County, YCWA financed and built the Yuba River Development Project (Yuba Project). The Yuba Project facilities include New Bullards Bar Dam and Reservoir, several small dams, diversion tunnels, and hydroelectric generating facilities located above Englebright Dam (New Colgate Powerhouse) and below Englebright Dam (Narrows II Powerhouse). Additionally, Pacific Gas and Electric Company (PG&E) owns a hydroelectric facility below Englebright Dam (Narrows I Powerhouse). The powerhouses are capable of generating approximately 397

megawatts of energy. New Bullards Bar Reservoir is the major storage facility for the Yuba Project. The reservoir has a total storage of 966 thousand acre-feet (TAF) and operable capacity of approximately 732 TAF. YCWA delivers approximately 310 TAF of water to local irrigation districts annually. Figure 3 shows the major facilities on the Lower Yuba River.

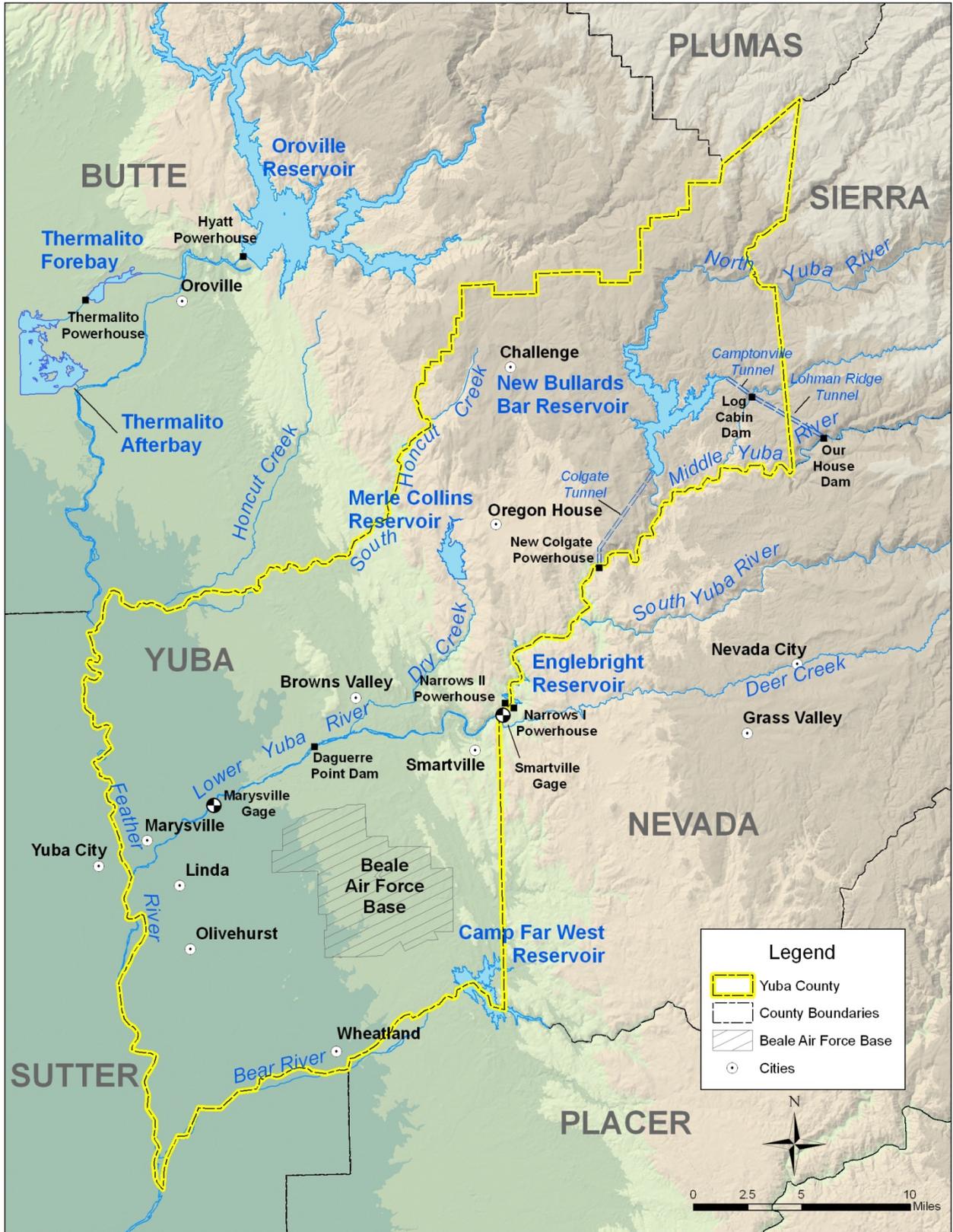
The YCWA service area includes all of Yuba County and the contiguous territories of its Member Units that are outside Yuba County. YCWA currently provides surface water to seven of its eight Member Units: Brophy Water District, Browns Valley Irrigation District, Cordua Irrigation District, Dry Creek Mutual Water Company, Hallwood Irrigation Company, Ramirez Water District, and the South Yuba Water District. YCWA and its eighth Member Unit, Wheatland Water District, are currently constructing a canal to deliver water to farmers within the WWD service area. Delivery of surface water to local farmers reversed a serious groundwater overdraft condition that had occurred particularly in the South Yuba Basin, due to prior groundwater pumping for irrigation.

2.1.2 Source of Supply

YCWA's source of water supply is the Yuba River. The Yuba River is a tributary of the Feather River, which, in turn, is a tributary of the Sacramento River. The Yuba River Basin drains approximately 1,339 square miles of the western Sierra Nevada slope, including portions of Sierra, Placer, Yuba, and Nevada counties. The average annual unimpaired flow of the Yuba River at Smartville is 2.45 million acre-feet (MAF); however a significant portion of this water is diverted out of the watershed and is not available to the lower Yuba River. The annual unimpaired flow has ranged from a maximum of approximately 4.9 MAF in 1986 to a minimum of approximately 370 TAF in 1977.

The Yuba River is one of California's most important rivers because it provides habitat for some of the Central Valley's last wild, native Chinook salmon and steelhead runs. However, hydraulic mining and other destructive mining techniques took a significant toll on the river. Debris from these activities clogged the river, damaged salmon and steelhead spawning beds, and led to later flooding in nearby communities. To stabilize debris and reduce flood risk, the United States Army Corps of Engineers (Corps) constructed Daquerre Point Dam in 1906 and Englebright Dam in 1951, located downstream of Bullards Bar Reservoir. The Corps still owns and is responsible for maintenance of Englebright and Daquerre Point dams today.

Figure 3: YCWA and Major Water Facilities on the Lower Yuba River



2.1.3 Water Rights

YCWA is a major holder of post-1914 appropriative water rights on the Yuba River. YCWA has water rights for consumptive use from the Yuba River under water rights permits 15026 (Application 5632), 15027 (Application 15204), and 15030 (Application 15574). Permit 15026 authorizes the storage of 490,000 AF of water per year from the North Yuba River between October 1 and June 30. Permit 15026 also authorizes the direct diversion of up to 1593 cubic feet per second (cfs) from the North Yuba and Yuba Rivers between September 1 and June 30. The authorized points of diversion and rediversion under Permit 15026 are located at New Bullards Bar Dam and Daguerre Dam. The authorized purposes of use under Permit 15026 are irrigation, industrial, recreation, fish mitigation, and enhancement, and domestic purposes within the place of use.

In July 16, 2003, the State Water Resources Control Board (SWRCB) adopted Revised Water Rights Decision 1644 (RD-1644), which placed conditions on YCWA's water rights for consumptive use under water rights permits 15026, 15027, and 15030, in order to address fishery protection and water rights issues involving the diversion and use of water on the Yuba River.

2.1.4 Yuba Accord

The Lower Yuba River Accord (Yuba Accord) is a collaborative, 17-party agreement that resolves decades of disputes over instream flow issues associated with operation of the Yuba Project in a way that protects and enhances lower Yuba River fisheries, improves water supply reliability, and provides revenues for local flood control and water supply projects. The Yuba Accord was implemented in 2008 following YCWA's certification of a Final Environmental Impact Report (EIR) for the Yuba Accord in 2007 and the issuance by SWRCB of Corrected Water Right Order 2008-14 in 2008, approving the addition of the State Water Project (SWP) and Central Valley Project (CVP) service areas as places of use and the Delta export pumps as points of rediversion to YCWA's water rights through the year 2025.

The Yuba Accord includes three separate but interrelated agreements:

- The **Fisheries Agreement** establishes new variable instream flow levels to benefit wild salmon and steelhead on the lower Yuba River, increasing fish flows by as much as 170 TAF. The Fisheries Agreement also establishes a River Management Team to monitor and evaluate the fisheries and the effectiveness of the Yuba

Accord. The term of the Fisheries Agreement extends to 2016, when the existing Federal Energy Regulatory Commission (FERC) long-term license for the Yuba Project expires.

- The seven **Conjunctive Use Agreements** establish a new comprehensive conjunctive use program that integrates the surface water and groundwater supplies of the local irrigation districts and mutual water companies that YCWA serves in Yuba County. Integration of surface water and groundwater allows YCWA to increase the efficiency of its water management. The term of the Conjunctive Use Agreements extend until 2016, consistent with the term of the Fisheries Agreement.
- The **Water Purchase Agreement** creates a long-term water transfer program under which Yuba River water will be transferred to the environment and SWP and CVP contractors primarily during drought conditions. Up to 200 TAF could be transferred per year. On an annual basis, 60 TAF will be purchased by Department of Water Resources (DWR) for environmental flows for the Delta. In drier years, additional water purchased by DWR is available for purchase by SWP and CVP contractors. The initial terms of the Water Purchase Agreement extend until the expiration of YCWA's FERC license in 2016, consistent with the terms of the Fisheries Agreement and Conjunctive Use Agreements. The Water Purchase Agreement includes provisions for some continued YCWA deliveries of water, and DWR purchase of such water for SWP and CVP contractors through December 31, 2025.
- Revenues generated from implementation of the Water Purchase Agreement are being used by YCWA to fund local flood control and water supply projects and fisheries programs.

2.1.5. Yuba Accord – Freeport Point of Rediversion Project

YCWA, in partnership with EBMUD, is proposing to add the FRWP intake as a point of rediversion to YCWA's water rights. EBMUD would become a back-up buyer for transfer water released under the terms of the Yuba Accord that cannot currently be delivered to existing Yuba Accord buyers pursuant to the Water Purchase Agreement. The proposed project would offer YCWA a broader range of opportunities to transfer water so that they can receive revenues from water purchases to continue to provide the benefits of the Yuba Accord.

Implementation of the Yuba Accord began in 2008, following certification of a Final EIR for the Yuba Accord in 2007 and approval by the SWRCB in 2008 to add the SWP and CVP service areas (EBMUD is a CVP contractor) as places of use and the Delta export pumps

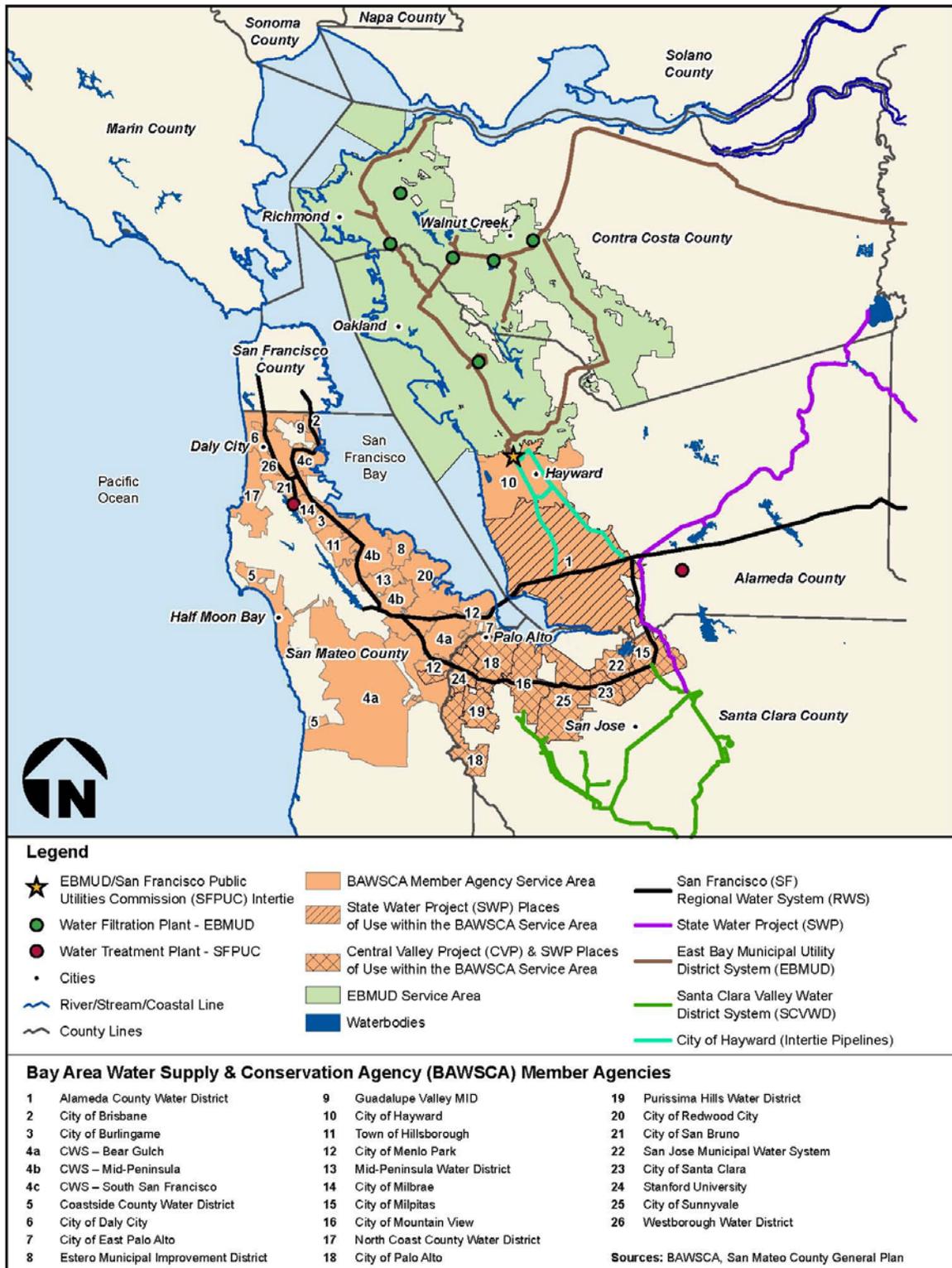
as points of diversion to YCWA's water rights permits through the year 2025. There are times when transfer water that is available for release from the Yuba River cannot be directly diverted at the Delta export facilities, due to either regulatory restrictions or restrictions specific to the mitigation measures of the Yuba Accord EIR. Under these conditions, the SWP attempts to modify operations of Lake Oroville to "back up water" into the Lake Oroville, resulting in a temporary storage of transfer water in Lake Oroville with the intent that it can be transferred at a later time when it can be diverted at the Delta. This operation cannot always be accomplished, and even when it is successful, the transfer water stored in Lake Oroville will sometimes be spilled from storage at a later time when winter runoff fills the reservoir.

Now that the Freeport Project is fully functional, EBMUD is able to receive transfer water from the Sacramento River. The addition of the FRWP intake as a point of rediversion will facilitate transfers of water from YCWA to EBMUD through 2025, which is the same duration of YCWA's current SWRCB approval for transfers under the Yuba Accord. YCWA, in cooperation with EBMUD, is currently preparing an environmental analysis to address specific changes or additions that are necessary under the California Environmental Quality Act (CEQA) to supplement the Yuba Accord EIR for approval of this project.

The proposed project to add the FRWP intake as a point of rediversion requires SWRCB approval. If the SWRCB grants YCWA's petition to add the FRWP intake as a point of rediversion, future transfers to EBMUD (either short-term or long-term) would not require additional SWRCB approval since the SWRCB previously approved adding the CVP service area to YCWA's water rights place of use. YCWA and EBMUD are seeking to receive SWRCB approval and complete the proposed project by the end of 2013.

As shown in Figure 4, several BAWSCA member agencies are either SWP or CVP contractors. A transfer between YCWA and a BAWSCA member agency who is a SWP or CVP contractor would likely not require additional SWRCB approval to add to the approved place of use; at present, BAWSCA does not anticipate structuring a transfer in this manner. Thus petitioning for a short-term addition to the place of use may be necessary. In addition, petitioning the SWRCB to add BAWSCA's entire service area as a place of use in the future would provide added flexibility and could decrease the complexity of agreements and institutional arrangements between BAWSCA and its member agencies to distribute the transfer water. If YCWA supplies water for the pilot water transfer, it is recommended that YCWA, EBMUD, and BAWSCA work cooperatively to determine the best approach to obtain the necessary approvals to implement the Pilot Plan.

Figure 4: BAWSCA Member Agencies



2.1.6 Transfer Method

YCWA has been active in the water transfer market. Beginning in 1987, water appropriated under YCWA's permits has been transferred to other water users in a series of short-term (one year) transfers pursuant to Water Code Section 1725. This water has been transferred to various water and irrigation districts, DWR, the Environmental Water Account (EWA), the United States Bureau of Reclamation (USBR or Reclamation), and the Drought Water Bank.

More recently, YCWA has been transferring water to SWP and CVP contractors under the terms of the Yuba Accord. The transfer method used has been either groundwater substitution² or surface water released from storage (i.e. stored water releases). In 2007, YCWA transferred 125 TAF (all surface water). In 2008, YCWA transferred 166 TAF (117 TAF surface water, 49 TAF groundwater substitution). In 2009, YCWA transferred 180 TAF (91 TAF surface water, 89 TAF groundwater substitution). In 2010, YCWA transferred 143 TAF (76 TAF surface water and 66 TAF groundwater substitution).

The method used to transfer water to EBMUD is anticipated to be stored water releases. EBMUD also anticipates stored water releases being the method used to make transfer water available for the pilot water transfer.

2.1.7 Quantity, Schedule, and Rate of Delivery

The quantity, schedule, and rate of delivery would need to be discussed for both a pilot water transfer and long-term water transfer project with YCWA. Preliminary hydrologic modeling performed for the proposed Yuba Accord – Freeport Point of Rediversion Project indicates that up to 67 TAF of water could potentially be available for transfer to EBMUD and BAWSCA in certain dry years. Initial discussions with YCWA indicated that the EBMUD transfer quantity would be capped at 34 TAF. This is water that is released by YCWA under the terms of the Yuba Accord that currently is likely to be backed up in Lake Oroville because it cannot be pumped to the existing Yuba Accord buyers located south of the Delta.

If BAWSCA and EBMUD commit to undertaking a pilot water transfer, the schedule for moving water as part of the pilot test would most likely be in late fall or early spring of the second year of a drought, once it is anticipated that the FRWP may be operated to deliver

² Groundwater substitution is where the amount of surface water used is reduced and offset with additional groundwater pumping. The reduced amount of surface water used is potentially available for transfer.

water to EBMUD's service area, EBMUD and BAWSCA would approach YCWA to determine whether transfer water is available to sell to a back-up buyer.

Quantities of transfer for the pilot test would need to be discussed with YCWA. The rate of delivery for the transfer water cannot exceed EBMUD's FRWP capacity of 100 million of gallons a day (mgd) and would likely be based on the recommended rate to convey transfer water through the Hayward Intertie. The recommended transfer water rate through the Hayward Intertie is expected to be around 15 – 20 mgd. EBMUD may opt to divert a combination of CVP and transfer water or may opt to divert the full quantity of transfer water over a short period of time to maintain greater optimal rates for operating the FRWP.

2.1.8 Purchase Cost

The Yuba Accord Water Purchase Agreement has different components of water with separate pricing for each component. The pricing for components of water sold to SWP and CVP contractors ranges from \$75 – \$125 per AF for dry year water. The pricing is based on the Sacramento Valley hydrologic index with the cost for water increasing with drier conditions. The voluntary conjunctive use component of the Yuba Accord where YCWA's Member Units can provide transfer water via groundwater substitution appears to be sold at market prices and quantities of transfer water under this component have been sold between \$200 – \$275 per AF during the most recent drought.

It is expected that EBMUD and BAWSCA would negotiate the cost to purchase water from YCWA in the year of the transfer. The price for water would likely depend on the type of hydrologic year (severity of the drought) and YCWA's ability to sell this water to another willing party. For both a pilot water transfer and a long-term water transfer, BAWSCA can expect to pay between \$75 – \$275 per AF for transfer water. This purchase price does not include additional administrative costs to obtain approvals necessary to implement the transfer and wheeling costs to divert the transfer water at the FRWP intake and convey it via EBMUD's facilities to the Hayward Intertie. Wheeling costs will be discussed in TM #5: Recommendations for Pilot Water Transfer that will be developed as part of this study.

2.2 Placer County Water Agency

2.2.1 Background

PCWA serves a population of 150,000 and has a service area encompassing the entire, 1,500-square-mile boundary of Placer County, ranging from the rim of the Sacramento Valley on the west to the Sierra Nevada and Lake Tahoe on the east. PCWA is headquartered in Auburn, the county seat of Placer County, in California's Gold Country (see Figure 5).

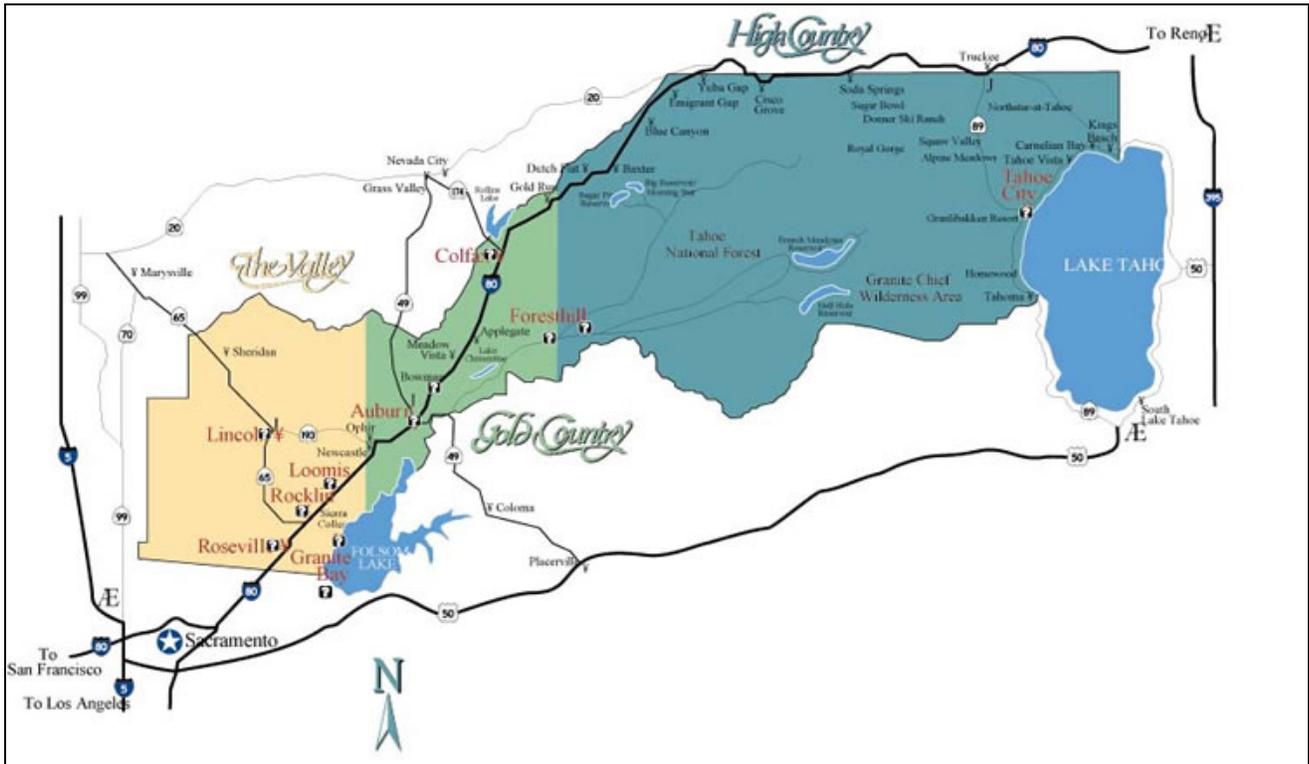
PCWA was created under its own state legislation entitled the "Placer County Water Agency Act," adopted in 1957 by the California State Legislature. The organization is a public agency governed by an elected five-member Board of Directors. Board members are elected to four-year terms by voters residing within five geographical districts of Placer County. Boundaries of each district coincide with Placer County supervisorial districts.

The organization carries out a broad range of responsibilities including water resource planning and management, retail and wholesale supply of irrigation water and drinking water and production of hydroelectric energy. PCWA responsibilities and activities are organized into three divisions, Agency Wide, Power System and Water System.

- The **Agency Wide Division** is responsible for general administration and water resource planning and management activities within Placer County and in the surrounding region. PCWA is active in surface water and groundwater issues. Watershed areas in which PCWA is involved include the American, Yuba and Bear Rivers, the Lake Tahoe/Truckee River system, the Central Valley Project and Bay/Delta system.
- The **PCWA Power System** operates the Middle Fork American River Project (MFP), which was completed in 1967 and includes two major reservoirs, seven dams, five hydroelectric power plants, 21 miles of tunnels and related facilities. The MFP also includes public recreational facilities at PCWA mountain reservoirs. PCWA has a power generation capacity of 244 megawatts and in the average year produces enough clean, hydroelectric energy to power more than 100,000 homes. PCWA's power output is sold to PG&E.
- The **Water System Division** supplies irrigation and treated drinking water in four service zones in central and western Placer County, located along the Interstate 80 corridor between Roseville and Alta; and one service zone in the Martis Valley, south of Truckee, in eastern Placer County. PCWA operates an extensive raw water distribution system that includes 165 miles of canals, ditches, flumes and

several small reservoirs. A significant amount of PCWA raw water irrigates agricultural land and golf courses. Drinking water is produced through a network of eight water treatment plants.

Figure 5: General Map of Placer County Water Agency



2.2.2 Source of Supply

PCWA owns and operates the MFP (located within the upper American River watershed) as shown in Figure 6. The source of supply for PCWA’s water transfers is from the MFP. The MFP consists of the French Meadows and Hell Hole Reservoirs, with a combined storage capacity of approximately 342 TAF, and associated canals, pipelines, powerhouses, and regulated reservoirs. French Meadows Reservoir is located on the Middle Fork American River and Hell Hole Reservoir is located on the Rubicon River (which is a tributary to the Middle Fork American River). PCWA’s FERC licenses require PCWA to maintain minimum instream flows to the Middle Fork American River and Rubicon River (below both reservoirs) based on the season and water year type. Water stored in French Meadows Reservoirs may be pumped via underground pipeline to Hell Hole Reservoir and, during normal operations, PCWA uses Hell Hole Reservoir as the

release point for most of the water it uses for power generation and its authorized consumptive uses.

PCWA also receives water from a contract with PG&E for water from the Drum-Spaulding Project (pre-1914). The source of this PG&E water contract is the Yuba and Bear Rivers and the maximum annual contract amount is 125,400 AF. PCWA also has an M&I water service contract with Reclamation for 35 TAF from the American River but has never taken delivery of water under this contract to date. PCWA's CVP contract with Reclamation includes a term stating that Reclamation will support changing the point of diversion for the contract supplies from the American River to the Sacramento River.

The majority of the water PCWA currently uses to meet its customer demands is purchased from PG&E and supplied by gravity. Because of geography, PCWA must pump its American River water rights and CVP water from the American River near the Auburn Dam site. Due to high pumping costs, PCWA first maximizes use of its PG&E contract to meet customer demands.

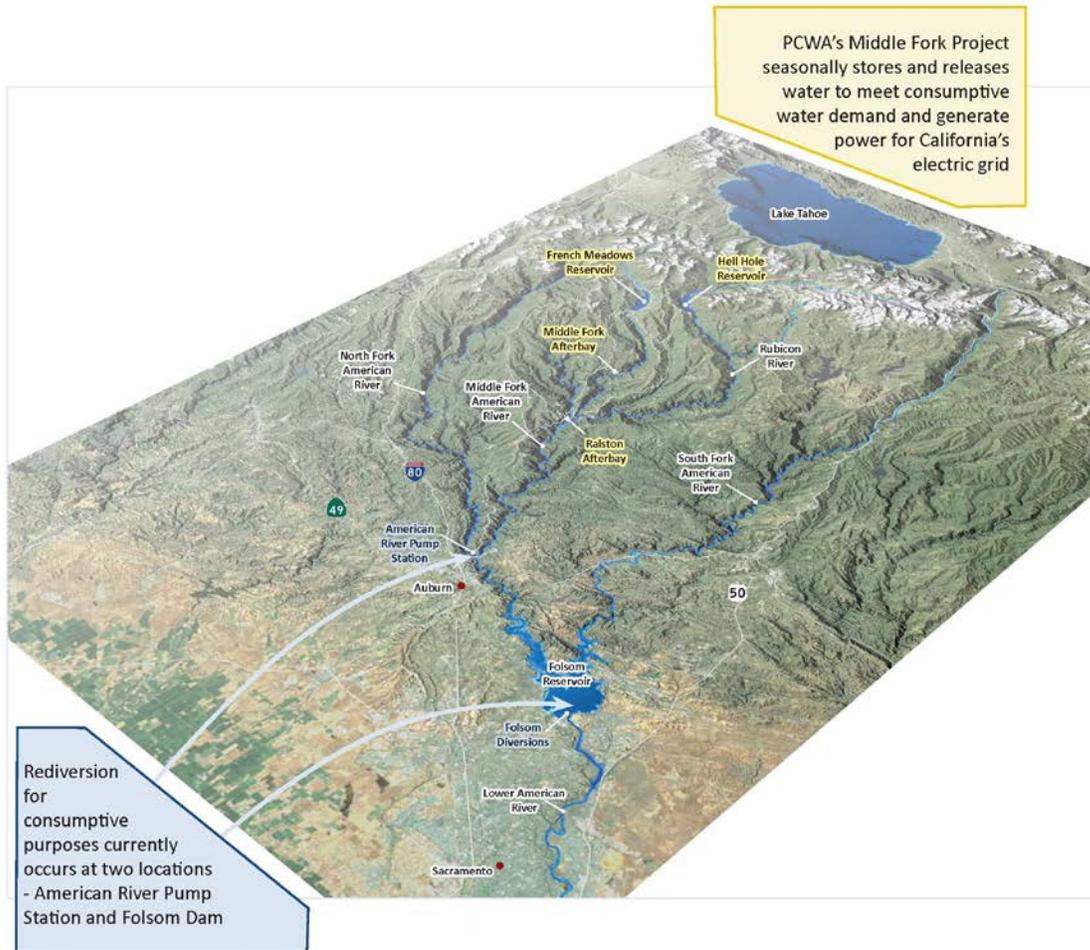
2.2.3 MFP Water Rights

Permits 13856 and 13858 (Applications 18085 and 18087), issued on January 10, 1963, authorize PCWA to divert to storage up to a maximum of 133,700 AF per year in French Meadows Reservoir and up to 208,400 AF per year in Hell Hole Reservoir. These permits also authorize the direct diversion of up to a total of 2,205 cfs between November 1 of each year and July 1 of the succeeding year. The authorized purposes of use under Permits 13856 and 13858 are irrigation, municipal, industrial, recreation, and incidental domestic and the place of use is shown on PCWA's map dated July 31, 1996.

PCWA also holds Permits 13855 and 13857 (Applications 18084 and 18086), issued on January 10, 1963. These permits authorized similar direct diversion and storage totals and locations as Permits 13856 and 13858; however, these permits are for non-consumptive uses (i.e. power generation and recreation). Accordingly, Permits 13855 and 13857 would not be included in any petitions for temporary change to implement a water transfer.

Figure 6: Location of PCWA’s Middle Fork Project

(Reference: American River Water Rights Extension Preliminary Scoping Document, February 2013)



In 1962, PCWA and the USBR reached an agreement to resolve water rights disputes between PCWA's proposed MFP and Reclamation’s proposed Auburn Dam. The agreement with Reclamation limits PCWA’s consumptive use of water from its MFP to 120,000 AFA within Placer County. PCWA estimates that at buildout, 35,500 AFA would be diverted from the MFP at PCWA’s American River Pump Station to directly serve the needs of PCWA customers. PCWA also has agreements to sell MFP water to Roseville (30,000 AFA), San Juan Water District (25,000 AFA), and Sacramento Suburban Water District (29,000 AFA). The contracts vary in water supply reliability during dry years with water deliveries to Sacramento Suburban Water District limited to wet and normal hydrologic years and no provision for supplies to SSWD in dry years.

In order to accomplish a one-year pilot water transfer with EBMUD and BAWSCA, PCWA would need to petition the SWRCB to add the FRWP intake as a point of rediversion and

EBMUD and BAWSCA's service areas as places of use under Permits 13856 and 13858 for the duration of the transfer. The transfer water would be released by PCWA and temporarily stored in Folsom Reservoir, owned and operated by Reclamation. As discussed in Section 3.2.2, to accomplish this transfer EBMUD or BAWSCA would need to execute a Warren Act contract with the Reclamation to convey the water through Folsom Reservoir and the Folsom South Canal to EBMUD and BAWSCA's service areas. PCWA would also need to execute a refill agreement with Reclamation to protect the CVP and SWP from injury that could result from PCWA's refill of reservoir space made available by the pilot water transfer.

In 2008, PCWA submitted a petition to the SWRCB requesting an extension of time for its MFP water rights permits to fully put the 120,000 AFA authorized for use under these permits to beneficial use. PCWA is currently initiating work on draft environment documents to support its MFP water rights extension project and include the FRWP intake as a point of diversion. With the current approval timeline of end of 2016, EBMUD's service area will be added to the place of use. EBMUD and PCWA currently anticipate SWRCB approval for these efforts by end of 2016. Additionally, this project will review the potential environmental impacts of PCWA's full utilization of its 120,000 AFA of MFP water. PCWA has indicated that it would prefer to complete its MFP water rights extension project and receive SWRCB approval before entering into a long-term agreement to sell transfer water.

2.2.4 Water Forum Agreement

PCWA is a signatory to the Sacramento Water Forum Agreement (WFA). The WFA establishes the co-equal goals of preserving the Lower American River and providing a reliable and safe water supply for the region. As part of the WFA, PCWA has agreed to release additional water from its MFP reservoirs in dry years to benefit the Lower American River. This obligation to make environmental releases is conditioned upon PCWA's ability find a willing buyer to purchase the water downstream of the confluence of the Sacramento and American Rivers.

The quantity of environmental releases that would be available for purchase is determined based on flow conditions and use within Placer County. Based on operational modeling of the historical hydrology of the American River and incorporating certain expectations that use within Placer County will increase, the range of additional water that would be released by PCWA and available for purchase by a transfer partner would vary from 0 in non-drought years to a maximum of 47 TAF in critically dry years. PCWA modeling results show that environmental releases would be required in approximately 20% of all

hydrologic years, and the schedule and quantity of PCWA's projected environmental release under the WFA matches well with EBMUD's projected need for supplemental water at buildout.

Under the WFA, PCWA is currently required to release a maximum of approximately 4,000 AF in a critically dry year, but as its deliveries increase over time, the release requirement will also increase. Despite current usage and release conditions, higher quantities of water may provide benefits to the Lower American River, provide revenue benefits for PCWA, and promote water supply reliability for transfer partners in other regions of the state.

2.2.5 EBMUD Preliminary Long-term Transfer Discussions with PCWA

EBMUD and PCWA are currently in the very early stages of discussions on the potential for a long-term water transfer arrangement under which EBMUD would purchase water from PCWA in dry years, consistent with the WFA. A proposed partnership between PCWA and EBMUD would allow PCWA to meet its WFA obligations to release additional water to the American River in dry years for purchase by a water transfer partner. The additional water releases would improve conditions on the Lower American River in dry years and provide increased water supply reliability for EBMUD's customers in dry years. A long-term water transfer project with PCWA would involve many steps and is not expected to be implemented until 2016, after approval by the SWRCB of PCWA's MFP water rights permit extension.

PCWA and EBMUD have discussed establishing a minimum transfer quantity that would be released and purchased by EBMUD as part of a long-term agreement. Because EBMUD's customer demands are presently lower than the levels that EBMUD was projecting prior to the economic downturn that began in 2008, this minimum quantity may exceed EBMUD's needs in the short term. Thus, EBMUD is exploring the possibility of partnering with other agencies to buy water from PCWA in the near-term if EBMUD does not need the transfer water. PCWA has indicated that it is receptive to an arrangement that would contemplate other users of transfer water so that EBMUD can minimize financial risks and can maximize the benefits of the transaction.

2.2.6 Transfer Method

PCWA has been successfully transferring water under Water Code Section 1725 since 2000. The method used to make transfer water available for either a pilot water transfer or

long-term water transfer project would be through releases of stored water from the MFP. Absent the transfer, the water would remain in storage in PCWA's MFP.

As discussed further in TM #4, all PCWA water transfers require a refill agreement with Reclamation to make sure that Reclamation is not harmed by the transfer (i.e. the water used to refill the MFP is not water that would otherwise have been captured in Folsom Reservoir). The refill agreement includes provisions for the timing of when PCWA can begin to refill the MFP. In general, Folsom Reservoir must be making flood control releases before PCWA can refill the volume of empty storage made available by transferring water.

2.2.7 Quantity, Schedule, and Rate of Delivery

The quantity, schedule, and rate of delivery would need to be discussed with PCWA for both a pilot water transfer and long-term water transfer project. At buildout, PCWA anticipates releasing up to 47 TAF in dry years, consistent with its commitments in the WFA. EBMUD would need to have discussions with PCWA to explore their willingness to supply a small quantity of transfer water for the pilot test.

If BAWSCA and EBMUD commit to performing a pilot water transfer, the schedule for conducting the pilot test would most likely occur in late fall once the FRWP is operating and delivering water to EBMUD's service area. Late summer and fall is also when PCWA prefers to make releases to maximize power generation. The rate of delivery for the transfer water cannot exceed EBMUD's FRWP capacity of 100 mgd and would likely be based on the recommended rate for conveying transfer water through the Hayward Intertie. The recommended transfer water rate through the Hayward Intertie is expected to be around 15 – 20 mgd. EBMUD may opt to divert a combination of CVP and transfer water or may opt to divert the full quantity of transfer water over a short period of time to maintain greater optimal rates for operating the FRWP.

2.2.8 Purchase Cost

PCWA has historically sold dry year water to other agencies in the range of \$75 – \$275/AF. In 2001, PCWA sold 20 TAF of water to the EWA at \$75/AF. In 2008, PCWA sold 20 TAF to Westlands Water District (Westlands) at a price of \$125/AF and in 2009, PCWA sold 20 TAF to the San Diego County Water Authority at a price of \$275/AF (price set by DWR for the Drought Water Bank). In 2012, PCWA and Westlands entered into an option agreement for Westlands to purchase 20 TAF at \$175/AF but the option was never exercised due to changed hydrologic conditions.

It is expected that EBMUD and BAWSCA would negotiate the cost to purchase water from PCWA in the year of the pilot water transfer. The price for water would likely depend on the type of hydrologic year (severity of the drought) and demand for transfer water. For both a pilot water transfer and a long-term water transfer, BAWSCA can expect to pay between \$75 – \$275 for the purchase price for transfer water. This purchase price does not include additional administrative costs to obtain approvals necessary to implement the transfer and wheeling costs to divert the transfer water at the FRWP intake and convey it via EBMUD’s facilities to the Hayward Intertie. Wheeling costs will be discussed in TM #5: Recommendations for Pilot Water Transfer that will be developed as part of this study.

Section 3: Recommendations

A water transfer to BAWSCA would involve purchasing water from a willing seller, diverting the water using the FRWP intake, conveying the water through the FRWP facilities and EBMUD’s raw water and treated water distribution system, and delivering the transfer water to BAWSCA via the Hayward Intertie.

Outreach to YCWA and PCWA should be performed to determine their willingness to participate in the pilot water transfer. Key terms, including potential minimum quantities, costs, and schedule for delivering water should be discussed to help EBMUD and BAWSCA determine the likely seller for the pilot water transfer. The selection of a seller for the pilot test would not preclude the potential for a different seller or multiple sellers for a long-term transfer arrangement. The seller’s input will be critical for developing a schedule for implementing the pilot water transfer that will be further discussed in TM #5.

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ATTACHMENT C

- Technical Memorandum #3 - Ability to Convey Transfer Water to BAWSCA
- Technical Memorandum #3A - Summary of Considerations for Conveying Water through the Hayward Intertie to the BAWSCA Service Area

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*TECHNICAL MEMORANDUM #3 - ABILITY TO CONVEY
TRANSFER WATER TO BAWSCA*

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Technical Memorandum #3

Ability to Convey Transfer Water to BAWSCA

March 29, 2013, revised September 19, 2013

Section 1: Introduction

The East Bay Municipal Utility District (EBMUD or “District”) and the Bay Area Water Supply and Conservation Agency (BAWSCA) are developing a Short-term Pilot Water Transfer Plan (Pilot

Plan) to evaluate the feasibility of partnering on long-term water transfer projects to improve future water supply reliability for the respective agencies. EBMUD and BAWSCA have agreed that jointly conducting a one-year¹, pilot water transfer with a willing seller would provide important information needed to evaluate the costs and benefits of a long-term partnership.

In this TM:

1. Introduction
2. Key Infrastructure
3. Operation During a Pilot Water Transfer
4. Long-term Water Transfer Issues

Technical Memorandum (TM) #3 describes facilities that would be used to transport transfer water to BAWSCA and evaluates capacity and operational limitations for each component of the conveyance system. The scope of this TM is from the Sacramento River at Freeport to the intertie connecting EBMUD’s and the City of Hayward’s treated water distribution systems (Hayward Intertie). Facilities that would be utilized to convey water further to BAWSCA are addressed in TM #3A, prepared by BAWSCA.

Section 2: Key Infrastructure

This section describes the features of facilities that would be utilized to convey transfer water to the City of Hayward, a BAWSCA member. An overview of the path that the water would take is shown in Figure 1.

2.1 Freeport Project Facilities

The Freeport Regional Water Project (“FRWP” or “Freeport Project”), completed in 2011, would be used to divert transfer water from the Sacramento River near Freeport and transport it to EBMUD’s Mokelumne Aqueducts in San Joaquin County. The FRWP consists of pipelines, canals and pumping plants, shown in Figure 2 and described below.

¹ The term “one-year transfer” is an industry term referring to a short-term water transfer that is completed within a one-year time period.

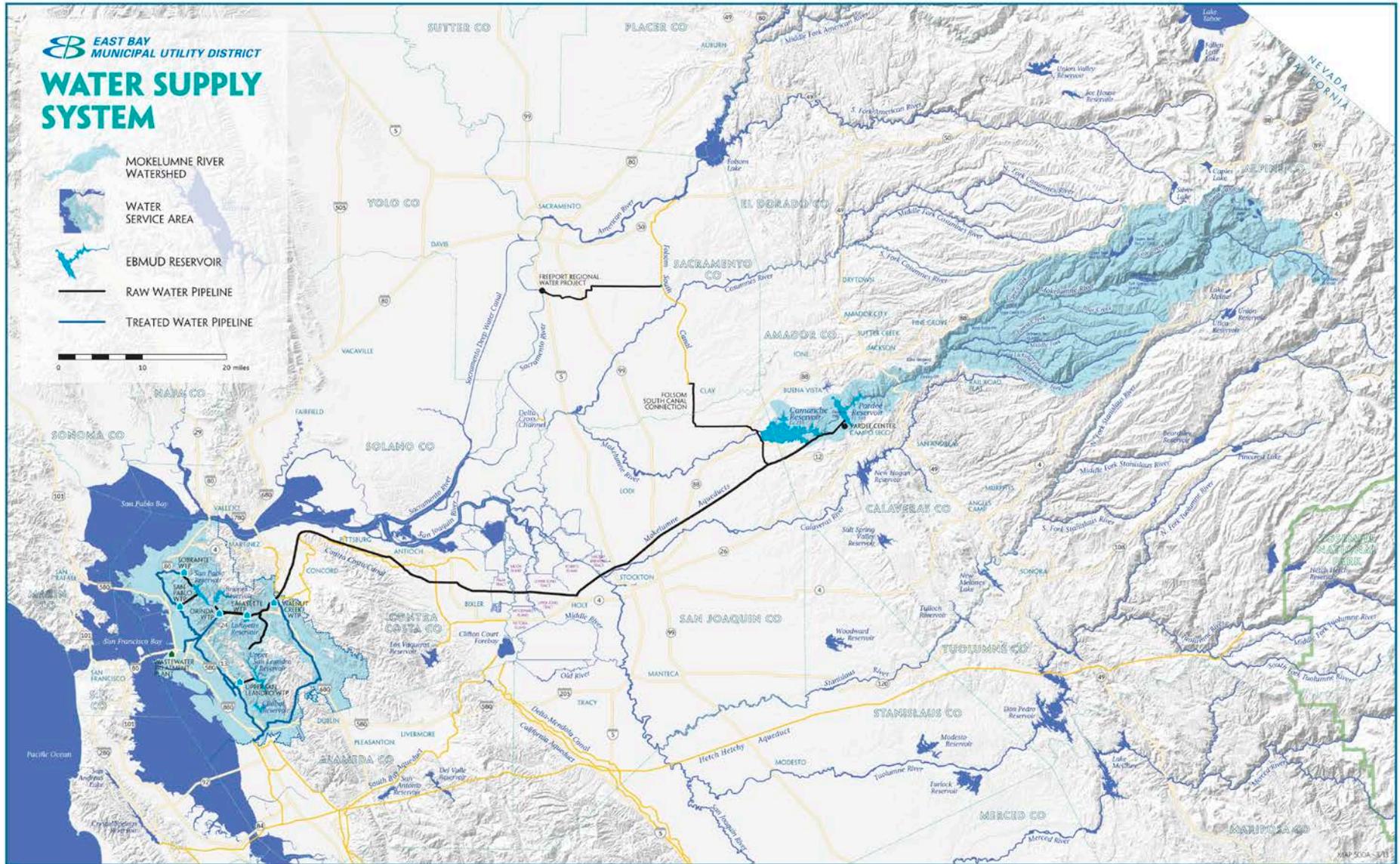


Figure 1. Map of EBMUD Water Supply System

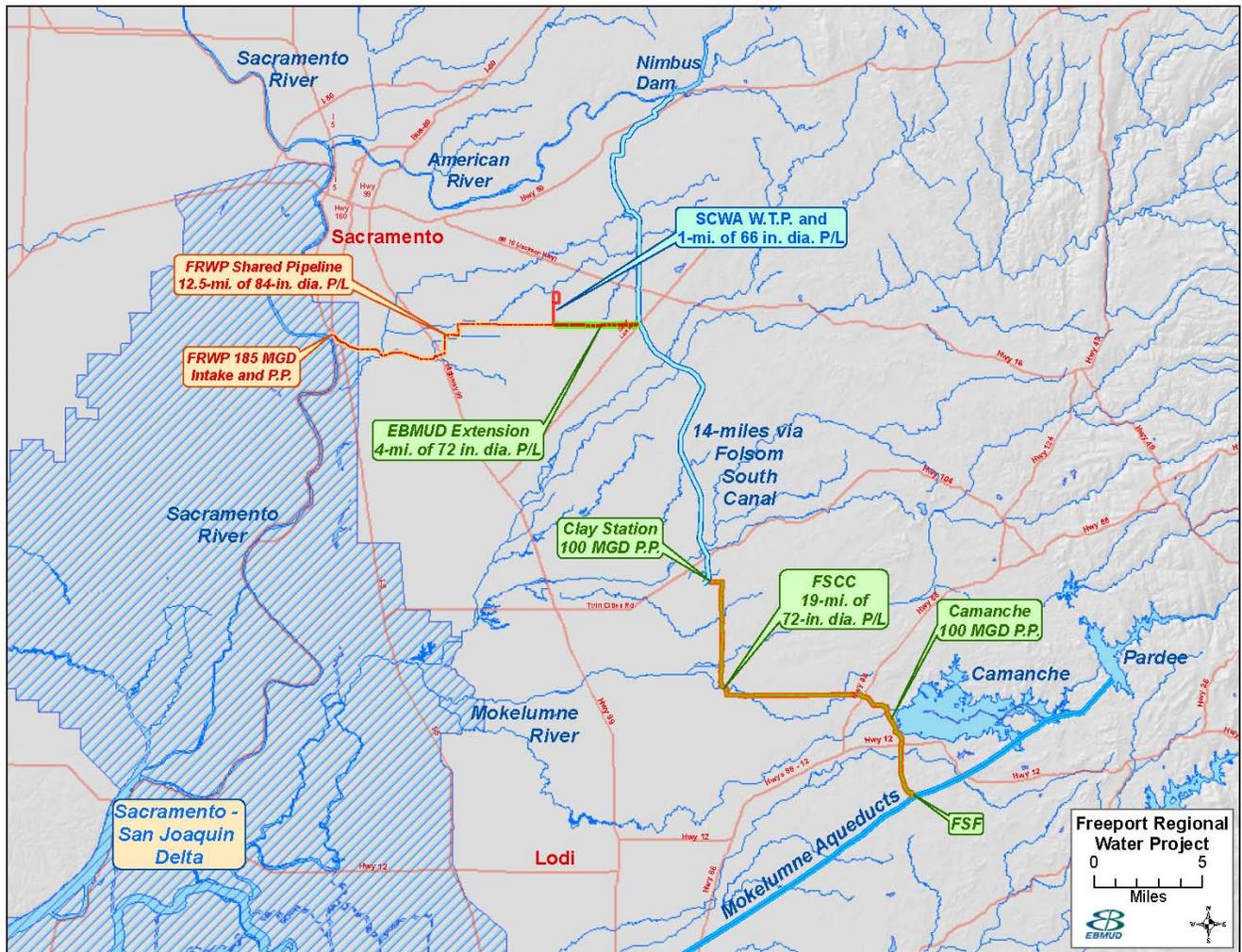


Figure 2. Map of Freeport Regional Water Supply Project

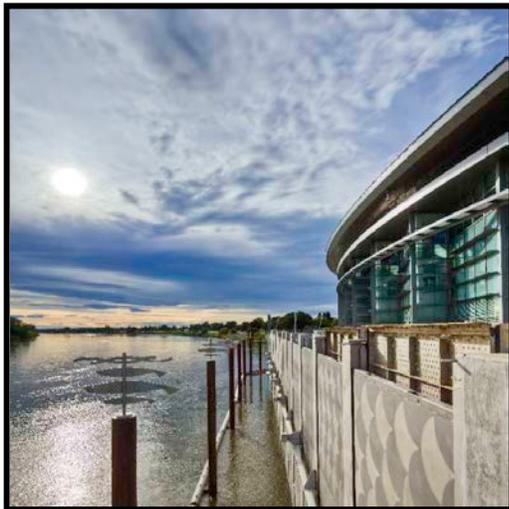
2.1.1 FRWA Facilities

The intake on the Sacramento River and the first 12.5 miles of pipeline are owned by the Freeport Regional Water Authority, a Joint Powers Authority whose members are EBMUD and the Sacramento County Water Agency (SCWA). FRWA facilities are operated and maintained by SCWA, with costs shared between the FRWA member agencies in accordance with an Operations Agreement.

FRWA Intake. The intake is located on the eastern bank of the Sacramento River, at the southern boundary of the city of Sacramento, near the town of Freeport. This location is within the legal boundary of the Sacramento-San Joaquin Delta since the river there is under tidal influence. However, the source of all water in the river is upstream. To protect the quality of the water diverted at the FRWA Intake, the facility is located 1 1/3 miles upstream of the outfall for the Sacramento Regional Wastewater Treatment Plant.

The FRWA Intake has a capacity of 185 MGD. EBMUD's allocated share of that capacity is 100 MGD, and SCWA is allocated the remaining 85 MGD of capacity. EBMUD plans to use the intake only during dry years, estimated to occur in approximately 3 out of 10 years, and immediately afterward to refill storage. EBMUD may also take water from the Sacramento River with approval from USBR following a catastrophic event or in an emergency. SCWA uses the FRWA Intake in all years to supply its Vineyard Surface Water Treatment Plant. The intake has eight identical raw water pumps and can deliver any flow rate between 15 MGD and 185 MGD.

FRWA Joint Pipeline. Water pumped at the FRWA Intake is transported 12.3 miles eastward in an 84-inch-diameter buried cement-mortar-lined steel pipeline. At the end of this pipeline, it branches into a 66-inch-diameter pipeline which travels north to SCWA's water treatment plant and then transitions to a 72-inch-diameter pipeline, the Gerber Pipeline, which continues eastward to the Folsom South Canal.



FRWA Intake



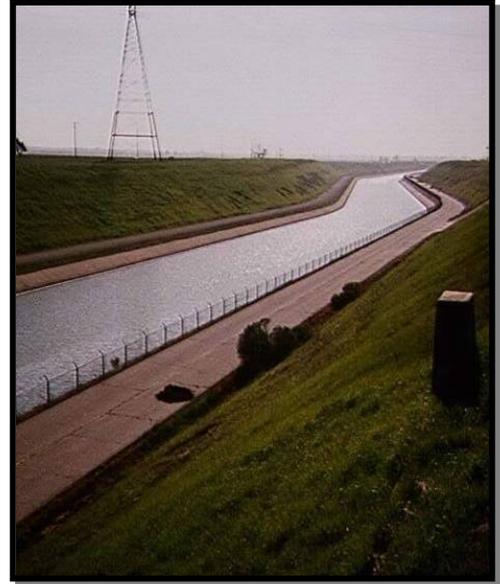
FRWA Intake Pumps

2.1.2 Gerber Pipeline

This 72-inch-diameter buried pipeline, also known as the EBMUD Extension Pipeline, carries water 4 miles further east to a terminal weir structure, discharging into the Folsom South Canal. The Gerber Pipeline is owned and operated by EBMUD.

2.1.3 Folsom South Canal

The Folsom South Canal was built in the 1970s to convey water from Lake Natomas on the American River south into San Joaquin County. Construction of the canal, which is owned and operated by the US Bureau of Reclamation, was suspended when plans to build Auburn Dam were tabled and the canal terminates after 26 miles.



Folsom South Canal

The Gerber Pipeline intersects the Folsom South Canal near its midpoint. Freeport Project water entering the canal mixes with American River water and flows south 14 miles to near the terminus of the canal, where it is diverted by EBMUD. The only other user of the canal along this stretch is the Sacramento Municipal Utility District which takes delivery of water in the canal for cooling at its Cosumnes Power Plant.

2.1.4 Folsom South Canal Connection

The Folsom South Canal Connection (FSCC), owned and operated by EBMUD, is comprised of two nearly identical pumping plants (Clay Station and Camanche) and 19 miles of buried 72-inch-diameter cement-mortar-lined steel pipeline which connect to the Mokelumne Aqueducts. While each of the series pumping plants has a design operating range of 15 to 100 MGD, they generally will be operated at a flow rate between 50 and 90 MGD.



Clay Station Pumping Plant

2.2 EBMUD Raw Water System

EBMUD’s raw water system links Pardee Reservoir on the Mokelumne River with EBMUD’s terminal reservoirs and water treatment plants in the East Bay. The system consists of pipelines, pumping plants and reservoirs.

2.2.1 Mokelumne Aqueducts

The aqueducts consist of three pipelines that originate at the outlet of Pardee Tunnel in San Joaquin County and terminate 82 miles to the west at Walnut Creek within the District’s service area. The aqueducts are buried for most of their length except for 10.6 miles where they cross the unstable soils of the Delta. Key data for each of the aqueducts is summarized in Table 1.

Table 1. Mokelumne Aqueducts Summary

| Mokelumne Aqueduct | Year Placed in Service | Diameter (inches) | Construction Materials | Maximum Gravity Flow Capacity (MGD) | Maximum Pumped Flow Capacity (MGD) |
|--------------------|------------------------|-------------------|---|-------------------------------------|------------------------------------|
| #1 | 1929 | 65 | Riveted and welded steel pipeline with coal-tar enamel lining and coating | 41 | 66 |
| #2 | 1949 | 67 | Primarily steel with cement mortar lining | 54 | 87 |
| #3 | 1963 | 87 | Mortar-lined welded steel | 107 | 172 |



Mokelumne Aqueducts as they cross the Delta

2.2.2 Walnut Creek Pumping Plants

Each of the Mokelumne Aqueducts passes through a dedicated pumping plant, located near its western end, in Walnut Creek. These pumping plants provide the ability to augment the gravity flow rate of their respective aqueduct. Most of the year the Mokelumne Aqueducts operate under gravity flow mode. The Walnut Creek pumps are operated during periods of peak demand, or to support outages of individual aqueducts.

2.2.3 Lafayette Aqueducts

Mokelumne Aqueducts #1 and #2 join west of their respective Walnut Creek pumping plant and the water within them continues westward to Orinda in a 108"-diameter buried pipeline, Lafayette Aqueduct #1. Parallel to this aqueduct is Lafayette Aqueduct #2, which is a continuation of Mokelumne Aqueduct #3. The Lafayette Aqueducts connect directly to EBMUD's three inline filtration plants (Walnut Creek, Lafayette, and Orinda). They also can deliver water to two of EBMUD's terminal reservoirs: San Pablo Reservoir via Wildcat Creek, and Upper San Leandro (USL) Reservoir via the Moraga Aqueduct and Moraga Creek.

2.2.4 Moraga Aqueduct and Pumping Plant

To transport raw water from the Lafayette Aqueducts into USL Reservoir requires use of the Moraga Pumping Plant and the Moraga Aqueduct. Maximum allowable flow through this system, determined by the capacity of the energy dissipater at the terminus of the aqueduct, is approximately 70 MGD. During wet and normal years, little if any Mokelumne River water is routed to USL Reservoir, due to the energy cost for pumping. However, during dry years when local runoff into this reservoir is low, and particularly when Sacramento River water is utilized, the Moraga Aqueduct system will be operated to replenish USL Reservoir.

2.2.5 Terminal Reservoirs

There are five terminal reservoirs in the EBMUD service area that are used to capture local runoff and to provide equalization and emergency storage. Three of the terminal reservoirs supply water treatment plants: San Pablo Reservoir supplies Sobrante Water Treatment Plant, USL Reservoir supplies USL Water Treatment Plant, and Briones Reservoir can supply Orinda Filter Plant as well as add water to San Pablo Reservoir.

2.3 EBMUD Treated Water System

Raw water is treated before delivering it to customers via EBMUD's distribution system. For the purposes of this memorandum, the following description will focus on the facilities related to wheeling water to BAWSCA.

2.3.1 Treatment Plants

EBMUD has five water treatment plants within its service district. Three of these plants; Orinda, Walnut Creek and Lafayette; use the inline filtration process that is only permitted by the Department of Public Health for treatment of Mokelumne River water. Consequently the inline filtration plants are supplied directly from the Mokelumne and Lafayette Aqueducts. The two other treatment plants, USL and Sobrante, are supplied by terminal reservoirs which receive runoff from developed areas. Therefore these two treatment plants provide full conventional treatment, which is more expensive to operate than inline filtration.

Conventional treatment is also appropriate for Sacramento River water. Therefore, all Sacramento River water delivered to EBMUD through the Freeport Project will be routed to USL and Sobrante water treatment plants, at least in the short term. When greater customer demands require Freeport Project water deliveries that exceed the capacity of these treatment plants and the portion of the district that they supply EBMUD plans to

either construct a pretreatment plant adjacent to Camanche Pumping Plant, or upgrade some of the inline filtration plants to allow treatment of blended Mokelumne River and Sacramento River water.

2.3.2 Distribution System

EBMUD's treated water distribution system servicing its 1.3 million customers includes approximately 4,100 miles of distribution pipe, 160 distribution reservoirs and 124 pressure zones. As shown in Figure 3, most of the system covers the plain just east of the San Francisco Bay and Castro Valley. There also is coverage for the Walnut Creek and San Ramon Valleys, as well as a linking corridor between Orinda and Walnut Creek.

In 2003, EBMUD added the 11-mile-long Southern Loop Pipeline which provides a link between Castro Valley and the San Ramon Valley. The Southern Loop is intended for use primarily in emergencies, but when placed into service it has the capacity to supply Castro Valley and the San Leandro area with up to 30 MGD of treated water from San Ramon. This mode of operation requires considerable pumping of water south from Walnut Creek.

2.4 Hayward Intertie

(Described in TM #3A)

2.5 Connection to the San Francisco Regional Water System

(Described in TM #3A)

Section 3: Operation During a Pilot Transfer

This section describes how the facilities described in Section 2 would likely be operated to wheel water from the FRWA Intake on the Sacramento River, through EBMUD's raw water and treated water system, and on to BAWSCA via the Hayward Intertie, the City of Hayward's distribution system, and potentially into the San Francisco Regional Water System.

3.1 Test Timing

The pilot transfer would be conducted during a dry year when EBMUD is utilizing the Freeport Project. While it is technically feasible to conduct the pilot transfer in another year type, the cost of the pilot would be substantially higher to include the full cost for startup and shutdown of the Freeport Project facilities and reconfiguration of the Mokelumne Aqueducts.

Current plans are that in the first year of a drought EBMUD would begin taking delivery of water from the Freeport Project no earlier than July 1. This provides the time necessary to confirm a drought condition and to ready the conveyance facilities. In the subsequent consecutive years of a drought, EBMUD may begin taking delivery of its CVP water as early as March 1, the beginning of the CVP contract year. In the midst of a severe drought, deliveries of transfer water via the Freeport Project might occur even earlier.

3.2 Water Routing

Current plans are that all Sacramento River water received by EBMUD will be conveyed via Mokelumne Aqueducts No. 1 and No. 2 and Lafayette Aqueduct No. 1 to USL Reservoir and to San Pablo Reservoir for treatment at EBMUD's conventional treatment plants, USL and Sobrante, respectively. During dry years when EBMUD utilizes the Freeport Project, the southwest portion of EBMUD's service district adjacent to the Hayward Intertie will be served by USL Water Treatment Plant. Therefore, it can be assumed that all water wheeled to BAWSCA will be pumped into USL Reservoir using Moraga Pumping Plant and treated at USL Water Treatment Plant.

While it is possible to supply water to the vicinity of the Hayward Intertie using the Southern Loop Pipeline, this mode of operation is likely only to be used during emergencies. Even if the Southern Loop Pipeline were operated during the pilot transfer to convey water from the San Ramon Valley to the west, all Sacramento River water placed in USL Reservoir during the pilot transfer will require pumping at Moraga Pumping Plant and treatment at the USL plant. Therefore the incremental cost for these operations is directly associated with the pilot water transfer.

3.3 Delivery Rate

To minimize costs, simplify operation, and reduce variations in water quality during the pilot transfer, the delivery rate through the Hayward Intertie is assumed to occur at a constant rate approximately equal to the anticipated average demand of the City of Hayward at the time. For the purposes of this memorandum, it is assumed that flow through the Hayward Intertie will be at a constant rate of 15 MGD, which delivers 46.1 acre-feet per day. Once the actual transfer dates are determined, a firm transfer rate will set mutually by EBMUD, BAWSCA, SFPUC and the City of Hayward.

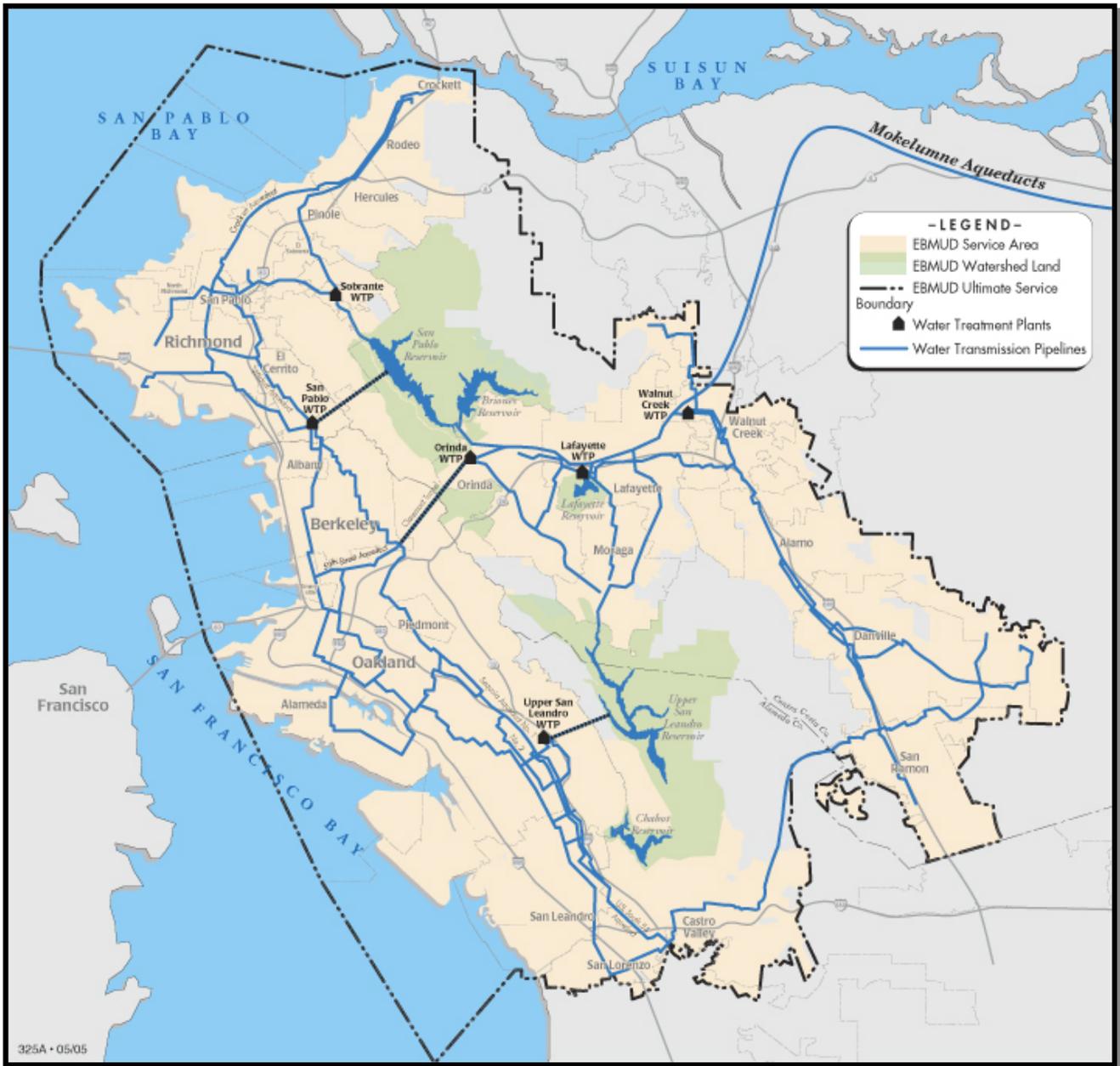


Figure 3. Map of EBMUD Treated Water Transmission System

3.4 Hydraulic Constraints

The hydraulic capacity of each component of the conveyance system between the Sacramento River and the Hayward Intertie is summarized in Table 2. Assuming there are no unexpected outages, there are no hydraulic capacity limitations that would prevent a delivery rate of 15 MGD during the pilot transfer.

3.5 Transfer Volume

As discussed in TM #2, the source of water for the pilot transfer will most likely be a water transfer diverted from the Sacramento River at the FRWA Intake. It is expected that the supplier of the transfer water will require a minimum transfer volume to justify the time and expense of processing the transfer. For the purposes of this memorandum it is assumed that the minimum transfer volume for the pilot transfer is 1,000 acre-feet.

3.6 Test Duration

Combining the assumed delivery rate, 15 MGD, and minimum transfer volume, 1,000 acre-feet, results in minimum test duration of 21.7 days. Adjustments to either of these assumed parameters will change the test duration proportionally.

Although the pilot transfer is described as a “one-year transfer,” that term is simply to differentiate it from a “long-term transfer” that requires a more involved permitting process.

3.7 Water Quality

The quality of the water delivered to BAWSCA through the Hayward Intertie during the pilot transfer will be determined by the original source water quality, changes that may occur during conveyance and storage of raw water, treatment received, and changes that may occur during conveyance of treated water. At this time there is no direct experience that can be used to know precisely what the quality of water will be at the Hayward Intertie when the Freeport Project is in operation. Therefore this section must discuss this issue in general terms.

Table 2. Hydraulic Capacity of Facilities Utilized to Wheel Water to BAWSCA

| Conveyance section | Hydraulic capacity, MGD | Comments |
|--|-------------------------|---|
| FRWA Intake and Joint Pipeline | 185 | EBMUD's allocated FRWA capacity is 100 MGD. Minimum pumping rate is 15 MGD. |
| Gerber Pipeline | 100 | Design capacity |
| Folsom South Canal | Virtually unlimited | Canal designed for 2,300 MGD (3,500 cfs) |
| Folsom South Canal Connection | 100 | Design capacity. Design minimum pumping rate is 15 MGD but the preferred operating minimum rate is 50 MGD. |
| Mokelumne Aqueducts (for Freeport Project water) | 90 | Aqueducts 1 and 2 dedicated to convey Freeport Project water. Capacity limited to 90 MGD to avoid over-pressurizing the pipelines at their low point in the Delta. Pumping of these aqueducts at Walnut Creek can increase capacity. |
| Lafayette Aqueduct No. 1 | 153 | Determined by the pumped capacity of Mokelumne Aqueducts No. 1 and No. 2 |
| Moraga Aqueduct System | 70 | Limited by capacity of the energy dissipater into Moraga Creek |
| Southern Loop Pipeline | 30 | Capacity from East to West |
| Hayward Intertie | 30 | Capacity limited to 20 MGD at Maximum Day Demand while South Reservoir is out of service for replacement, South Reservoir is expected to be returned to service in mid-2017. EBMUD operators prefer limiting deliveries to Hayward to a rate of 20 MGD. |

3.7.1 Source Water Quality

The source of the water transfer will be the Sacramento River at Freeport. This location is in the northern end of the legal Delta, as the river level at low flows is under tidal influence. However the quality of the water at Freeport is distinctly different from that in the central portion of the Delta and is not influenced by the Delta wetlands and sea water that affect water quality in the central Delta.

The FRWA Intake is located 1.3 miles upstream of the outfall from the Sacramento Regional County Sanitation District wastewater treatment plant which handles all the wastewater in the Sacramento region. During rare periods when extremely low river flow

occurs simultaneously with very high tides, the Sacramento River reverses its direction for up to four hours. This phenomenon was studied and modeled during development of the Freeport Project and as a consequence the velocity of the river is measured to trigger an automated shutdown of the FRWA Intake that prevents diversion of any diluted treated wastewater during a reverse flow event.

Average values for key water quality parameters at Freeport are listed in Table 3.

3.7.2 Raw Water Quality Changes During Conveyance and Storage

Settling of suspended solids will occur as Sacramento River water is transported to EBMUD's treatment plants in the East Bay. The FRWA Intake includes a large forebay designed to remove sediment in Sacramento River water. This step is taken to prevent accumulation of river sediment in the conveyance pipelines where velocities can at times be lower than in the river. Further settling of suspended solids is expected to take place in the Folsom South Canal where velocities will be less than 0.2 feet per second. Finally, further settling of solids will occur in the East Bay terminal reservoirs where Sacramento River water will be discharged.

3.7.3 Treatment

As discussed in Section 2.2, it is expected that all water delivered to the Hayward Intertie during the pilot transfer will be treated at the USL Water Treatment Plant. This facility provides conventional treatment, including aeration, coagulation, flocculation, sedimentation, intermediate ozonation, dual-media filtration, fluoridation, and chloramination.

Since Sacramento River water has not yet been delivered to USL Reservoir, the supply source for the USL Water Treatment Plant, the quality of treated water from that facility is not known. However, a comparison with historical raw and treated water quality for that facility is useful. Note in Table 3 that the inorganic dissolved solids concentrations in Sacramento River water are substantially lower than in USL raw and treated water. Total organic carbon is also lower in the Sacramento River water so it is likely that the disinfection byproducts will also be lower once Freeport Project water is introduced into USL Reservoir.

USL Water Treatment Plant was not in service throughout delivery of EBMUD water to SFPUC through the Hayward Intertie in 2009 and 2010, as this facility is only normally operated during peak demand periods. Therefore water received by the City of Hayward



was treated at EBMUD’s Orinda Filter Plant which utilizes Mokelumne River water. Historical treated water quality from that facility is also listed in Table 3.

Table 3 Average raw water and treated water quality

| Constituent | Units | Sacramento River at Freeport ^a | USL WTP raw water ^b | USL WTP treated water ^b | Orinda FP treated water ^b |
|--|---------------------------|---|--------------------------------|------------------------------------|--------------------------------------|
| Alkalinity | mg/L as CaCO ₃ | 53 ^c | 113 | 114 | 26 |
| pH | units | 7.6 | 7.9 | 8.4 | 8.7 |
| Turbidity | NTU | 24 | 2 | 0.13 | 0.12 |
| Total Suspended Solids | mg/L | 33 | 4 | NR | NR |
| Total Dissolved Solids | mg/L | 105 | NR | 210 | 60 |
| Conductivity | µmhos/cm | 142 | NR | 354 | 91 |
| Chloride | mg/L | 5.1 | NR | 15 | 5.3 |
| Hardness | mg/L | 57 | 140 | 117 | 24 |
| Chlorine (total) residual | mg/L | n/a | n/a | 1.9 | 2.1 |
| Total Organic Carbon | mg/L | 2.3 | 4.9 | 3.1 | 1.1 |
| Trihalomethanes | ug/L | | | | |
| All years 1999-2013^d | | NR | NR | 65 | 34 |
| | | NR | NR | 23 | 29 |

n/a – Not Applicable
NR - Not Reported

Notes:

- a) from *SRCSD Coordinated Monitoring Program Annual Report (2008)*, sampling from 1992 - 2008 at Freeport (except as noted)
- b) from *EBMUD Water Quality Database, 1992 - 2013*
- c) from *ERWA Water Quality Sampling Program Summary Report (2007)*, sampling from 2005 -2007 at Freeport
- d) EBMUD converted to chloramine disinfection in 1998

It is anticipated that the quality of water exiting the EBMUD system during the pilot transfer will be between the quality produced by the Orinda Filter Plant and USL Water Treatment Plant. Use of the Southern Loop pipeline to bring some Mokelumne River water treated at the Walnut Creek Filtration Plant to the vicinity of the Hayward Intertie might have a positive effect on the quality of water introduced into the City of Hayward’s system. However, when the USL Water Treatment Plant is operated at higher rates, as will be the case when treating Sacramento River water, treated water in the vicinity of the Hayward Intertie will come from the USL treatment plant, even if the Southern Loop is in operation.

3.7.4 Treated Water Quality Changes

On July 25, 2007, EBMUD, City of Hayward, and SFPUC conducted a joint operation to test the capacity of the EBMUD-SFPUC Intertie via Mode 5. For at least 3½ hours, from

0930 hrs to 1300 hrs, EBMUD supplied water to the City of Hayward at a rate of approximately 30 MGD.

During the test pH, conductivity, chlorine residual, turbidity and pressure were monitored at three locations. The results of this monitoring are summarized in Table 4. Raw data is located in Appendix A. Two monitoring sites were along EBMUD’s 42” transmission main (one at Montgomery and Blossom Avenues and the other at Hesperian and Bartlett Avenues, the latter location being the last testing point before the beginning of the Hayward Intertie). A third location was at the SkyWest Pumping Plant.

Table 4: July 25, 2007 Mode 5 Hayward Intertie Test – Water Quality Monitoring

| Parameter | Location | | |
|-----------------------------|--------------------|--------------------|--------------|
| | Montgomery/Blossom | Hesperian/Bartlett | SkyWest PP |
| Turbidity, NTU | 0.07 – 0.24 | 0.10 – 0.52 | 0.23 – 3.27 |
| Chlorine Residual, mg/L | 1.16 – 1.78 | 0.96 – 1.39 | 0.81 – 2.04 |
| pH | 8.59 – 8.91 | 8.75 – 8.84 | 8.68 – 11.30 |
| Conductivity, μ mhos/cm | 90 – 96.4 | 97.5 – 105.5 | 97.5 – 370.8 |
| Pressure, psig | 58 – 62 | 64 – 74 | 71 – 136 |

Prior to the start of the test, the water quality at SkyWest Pumping Plant had a conductivity reading of 352 μ mhos/cm, turbidity of 0.86 NTU, chlorine residual of 0.81 mg/L and a pH of 11.14. Monitoring at this site during the test showed a turbidity spike to 3.27 NTU from 0950 hrs to 1000 hrs until EBMUD source water reached the pumping plant. The increased turbidity appeared to be from the static water between the intertie isolation valves and the pumping plant. Once the pumping plant was receiving EBMUD water, the turbidity returned to a reading of 0.71 NTU and the pH dropped to 8.97.

Beginning in mid-December 2009, the Hayward Intertie was operated for 66 days to deliver 4,000 acre-feet of EBMUD water to SFPUC. Figure 4 includes graphs taken from EBMUD’s SCADA system showing the flow rate, turbidity, and pH measured at SkyWest Pumping Plant during this period. These graphs show that turbidity peaked during the middle of the transfer period, but returned to initial levels even though the highest transfer rate (30 MGD) occurred then. This suggests that by that time all settled material in the

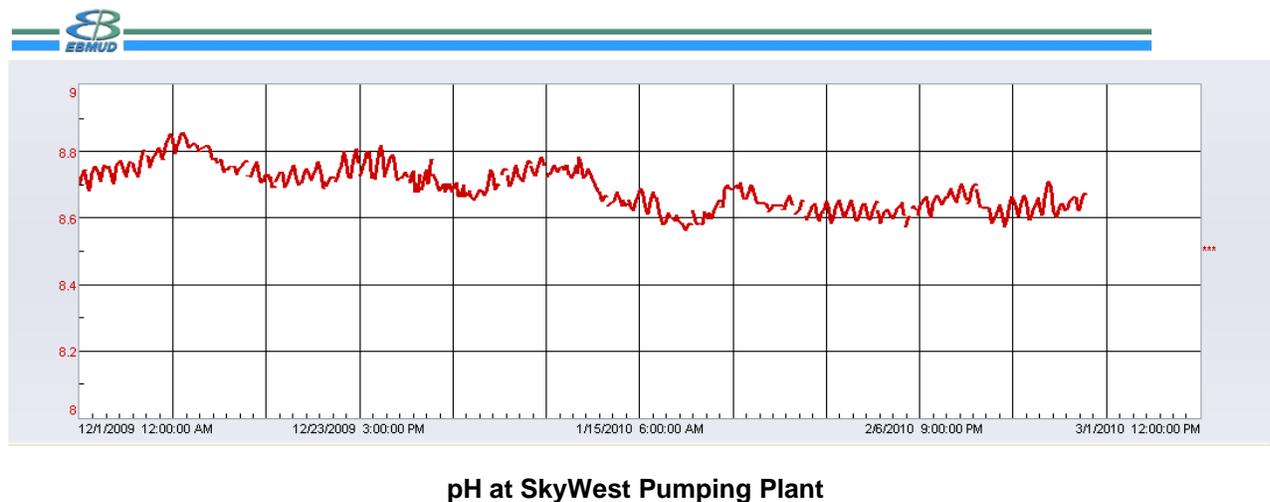
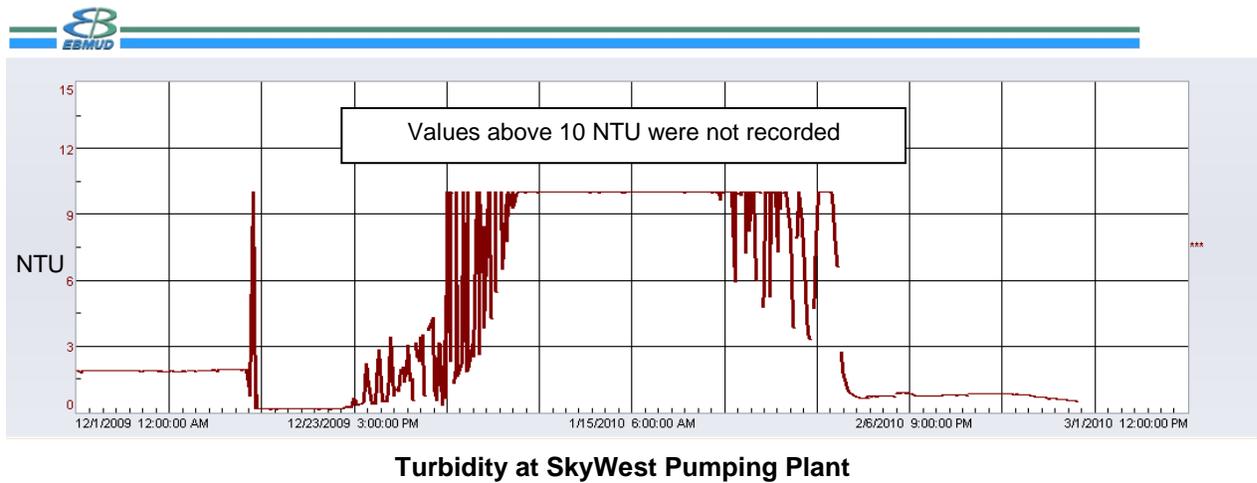
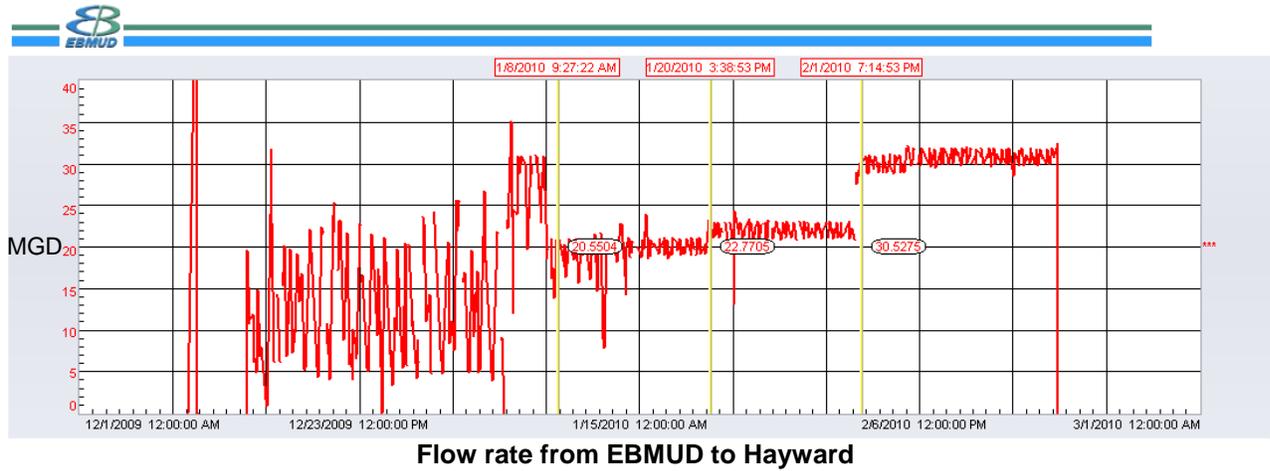


Figure 4. SCADA data recorded at SkyWest Pumping Plant during operation of the Hayward Intertie in 2009 and 2010

pipelines affected by operation of the Hayward Intertie had been suspended and were completely flushed out.

To minimize possible turbidity increases during delivery of transfer water to BAWSCA, close coordination between the operations departments of EBMUD, the City of Hayward, and SFPUC is recommended prior to and during operation of the Hayward Intertie.

3.8 Staffing

Conveyance of water from the Sacramento River to BAWSCA will require simultaneous coordinated operation by staff of multiple organizations.

3.8.1 FRWA

The FRWA Intake and joint pipeline will be operated by SCWA, FRWA's Operating Agent. From the control room at the Vineyard Surface Water Treatment Plant SCWA can direct flow to the Gerber Pipeline and into the Folsom South Canal at any rate up to 100 MGD. FRWA monitors the water level in the canal and will curtail flow into the canal if the water surface in the canal exceeds a value set by USBR.

3.8.2 USBR

Based on an operating plan agreed to by FRWA and USBR, FRWA must add and remove water from the Folsom South Canal at the same rate. This balanced input and output is intended to eliminate any changes in USBR operation of the canal. Nonetheless, USBR staff will monitor water levels in the canal from their control room in Folsom and can adjust canal inlet gates and a set of mid-canal gates, if warranted.

3.8.3 EBMUD

EBMUD is responsible for operation of the FSCC pumping plants and pipeline, the Mokelumne Aqueducts, the Walnut Creek raw water pumping plants, the Moraga Aqueduct pumping plant and pipeline, USL Water Treatment Plant, the rate control stations in its distribution system, and the isolation valves for the Hayward Intertie. The FSCC and the treated water distribution system are monitored and operated from EBMUD's Oakland Control Center. Other portions of the raw water system are generally operated from the Pardee Control Center. USL Water Treatment Plant is operated by staff on site.

3.8.4 City of Hayward

The City of Hayward is responsible for operating SkyWest Pumping Plant, and, if necessary, Hesperian Pumping Plant. *(Described in TM #3A)*

3.8.5 SFPUC

To facilitate coordinated operation, real-time Supervising Control and Data Acquisition (SCADA) data is shared amongst several of the operating agencies. FRWA transmits key operating data to USBR's SCADA system via a radio link. EBMUD and FRWA SCADA systems are connected through a dedicated telephone line with a radio backup. The status of SkyWest Pumping Plant is transmitted to the City of Hayward, EBMUD and SFPUC. *(Described in TM #3A)*

Section 4: Long-term Water Transfer Issues

Treatment and/or distribution system improvements are required to deliver EBMUD's projected supplemental water supply need in 2040. Several options are under consideration including a pretreatment plant near Camanche Pumping Plant for Sacramento River water and upgrades to one or more of EBMUD's direct filtration plants. These improvements will eliminate the need to separate Mokelumne River water from Sacramento River water. While design and construction of these improvements will incur capital costs, the improvements will increase operational flexibility and likely will reduce pumping and treatment operating costs. The timing for adding these improvements is currently under study.

The Bay Area Regional Desalination Project (BARDP), among the potential projects to supplement EBMUD's water supply, is currently in the planning phase. As currently conceived, this project would include wheeling of water through EBMUD's raw water and treated water systems to the SFPUC system via the Hayward Intertie. SFPUC participation in the BARDP is for delivery of 9 MGD, in all years. The Santa Clara Valley Water District (SCVWD) is seeking an additional 5 MGD from the BARDP in dry years only, beginning in 2035. If the BARDP is implemented, the capacity of the Hayward Intertie could become a constraint for meeting SFPUC and SCVWD's planned use of the water from the BARDP while also wheeling dry-year water to BAWSCA. Close coordination and scheduling of water passing through the Hayward Intertie would be required to maximize water deliveries to all parties.

As discussed in TM #4, EBMUD's Policy for Unassigned Freeport Capacity only makes Freeport capacity available for others in wet and normal years. EBMUD retains first priority



to this capacity during dry years. While it is expected that EBMUD will not utilize its full Freeport capacity for many years, in the long-term, available dry year capacity for others, including BAWSCA, will likely be reduced and in some years may not be available.



Appendix A

Hayward Intertie Mode 5 Operation Test Water Quality Monitoring Data (July 25, 2007)

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25 feet cm

HAYWARD INERTIE MODE 5 MONITORING LOG JULY 16, 2007 SITE HESPERIAN W/ BARTLETT

| | TIME | TURBIDITY | CL2 | pH | SP COND | NOTES/LOCATION |
|----|-------|-----------|------|------|---------|--------------------------|
| 1 | 8:30 | | | | | PRE TEST PRESSURE 74 PSI |
| 2 | 8:46 | 0.44 | 1.39 | 8.76 | 105.1 | TEST PRESSURE |
| 3 | 8:50 | 0.26 | | | | (PRETEST/Pump) 72 PSI |
| 4 | 9:29 | | | | | 70 PSI |
| 5 | 9:33 | 0.15 | 0.96 | 8.78 | 105.5 | (START TEST) 70 PSI |
| 6 | 9:41 | 0.19 | 1.21 | | | 70 PSI |
| 7 | 9:48 | 0.10 | 1.33 | 8.83 | 97.5 | 70 PSI |
| 8 | 9:54 | | | | | 69 PSI |
| 9 | 9:58 | 0.14 | 1.26 | 8.84 | 98.2 | 68 PSI |
| 10 | 10:07 | 0.27 | 1.28 | | | 68 |
| 11 | 10:12 | 0.18 | | 8.81 | 97.8 | 68 |
| 12 | 10:17 | 0.23 | 1.22 | | | 68 |
| 13 | 10:26 | 0.20 | 1.16 | 8.78 | 99.6 | 68 ↓ |
| 14 | 10:37 | 0.28 | 1.14 | | | 66 |
| 15 | 10:39 | | | | | 65 |
| 16 | 10:49 | 0.31 | 1.15 | 8.77 | 97.9 | 67 |
| 17 | 10:56 | 0.52 | | | | |
| 18 | 11:00 | | | | | 64 30-30 |
| 19 | 11:14 | | | | | 66 |
| 20 | 11:20 | 0.41 | 1.07 | 8.75 | 98.1 | 66 |
| 21 | 11:40 | 0.25 | 1.13 | 8.76 | 97.8 | 66 |
| 22 | 12:00 | 0.18 | 1.14 | 8.77 | 104.4 | 66 |
| 23 | 12:20 | 0.17 | 1.13 | 8.76 | 99.7 | 66 |
| 24 | 12:40 | 0.16 | 1.10 | 8.79 | 100.4 | 66 |
| 25 | 12:45 | | | | | 70, 12:50 66 |
| 26 | 12:53 | | | | | #2 OFF, 20-6D, 68 |
| 27 | 12:55 | | | | | 70 PSI |
| 28 | 12:56 | | | | | 72 |
| 29 | 12:59 | | | | | 73 (2 w 6D) 1 Pump |
| 30 | 13:00 | | | | | 74 (13:01 72psi - 74psi) |
| 31 | 13:07 | | | | | 74 TEST ENDED |
| 32 | | | | | | |

NAME: J KEELER



Technical Memorandum #3: Ability to Convey Transfer Water to BAWSCA

HAYWARD INTERTIE MODE 5 MONITORING LOG JULY 16, 2007 SITE SW P.P.
17.5°C 25 cm

| | TIME | TURBIDITY | CL2 | pH | SP COND | NOTES/LOCATION |
|----|------|-----------|------|-------|---------|------------------------------|
| 1 | 0900 | 0.86 | 0.81 | 11.14 | 352.1 | PRE TEST PRESSURE 71# static |
| 2 | 0940 | 0.86 | 1.16 | 11.30 | 370.8 | TEST PRESSURE 129# 12 MGD |
| 3 | 0950 | 2.42 | 1.15 | 11.30 | 345.7 | 134# 1+2 19.1 MGD |
| 4 | 1000 | 3.27 | 2.04 | 10.63 | 106.7 | 134/136 1+2 18 MGD |
| 5 | 1010 | 0.71 | 1.43 | 9.15 | 98.6 | " " " |
| 6 | 1020 | 0.50 | 1.37 | 8.97 | 98.1 | " " " |
| 7 | 1030 | 0.46 | 1.36 | 8.90 | 97.5 | 130/133/130 1,2+3 24 MGD |
| 8 | 1040 | 0.42 | 1.21 | 8.79 | 98.6 | 132/134/136/ 1,2+3 28 MGD |
| 9 | 1050 | 0.41 | 1.23 | 8.78 | 98.3 | 130/132/134/ 1,2+3 27 MGD |
| 10 | 1100 | 0.57 | 1.18 | 8.75 | 98.7 | 120/122/120/ 1,2,+4 29.3 MGD |
| 11 | 1120 | 0.35 | 1.20 | 8.74 | 98.7 | 120/120/117/ 1,2+4 29.9 MGD |
| 12 | 1140 | 0.42 | 1.21 | 8.74 | 98.6 | 122/124/123 1,2+4 29.2 MGD |
| 13 | 1200 | 0.45 | 1.20 | 8.74 | 97.9 | 122/124/120 1,2+4 28.3 MGD |
| 14 | 1220 | 0.25 | 1.18 | 8.72 | 98.8 | 124/126/123 1,2+4 28.4 MGD |
| 15 | 1240 | 0.23 | 1.18 | 8.70 | 98.8 | 133/135/133/133 1-4 29.7 MGD |
| 16 | 1300 | 0.33 | 1.16 | 8.68 | 99.0 | 121 1 only |
| 17 | | | | | | (Pump shutting down) |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
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| 29 | | | | | | |
| 30 | | | | | | |
| 31 | | | | | | |
| 32 | | | | | | |

NAME: E. Baker



Technical Memorandum #3: Ability to Convey Transfer Water to BAWSCA

HAYWARD INTERTIE MODE 5 MONITORING LOG JULY 18, 2007 SITE ^{25 cm} BLOSSOM & MONTGOMERY

| | Time | TURBIDITY | CL2 | PH | SP CONK | |
|----|-------|-----------|------|------|---------|----|
| 33 | 8:30 | 0.10 | 1.25 | 8.62 | 94.8 | 62 |
| 34 | 9:30 | | | | | |
| 35 | 9:40 | | | | | |
| 36 | 9:50 | | | | | |
| 37 | 10:00 | .24 | 1.16 | 8.63 | 95.5 | 61 |
| 38 | 10:10 | .14 | 1.22 | 8.63 | 94.8 | 61 |
| 39 | 10:20 | .15 | 1.19 | 8.61 | 95.5 | 61 |
| 40 | 10:30 | .11 | 1.21 | 8.61 | 96 | 61 |
| 41 | 10:40 | .22 | 1.16 | 8.61 | 96 | 60 |
| 42 | 10:50 | .10 | 1.22 | 8.60 | 95.7 | 58 |
| 43 | 11:00 | .12 | 1.19 | 8.62 | 96 | 58 |
| 44 | 11:10 | .15 | 1.18 | 8.62 | 95.8 | 58 |
| 45 | 11:20 | .15 | 1.21 | 8.60 | 95.7 | 58 |
| 46 | 11:30 | .07 | 1.17 | 8.60 | 95.5 | 58 |
| 47 | 11:40 | | | | | |
| 48 | 11:50 | .10 | 1.17 | 8.59 | 95.4 | 58 |
| 49 | 12:10 | .10 | 1.17 | 8.60 | 96.2 | 58 |
| 50 | 12:30 | .07 | 1.31 | 8.61 | 96.4 | 58 |
| 51 | 12:50 | | | | | |
| 52 | 1:10 | .15 | 1.78 | 8.91 | 90 | 62 |
| 53 | | | | | | |
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*TECHNICAL MEMORANDUM #3A - SUMMARY OF
CONSIDERATIONS FOR CONVEYING WATER THROUGH THE
HAYWARD INTERTIE TO THE BAWSCA SERVICE AREA*

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TECHNICAL MEMORANDUM #3A

SUMMARY OF CONSIDERATIONS FOR CONVEYING WATER THROUGH THE HAYWARD INTERTIE TO THE BAWSCA SERVICE AREA

June 25, 2013, revised September 19, 2013

Section 1: Introduction

The East Bay Municipal Utility District (EBMUD), and the Bay Area Water Supply and Conservation Agency (BAWSCA) are partnering to develop a short-term pilot water transfer plan (Pilot Plan). The objective of the Pilot Plan is to evaluate the physical and institutional ability to transfer water through the EBMUD system and the EBMUD/San Francisco Public Utility Commission (SFPUC)/Hayward emergency intertie (Hayward Intertie) for the benefit of the BAWSCA member agencies. Based on the information available to date, the Pilot Plan envisions a pilot water transfer designed to:

1. Be short in duration;
2. Minimize water quality and other impacts to the City of Hayward (COH), EBMUD, and the San Francisco Regional Water System (SF RWS);
3. Meet 100 percent of COH's demand; and
4. Optimize operations so as to minimize the staff burden for all participating agencies.

This TM #3A summarizes the considerations associated with conveying water from EBMUD through the Hayward Intertie to the COH, and potentially into the SF RWS. It includes an overview of the key infrastructure elements, possible system operations, water quality considerations, other operational issues, and the next steps (i.e., in terms of additional information) needed in order for BAWSCA to execute a short-term pilot water transfer in partnership with EBMUD.

Section 2: Key Infrastructure

This section presents the key infrastructure elements required to transfer water through the Hayward Intertie and into the COH and SF RWS. These infrastructure elements include facilities owned and operated by EBMUD, the COH, and SFPUC. For context, Figure 1 shows the major regional water systems in the Bay Area, including the BAWSCA member agency service area, and the EBMUD service area.

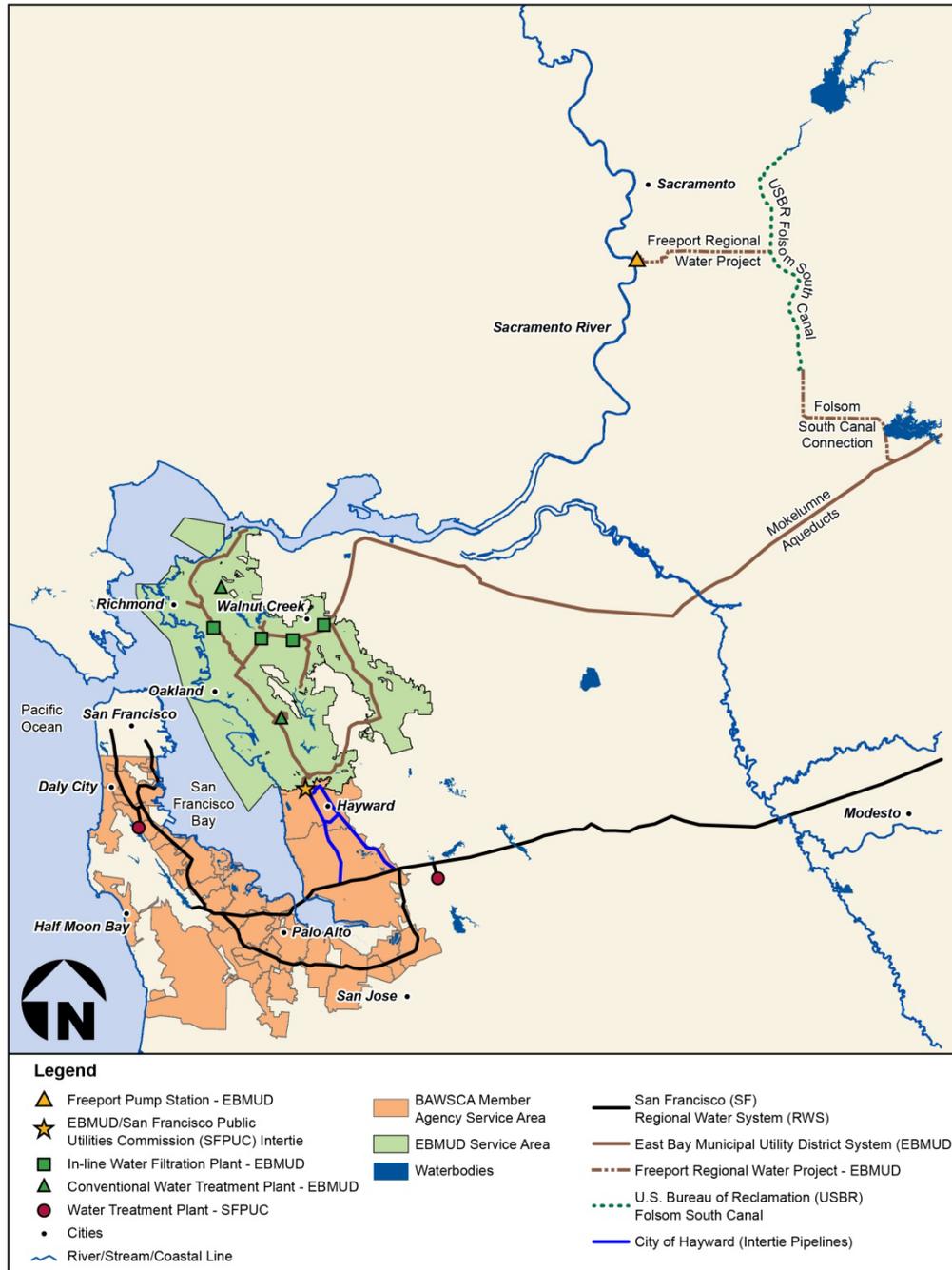


Figure 1 - Regional Water Systems

Under normal operations, the COH is supplied from the SF RWS through the Newark and Mission Road Turnouts, with water flowing to the north through the Hayward Intertie pipelines. These pipelines, which are owned and operated by the COH, are part of the original delivery system from the SF RWS to the COH.

The anticipated short-term pilot water transfer, and possible longer term dry year transfers, would include transfer of purchased water from a seller in the Sacramento

River basin and most likely delivered from the Sacramento River, through the Freeport Regional Water Project (FRWP) and the United States Bureau of Reclamation (USBR) Folsom South Canal, into the EBMUD Mokelumne Aqueducts. This water would be conveyed to the EBMUD service area, and then through existing EBMUD transmission facilities to the Hayward Intertie. Figure 2 shows the EBMUD system, the Hayward Intertie, the COH distribution system and pump stations, the COH connections to the SF RWS at the Newark and Mission Road Turnouts, and the SF RWS in the south bay.

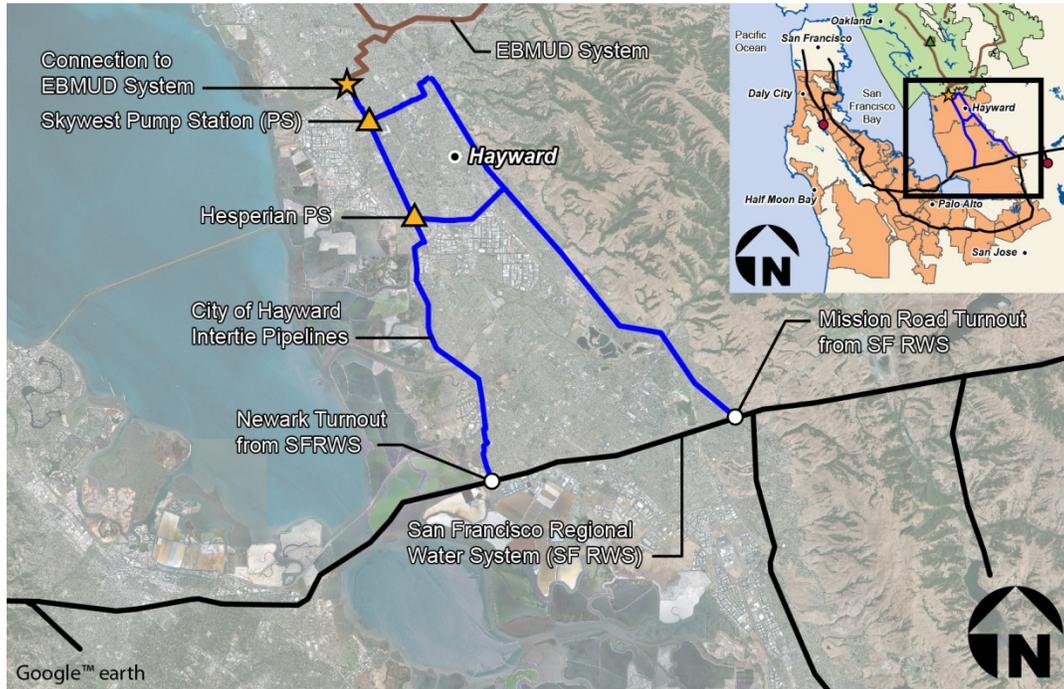


Figure 2 - Hayward Intertie Facilities

In 2002, EBMUD, the COH and SFPUC formed a regional partnership to address potential supply interruptions resulting from a natural disaster, or planned critical maintenance and repair of the regional water systems. The partnering agencies signed a Joint Powers Agreement (JPA) and a long-term operation and maintenance (O&M) agreement for the construction, operation, and maintenance of the Hayward Intertie, in which EBMUD and SFPUC are the owners, and the COH is the designated operator. The Hayward Intertie, connecting the EBMUD and SF RWS via the COH system, allows sharing of water deliveries up to 30 million gallons per day (MGD) during emergencies or planned critical work on facilities that cannot be removed from service without an alternative water source.

The Hayward Intertie was completed in 2007 and consists of the following major elements:

- Approximately 8,000 feet of 36 inch-diameter pipeline;
- A 30 MGD pump station (Skywest Pump Station);
- Modifications to the Hesperian Pump Station; and
- Modifications to existing facilities to allow bi-directional flows (EBMUD to SF RWS, and SF RWS to EBMUD).

The relative heads for the EBMUD, the COH and the SF RWS systems are shown in Figure 3 (the system hydraulic schematic from the July 2008 Hayward Intertie Operations Plan).

The new facilities and modifications described above were tested in 2007. In addition, approximately 1.3 billion gallons (4,000 acre-feet) were exchanged between the SFPUC and EBMUD over a 66 day period in the winter of 2009-2010. Transfer rates during the 2009-2010 test of the Hayward Intertie varied from 8.4 to 29.5 MGD and the test apparently went without incident except for some water quality concerns over turbidity at the beginning of the transfer. The flow of water between EBMUD, the COH and the SF FWS during the 2009-2010 test of the Hayward Intertie are depicted in Figure 4. Other data from the 2009-2010 test of the Hayward Intertie are found in Attachment 1.

2.1 Hayward Intertie/Skywest Pump Station

The EBMUD and COH systems are connected via the Hayward Intertie which consists of 8,000 feet of 36-inch diameter pipe (i.e., between EBMUD's 42-inch pipeline at Hesperian Boulevard and Bartlett Avenue and the COH's 33-inch pipeline at Hesperian Boulevard and West Winton Avenue) and the 30 MGD Skywest Pump Station. Water can be moved through these facilities from EBMUD to the COH, and vice-versa.

The Skywest Pump Station is used to lift water from the EBMUD system into the COH system. This pump station consists of the following major elements:

- Four variable frequency drive 10 MGD pumps, with one of these pumps as a standby;
- An isolation valve structure housing several valves that can be opened and closed to allow water from EBMUD to the COH, or the COH to EBMUD;
- Surge tank;
- Emergency generator; and
- Underground fuel storage tank.

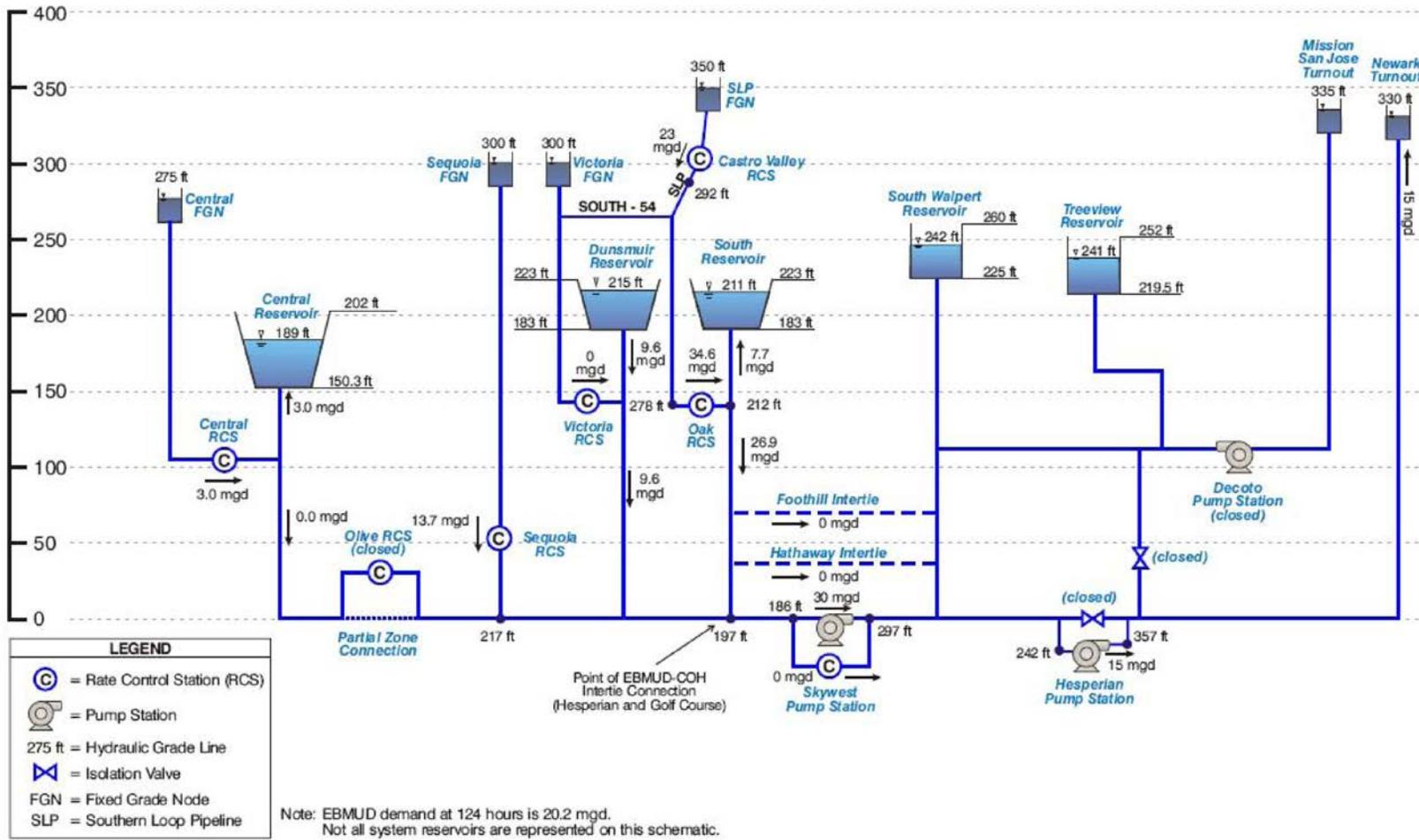


Figure 3
Relative Hydraulic Head for Interite System When Flow Transported from EBMUD to SF RWS (i.e., Mode 5)
Source: Intertie Operations Plan (July 2008)

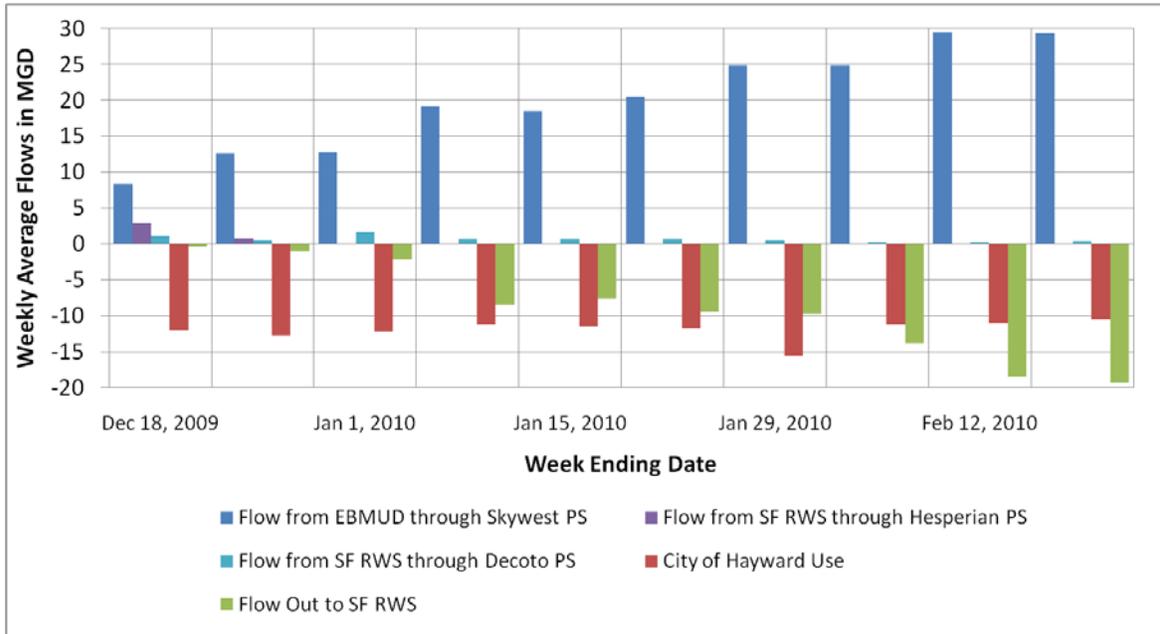


Figure 4 - Summary of Flows during the 2009-2010 Hayward Intertie Test

There is an EBMUD isolation valve located outside of the Skywest Pump Station that isolates the EBMUD and COH systems when the Hayward Intertie is not in operation.

Another EBMUD isolation valve vault is located at the intersection of Hesperian Boulevard and Golf Course Road, near the northern end of the Hayward Intertie pipeline. This vault houses two butterfly valves separated by an air gap when the valves are closed.

2.2 Hesperian Pump Station and Newark Turnout

The Hayward Intertie allows for 45 MGD to be delivered from the SF RWS to the COH, with up to 30 MGD able to be delivered to EBMUD. For transfers from EBMUD, up to 30 MGD can be moved into the COH by pumping through the Skywest Pump Station, with up to 15 MGD able to be delivered to the SF RWS by pumping through the Skywest and Hesperian Pump Stations.

The Hesperian Pump Station is located near the southerly end of the COH service area and has a minimum pumping rate of 8 MGD and a maximum pumping rate of 45 MGD (see Figure 2). Under normal operating conditions, the Hesperian Pump Station is used to lift water from the SF RWS south to north into the COH system. In order to accommodate transfers through the Hayward Intertie, new piping and valves were

added to allow the Hesperian Pump Station to also move water from the COH system into the SF RWS.

The Newark Turnout, which connects the SF RWS to the COH system, was modified to allow water to flow from the COH into the SF RWS. This required installation of new flowmeter piping and valves at the Newark Turnout, and the new configuration is termed the "EBMUD bypass". All transfer water entering the SF RWS from the COH will move via this bypass connection.

Modifications to existing structures at the Mission Turnout near Irvington Portal were also required to provide adequate hydraulic capacity, and to facilitate flows in both directions (i.e., from the COH into the SF RWS).

During the construction of the Bay Tunnel and Bay Division Pipeline No. 5, there may be temporary interruptions to service at the Newark Turnout connections (i.e., flows into and out of the SF RWS may be temporarily halted). The construction schedule as of June 2013 projects that these SF RWS modifications will be finished by May 2015. Once complete, the reliability will be improved at the Newark Turnout connections. However, the timing of the short-term pilot water transfer will have to be closely coordinated with SFPUC staff to ensure that the transfer is not scheduled during a shut-down window.

Section 3: Possible System Operation during a Short-Term Pilot Water Transfer

This section describes the operational scenarios and activities that will be necessary to convey water from EBMUD to the COH, and then possibly to the SF RWS if the transfer rate exceeds the COH demand.

3.1 Operational Scenarios

Three operational scenarios were identified for potential transfers from EBMUD to the COH and/or the COH to the SF RWS. These scenarios are based on discussions with EBMUD, the COH, SFPUC, and consideration of the Pilot Plan objectives. These scenarios include:

- Scenario 1: Deliver transfer water to the COH from EBMUD through existing connections between the two agencies, other than the Hayward Intertie;

- Scenario 2: Vary the transfer rates through the Hayward Intertie to meet the COH's demand; and
- Scenario 3: Maintain a constant flow rate through the Hayward Intertie and pump water in excess of COH's demand into the SF RWS.

3.2 Description of Operational Scenarios 1, 2 and 3

3.2.1 Scenario 1 – Utilize Existing COH/EBMUD Connections

Excluding the Hayward Intertie, the existing connections between EBMUD and the COH are limited in number and capacity and only provide service to a small portion of the COH's service area. Use of the Hayward Intertie is required in order to transfer sufficient supply to meet the demands of the entire COH service area (i.e., an average of 15 MGD). As such, Scenario 1 does not meet the Pilot Plan objectives and is not included for further analysis or discussion.

3.2.2 Scenario 2 – Vary Transfer Rates to Match COH's Demand

Scenario 2 assumes that transfers from EBMUD through the Hayward Intertie are used to meet exactly 100% of the COH's demands. Assuming an average day demand of 15 MGD, up to 15 million gallons would be conveyed at varying rates over 24 hours from EBMUD to the COH, with the Skywest Pump Station boosting that flow into the COH distribution system (see Figure 5).

During startup, the Skywest Pump Station would be operated at the same time as flow would continue through the two COH turnouts on the SF RWS. This operation would continue with flows increasing through the Skywest Pump Station, and decreasing from the SF RWS until the COH system could be completely served by EBMUD. Then the flow from EBMUD would be varied over time to match the diurnal fluctuations in the COH's demands.

This scenario, while potentially feasible, is complicated by several factors. The first is that the SFPUC and COH have indicated that, due to the 1.5 mile length of the Intertie Pipeline, there are water quality benefits to maintaining at least a minimal flow from that pipeline into the SF RWS. Therefore, if the Hayward Intertie were only operated to meet the COH's demand, and no water was moved through the COH into the SF RWS, then there may be some potential water quality issues when the Intertie Pipeline is returned to service after the transfer.

The second issue is that, if 100% of COH's system is fed by EBMUD, the flow rate from EBMUD and the operation of the Hayward Intertie would have to be adjusted to meet the diurnal fluctuations in the COH's demand. Specifically, the flow rate for the Skywest Pump Station would need to be regulated by adjusting the number and flow rate of the pumps within their operational range, and the storage in the COH distribution system reservoirs would have to be actively utilized to match demand.¹ This could require operation of a single Skywest 10 MGD pump for a portion of the day, and 2 pumps operating, with a combined flow of 20 MGD, for the remainder of the day. Given the limited operating flow ranges at the Skywest Pump Station, the COH staff have indicated that it would be difficult to operate the Hayward Intertie in a way that would exactly meet the diurnal variations in the COH's demand, even accounting for reservoir filling.

This scenario would also require that EBMUD vary flows through the Hayward Intertie to match the flow capacity of the Skywest Pump Station pumps, which EBMUD staff have indicated would be difficult for them to accommodate.²

3.2.3 Scenario 3 – Conduct the Transfer at a Constant Rate

Scenario 3 is similar to Scenario 2 with two exceptions: a) the flow from EBMUD would be set at a constant rate, and b) the Hesperian Pump Station would be used to pump all excess flows into the SF RWS.³ This operation is indicated in Figure 6.

During startup, the Skywest Pump Station would be operated at the same time as flow would continue through the two COH turnouts on the SF RWS. This operation would continue with flows increasing through the Skywest Pump Station, and decreasing from the SF RWS until the COH system could be completely served by EBMUD. Then the flow from EBMUD and through the Skywest Pump Station would be held constant at approximately 15 MGD for the duration of the pilot transfer. Transfer water delivered in excess of the COH's demand would then be pumped at the Hesperian Pump Station into the SF RWS.

The benefit of this approach is that it is likely to be operationally simpler and eliminates the potential water quality issues in the 1.5-mile Intertie Pipeline. However, the degree to which the surplus transfer water can be "bled" into the SF RWS is an issue that will

¹ The maximum capacity of the pump station is 30 MGD with three of the pumps operating at 10 MGD each. However, these pumps have variable frequency drives and can be adjusted. Based on discussions with COH staff, the minimum flow rate through the Skywest Pump Station is approximately 9 MGD.

² EBMUD Operations has a strong preference to deliver water to the intertie at a constant rate during the pilot transfer. This would require either optimized COH reservoir/distribution operations or an ability to "bleed" water in excess of demand into the SF RWS.

³ Due to South Reservoir being out of service until 2017, the maximum total EBMUD flow would be limited to 20 MGD.

need further consideration for both water quality and operational flow purposes (i.e., the preferred flow rates and pumping durations will need to be further reviewed with the COH, SFPUC, and EBMUD operations staff.)

3.3 Pump and Valve Settings for Scenarios 2 and 3

As part of the design and the development of the operations for the Hayward Intertie an operations plan was developed by SFPUC, the COH and EBMUD⁴. This plan outlines the sequence of pump and valve settings for the startup and continued operation of Scenarios 2 and 3. The steps involved are summarized below.

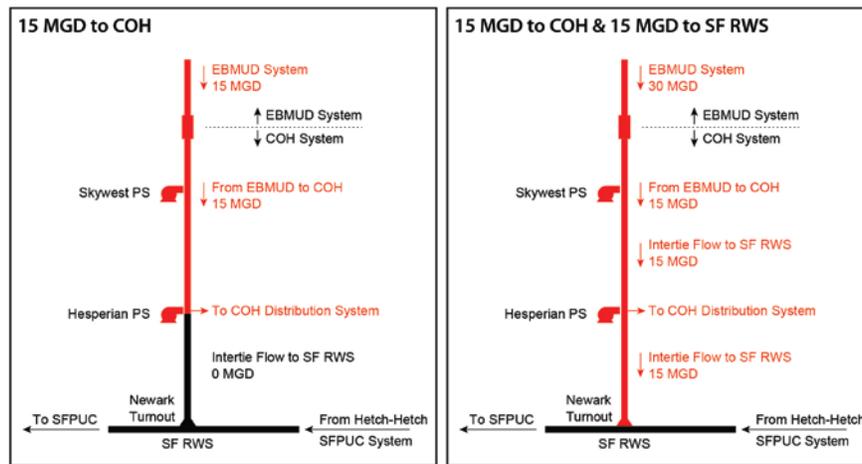


Figure 5 - Scenario 2 Operation

Figure 6 - Scenario 3 Operation

Note: In Scenario 2, a limited amount of flow may be necessary between Hesperian Pump Station and the Newark Turnout for operational and water quality reasons.

Step 1 – Skywest Pump Station Valve Vault – Configuring Pumped Flow from EBMUD to COH

- Close and open appropriate valves.

Step 2 – Hayward Isolation Valve – Skywest Pump Station

- Open appropriate valves.

Step 3 – EBMUD Valve Vault

- Close and open appropriate valves.

Step 4 – Skywest Pump Station - Ramping Pumps Up to Maintain EBMUD System Pressure

- Open all pump suction valves and bleed any air from pump casings.
- Check suction and discharge pressure at each pump – note any abnormalities and correct.

⁴ Intertie Project Operations Plan, July 2008, Appendix D SFPUC, City of Hayward, EBMUD.

- Notify COH Operations Manager when pump station is ready for operation.
- Record beginning meter reading.
- Begin water quality sampling.
- Open all discharge valves.
- Start Pump 1 at 25% speed and begin ramping up to 100% speed.
- Record Pump 1 suction and discharge pressure at 100%. Record Mission Turnout transmission pressure at 100% speed.
- Continue to bring on pumps to maintain COH system demand.
- Start Pump 2 at 25% speed and begin ramping up to achieve desired COH system pressure and flow. Once the COH system has been stabilized, proceed to Step 5.

Step 5 – Hesperian Pump Station

- Open and close valves as appropriate.
- Notify COH Operations Manager when this sequence is complete.

Step 6 – Newark Turnout / EBMUD Bypass (to be done by SFPUC in both Scenarios 2 and 3)

- Insure that appropriate valves are open and that North/South flow can access both Bay Division Pipelines 1 and 2
- Open appropriate valves.
- Record beginning meter reading.
- Notify COH Operations Manager when this sequence is complete.

Step 7 – Hesperian Pump Station (only done in Scenario 3: water moving into SF RWS)⁵

- Open all pump suction and discharge valves and bleed any air from pump casings.
- Check suction and discharge pressure at each pump – Note any abnormalities and correct.
- Notify COH Operations Manager that Hesperian Pump Station is ready for operation.
- Start Pump 4 at 25% speed.
- Close appropriate valve to establish North/South flow.
- Begin to ramp up Pump 4 to 75% speed and record flow and pressure.
- Concurrent with Hesperian Pump Station ramp up, begin adjusting Skywest pump speed and output.

⁵ A certain degree of flow into the SF RWS will likely be needed in Scenario 2 to prevent water quality deterioration in the 1.5 mile pipeline.

- COH Operations Manager will assist as necessary.
- Start Pump 3 as necessary to achieve a flow of 15 MGD.

Step 8 – Skywest/Hesperian Pump Stations (only done in Scenario 3: water moving into SF RWS)⁶

- Adjust flow output of both stations to achieve a pressure 75 – 85 pounds per square inch at Mission Turnout pressure reducing valve and a flow of 10,500 gallons per minute at Hesperian Pump Station.
- Increase Skywest flow up to 30 MGD and maintain at up to 30 MGD.
- Monitor and adjust both pump stations as necessary for the duration of the operation.

Step 9 – Shutting Down

- Ramp pumps down over a period of at least 45 minutes. To end the operation and return all water system to normal operations, perform the operations sequence in reverse.

3.4 Pre-Transfer Water System Flushing Considerations

The potential for elevated turbidity, as is discussed in Section 4, is one of the concerns related to the reverse flows that result when the Hayward Intertie is used to transfer water from EBMUD to the COH (i.e., typically the water flows from South to North, from the SF RWS to COH). This reverse flow, especially at the start of transfer operations, may displace stagnant water and re-suspend sediment that has collected along the bottom of the transmission pipelines and cause increases in turbidity. One means to reduce this short-term impact on water quality would be to conduct a pre-transfer flushing program of the major transmission pipelines associated with the use of the Hayward Intertie. However, several factors make a pre-transfer flushing program difficult for both EBMUD and COH including:

- A significant volume of flushed water would need to be disposed of. Since the pipelines that need to be flushed are in some cases quite large (i.e., 42-inch diameter), and flushing requires sufficiently high velocities to suspend any materials deposited on the bottom of the pipelines, and several pipe volumes need to be voided, significant volumes of water are generated.
- There are water quality constraints on the discharge. Discharge of the flushed water is governed by the Regional Water Quality Control Board (RWQCB) and treatment and monitoring of the flushed water for pH, turbidity, and chlorine is

⁶ A certain degree of flow into the SF RWS will likely be needed in Scenario 2 to prevent water quality deterioration in the 1.5 mile pipeline.

required. The logistics of working with the RWQCB necessitates significant staff time and the actual dechlorination operations are complex (e.g., EBMUD needed to augment staff to conduct the dechlorination and the associated downstream monitoring when pipelines were flushed in advance of the 2009-2010 test of the Hayward Intertie).

- There are system configuration constraints. EBMUD has operational constraints on flushing because its South Reservoir will be out of service until 2017 (i.e., without the South Reservoir, there is insufficient hydraulic head to induce scouring velocities). The COH can only discharge significant amounts of water at Hesperian Pump Station, not at Skywest Pump Station. However, even at Hesperian Pump Station, a flushing operation requires significant temporary facilities to pump the flushed water into the sewer system force main. In addition, some businesses in the vicinity of the Hesperian Pump Station would need to make modifications (i.e., install backflow prevention devices) in order to avoid a repeat of the flooding that occurred when the pipelines were flushed in advance of the 2009-2010 test of the Hayward Intertie.

While experiences during the 2009-2010 test of the Hayward Intertie highlighted potential trouble spots⁷ associated with water quality variations at the start of transfer operations, these issues were likely attributed to the fact that the associated pipelines had not been flushed for a very long time prior to the start of the 2009-2010 test. Given that it has only been a few years since the 2009-2010 test of the Hayward Intertie, significant amounts of sediment may not have accumulated.

As such, rather than performing a large scale flushing program, there may be ways to manage the operation of the pilot water transfer to minimize the re-suspension of any sediment that might exist. Specifically, the operations could be managed to do the following:

1. Keep Pipeline Velocities Low – The projected flow rate of the transfer is 15 MGD, which is one-half the 30 MGD maximum capacity of the Hayward Intertie. Consequently, the velocities within the pipelines associated with the Hayward Intertie will likely be below the threshold for achieving significant re-suspension of any accumulated sediment.

⁷ In 2007, a short-lived turbidity spike was associated with static water between the intertie isolation valves and the Skywest Pump Station). During the 2009-2010 transfer, a turbidity spike was observed associated with resuspension of sediment.

2. Conduct an Operational Slow-Start – It is possible to further reduce the risk of inducing turbidity spikes by gradually increasing the flow rates from EBMUD through the Hayward Intertie and into the COH's system, and similarly from the COH into the SF RWS.
3. Monitor and Adjust – At start-up and during operation, actively monitor the turbidity, pH, and chlorine residual, and set certain parameter values that would trigger operational actions (e.g., reducing flows, diverting flows from Hesperian Pump Station into the 250,000 gallon reservoir, limited flushing via the smaller blow-off near Skywest Pump Station, etc.). Pre-planning and close coordination between the operations staff of EBMUD, the COH, and SFPUC will be necessary to develop a menu of operational adjustments and water quality triggers.

It is recommended that the COH, EBMUD, and SFPUC consider the above steps as an alternative to a large-scale flushing program as they develop the operation plan for the pilot transfer.

Section 4: Water Quality Concerns during Pilot Water Transfer

Under normal operation, COH receives 100% of its supply from the SF RWS through the Newark and Mission Road Turnouts. During the pilot transfer, the COH supply will come primarily from EBMUD. This section summarizes potential concerns regarding changes in water quality during startup and operation of the pilot transfer based on discussions with EBMUD, the COH and SFPUC.

4.1 Potential Water Quality Issues

Regulatory compliance will be readily maintained during a transfer. However, there are a number of potential water quality parameters that might change within the COH during the pilot transfer (see Table 1). The COH has expressed significant concerns regarding those potential changes to its water quality, and in particular, the predictability of those changes.

Table 1. Summary of Key Water Quality Parameters and Reason for Concern

| Issue | Concern |
|--------------------------------|-----------------------------------|
| Disinfection By-Products (DBP) | Regulatory violation |
| Chloramine residual | Regulatory violation |
| Coliform | Regulatory violation |
| Nitrification | Precursor to regulatory violation |
| Taste | Customer complaints |
| Total Dissolved Solids (TDS) | Commercial impacts |
| Turbidity | Customer perception |

The COH has evaluated the potential impact of changes in water residence time due to the shift in water sources anticipated as part of the pilot transfer. They have indicated that as long as the disinfectant residuals are maintained at adequate levels at the point where they enter the Hayward Intertie the water age should not be an issue.

Another issue identified during previous transfers was short-term turbidity increases in the larger diameter pipelines and dead ends, under higher flow conditions. The SFPUC has also registered concerns over the potential for reverse flows to transport turbidity/sediment into the SF RWS. EBMUD and the COH will be evaluating flushing of the impacted pipelines and limiting changes in flow as much as is practical.

In addition to its residential customers, COH has identified several potentially sensitive commercial and industrial customers that may have concerns regarding the *changes* in water quality associated with the pilot transfer. These potentially sensitive customers include:

- Food related businesses;
- Manufacturers; and
- Research and development parks.

Concerns include reduced water quality and frequent changes in water quality. However, the COH staff have indicated that these customers have demonstrated that they can operate with different water qualities, as long as they are given sufficient notice and the variations are minimal (i.e., the water quality is not changing significantly on a daily basis).

4.2 Water Quality Monitoring

Currently, the COH monitors pH, chlorine, ammonia, conductivity, temperature, turbidity, total coliform, heterotrophic plate count (HPC), *E. Coli*, nitrate and nitrite at multiple points within its distribution system. A map of the monitoring locations along with sample report sheets are found in Attachment 2.

BAWSCA has conducted initial discussions with the COH regarding a Water Quality Monitoring Plan for the pilot transfer, and also possible long-term transfers. In addition to receiving basic water quality monitoring from the EBMUD USL Plant on a weekly (if not, daily basis), the initial Water Quality Monitoring Plan proposed by the COH includes:

- Twice a month sampling at 60 stations throughout the COH distribution system;
- Installation of monitoring (Chemscan) units at the Hesperian Pump Station to monitor total chlorine residual, monochloramine, free ammonia and total ammonia;
- Monitoring of turbidity and pH at the Skywest Pump Station⁸;
- HPC and nitrite tests are conducted on the water in the reservoirs and distribution system monthly.⁹ Depending on the TOC of the EBMUD supply, however, Hayward may increase the test frequency for HPC and nitrite to weekly until it is satisfied that the water quality will not deteriorate in the system.

Section 5: Other Operational Issues to be Considered for the Pilot Water Transfer

This section discusses other operational issues that need to be considered based on previous experience operating the Hayward Intertie, and discussions with the COH, SFPUC and EBMUD regarding the pilot transfer.

5.1 Agency Coordination

Close coordination will be required between the COH, EBMUD, and SFPUC during the planning, operation, and shutdown of the pilot transfer. BAWSCA will need to be actively involved in the planning phase and determination of the timing, duration and

⁸ Instrumentation is already installed to monitor these parameters at Skywest Pump Station. Therefore, this information is available and recorded on EBMUD's and COH's SCADA systems. The COH staff note that maintaining the monitoring equipment poses its own set of challenges.

⁹ The COH staff currently manually sample and test their reservoirs and distribution system for residual chlorine (free and total), free ammonia, turbidity and conductivity a weekly basis.

flows considered for the execution of the transfer. BAWSCA will also need to be notified of any changes during the actual execution of a transfer if the quantity or timing of flows and deliveries will be affected.

5.2 Staffing

The COH has identified that, during the initial startup, nine electricians and mechanics and a supervisor will be required on-site to get the Hayward Intertie pump station(s) started, running and transitioned to automatic operation. This level of staffing will decrease as the pump stations are up and running. Depending on specific issues encountered, the COH may have to call in a SCADA contractor for technical assistance.

The COH has indicated that these staffing demands will have a significant, but short-term, impact on the overall staffing for the city. The pump stations have not been run several years and the control system will require a large commitment of time to get running as designed. In addition to the Hayward Intertie facilities, the COH's staff will still be responsible for operating and maintaining the water and sewer systems and the storm water pumping stations throughout the city. The COH has also noted that prior flushing efforts have required over one week to configure the system with 7 to 10 people involved.

The COH, SFPUC and EBMUD will refine their estimates of staff needed for the execution of the pilot transfer once the timing and duration of the transfer is finalized.

5.3 Lead Time Needed to Make Operational Changes

As indicated in Section 3, sequences of operation have been developed for the different water transfer scenarios. The SFPUC has indicated that they will require 4 to 6 hours to configure the Newark Turnout to receive transfer water under reverse flow conditions, assuming the necessary flushing has been performed. Pending development of the flushing program, the COH has indicated that they will require 1 to 2 weeks to configure the COH system for the flushing program. Other potential lead times and response times will need to be identified by each of the agencies for the pilot transfer.

5.4 System Pressure and Fire Flow Issues

The COH has identified possible concerns with changes in pressure and impacts to fire flows during a pilot transfer. The COH is currently developing a water master plan for the city and may identify and evaluate those potential issues as part of this master planning process.

5.5 Operational Costs

The COH, SFPUC and EBMUD are in the process of identifying their operational costs for implementation of the pilot transfer. These costs may vary depending on the timing, duration and quantity of the pilot transfer.

5.6 Accounting and Cost Recovery

BAWSCA, SFPUC, EBMUD and the COH will develop an appropriate metering plan and water and cost accounting procedure. The plan will likely be part of Operational Agreement or other Agreements that will be developed as part of the implementation of the pilot transfer.

Section 6: Additional Information Required

In order to facilitate a pilot transfer, the following additional information from each participating agency will be required.

COH:

- Confirm specific issues and lead time for water quality changes for sensitive customers;
- Estimated operational costs associated with pilot transfer (i.e., staffing, power, water quality sampling, etc.); and
- Coordinate flow rates with EBMUD.

EBMUD:

- Estimated operational costs associated with pilot transfer (i.e., staffing, power, water quality sampling, etc.), and;
- Coordinate flow rates with COH.

SFPUC (for Scenario 3 where up to 15 MGD of water would enter the SF RWS):

- List any water quality threshold values that cannot be exceeded when transferring EBMUD water into the SF RWS supply;
- Estimated operational costs associated with pilot transfer (i.e., staffing, water quality sampling, etc.).¹⁰

Beyond the pilot water transfer, possible long-term transfers will have some different characteristics that will require development of additional information by the appropriate agencies. This additional information may include:

- Impact of possible changes of long-term supply quality during a drought which could result in additional impacts to sensitive customers, either within the COH or the SF RWS;
- Need to update the Water Quality Monitoring plan with additional sampling necessary to address the longer period of operation (e.g., to track stability of disinfectant residuals, potential for nitrification, coliform positive samples, etc.);
- Difference between dry year supply quality from EBMUD and from the SF RWS (e.g., TDS differences), and potential impacts to customers within the COH service area; and
- Operating costs (e.g., staffing, monitoring, etc.) for EBMUD, the COH and SFPUC if different from the pilot transfer.

BAWSCA will be working with the COH, EBMUD, and SFPUC to further identify the required information, and which agency will develop it.

¹⁰ An October 16, 2012 meeting with SFPUC staff suggested that the O&M costs for the Newark Intertie were ~ \$30k/year.

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Attachment 1

Daily Pumping Log for 2009-2010 Transfer

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NORTH TO SOUTH INTER-TIE PUMPING

| DATE | SKYWEST P/S | | | | HESPERIAN P/S | | | | Decoto P/S | | COH Use | Total (MG): | MG Transferred |
|----------|-------------|--------|---------|-------|---------------|--------|-----------|-------|------------|-------|---------|----------------|----------------|
| | S METER | S USE | N METER | N USE | S METER | S USE | N METER | N USE | METER | USE | | | 1,303.38 |
| 12/14/09 | 19,784 | | 126 | | 222 | | 6,962,589 | | 5,438 | | | | |
| 12/15/09 | 24,967 | 5,183 | 126 | 0 | 222 | 0 | 6,964,146 | 1,557 | 7,844 | 2,406 | 9.15 | | |
| 12/16/09 | 30,199 | 5,232 | 126 | 0 | 222 | 0 | 6,970,053 | 5,907 | 9,278 | 1,434 | 12.57 | | |
| 12/17/09 | 41,076 | 10,877 | 126 | 0 | 1,587 | 1,365 | 6,974,144 | 4,091 | 9,729 | 451 | 14.05 | Weekly total: | 33.50 |
| 12/18/09 | 53,283 | 12,207 | 126 | 0 | 1,587 | 0 | 6,974,144 | 0 | 9,733 | 4 | 12.21 | Daily Average: | 6.70 |
| 12/19/09 | 65,526 | 12,243 | 126 | 0 | 1,587 | 0 | 6,974,144 | 0 | 9,737 | 4 | 12.25 | | |
| 12/20/09 | 76,675 | 11,149 | 126 | 0 | 1,587 | 0 | 6,974,144 | 0 | 9,742 | 5 | 11.15 | | |
| 12/21/09 | 87,841 | 11,166 | 126 | 0 | 1,587 | 0 | 6,974,144 | 0 | 9,750 | 8 | 11.17 | | |
| 12/22/09 | 104,228 | 16,387 | 126 | 0 | 5,386 | 3,799 | 6,977,020 | 2,876 | 9,764 | 14 | 15.48 | | |
| 12/23/09 | 117,060 | 12,832 | 126 | 0 | 7,702 | 2,316 | 6,979,395 | 2,375 | 12,026 | 2,262 | 15.15 | | |
| 12/24/09 | 128,639 | 11,579 | 126 | 0 | 7,759 | 57 | 6,979,395 | 0 | 12,113 | 87 | 11.61 | Weekly total: | 88.43 |
| 12/25/09 | 141,716 | 13,077 | 126 | 0 | 8,718 | 959 | 6,979,395 | 0 | 12,854 | 741 | 12.86 | Daily Average: | 12.63 |
| 12/26/09 | 153,801 | 12,085 | 126 | 0 | 12,365 | 3,647 | 6,979,395 | 0 | 15,277 | 2,423 | 10.86 | | |
| 12/27/09 | 163,727 | 9,926 | 126 | 0 | 12,675 | 310 | 6,979,395 | 0 | 15,728 | 451 | 10.07 | | |
| 12/28/09 | 176,274 | 12,547 | 126 | 0 | 16,987 | 4,312 | 6,979,395 | 0 | 18,021 | 2,293 | 10.53 | | |
| 12/29/09 | 189,514 | 13,240 | 126 | 0 | 18,398 | 1,411 | 6,979,395 | 0 | 18,847 | 826 | 12.66 | | |
| 12/30/09 | 203,762 | 14,248 | 126 | 0 | 21,375 | 2,977 | 6,979,395 | 0 | 20,896 | 2,049 | 13.32 | | |
| 12/31/09 | 214,729 | 10,967 | 126 | 0 | 22,721 | 1,346 | 6,979,395 | 0 | 23,927 | 3,031 | 12.65 | Weekly total: | 89.39 |
| 01/01/10 | 231,108 | 16,379 | 126 | 0 | 23,927 | 1,206 | 6,979,395 | 0 | 24,260 | 333 | 15.51 | Daily Average: | 12.77 |
| 01/02/10 | 241,636 | 10,528 | 126 | 0 | 25,831 | 1,904 | 6,979,395 | 0 | 24,260 | 0 | 8.62 | | |
| 01/03/10 | 254,294 | 12,658 | 126 | 0 | 29,269 | 3,438 | 6,979,395 | 0 | 25,972 | 1,712 | 10.93 | | |
| 01/04/10 | 266,303 | 12,009 | 126 | 0 | 29,832 | 563 | 6,979,395 | 0 | 26,408 | 436 | 11.88 | | |
| 01/05/10 | 285,738 | 19,435 | 134 | 8 | 38,727 | 8,895 | 6,979,395 | 0 | 28,061 | 1,653 | 12.19 | | |
| 01/06/10 | 313,213 | 27,475 | 134 | 0 | 55,466 | 16,739 | 6,979,395 | 0 | 29,049 | 988 | 11.72 | | |
| 01/07/10 | 341,092 | 27,879 | 134 | 0 | 71,692 | 16,226 | 6,979,395 | 0 | 29,049 | 0 | 11.65 | Weekly total: | 133.63 |
| 01/08/10 | 364,733 | 23,641 | 134 | 0 | 83,577 | 11,885 | 6,979,395 | 0 | 29,049 | 0 | 11.76 | Daily Average: | 19.09 |

NORTH TO SOUTH INTER-TIE PUMPING

| DATE | S METER | S USE | N METER | N USE | S METER | S USE | N METER | N USE | METER | USE | COH Use | Total (MG): | 1,303.38 |
|----------|---------|--------|---------|-------|---------|--------|-----------|-------|--------|-------|---------|----------------|----------|
| 01/09/10 | 383,070 | 18,337 | 134 | 0 | 91,808 | 8,231 | 6,979,395 | 0 | 30,194 | 1,145 | 11.25 | | |
| 01/10/10 | 401,898 | 18,828 | 134 | 0 | 99,746 | 7,938 | 6,979,395 | 0 | 30,194 | 0 | 10.89 | | |
| 01/11/10 | 420,669 | 18,771 | 134 | 0 | 107,450 | 7,704 | 6,979,395 | 0 | 30,194 | 0 | 11.07 | | |
| 01/12/10 | 439,004 | 18,335 | 134 | 0 | 115,479 | 8,029 | 6,979,395 | 0 | 32,210 | 2,016 | 12.32 | | |
| 01/13/10 | 455,749 | 16,745 | 134 | 0 | 121,644 | 6,165 | 6,979,395 | 0 | 33,359 | 1,149 | 11.73 | | |
| 01/14/10 | 474,827 | 19,078 | 134 | 0 | 128,995 | 7,351 | 6,979,395 | 0 | 33,359 | 0 | 11.73 | Weekly total: | 129.17 |
| 01/15/10 | 493,898 | 19,071 | 134 | 0 | 136,794 | 7,799 | 6,979,395 | 0 | 33,719 | 360 | 11.63 | Daily Average: | 18.45 |
| 01/16/10 | 513,614 | 19,716 | 134 | 0 | 145,268 | 8,474 | 6,979,395 | 0 | 35,396 | 1,677 | 12.92 | | |
| 01/17/10 | 532,561 | 18,947 | 134 | 0 | 154,786 | 9,518 | 6,979,395 | 0 | 36,551 | 1,155 | 10.58 | | |
| 01/18/10 | 551,561 | 19,000 | 134 | 0 | 164,221 | 9,435 | 6,979,395 | 0 | 37,410 | 859 | 10.42 | | |
| 01/19/10 | 570,742 | 19,181 | 134 | 0 | 172,822 | 8,601 | 6,979,395 | 0 | 37,410 | 0 | 10.58 | | |
| 01/20/10 | 589,814 | 19,072 | 134 | 0 | 180,345 | 7,523 | 6,979,395 | 0 | 37,410 | 0 | 11.55 | | |
| 01/21/10 | 610,097 | 20,283 | 134 | 0 | 189,153 | 8,808 | 6,979,395 | 0 | 37,410 | 0 | 11.48 | Weekly total: | 143.65 |
| 01/22/10 | 637,548 | 27,451 | 134 | 0 | 202,889 | 13,736 | 6,979,395 | 0 | 38,643 | 1,233 | 14.95 | Daily Average: | 20.52 |
| 01/23/10 | 651,993 | 14,445 | 134 | 0 | 208,210 | 5,321 | 6,979,395 | 0 | 38,643 | 0 | 9.12 | | |
| 01/24/10 | 672,945 | 20,952 | 134 | 0 | 219,863 | 11,653 | 6,979,395 | 0 | 39,484 | 841 | 10.14 | | |
| 01/25/10 | 693,909 | 20,964 | 134 | 0 | 230,230 | 10,367 | 6,979,395 | 0 | 39,698 | 214 | 10.81 | | |
| 01/26/10 | 714,857 | 20,948 | 134 | 0 | 240,734 | 10,504 | 6,979,395 | 0 | 40,736 | 1,038 | 11.48 | | |
| 01/27/10 | 735,826 | 20,969 | 134 | 0 | 250,812 | 10,078 | 6,979,395 | 0 | 40,736 | 0 | 10.89 | | |
| 01/28/10 | 756,802 | 20,976 | 134 | 0 | 261,529 | 10,717 | 6,979,395 | 0 | 41,795 | 1,059 | 11.32 | Weekly total: | 140.21 |
| 01/29/10 | 777,756 | 20,954 | 134 | 0 | 271,399 | 9,870 | 6,979,395 | 0 | 41,795 | 0 | 11.08 | Daily Average: | 20.03 |
| 01/30/10 | 798,706 | 20,950 | 134 | 0 | 280,533 | 9,134 | 6,979,395 | 0 | 41,795 | 0 | 11.82 | | |
| 01/31/10 | 819,685 | 20,979 | 134 | 0 | 290,586 | 10,053 | 6,979,395 | 0 | 41,795 | 0 | 10.93 | | |
| 02/01/10 | 840,636 | 20,951 | 134 | 0 | 301,854 | 11,268 | 6,979,395 | 0 | 42,669 | 874 | 10.56 | | |
| 02/02/10 | 865,811 | 25,175 | 134 | 0 | 315,871 | 14,017 | 6,979,395 | 0 | 43,644 | 975 | 12.13 | | |
| 02/03/10 | 894,384 | 28,573 | 134 | 0 | 333,049 | 17,178 | 6,979,395 | 0 | 43,644 | 0 | 11.40 | | |
| 02/04/10 | 922,975 | 28,591 | 134 | 0 | 350,778 | 17,729 | 6,979,395 | 0 | 43,644 | 0 | 10.86 | Weekly total: | 173.80 |
| 02/05/10 | 951,557 | 28,582 | 134 | 0 | 368,249 | 17,471 | 6,979,395 | 0 | 43,644 | 0 | 11.11 | Daily Average: | 24.83 |

NORTH TO SOUTH INTER-TIE PUMPING

| DATE | S METER | S USE | N METER | N USE | S METER | S USE | N METER | N USE | METER | USE | COH Use | Total (MG): | 1,303.38 |
|---------------------------|------------------|---------------|------------|----------|----------------|---------------|------------------|----------|---------------|----------|-------------|----------------|----------|
| 02/06/10 | 980,768 | 29,211 | 134 | 0 | 386,323 | 18,074 | 6,979,395 | 0 | 43,644 | 0 | 11.14 | | |
| 02/07/10 | 1,010,272 | 29,504 | 134 | 0 | 405,200 | 18,877 | 6,979,395 | 0 | 43,644 | 0 | 10.63 | | |
| 02/08/10 | 1,039,699 | 29,427 | 134 | 0 | 424,150 | 18,950 | 6,979,395 | 0 | 43,644 | 0 | 10.48 | | |
| 02/09/10 | 1,069,119 | 29,420 | 134 | 0 | 442,180 | 18,030 | 6,979,395 | 0 | 43,644 | 0 | 11.39 | | |
| 02/10/10 | 1,098,656 | 29,537 | 134 | 0 | 462,177 | 19,997 | 6,979,395 | 0 | 45,086 | 1,442 | 10.98 | | |
| 02/11/10 | 1,128,156 | 29,500 | 134 | 0 | 480,760 | 18,583 | 6,979,395 | 0 | 45,086 | 0 | 10.92 | Weekly total: | 206.15 |
| 02/12/10 | 1,157,709 | 29,553 | 134 | 0 | 498,208 | 17,448 | 6,979,395 | 0 | 45,086 | 0 | 12.11 | Daily Average: | 29.45 |
| 02/13/10 | 1,187,211 | 29,502 | 134 | 0 | 516,671 | 18,463 | 6,979,395 | 0 | 45,086 | 0 | 11.04 | | |
| 02/14/10 | 1,216,711 | 29,500 | 134 | 0 | 535,408 | 18,737 | 6,979,395 | 0 | 45,086 | 0 | 10.76 | | |
| 02/15/10 | 1,246,183 | 29,472 | 134 | 0 | 555,404 | 19,996 | 6,979,395 | 0 | 45,086 | 0 | 9.48 | | |
| 02/16/10 | 1,275,639 | 29,456 | 134 | 0 | 574,173 | 18,769 | 6,979,395 | 0 | 45,086 | 0 | 10.69 | | |
| 02/17/10 | 1,305,143 | 29,504 | 134 | 0 | 594,407 | 20,234 | 6,979,395 | 0 | 47,220 | 2,134 | 11.40 | | |
| 02/17/10 15:00 | 1,323,160 | 18,017 | 134 | 0 | 606,390 | 11,983 | 6,979,395 | 0 | 47,220 | 0 | 6.03 | Weekly total: | 165.45 |

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Attachment 2

**City of Hayward Water Quality Monitoring Plan Extracts: Sampling
Map and Typical Data Sheets**

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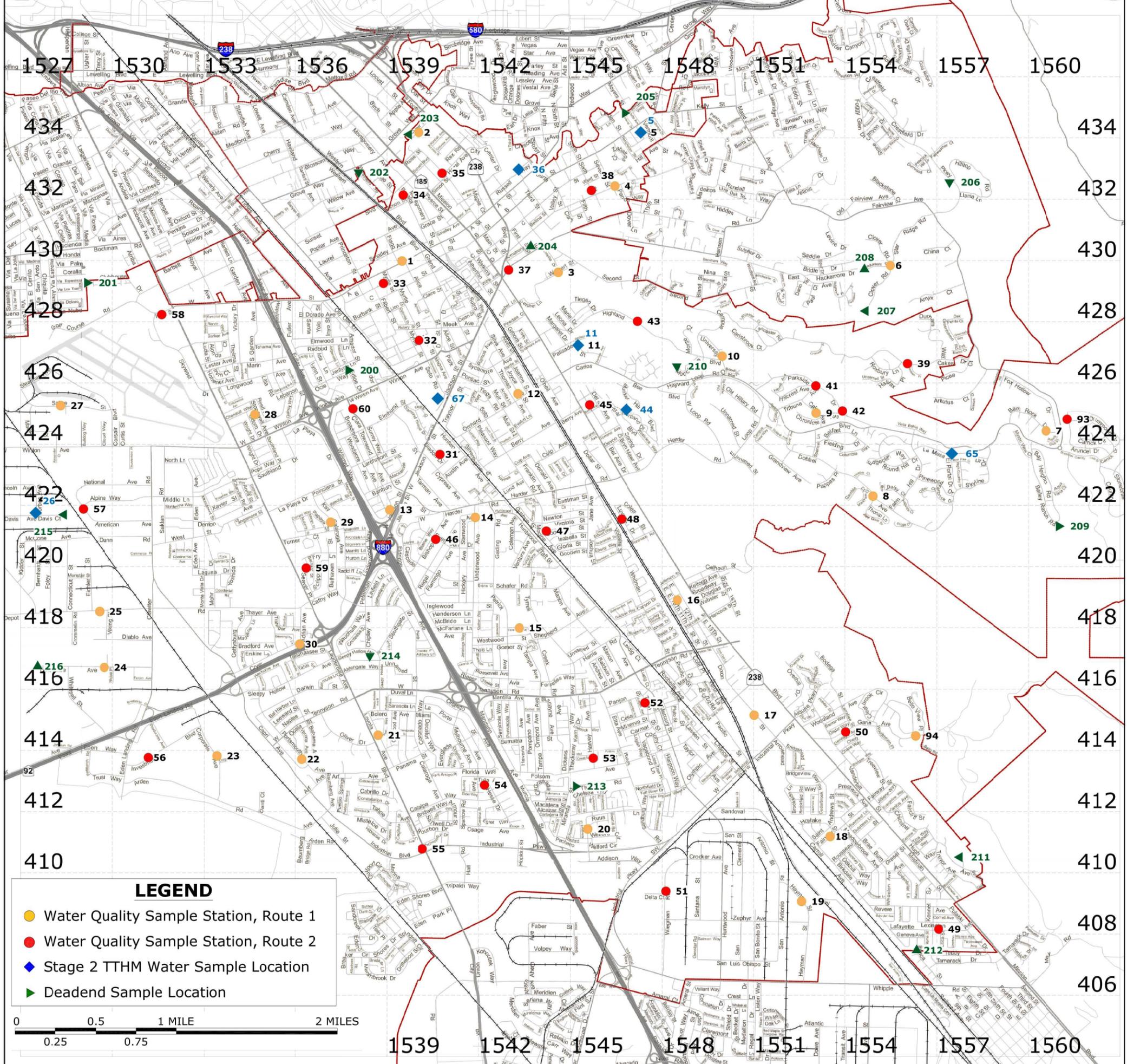


CITY OF
HAYWARD

HEART OF THE BAY

WATER SAMPLING LOCATIONS

| Location No. | Location | Press Zone | Note |
|--------------|--------------------------|------------|---------------------------|
| 1 | 492 "A" St. | 250 | |
| 2 | 1187 Cotter Way | 250 | |
| 3 | 1184 Walpert St. | 250 | |
| 4 | 1708 "D" St. | 250 | |
| 5 | 22628 Beech St. | 250 | In hedge |
| 6 | 3713 Star Ridge Rd. | 250 | Under pine tree |
| 7 | 28750 Barn Rock Dr. | 250 | |
| 8 | 28031 Dobbel Ave. | 330 | |
| 9 | 26775 Call Ave. | 1000 | |
| 10 | 25700 University Ct. | 1285 | |
| 11 | 1027 Palisade St. | 750 | |
| 12 | 24867 Joyce St. | 1000 | |
| 13 | 24992 Townsend | 750 | |
| 14 | 25852 Underwood Ave. | 500 | |
| 15 | 894 Saint Bede Ln. | 250 | |
| 16 | 27624 East 11th St. | 250 | |
| 17 | 29405 Dixon St. | 250 | |
| 18 | 154 Fairway St. | 250 | |
| 19 | 31625 Hayman St. | 250 | |
| 20 | 29119 Stratford Rd. | 250 | |
| 21 | 27621 Loyola Ave. | 250 | |
| 22 | 27619 Portsmouth Ave. | 250 | |
| 23 | 26500 Corporate Ave. | 250 | |
| 24 | 3440 Enterprise Ave. | 250 | |
| 25 | 3464 Depot Rd. | 250 | |
| 26 | 21093 Forbes St. | 250 | |
| 27 | 1787 Sabre St. | 250 | |
| 28 | 23491 Stonewall Ave. | 250 | |
| 29 | 24867 Calaroga Ave. | 250 | |
| 30 | 2226 Cryer St. | 250 | |
| 31 | 1153 Garin Rd. | 650 | Entry Pt.; PRV Sta. #07 |
| 32 | 24928 Diadon Dr. | 250 | |
| 33 | 23980 Myrtle St. | 250 | |
| 34 | 360 "B" St. | 250 | |
| 35 | 22141 Peralta St. | 250 | |
| 36 | 22165 Main St. | 250 | |
| 37 | 1338 Russell Way | 250 | |
| 38 | "E" St. | 250 | |
| 39 | 22774 6th St. | 330 | |
| 40 | 3772 Oakes Dr | 1000 | |
| 40 (65) | 3536 La Mesa Dr. | 1285 | |
| 41 | Tribune Ave. | 750 | |
| 42 | 27053 Parkside Dr. | 1000 | |
| 43 | 1487 Highland Blvd. | 750 | |
| 44 | 25561 Maitland Dr. | 500 | |
| 45 | 25182 Belmont Ave. | 250 | |
| 46 | 26017 Evergreen St. | 250 | |
| 47 | 117 Goodrich St. | 250 | |
| 48 | 26629 Luvena Dr. | 250 | |
| 49 | 268 Lafayette Ave. | 250 | Behind white picket fence |
| 50 | 649 Garin Ave. | 250 | |
| 51 | 30901 Wiegman Rd. | 250 | Across from 30901 |
| 52 | 28463 Triton St. | 250 | |
| 53 | 28663 Harvey Ave. | 250 | |
| 54 | 28003 Hesse Drive | 250 | |
| 55 | 28521 Hesperian Blvd. | 250 | Entry Pt., PRV Sta. #11 |
| 56 | 3521 Investment Blvd. | 250 | |
| 57 | 2474 American Ave. | 250 | |
| 58 | 957 West A St. | 250 | |
| 59 | 25648 Seaver St. | 250 | |
| 60 | 24438 Santa Clara St. | 250 | At Police Sta. S driveway |
| 93 | 179 Arundel Pl. | 1530 | |
| 5 | 22628 Beech St. | 250 | DOPH Site No. 250-801 |
| 11 | 3536 La Mesa Dr. | 1285 | DOPH Site No. 250-802 |
| 26 | 21093 Forbes St. | 250 | DOPH Site No. 250-803 |
| 36 | 1338 Russell Way | 250 | DOPH Site No. 250-804 |
| 44 | 25561 Maitland Dr. | 500 | DOPH Site No. 250-805 |
| 61 (251) | 8650 Thornton Ave. | 250 | DOPH Site No. 250-806 |
| 65 (40) | 3536 La Mesa Dr. | 250 | DOPH Site No. 250-807 |
| 67 | 24505 Soto Rd. | 250 | DOPH Site No. 250-808 |
| 200 | 299 Ocie Way | 250 | Hydrant |
| 201 | 1098 Azalea Ct. | 250 | Hydrant |
| 202 | 21605 Westfield Ave. | 250 | Hydrant |
| 203 | 1115 Cotter Way | 250 | Blowoff |
| 204 | 1123 Armstrong Ct. | 250 | Blowoff |
| 205 | 22557 Norwood Dr. | 250 | Blowoff |
| 206 | 25847 Five Canyons Pkwy. | | Blowoff |
| 207 | 26204 Clover Rd. | | Hydrant |
| 208 | 3566 Star Ridge Rd. | | Hydrant |
| 209 | 28880 Rocky Point | | Hydrant |
| 210 | 25472 Modoc Ave. | | Hydrant |
| 211 | 31855 Veril Way | 250 | Blowoff |
| 212 | 32303 Itnica St. | | Blowoff |
| 213 | 1506 Thiel Rd. | 250 | Blowoff |
| 214 | 26876 Boca Raton Ct. | 250 | Blowoff |
| 215 | 2249 Davis Ct. | 250 | Hydrant |
| 216 | 3650 Enterprise Ave. | 250 | Blowoff |
| 250 | 41458 Mission Blvd. | M24A | Fremont 24" Turnout |
| 251 (61) | 8650 Thornton Ave. | N42A | Newark 42" Turnout |



City of Hayward
Water Pollution Control Facility Laboratory
Microbiological Report

| Sample Number | ADDRESS | Sample Date | Chlorine Residual (mg/L) | HPC (CFU/ml) | Temp. (°F) | pH | Conductivity (umho/cm) | Total Coliform (Present/Absent) | E. Coli (Present/Absent) |
|---------------|---|-------------|--------------------------|--------------|------------|----|------------------------|---------------------------------|--------------------------|
| 31 | 24928 Diadon Dr. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 32 | 23980 Myrtle St. | 11/06/12 | 2.3 | | | | | Absent | Absent |
| 33 | 360 "B" Street | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 34 | 22141 Peralta St. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 35 | Main St at Hazel Ave | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 36 | 1338 Russell Way | 11/06/12 | 2.5 | | | | | Absent | Absent |
| 37 | E St. at Flag Park | 11/06/12 | 2.3 | | | | | Absent | Absent |
| 38 | 1608 Ward St.(dead end) | 11/06/12 | 2.2 | | | | | Absent | Absent |
| 39 | 3772 Oakes Drive | 11/06/12 | 2.4 | | | | | Absent | Absent |
| 40 | 3536 La Mesa Drive | 11/06/12 | 2.5 | | | | | Absent | Absent |
| 41 | Corner Parkside Dr. & Tribune Ave. | 11/06/12 | 2.5 | | | | | Absent | Absent |
| 42 | 27046 Parkside Drive | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 43 | 1487 Highland Blvd. | 11/06/12 | 2.5 | | | | | Absent | Absent |
| 44 | Maitland Reservoir | 11/06/12 | 1.5 | | | | | Absent | Absent |
| 45 | 25202 Belmont Ave. | 11/06/12 | 2.5 | | | | | Absent | Absent |
| 46 | Evergreen St. at Greenway | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 47 | 26302 Mocine Ave. on Goodrich St. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 48 | 26629 Luvena Dr. (dead end) | 11/06/12 | 2.5 | | | | | Absent | Absent |
| 49 | 268 Lafayette Ave. | 11/06/12 | 2.7 | | | | | Absent | Absent |
| 50 | 649 Garin Ave. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 51 | Across from 30825 Wiegman Rd. | 11/06/12 | 2.7 | | | | | Absent | Absent |
| 52 | 28477 Triton St. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 53 | Across from 28648 Harvey Ave. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 54 | 28003 Hesse Drive | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 55 | 28521 Hesperian Blvd. (reducing station) | 11/06/12 | 2.7 | | | | | Present | Absent |
| 56 | 3521 Investment Blvd. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 57 | 2474 American Ave. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 58 | 20777 Hesperian Blvd. on West A St. | 11/06/12 | 2.6 | | | | | Absent | Absent |
| 59 | 1519 Seaver Ct. | 11/06/12 | 2.7 | | | | | Absent | Absent |
| 60 | Santa Clara St. at south dr. Police Station | 11/06/12 | 2.6 | | | | | Absent | Absent |
| ** | 32513 Mission Blvd. ENTRY PT. | 11/06/12 | 2.7 | | | | | | |

Colilert-24, Lot #: JH026, Exp. Date: 8/20/15, bottle lot no. HH460 exp 9/15/13

Analyst: Steve DiCarolis

Date: 11/7/2012

Reviewed by: Farid Ramezanzadeh

Date: 11/8/2012

City of Hayward
Water Pollution Control Facility Laboratory
Microbiological Report

| Sample Number | ADDRESS | Sample Date | Chlorine Residual (mg/L) | HPC (CFU/ml) | Temp. (°F) | pH | Conductivity (umho/cm) | Total Coliform (Present/Absent) | E. Coli (Present/Absent) |
|---------------|----------------------------------|-------------|--------------------------|--------------|------------|----|------------------------|---------------------------------|--------------------------|
| 55 | 28521 Hesperian Blvd. | 11/08/12 | 2.7 | | | | | Absent | Absent |
| 55 A | 28800 Hesperian Blvd. (upstream) | 11/08/12 | 2.7 | | | | | Absent | Absent |
| 55 B | 25131 Echaoggy Dr | 11/08/12 | 2.6 | | | | | Absent | Absent |

Colilert-24, Lot #: HH460, Exp. Date:9/15/13, bottle lot no. JH026, exp. 8/20/15

Analyst: Steve DiCarolis

Date: 11/9/2012

Reviewed by: Farid Ramezanzadeh

Date: 11/13/2012

City of Hayward
Water Pollution Control Facility Laboratory
Microbiological Report

| Sample Number | ADDRESS | Sample Date | Chlorine Residual (mg/L) | HPC (CFU/ml) | Temp. (°F) | pH | Conductivity (umho/cm) | Total Coliform (Present/Absent) | E. Coli (Present/Absent) |
|---------------|---------------------------------|-------------|--------------------------|--------------|------------|----|------------------------|---------------------------------|--------------------------|
| 1 | 492 "A" St. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 2 | 1187 Cotter Way(deadend) | 11/13/12 | 2.2 | | | | | Absent | Absent |
| 3 | 1140 Walpert St. | 11/13/12 | 2.6 | | | | | Absent | Absent |
| 4 | 1708 "D" St. | 11/13/12 | 2.2 | | | | | Absent | Absent |
| 5 | 22628 Beech St. | 11/13/12 | 1.4 | | | | | Absent | Absent |
| 6 | 3727 East Ave | 11/13/12 | 0.2 | | | | | Absent | Absent |
| 7 | Across from 28750 Barn Rock Dr. | 11/13/12 | 0.3 | | | | | Absent | Absent |
| 8 | 28031 Dobbel Ave. | 11/13/12 | 2.3 | | | | | Absent | Absent |
| 9 | 26775 Call Ave. | 11/13/12 | 2.4 | | | | | Absent | Absent |
| 10 | 25700 University Ct. | 11/13/12 | 2.5 | | | | | Absent | Absent |
| 11 | 1027 Palisade St. | 11/13/12 | 1.2 | | | | | Absent | Absent |
| 12 | 24867 Joyce St. | 11/13/12 | 2.5 | | | | | Absent | Absent |
| 13 | Corner of Broadmore& Townsend | 11/13/12 | 2.6 | | | | | Absent | Absent |
| 14 | 25852 Underwood Ave. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 15 | 894 St. Bede Lane | 11/13/12 | 2.3 | | | | | Absent | Absent |
| 16 | 27624 East 11th St. | 11/13/12 | 2.6 | | | | | Absent | Absent |
| 17 | 29596 Dixon St. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 18 | 154 Fairway St. | 11/13/12 | 2.8 | | | | | Absent | Absent |
| 19 | 31625 Hayman St. | 11/13/12 | 2.8 | | | | | Absent | Absent |
| 20 | Across from 29277 Stratford Rd. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 21 | 27621 Loyola Ave. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 22 | 27619 Portsmouth Ave. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 23 | 26500 Corporate Ave. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 24 | 3440 Enterprise Ave. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 25 | 3464 Depot Rd. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 26 | 2249 Davis Ct.(Deadend) | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 27 | 1787 Sabre St. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 28 | 23491 Stonewall Ave. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 29 | 24867 Calaroga Ave. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| 30 | Adrian Ave. & Cryer St. | 11/13/12 | 2.7 | | | | | Absent | Absent |
| ** | 32527 Mission ENTRY PT. | 11/13/12 | 2.8 | | | | | | |
| ** | 28521 Hesperian ENTRY PT. | 11/13/12 | 2.8 | | | | | | |

Colilert-24, Lot #: HH460, Exp. Date:9/15/13, bottle lot no. JH026, exp. 8/20/15

Analyst: Steve DiCarolis

Date: 11/14/2012

Reviewed by: Farid Ramezanzadeh

Date: 11/15/2012

City of Hayward
Water Pollution Control Facility Laboratory
Microbiological Report

| Sample Number | ADDRESS | Sample Date | Chlorine Residual (mg/L) | HPC (CFU/ml) | Temp. (°F) | pH | Conductivity (umho/cm) | Total Coliform (Present/Absent) | E. Coli (Present/Absent) |
|---------------|---|-------------|--------------------------|--------------|------------|----|------------------------|---------------------------------|--------------------------|
| 31 | 24928 Diadon Dr. | 11/20/12 | 2.7 | | | | | Absent | Absent |
| 32 | 23980 Myrtle St. | 11/20/12 | 2.1 | | | | | Absent | Absent |
| 33 | 360 "B" Street | 11/20/12 | 2.6 | | | | | Absent | Absent |
| 34 | 22141 Peralta St. | 11/20/12 | 2.5 | | | | | Absent | Absent |
| 35 | Main St at Hazel Ave | 11/20/12 | 2.7 | | | | | Absent | Absent |
| 36 | 1338 Russell Way | 11/20/12 | 2.6 | | | | | Absent | Absent |
| 37 | E St. at Flag Park | 11/20/12 | 1.6 | | | | | Absent | Absent |
| 38 | 1608 Ward St.(dead end) | 11/20/12 | 2.1 | | | | | Absent | Absent |
| 39 | 3772 Oakes Drive | 11/20/12 | 1.8 | | | | | Absent | Absent |
| 40 | 3536 La Mesa Drive | 11/20/12 | 2.4 | | | | | Absent | Absent |
| 41 | Corner Parkside Dr. & Tribune Ave. | 11/20/12 | 2.4 | | | | | Absent | Absent |
| 42 | 27046 Parkside Drive | 11/20/12 | 2.3 | | | | | Absent | Absent |
| 43 | 1487 Highland Blvd. | 11/20/12 | 2.4 | | | | | Absent | Absent |
| 44 | Maitland Reservoir | 11/20/12 | 1.3 | | | | | Absent | Absent |
| 45 | 25202 Belmont Ave. | 11/20/12 | 2.4 | | | | | Absent | Absent |
| 46 | Evergreen St. at Greenway | 11/20/12 | 2.7 | | | | | Absent | Absent |
| 47 | 26302 Mocine Ave. on Goodrich St. | 11/20/12 | 2.6 | | | | | Absent | Absent |
| 48 | 26629 Luvena Dr. (dead end) | 11/20/12 | 2.3 | | | | | Absent | Absent |
| 49 | 268 Lafayette Ave. | 11/20/12 | 2.8 | | | | | Absent | Absent |
| 50 | 649 Garin Ave. | 11/20/12 | 2.6 | | | | | Absent | Absent |
| 51 | Across from 30825 Wiegman Rd. | 11/20/12 | 2.6 | | | | | Absent | Absent |
| 52 | 28477 Triton St. | 11/20/12 | 2.7 | | | | | Absent | Absent |
| 53 | Across from 28648 Harvey Ave. | 11/20/12 | 2.7 | | | | | Absent | Absent |
| 54 | 28003 Hesse Drive | 11/20/12 | 2.5 | | | | | Absent | Absent |
| 55 | 28521 Hesperian Blvd. (reducing station) | 11/20/12 | 2.8 | | | | | Absent | Absent |
| 56 | 3521 Investment Blvd. | 11/20/12 | 2.6 | | | | | Absent | Absent |
| 57 | 2474 American Ave. | 11/20/12 | 2.7 | | | | | Absent | Absent |
| 58 | 20777 Hesperian Blvd. on West A St. | 11/20/12 | 1.8 | | | | | Absent | Absent |
| 59 | 1519 Seaver Ct. | 11/20/12 | 2.7 | | | | | Absent | Absent |
| 60 | Santa Clara St. at south dr. Police Station | 11/20/12 | 2.7 | | | | | Absent | Absent |
| ** | 32513 Mission Blvd. ENTRY PT. | 11/20/12 | 2.8 | | | | | | |

Colliert-24, Lot #: HH460, Exp. Date:9/15/13, bottle lot no. JH026, exp. 8/20/15

Analyst: Steve DiCarolis

Date: 11/21/2012

Reviewed by: Farid Ramezanzadeh

Date: 11/26/2012

City of Hayward
Water Pollution Control Facility Laboratory
Microbiological Report

| Sample Number | ADDRESS | Sample Date | Chlorine Residual (mg/L) | HPC (CFU/ml) | Temp. (°F) | pH | Conductivity (umho/cm) | Total Coliform (Present/Absent) | E. Coli (Present/Absent) |
|---------------|---------------------------------|-------------|--------------------------|--------------|------------|----|------------------------|---------------------------------|--------------------------|
| 1 | 492 "A" St. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 2 | 1187 Cotter Way(deadend) | 11/27/12 | 2.1 | | | | | Absent | Absent |
| 3 | 1140 Walpert St. | 11/27/12 | 2.5 | | | | | Absent | Absent |
| 4 | 1708 "D" St. | 11/27/12 | 2.2 | | | | | Absent | Absent |
| 5 | 22628 Beech St. | 11/27/12 | 1.3 | | | | | Absent | Absent |
| 6 | 3727 East Ave | 11/27/12 | 0.1 | | | | | Absent | Absent |
| 7 | Across from 28750 Barn Rock Dr. | 11/27/12 | 0.3 | | | | | Absent | Absent |
| 8 | 28031 Dobbel Ave. | 11/27/12 | 2.3 | | | | | Absent | Absent |
| 9 | 26775 Call Ave. | 11/27/12 | 2.3 | | | | | Absent | Absent |
| 10 | 25700 University Ct. | 11/27/12 | 2.4 | | | | | Absent | Absent |
| 11 | 1027 Palisade St. | 11/27/12 | 0.9 | | | | | Absent | Absent |
| 12 | 24867 Joyce St. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 13 | Corner of Broadmore& Townsend | 11/27/12 | 2.5 | | | | | Absent | Absent |
| 14 | 25852 Underwood Ave. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 15 | 894 St. Bede Lane | 11/27/12 | 1.8 | | | | | Absent | Absent |
| 16 | 27624 East 11th St. | 11/27/12 | 2.3 | | | | | Absent | Absent |
| 17 | 29596 Dixon St. | 11/27/12 | 2.6 | | | | | Absent | Absent |
| 18 | 154 Fairway St. | 11/27/12 | 2.8 | | | | | Absent | Absent |
| 19 | 31625 Hayman St. | 11/27/12 | 2.6 | | | | | Absent | Absent |
| 20 | Across from 29277 Stratford Rd. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 21 | 27621 Loyola Ave. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 22 | 27619 Portsmouth Ave. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 23 | 26500 Corporate Ave. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 24 | 3440 Enterprise Ave. | 11/27/12 | 2.5 | | | | | Absent | Absent |
| 25 | 3464 Depot Rd. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 26 | 2249 Davis Ct.(Deadend) | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 27 | 1787 Sabre St. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 28 | 23491 Stonewall Ave. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| 29 | 24867 Calaroga Ave. | 11/27/12 | 2.6 | | | | | Absent | Absent |
| 30 | Adrian Ave. & Cryer St. | 11/27/12 | 2.7 | | | | | Absent | Absent |
| ** | 32527 Mission ENTRY PT. | 11/27/12 | 2.8 | | | | | | |
| ** | 28521 Hesperian ENTRY PT. | 11/27/12 | 2.8 | | | | | | |

Colilert-24, Lot #: HH460, Exp. Date:9/15/13, bottle lot no. JH026, exp. 8/20/15

Analyst: Steve DiCarolis

Date: 11/28/2012

Reviewed by: Farid Ramezanzadeh

Date: 11/29/2012

**City of Hayward
Monthly Summary Of Distribution System
Coliform Monitoring**

System Name: **Hayward**

System Number: **110006**

Sampling Period: **November 2012**

| | Number Required | Number Collected | Number Total Coliform Positive | Number Fecal/E.coli Positive |
|---|------------------------|-------------------------|---------------------------------------|-------------------------------------|
| 1. Routine Samples | 96 | 120 | 1 | 0 |
| 2. Repeat Samples Following Samples Which are Total Coliform Positive and Fecal/E.coli negative | | 3 | 0 | 0 |
| 3. Repeat Samples Following Routine Samples Which are Total Coliform Positive and Fecal/E. coli Positive | | 0 | 0 | 0 |
| 4. MCL Computation For Total Coliform Positive Sample | | | | |
| a: Total (sum of columns) | 96 | 123 | | |
| b. If 40 or more sample collected month, determine percent of samples that are coliform positive. (total number of positive/total number collected) x 100 | | 0.8 | | |
| c. Is system in compliance with | | | | |
| fecal/E.coli MCL? | | Yes | | |
| monthly MCL? | | Yes | | |
| 5. Invalidated Samples | | 0 | | |
| 6. Summary Completed By: | | | | |

Signature: *Farid Ramezanzadeh*
 Farid Ramezanzadeh, Lab Supervisor

Date: 11/29/2012

**MONTHLY SUMMARY OF MONITORING
FOR SURFACE WATER TREATMENT REGULATIONS**

System Name: **City of Hayward**

System No.: **0110006**

Wholesaler Name:

Month/Year: **November 2012**

DISINFECTION PROCESS DATA

Disinfectant Residual Type:

free chlorine _____
combined chlorine _____
other _____

| Incidents of Chlorine Residuals Less Than 0.2 ppm at the Plant Effluent: | | | | | |
|--|--|--|--|--|--|
| Date of Incident | | | | | |
| Duration | | | | | |
| Date Dept. Notified | | | | | |

Total No. of Incidents Where Residual is <0.2 NTU: _____

Meets Standard (i.e. is not less than 0.2 ppm for more that four hours (Y/N)? _____

| | |
|---|------------|
| No. of distribution system residual samples collected: | 132 |
| No. of distribution system samples for HPC only: | |
| Total No. residual and/or HPC samples collected: | 132 |
| No. of samples with no detectable residual and HPC is not measured: | 0 |
| No. of samples with no residual and HPC >500 CFU/mL: | 0 |
| No. of samples for HPC only and HPC >500 CFU/mL: | |
| Total No. samples with no residual and/or HPC >500 CFU/mL: | 0 |

Where Compute V,

$$V = \frac{1 - (\text{Total No. samples with no residual and/or HPC} > 500)}{(\text{Total No. residual and/or HPC samples collected})} \times 100 = 100$$
 Meets Standard (i.e. V=>95%) (Y/N)? YES

SUMMARY OF WATER QUALITY COMPLAINTS

General Complaints

| Type of Complaint | Number | Corrective Actions Taken |
|-------------------|--------|--------------------------|
| Taste/Odor | | |
| Color | | |
| Turbidity | | |
| Suspended Solids | | |
| Other (Describe) | | |

Reports of Gastrointestinal Illness (Attach additional sheets if necessary):

| Person Reporting | Date | Corrective Actions Taken |
|------------------|------|--------------------------|
| | | |
| | | |
| | | |

Attach an explanation of any failure of the performance standards or operating criteria and corrective action taken or

Signature: _____

Date: _____

CITY OF HAYWARD
Water Sample Route # 1A

Date Received: 1/9/12 Date Prep'd Analyzed: 01/10/12 1/10/2012 1/12/12 1/10/12

| ROUTE ORDER | ADDRESS | Lab ID | Nitrate (mg/L) NO ₃ -N | MPN HPC | Nitrite (mg/L) NO ₂ -N |
|-------------|---------------------------------|--------|-----------------------------------|---------|-----------------------------------|
| 1 | 492 "A" St. | 85592 | < 0.1 | <2 | < 0.025 |
| 2 | 1187 Cotter Way(Dead End) | 85593 | < 0.1 | <2 | < 0.025 |
| 3 | 1140 Walpert St. | 85594 | < 0.1 | <2 | < 0.025 |
| 4 | 1708 "D" St. | 85595 | < 0.1 | <2 | < 0.025 |
| 5 | 22628 Beech St. | 85596 | < 0.1 | <2 | < 0.025 |
| 6 | 3713 East Ave | 85597 | 0.13 | 2 | < 0.025 |
| 7 | Across from 28750 Barn Rock Dr. | 85598 | < 0.1 | <2 | < 0.025 |
| 8 | 28031 Dobbel Ave. | 85599 | < 0.1 | <2 | < 0.025 |
| 9 | 26775 Call Ave. | 85600 | < 0.1 | 2 | < 0.025 |
| 10 | 25700 University Ct. | 85601 | < 0.1 | 2 | < 0.025 |
| 11 | 1027 Palisade St. | 85602 | < 0.1 | <2 | < 0.025 |
| 12 | 24867 Joyce St. | 85603 | < 0.1 | <2 | < 0.025 |
| 13 | Broadmore& Townsend | 85604 | < 0.1 | <2 | < 0.025 |
| 14 | 25852 Underwood Ave. | 85605 | < 0.1 | <2 | < 0.025 |
| 15 | 894 St. Bede Lane | 85606 | < 0.1 | <2 | < 0.025 |

SimPlate for HPC @ 35.0±0.5°C for 48hrs.

Unit: MPN

Blank: < 2

Air cal: 6

| | |
|---------|-----|
| Minimum | < 2 |
| Maximum | 2 |

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ATTACHMENT D

- Technical Memorandum #4 - Approvals and Institutional Agreements
- Technical Memorandum #4A - Approvals and Institutional Arrangements

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*TECHNICAL MEMORANDUM #4 - APPROVALS AND
INSTITUTIONAL AGREEMENTS*

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Technical Memorandum #4

Approvals and Institutional Agreements

March 11, 2013, revised September 19, 2013

Section 1: Introduction

The East Bay Municipal Utility District (EBMUD or District) and the Bay Area Water Supply and Conservation Agency (BAWSCA) are developing a Short-term Pilot Water Transfer Plan (Pilot Plan) to evaluate the feasibility of partnering as buyers on long-term water transfer projects to improve future water supply reliability for their respective agencies. EBMUD and BAWSCA have agreed that jointly conducting a one-year pilot water transfer with a willing seller would provide important information needed to evaluate the costs and benefits of a long-term buyer partnership. The purpose of this Technical Memorandum (TM)¹ is to:

- Identify approvals and institutional arrangements that would be required to implement a one-year pilot water transfer.
- Identify differences or issues with approvals and institutional arrangements that may require further evaluation when considering a future long-term water transfer arrangement versus a one-year pilot water transfer.

Section 2: Approvals and Institutional Arrangements

Section 2 describes the approvals and institutional arrangements that would be needed to implement a one-year pilot water transfer based on the assumption that Yuba County Water Agency (YCWA) or Placer County Water Agency (PCWA) would supply water for the transfer pilot test (see TM #2). If a seller other than YCWA or PCWA is considered for either the one-year pilot water transfer or a future long-term transfer, information provided in this section would need to be re-evaluated and revised as appropriate. This section also briefly describes additional requirements for a long-term transfer arrangement versus a one-year pilot test. TM #4A will be prepared by BAWSCA that describes the institutional arrangements for BAWSCA to distribute the transfer water to its member agencies through the San Francisco Regional Water System.

The legal and regulatory requirements for completing a water transfer can be complex and the standards for meeting these requirements and obtaining approvals from the necessary

¹ TM #4A will be prepared separately by BAWSCA that summarizes potential approvals and institutional arrangements needed to distribute transfer water to its member agencies via the Hayward intertie.

regulatory and resource agencies are constantly evolving. There is no set of requirements that uniformly applies to all water transfers. Rather, the steps required for completing a water transfer depend on the parties involved and the details of the transaction.

In California, oversight for completing a water transfer is divided among state, federal, and local agencies responsible for managing different aspects of surface water and groundwater resources. Often there is a fair amount of redundancy and overlap in these requirements. The underlying water rights at issue largely determine whether and how water can be transferred in California. Therefore, a general understanding of California's water rights system is necessary to understand the legal and regulatory requirements for transferring water in California. The State Water Resources Control Board (SWRCB) has prepared a "Draft Guide to Water Transfers" to help foster voluntary transfers of water by providing a better understanding of the California Water Code and the existing regulations that govern water transfers. The Draft Guide to Water Transfers is available at:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/water_transfers/.

The vast majority of transactions in the California water market are one-year transfers that are negotiated and implemented within a single year. They often require minimal regulatory review and can be accomplished fairly quickly but provide limited long-term reliability since they are one year transactions. There are very few long-term transfer arrangements completed in California and these long-term transfers typically undergo a much more extensive review by regulatory and resource agencies that have some approval authority over the water transfer.

As discussed above, water transfer to BAWSCA would involve purchasing water from a willing seller, likely to be YCWA or PCWA, diverting the water using the Freeport Regional Water Project (FRWP or Freeport) intake, conveying the water through the FRWP facilities and EBMUD's raw water and treated water distribution system, and delivering the transfer water to BAWSCA via the Hayward Intertie. Under the Municipal Utility District Act (MUD Act), EBMUD can sell water outside of the District only when it is surplus to the needs of the EBMUD's customers. Thus, EBMUD cannot purchase transfer water and re-sell it to a third party at times when it is asking its customers to ration water. Because the transfers are anticipated to be occurring during dry years, at times when EBMUD is asking its customers to conserve water, for the short-term pilot, BAWSCA may have to be the purchaser of the water that it will be receiving. EBMUD can provide any support necessary to accomplish this transaction. For the long-term transfer arrangement, the entities can explore the creation of a joint powers authority or some other mechanism to facilitate the transfers and to address the MUD Act limitations.

Table 1 summarizes the environmental reviews, approvals, and institutional arrangements that would be needed to transfer water to BAWSCA based on the potential sellers identified in TM #2. Table 1 illustrates the potential complexity of a water transfer to BAWSCA and it may be beneficial to undertake a one-year pilot to engage key stakeholders early on in the process and establish relationships critical to the success of both a pilot water transfer and a potential future long-term water transfer project. The pilot water transfer would provide an opportunity to test potential institutional arrangements and obtain input on issues and concerns that may need to be addressed as part of a long-term water transfer project. In Table 1, the proposed primary responsible party for each arrangement is also identified.

2.1 Environmental Review

Environmental resource laws generally require that significant adverse environmental impacts of water transfers be identified and mitigated.

2.1.1 State Resource Laws

The California Environmental Quality Act (CEQA) is a statute that requires state and local agencies to identify and analyze the significant environmental impacts of their actions, including compliance with the California Environmental Species Act (CESA), and to avoid or mitigate those impacts, if feasible. A public agency must comply with CEQA when it undertakes a "project." A project is a discretionary activity undertaken by the public agency, and it includes discretionary approvals of permits or other authorizations sought by private entities which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment.

Depending on the nature of the water transfer, the buyer or the seller may be the Lead Agency for CEQA. In the majority of successful transactions undertaken to date, the seller has been the Lead Agency for CEQA since the seller is closest to the origin of the resource and presumably more knowledgeable about potential local environmental impacts than the buyer. The parties will need to closely coordinate on preparation of the environmental document. If the seller is selected to be the Lead Agency, EBMUD, BAWSCA, and the SWRCB would likely be listed as Responsible Agencies.

Table 1: Summary of Environmental Reviews, Approvals and Institutional Arrangements Needed to Transfer Water to BAWSCA ⁽¹⁾

| | One-year Pilot Test | Proposed Primary Responsible Party | Long-term Water Transfer | Proposed Primary Responsible Party |
|---|--|------------------------------------|--|------------------------------------|
| Environmental Review | | | | |
| State resource laws | CEQA exemption(s) | Seller / BAWSCA | Compliance with CEQA, CESA | TBD |
| Federal resource laws | Compliance with NEPA, ESA ⁽²⁾ | USBR / BAWSCA / EBMUD | Compliance with NEPA, ESA ⁽²⁾ | USBR / BAWSCA / EBMUD |
| Regulatory Agency Approvals | | | | |
| SWRCB | Required ⁽³⁾ | Seller | Required ⁽³⁾ | Seller |
| USBR | Required for Warren Act contract and PCWA refill agreement | USBR / BAWSCA / EBMUD | Required for Warren Act contract(s) and PCWA refill agreement | USBR / BAWSCA / EBMUD |
| Delta Stewardship Council (future) | Likely not covered or exempt | TBD | TBD | TBD |
| Permits | | | | |
| FRWA Intake Incidental Take Permit (2011) | Potentially no changes required | EBMUD | Amendment may be required | EBMUD |
| Freeport Agreements | | | | |
| FRWA Joint Powers Agreement (2006) | No changes required; Allows a member to make a portion of its dedicated capacity available to third parties provided such use of capacity does not interfere with another member's | EBMUD | No changes required; Allows a member to make a portion of its dedicated capacity available to third parties provided such use of capacity does not interfere with another member's | EBMUD |



| | One-year Pilot Test | Proposed Primary Responsible Party | Long-term Water Transfer | Proposed Primary Responsible Party |
|--|--|---|--|---|
| | rights or the financing of the FRWA facilities. | | rights or the financing of the FRWA facilities. | |
| Settlement Agreement with State Water Contractors (2003) | Not applicable | N/A | Not applicable | N/A |
| Settlement Agreement with SLDMA/Westlands (2003) | Work with SLDMA and Westlands to develop project in a way that avoids water supply impacts to SLDMA. | EBMUD | Work with SLDMA and Westlands to develop project in a way that avoids water supply impacts to SLDMA. | EBMUD |
| Settlement Agreement with SCVWD (2003) | Not applicable | N/A | Not applicable | N/A |
| Settlement Agreement with SMUD (2003) | See discussion in Section 3.4 | EBMUD | See discussion in Section 3.4 | EBMUD |
| Settlement Agreement with CCWD (2004) | Not applicable | N/A | Not applicable | N/A |
| Principles for Unassigned Freeport Capacity (2005) | Proposed transfer project must be consistent with EBMUD Board adopted principles for third party use of FRWP facilities. | EBMUD | Proposed transfer project must be consistent with EBMUD Board adopted principles for third party use of FRWP facilities. | EBMUD |



| | One-year Pilot Test | Proposed Primary Responsible Party | Long-term Water Transfer | Proposed Primary Responsible Party |
|---|--|------------------------------------|--|------------------------------------|
| Hayward Intertie Documents | | | | |
| Hayward Intertie IS/MND (2003) | Environmental review limited to use of Hayward Intertie for emergencies only – may need addendum or supplement | EBMUD | Environmental review limited to use of Hayward Intertie for emergencies only – may need addendum or supplement | TBD |
| DWR Grant Funding Agreement (2006) | No restrictions that would prohibit use of Hayward Intertie for water transfer or exchange | N/A | No restrictions that would prohibit use of Hayward Intertie for water transfer or exchange | N/A |
| Hayward Intertie Operating Agreement (2007) | Amendment required to allow for one-year pilot test ⁽⁴⁾ | EBMUD / SFPUC / HAYWARD | Amendment required | EBMUD / SFPUC / HAYWARD |
| Transfer Agreements⁽⁴⁾ | | | | |
| Water purchase agreement with seller | Required | BAWSCA / Seller | Required | TBD |
| EBMUD-BAWSCA pilot water transfer agreement | Required | EBMUD / BAWSCA | Required | EBMUD / BAWSCA |

- (1) Information in Table 1 assumes that the potential seller is either YCWA or PCWA as described in TM #2. This information would need to be updated if a different seller is considered for the water transfer.
- (2) Compliance with NEPA and other federal environmental resource laws required for United States Bureau of Reclamation (USBR or Reclamation) to execute a Warren Act contract to use the Folsom South Canal, a federally owned facility, to convey non-CVP water to EBMUD or BAWSCA service areas.
- (3) As described further in Section 2 of TM #2, if YCWA is able to successfully petition the SWRCB to add the FRWP intake as a point of re-diversion to their water rights in advance of a one-year pilot test or long-term transfer, SWRCB approval may not be required for a transfer of water diverted from YCWA to a BAWSCA member agency who is a State Water Project (SWP) or Central Valley Project (CVP) contractor utilizing the Freeport Regional Water Authority (FRWA) facilities at present, BAWSCA does not anticipate structuring a transfer in this manner.
- (4) BAWSCA will provide a separate TM #4A to address potential agreements and institutional arrangements needed with San Francisco Public Utilities Commission (SFPUC) and its member agencies to be able to implement a one-year pilot test.

One-year Water Transfers

A public agency is required to comply with CEQA to complete a water transfer, but a temporary one-year water transfer involving post-1914 surface water rights is exempt from this requirement. Water Code Section 1729 provides that temporary changes in the point of diversion, place of use, or purpose of use due to a transfer or exchange of water or water rights pursuant to Water Code Section 1725 are exempt from the requirements of CEQA. As described previously, the applicant is still required to petition for the necessary changes to the water right and to provide sufficient information to the SWRCB for the SWRCB to make findings of no injury to other legal users of water and no unreasonable effects to fish, wildlife, or other instream beneficial uses of water due to implementation of the one-year water transfer. Many agencies are opting to conduct a limited environmental review under CEQA for one-year water transfers, rather than relying solely on the CEQA exemption, in part to ensure that the documents submitted to the SWRCB adequately address potential injury concerns.

A one-year pilot water transfer with either YCWA or PCWA would be statutorily exempt from CEQA under Water Code Section 1729. The statutory exemption granted under Water Code Section 1729 applies to the temporary water right changes needed to implement the water transfer. Changes to the existing Hayward Intertie Operating Agreement would also be required to use the Hayward Intertie to convey transfer water to BAWSCA for the pilot water transfer. Previous CEQA documentation prepared for the planning, design, construction, and operation of the Hayward Intertie examined using the intertie for the limited purpose of emergencies only.

The definition of emergency does not provide for the use of the Hayward Intertie to transfer or exchange water during droughts. The proposed action by EBMUD, SFPUC, Hayward, and BAWSCA to modify or amend the Hayward Intertie Operating Agreement to conduct a one-year pilot water transfer would also likely be exempt from environmental review because the action has no possibility of having a significant effect on the environment beyond what was already examined in the documentation. In addition to relying on the existing documentation, the following CEQA Guideline sections could be cited as justification for determining that the one-year pilot water transfer is exempt from environmental review under CEQA:

- 15061(b)(3): Exemption for projects that have no possibility of having a significant effect on the environment.
- 15262: Exemption for feasibility and planning studies.
- 15303: Exemption for conversion of small structures.

- 15282(u): Exemption for temporary changes in the point of diversion, place of use, or purpose of use due to a transfer or exchange of water or water rights set forth in Section 1729 of the Water Code.

Long-term Water Transfers

A long-term water transfer would require environmental review under CEQA to analyze the potential environmental impacts of the transfer and changes to the purpose in use of the Hayward Intertie for transfers and water exchanges. Previously prepared environmental documentation for the Yuba Accord, FRWP, Hayward Intertie, and PCWA water transfers could be referenced, as appropriate, in preparing future environmental documentation for a long-term water transfer to BAWSCA and EBMUD.

2.1.2 Federal Resource Laws

Reclamation approval of a Warren Act contract would be required to be able to convey non-CVP transfer water using the Folsom South Canal (FSC), a federally owned facility, from YCWA or PCWA to EBMUD or BAWSCA's service area. In the case of a water transfer with PCWA, a Warren Act contract would also be needed to convey the non-CVP transfer water through Folsom Reservoir. In order to approve a Warren Act contract, Reclamation must fulfill its obligations under the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.). NEPA requires full disclosure and analysis regarding the environmental impacts of federal actions, alternatives, and possible mitigation. Reclamation would be the Lead Agency under NEPA, and would publish notices, provide for public and agency review, and respond to substantive comments on this document, as required by NEPA. In addition, Reclamation must also fulfill its obligations under the federal Endangered Species Act of 1973, as amended (ESA) (16 U.S.C. §§1531 et seq.) and National Historic Preservation Act for Reclamation's proposed action.

Under the ESA portion of NEPA, coordination or consultation with the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Services (NMFS) may occur along with protection of cultural resources. The level of analysis required for NEPA compliance would depend on whether or not an undertaking could significantly affect the environment. The three levels of NEPA compliance include: categorical exclusion determination; preparation of an environmental assessment/finding of no significant impact (EA/FONSI); and preparation of an environmental impact statement (EIS).

Project proponents typically pay for Reclamation's costs to comply with NEPA. In practice, Reclamation usually welcomes a draft environmental document provided by the applicant

(or its environmental consultant). NEPA allows for an applicant to prepare either a draft EA or a draft EIS, and these contributions generally speed up the process considerably.

One-year Water Transfers

Reclamation's current practice is to prepare an EA/FONSI for approval of one-year Warren Act contracts. Reclamation does not have a categorical exclusion for water transfers. The draft EA generally includes a draft of the Warren Act contract and these transactions typically involve an informal letter exchange with the USFWS and NMFS to satisfy Reclamation's obligations under Section 7 of the federal ESA (16 U.S.C. §§1536 (c)) and to 50 C.F.R. Part 42, if Reclamation finds that approval of the one-year Warren Act and water transfer is not likely to adversely impact protected species. Reclamation circulates the entire document with the letters from the resource agencies for public and resource agency review prior to approval of the Warren Act contract by Reclamation.

Long-term Water Transfers

For a long-term water transfer, the most effective means of processing a transfer may be for BAWSCA and EBMUD to work with Reclamation to prepare a joint document that complies with CEQA, NEPA, and other environmental resource laws. The joint CEQA/NEPA document would likely also include a draft of the Warren Act contract and biological assessment pursuant to Section 7(c) of the federal ESA. The entire document would then be circulated for public and resource agency review, prior to approval of the Warren Act contract by Reclamation.

2.2 Regulatory Agency Approvals

This section discusses the state and federal transfer laws and regulatory agencies whose approval would be required to implement a water transfer to EBMUD and BAWSCA.

2.2.1 State Water Resources Control Board

Water transfers involving surface water rights perfected after 1914 (post-1914) require approval by the SWRCB for the associated changes needed to the water rights. The State Water Code contains specific provisions that protect other legal users of water, fish, wildlife, other instream beneficial uses of water, and local economies from the potential effects of changes that facilitate water transfers. Collectively, these provisions are often referred to as the "no injury" rule. The SWRCB is required to review and make findings of no injury prior to approving a transfer (i.e. change to water right). The applicant is required to submit

documents along with the water transfer petition demonstrating the water transfer complies with the no injury rule, including any comments received by the California Department of Fish and Wildlife. The SWRCB will notice the water transfer petition and a party objecting to a transfer involving a post-1914 water right can file a protest with the SWRCB. Depending on the nature of the protests, and whether these raise valid issues and can be resolved in advance, the SWRCB could opt to hold a hearing on the water transfer or proceed with approval or denial of the water transfer petition.

The need to evaluate and mitigate potential economic or socioeconomic impacts due to water transfers has been a recent concern raised by local community and environmental groups. In the majority of transfers where socioeconomic concerns have been raised, the method used to transfer water has been crop idling and not stored water releases. Water Code Section 1810 *et seq.*, which addresses the use of state, regional, or local agency facilities for transfers, prohibits the use of facilities for water transfers where there could be unreasonable effects on the economy or the environment in the counties from which the water is being transferred.

It is possible that the SWRCB may require documentation to support a finding that water transfers utilizing the FRWP and EBMUD facilities to convey water to BAWSCA's service area do not result in unreasonable effects on the local economies from which the water is being transferred. In the case of YCWA, revenues from the transfer sales are actually used to benefit local water supply projects. For PCWA, Sacramento Water Forum Agreement (WFA) releases are being made for the dual purpose of instream benefits to the Lower American River and transfer to third parties. Therefore, PCWA water releases are not currently or in the future anticipated to be available to meet local water supply needs.

As discussed in Section 2.1.5 of TM #2, YCWA and EBMUD are currently implementing a project to add the FRWP intake as a point of rediversion to YCWA's water rights permits as a means to facilitate future water transfers. SWRCB Corrected Water Right Order 2008-14 in 2008 approved the addition of the SWP and CVP service areas as places of use (which includes EBMUD's service area and the service areas of several BAWSCA member agencies) and the Delta export pumps as points of rediversion to YCWA's water rights permits through the year 2025. Therefore, if the SWRCB were to approve adding the FRWP intake as a point of rediversion to YCWA's water rights permits, it may be possible to transfer water from YCWA to BAWSCA members who are SWP or CVP contractors without additional SWRCB approval. If the water is intended to be used by all BAWSCA members, YCWA would need to petition the SWRCB to add BAWSCA's service area to their water rights permits as described below.

One-year Water Transfers

Water Code Section 1725 *et seq.* allows a permittee or licensee to temporarily change the point of diversion, place of use, or purpose of use in order to transfer water. Potential transfers with PCWA and YCWA involve stored water or water that is held in storage or would have been held in storage, absent the transfer. With either potential seller, YCWA or PCWA would need to petition the SWRCB under Water Code Section 1725 to add FRWP as a temporary point of rediversion and EBMUD and BAWSCA's service areas as temporary places of use.

The SWRCB would need to make the following findings as part of approving the one-year water transfer:

- The proposed transfer involves only the amount of water that would have been consumptively used or stored, absent the transfer;
- The proposed transfer would not injure any legal user of the water; and
- The proposed temporary water transfer would not unreasonably affect fish, wildlife, or other instream beneficial uses.

For a one-year transfer, the SWRCB typically posts the notice of the transfer petition on its internet website within 10 days of the date of submission of the petition to the SWRCB. A 30 day comment period is provided for water users that believe they may be affected by the proposed temporary change or any other interested party to file written comments to the SWRCB. The SWRCB will either render a decision within 35 dates of noticing the transfer petition or may extend the date of its decision for up to 20 days based on comments filed on the transfer petition. The SWRCB may also elect to hold a hearing if it finds that additional information is needed to make findings on the transfer petition. Typically, the SWRCB does not hold hearings on one-year transfer petitions because the timing involved with holding a hearing would make the transfer difficult to complete within the year.

Long-term Water Transfers

Similar to one-year transfers, the SWRCB must approve changes to a seller's water rights that are necessary to undertake a long-term transfer of water. Water Code Sections 382 and 1735 *et seq.* address the legal requirements for long-term water transfers. The SWRCB must make similar findings of no injury to other legal users of water and no unreasonable effect on fish, wildlife or other instream beneficial uses of water. The documentation required and time involved with receiving approval for a long-term transfer is likely to be much more substantial than for a one-year pilot water transfer. EBMUD and BAWSCA

should work closely with the potential seller to evaluate the best approach for obtaining SWRCB approval if the parties elect to move forward with a long-term water transfer project.

2.2.2 Reclamation

Reclamation approval is not required to transfer non-CVP water from YCWA or PCWA to EBMUD and BAWSCA. However, all non-CVP water transfers from the Sacramento River Valley require the use of the Folsom South Canal (FSC) to convey water to EBMUD or BAWSCA's service area and thus would require execution of a Warren Act contract with Reclamation. In the case of a transfer with PCWA, a Warren Act contract would also be needed to wheel the transfer water through Folsom Reservoir. The Warren Act (43 U.S.C. 523) of 1911 authorizes the Secretary of the Interior to enter into contracts with water purveyors to use federal facilities to carry non-CVP water (i.e., water not developed as part of the CVP). Under Section 305 of the States Emergency Drought Relief Act of 1991 (43 U.S.C. 2211 et seq.), "Excess Storage and Carrying Capacity," the Secretary is specifically authorized to execute contracts with municipalities, public water districts and agencies, other federal agencies, state agencies, and private entities pursuant to the Warren Act. These contracts allow for the impounding, storage, and conveyance of non-CVP water for domestic, municipal, fish and wildlife, industrial, and other beneficial uses using any CVP facilities identified in the law, including the FSC.

Reclamation enters into Warren Act contracts when entities desire to use CVP facilities to transfer non-CVP water and also approves the NEPA analysis to support these contracts. If there are operating or legal (such as water rights) issues that Reclamation believes are tied to the use by the contracting agency of the designated CVP facilities, it either wraps their resolution into the Warren Act contract or requires them to be agreed to in writing as a precondition.

EBMUD can work with Reclamation and BAWSCA to obtain a short-term or long-term Warren Act contract. Short-term Warren Act contracts of less than a year and involving less than 10,000 AF can typically be approved by the Area Manager in Reclamation's Mid-Pacific Region. Higher levels of approval within Reclamation may be required for a long-term Warren Act contract, depending on the desired terms. The terms of the Warren Act contract are specific to the water transfer. Therefore, separate Warren Act contracts will likely be needed for each water transfer that EBMUD or BAWSCA implements with a different seller. If PCWA is the seller for the water transfer, Reclamation and PCWA may also need to execute a refill agreement to assure Reclamation that the transfer will not adversely impact storage in Folsom Reservoir, located downstream of PCWA's Middle Fork American River Project (MFP). PCWA and Reclamation have executed refill agreements in the past as part

of one-year transfers completed by PCWA primarily with buyers located south of the Delta. In general, the refill criteria prevent PCWA from refilling MFP reservoir storage space vacated by the water transfer until Folsom Reservoir goes into flood control operations.

2.2.3 Delta Stewardship Council

The Delta Reform Act of 2009 established the Delta Stewardship Council (DSC) as an independent agency of the state. The DSC is tasked with developing and implementing a comprehensive management plan for the Delta (Delta Plan) to further the coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. Under proposed Delta Plan regulations still being formulated by the Delta Stewardship Council, proposed water transfers by EBMUD or a third party involving diversion of water at the FRWP intake, which is located within the statutory limits of the Delta, could be deemed “covered actions,” requiring the proposing agency to file a certification of consistency with the Delta Plan.

Under the proposed Delta Plan regulations that were adopted by the DSC on May 16, 2013, one-year water transfers would be exempt from being considered a covered action, consistent with Section 1729 of the Water Code, however, the proposed exemption sunsets on December 31, 2016. Numerous stakeholders have commented that this limitation creates a potentially confusing regulatory requirement that could result in an agency undertaking an environmental review of a one-year transfer to satisfy the requirements for certifying consistency with the Delta Plan, even though the legislature has exempted one-year water transfers from CEQA review.

The proposed Delta Plan regulations are unclear on whether the long-term water transfer projects being considered by EBMUD would be considered covered actions. The DSC’s current schedule is to submit the proposed Delta Plan regulations to the Office of Administrative Law (OAL) soon. The earliest date the Delta Plan could become effective is October 7, 2013. EBMUD continues to monitor the DSC’s efforts to ensure that EBMUD would be able to comply with any adopted Delta Plan regulations that affect water transfers. If a long-term water transfer project is determined to be a covered action, additional time and effort would need to be included in the project schedule and budget to prepare and file a certification of consistency with the Delta Plan for review by the public and DSC.

2.3 Permits

The Incidental Take Permit (ITP) for the Freeport Regional Water Project, Sacramento County, 2081-2010-031-03 (see Appendix A) issued by the California Department of Fish

and Game (now California Department of Fish and Wildlife, CDFW) governs the operation of the FRWP. The ITP was issued to FRWA in April 2011 and expires on December 31, 2030. The ITP allows for a maximum diversion of 147,000 acre-feet in any water year at a rate of up to 185 million of gallons a day (mgd) (286 cubic feet per second (cfs)). Covered species are the longfin and delta smelt. Due to the FRWP intake design which includes state-of-the-art fish exclusion systems (screens) that comply with CDFW, USFWS, and NMFS criteria, there are no seasonal water diversion restrictions.

EBMUD does not anticipate that any changes to the FRWA ITP would be required in order to implement the one-year pilot water transfer. Water for the one-year pilot water transfer would be diverted at the FRWP intake in compliance with all the conditions of approval listed in the ITP. The one-year pilot water transfer is consistent with the project that was contemplated in the ITP, which includes diversion of water at the FRWP intake and conveyance of the diverted water through EBMUD constructed facilities. If needed, any letters exchanged with the USFWS and NMFS as part of an informal coordination process with the federal resource agencies anticipated as part of Reclamation's NEPA review for the Warren Act contract could be shared with the CDFW to provide assurances that protected species would not be adversely impacted by the one-year pilot water transfer.

For a long-term water transfer, EBMUD and BAWSCA would need to evaluate whether future transfer water volumes that would be wheeled to BAWSCA require an amendment to the FRWA ITP to increase the maximum annual diversion volume.

2.4 Freeport Agreements

This section describes existing agreements related to the FRWP that were reviewed to determine if there are any existing conditions or limitations that could potentially affect the ability to implement a pilot water transfer or long-term transfer of water to BAWSCA. Copies of the agreements discussed in this section are provided in Appendix B. The Freeport agreements reviewed include:

- Second Amended Joint Exercise of Powers Agreement executed on November 28, 2006 (FRWA Joint Powers Agreement)
- Settlement agreements with downstream diverting entities that had challenged the Freeport EIR/EIS (collectively referred to as the FRWA Settlement Agreements)
- Principles for Use by other Parties of Unassigned EBMUD Capacity in the Freeport Regional Water Project adopted by EBMUD's Board in February 2005 (Principles for Unassigned Freeport Capacity)

FRWA Joint Powers Agreement

FRWA, a joint powers authority between Sacramento County Water Agency (SCWA) and EBMUD, was formed to design, construct and operate the FRWP for the benefit of its members. The FRWA Joint Powers Agreement includes provisions detailing the purpose and powers of FRWA and its member agencies. The FRWP intake allows for delivery of up to 185 mgd or 286 cfs of water. Up to 85 mgd of capacity is dedicated for diversion of water to SCWA and up to 100 mgd of capacity is dedicated for diversion of water to EBMUD. Paragraph 4.3 of the FRWA Joint Powers Agreement allows members to make a portion of its dedicated capacity available for third party use subject to the following provision:

“No Member may make its Dedicated Capacity available to a third-party if the use of such capacity by a third-party would interfere with any water rights or contractual entitlement of another Member or would otherwise violate the terms of any resolution, indenture, or other instrument authorizing or securing bonds or other evidences of indebtedness incurred for financing the FRWA Facilities.”

EBMUD does not anticipate that any amendments to the FRWA Joint Powers Agreement would be required for a pilot water transfer or future water transfer project with BAWSCA. However, because SCWA operates the FRWP intake, EBMUD would need to notify SCWA of any proposed transfer projects and engage SCWA in discussions as a key partner and stakeholder.

FRWA Settlement Agreements

During the environmental review process for the FRWP, several downstream diverting entities challenged the Freeport EIR/EIS. Settlements were reached with each party before the EIR was certified by the FRWA Board ending all pending litigation. Table 2 provides a brief summary of the key terms of each settlement agreement. With exception of the settlement agreements with the San Luis Delta Mendota Authority (SLDMA)/Westlands Water District and the Sacramento Municipal Utility District, the FRWA Settlement Agreements do not include any commitments that would limit EBMUD's ability to implement future transfer projects.

The Settlement Agreement with SLDMA/Westlands requires FRWA to work with the SLDMA and Westlands to develop future projects that utilize the FRWP in a way that avoids water supply impacts on SLDMA. A future pilot water transfer or long-term water transfer project with BAWSCA is not expected to impact SLDMA. However, outreach to both these agencies should be included in the planning process for future water transfer

projects to provide an overview of the project and assurances that the project will not adversely impact SLDMA.

EBMUD and SMUD are currently in discussions over implementing the terms of the Financial Settlement Agreement with SMUD that was signed on July 30, 2004. The Settlement Agreement with SMUD was intended to provide compensation to SMUD for measures it stated were necessary to address the impacts associated with potential changes in FSC water quality when Sacramento River water is introduced into the canal for delivery to EBMUD's service area. The FSC has few users and a large amount of excess capacity thus the potential harm to SMUD is to its water quality and not to the quantities that it can receive. SMUD uses water conveyed from the American River through the FSC primarily for power plant cooling.

The Settlement Agreement with SMUD addresses impacts resulting from diversions of EBMUD's CVP contract water as described in the Freeport Project EIR/EIS. If different or additional use of the FRWP and FSC is proposed, the Settlement Agreement with SMUD states that FRWA must consult with SMUD and perform environmental review consistent with CEQA and NEPA. Future use of the FSC by EBMUD to convey transfer water via the FSC will trigger discussions and FRWA will need to reach consensus on necessary mitigation of any new impacts to SMUD due to changes in FSC water quality. The goal of current negotiations with SMUD is to develop a long-term comprehensive solution that resolves all issues and covers any and all water that EBMUD puts in the canal. Issues with SMUD would need to be addressed prior to the pilot water transfer with BAWSCA.



Table 2: Summary of Key Terms of FRWA Settlement Agreements

| Agency/ Entity | Agreement Date | Key Settlement Terms | Commitment for Future Projects that utilize FRWP |
|---------------------------------------|-------------------|---|--|
| State Water Contractors | August 2003 | Reclamation is to account for FRWP deliveries of CVP water to EBMUD under its amendatory contract as a Delta "Export" for the purpose of the CVP/SWP Coordinated Operations Agreement. | None |
| SLDMA/ Westlands | 9/18/2003 | A lump sum payment of \$2,390,000 was made to compensate for a potential decrease in water delivered during drought. If FRWA plans to use its "excess capacity", it shall work with SLDMA and Westlands to develop the project and the project operations in a way that avoids water supply impacts on SLDMA. | Develop future projects in a way that avoids water supply impacts to SLDMA. |
| Santa Clara Valley Water District | 10/29/2003 | EBMUD to make 6500 AF of its CVP allocation in the first year of a 3-consecutive-year drought available to SCVWD, with equal amount being returned to EBMUD in the second or third year. EBMUD paid \$375,000 to compensate SCVWD for additional CVP O&M costs. | None |
| Contra Costa Water District | 1/30/2004 | A lump sum of \$2,000,000 was paid by FRWA to CCWD to compensate for potential water quality impacts. EBMUD also paid \$351,000 to compensate CCWD for additional CVP O&M costs. FRWA/EBMUD, at CCWD's expense, will wheel up to 3200 AF/yr (October 1 to September 30) of CCWD water via the Freeport Project. CCWD constructed a 100 mgd intertie with the Mokelumne Aqueducts at its own cost, so that it can receive Freeport wheeled water. | None |
| Sacramento Municipal Utility District | 7/30/2004 | Up to \$5M to be paid by FRWA to SMUD for actual capital expenses for water treatment facilities constructed for Cosumnes Power Plant - Phase I and Rancho Seco Power Plant due to operation of the FRWP. \$950,000 from FRWA for a Mitigation Trust Fund within 30 days of authorizing construction for FRWA facilities which can be used for stated purposes. FRWA to reimburse SMUD for incremental O&M costs associated with the mitigation measures installed by SMUD. | Agreement limited to impacts for water described in the FRWP EIR/EIS. If different or additional use of the FRWP and FSC is proposed, FRWA must consult with SMUD and perform environmental review consistent with CEQA and NEPA. Additional discharges of water to the FSC trigger a re-opener of the settlement agreement to reach consensus on mitigation of any impacts to SMUD due to changes in FSC water quality. |

Principles for Unassigned Freeport Capacity

In 2005 the Board adopted Principles for Unassigned Freeport Capacity. Unassigned EBMUD capacity means any capacity dedicated to EBMUD remaining in the FRWP facilities after meeting all EBMUD needs. The principles require any proposed third party use of EBMUD's unassigned Freeport capacity to comply with all applicable environmental regulations and laws and for EBMUD to favor supporting projects that result in the greatest environmental benefit. All water transfer projects that involve buyer partners seeking to use EBMUD's unassigned Freeport capacity would need to be consistent with the Board approved principles.

The principles require proponents seeking to use EBMUD's unassigned capacity to pay all operating costs related to their use of unassigned capacity and a negotiated share of the capital and financing costs of EBMUD's portion of the FRWP. Proponents would also need to pay all additional capital costs that result specifically from the proponents' use. A pilot water transfer with BAWSCA is likely to be consistent with the Principles for Unassigned Freeport Capacity. Any long-term water transfer project involving BAWSCA that utilizes FRWP capacity would require BAWSCA to pay its share of capital costs to use a portion of EBMUD's FRWP capacity. Additional information on the costs for third parties to use the FRWP will be provided as part of TM #5: Recommendations for Pilot Water Transfer.

In wet and normal years, EBMUD does not anticipate the need to operate the FRWP. In dry years, when EBMUD does not need the entire capacity, there could potentially be capacity available to divert transfer water for BAWSCA.

2.5 Hayward Intertie

The Hayward Intertie was completed in 2007 by EBMUD, SFPUC, and the City of Hayward. The Hayward Intertie includes a pump station and approximately 1.5 miles of pipeline that connects the EBMUD and SFPUC water systems in the event of an emergency such as a natural disaster or outage associated with repairs. The Hayward Intertie is physically located within the City of Hayward and within the water service areas of EBMUD and Hayward.

This section evaluates any potential legal or institutional limitations to using the Hayward Intertie to transfer water to BAWSCA. The following documents (included as Appendix C) were reviewed to determine whether existing environmental documentation and agreements for the planning, design, construction, and operation of the Hayward Intertie provide for use of the Hayward Intertie to conduct a one-year pilot water transfer or whether supplemental

environmental review and agreements would be needed to use the Hayward Intertie to implement the pilot water transfer (see Appendix C).

- Draft Initial Study, Mitigated Negative Declaration, and Mitigation Monitoring and Reporting Program for the SFPUC-COH-EBMUD Water System Emergency Intertie Project, February 24, 2003 (Hayward Intertie IS/MND)
- DWR Proposition Public Agency Grant Funding Agreement No. 50060301: EBMUD-Hayward-SFPUC Intertie Second Amendment, JPA for Design and Construction Exhibit C, June 22, 2006 (DWR Grant Funding Agreement)
- First Amended Joint Exercise of Powers Agreement between City and County of San Francisco Public Utilities Commission, East Bay Municipal Utility District, and City of Hayward for Long-Term Operation and Maintenance of the Emergency/Maintenance Water System Intertie Project, July 10, 2007 (Hayward Intertie Operating Agreement)

Hayward Intertie IS/MND

In February 2003, the City of Hayward acting as Lead Agency prepared a draft Initial Study, Mitigated Negative Declaration, and Mitigation Monitoring and Reporting Program for the Hayward Intertie (Hayward Intertie IS/MND). The Hayward Intertie IS/MND was certified by the City of Hayward in April 2003. The existing CEQA documentation describes the project purpose and need based on the Memorandum of Agreement (MOA) signed by the City of Hayward, SFPUC, EBMUD, and ACWD on October 25, 2002 that established cost sharing between the parties and the individual member's decision to participate in future phases of the project if the environmental review identified a viable project.

The purpose of the Intertie Project is identified in the existing CEQA documentation and MOA as "to provide mutual aid by supplying potable water to the Parties during emergencies or planned critical work." An emergency is defined as "1) an actual or imminent failure of facilities, such as major pipelines, treatment plants, or pumping plants; or 2) major disruptions in water supply caused by natural conditions, manmade disasters or temporary regulatory conditions." The description further states that "these emergency scenarios may include an earthquake, a significant water quality event such as a failure at a water treatment plant, or an event that may require repair of critical water supply facilities."

The existing Hayward Intertie CEQA documentation review examines use for emergency purposes only. Additional CEQA documentation may be required, as appropriate, to cover use of the Hayward Intertie for water transfers and exchanges. As described in Section 2.1.1, a one-year pilot water transfer is expected to be exempt from environmental review



under CEQA per the CEQA Guidelines and is not expected to involve environmental impacts that are more significant than those examined in the MND. A long-term water transfer project would require additional environmental review to analyze potential environmental impacts, including the change in purpose of use of the Hayward Intertie to wheel transfer water to BAWSCA during droughts, and to avoid or mitigate those impacts, if feasible.

Grant Funding Agreement

In 2006, EBMUD entered into an agreement with the DWR for DWR to provide \$2.55 million in grant funding for the Hayward Intertie project. The term of the grant funding agreement is 20 years, following completion of the project in 2007. Section 1 of the grant funding agreement states that “the purpose of the funding is to assist in financing a project which will enable Supplier to enhance the protection and security of public water systems and drinking water supplies...” The grant funding agreement does not include any conditions that would limit the ability of EBMUD to use the Hayward Intertie to deliver transfer water to BAWSCA.

Hayward Intertie Operating Agreement

In 2007, SFPUC, EBMUD and Hayward entered into an agreement to define the obligations and responsibilities of each party, define cost share allocations and ownership of facilities between SFPUC and EBMUD, and govern the operation and maintenance of the Hayward Intertie. The term of the agreement is 20 years. The agreement limits the use of the Hayward Intertie to emergency use only and defines emergency as follows:

“Emergency: (1) Actual or imminent failure of facilities, such as major pipelines, treatment plants, or pumping stations; or (2) Major disruptions in water supply caused by natural conditions or manmade disasters; provided, however that drought conditions shall not constitute an Emergency under this Agreement.”

The existing Hayward Intertie Operating Agreement expressly prohibits use of the Hayward Intertie to supply water during drought conditions. This agreement would need to be amended to conduct a one-year pilot water transfer test. It is recommended that any amendments to the Hayward Intertie Operating Agreement be specific to the one-year pilot water transfer and its goals of testing the feasibility of transferring water via EBMUD facilities to BAWSCA. Limiting changes to the Hayward Intertie Operating Agreement to the one-year pilot water transfer would be consistent with the petition to the SWRCB for

approval of a one-year water transfer and qualify for an exemption from environmental review under CEQA.

Any long-term water transfer project involving use of the Hayward Intertie would also require an amendment to the existing Hayward Intertie Operating Agreement to expand its purpose of use and goals. This could be done by expanding the definition of “emergency” to include droughts. Any long-term change in the purpose of use of the Hayward Intertie may require additional environmental review under CEQA.

BAWSCA is not a party to the Hayward Intertie Operating Agreement and therefore all amendments, coordination, and use of the Hayward Intertie to conduct the one-year pilot water transfer or future water transfers would need to be done in cooperation with the City of Hayward and the SFPUC. If EBMUD, the City of Hayward, and SFPUC agree to allow use of the Hayward Intertie for the pilot water transfer test or future water transfers to BAWSCA, the parties and BAWSCA would need to discuss potential institutional arrangements to allow BAWSCA’s use of the Hayward Intertie to deliver transfer water to its member agencies. Potentially, the existing Hayward Intertie Operating Agreement could be amended to add BAWSCA as a party or SFPUC and BAWSCA could enter into a separate wheeling agreement under which SFPUC agrees to take delivery of the transfer water from EBMUD at the Hayward Intertie and coordinate with BAWSCA for delivery of the transfer water to its member agencies. These institutional issues require further discussion between SFPUC, the City of Hayward, EBMUD, and BAWSCA.

2.6 Transfer Agreements

This section describes new agreements that would be needed to purchase the transfer water from the seller and for EBMUD to wheel the water to BAWSCA for delivery at the Hayward Intertie for the one-year pilot water transfer. As described in Section 2.5, BAWSCA is not a party to the Hayward Intertie Operating Agreement and the institutional issues related to BAWSCA’s use of the Hayward Intertie for water transfers would need to be addressed prior to implementing the pilot water transfer. TM #4A provided by BAWSCA describes the institutional arrangements for BAWSCA to work with SFPUC to distribute the transfer water to its member agencies.

Transfer agreements to implement a long-term water transfer would be significantly more complex than agreements needed to implement the one-year water transfer pilot test. Key terms with the seller, including triggers for transfer water availability, minimum transfer water quantities, delivery schedules, rates of deliveries, payment terms, and roles and responsibilities for obtaining project approvals, would substantially differ between a one-

year transfer and a long-term transfer project. In addition, under a long-term transfer arrangement where EBMUD and BAWSCA both receive transfer water from a seller, the conditions under which each buyer partner receives and purchases water would need to be defined. Determining the best structure of transfer agreements needed to implement a long-term transfer project would require discussions between EBMUD, BAWSCA, and the seller and is beyond the scope of this TM.

Water Purchase Agreement with Seller

A one-year purchase agreement would need to be negotiated with the seller providing the water for the pilot water transfer. The parties involved would include the seller and BAWSCA and possibly EBMUD. The key terms of a transfer agreement generally include the transfer water quantity, point of delivery (typically the last point where the seller controls the water), notification and trigger dates, schedule and rate of delivery, payment terms, and roles and responsibilities for approvals and regulatory compliance.

One-year water transfers are typically negotiated as option agreements. A buyer agrees to pay a seller a non-refundable payment for an option to purchase water. If the buyer exercises the option, the seller is obligated to make the water available and the option payment is applied towards the total purchase price. If the option is not exercised, the seller is not obligated to make water available and retains the option payment. In some cases the non-refundable option payment is set to reimburse the seller for administrative costs to obtain the required regulatory approvals to complete the transfer. In other cases, the agreement may simply require the buyer to pay a set price for administrative costs.

EBMUD would need to have discussions with YCWA and PCWA to explore their willingness to participate in a small, one-year pilot water transfer. Because EBMUD has flexibility to divert transfer water outside of the Delta export pumping transfer window (July – September), YCWA and PCWA may be more open to selling a small quantity of transfer water for demonstration purposes. Also, because both YCWA and PCWA have a history of successfully transferring water, the administrative costs to prepare documents required for regulatory approvals for a one-year transfer may be lower than if EBMUD and BAWSCA partner with a less experienced transfer partner. If the transfer were to be scheduled later in the year (after September), YCWA and PCWA may not require an option payment but likely would still require some payment for administrative costs to obtain regulatory approvals.

The recommendation for a seller for the pilot test may depend largely on the purchase price for the transfer water, administrative costs to obtain regulatory approvals, and the willingness of the seller to provide a small quantity of transfer water. It is possible that the

effort and cost involved with obtaining regulatory approvals for the one-year water transfer could influence the seller's interest in selling a small quantity of water for the pilot test. The selection of a seller for the pilot test does not preclude the potential for a different seller or multiple sellers for a long-term arrangement.

EBMUD-BAWSCA Pilot Water Transfer Agreement

Under Task 7 of this pilot water transfer study, BAWSCA will prepare a draft agreement to provide a general framework to support the execution of a pilot transfer with EBMUD. The draft pilot water transfer agreement will define the scope of work, roles and responsibilities, costs, and general schedule for conducting the pilot test. The final deliverable may be revised by mutual decision between BAWSCA and EBMUD.

The specific terms of the pilot water transfer agreement will need to be negotiated in the year both parties elect to conduct the pilot. The terms of the pilot water transfer agreement will specify the conditions and costs under which EBMUD would wheel water to BAWSCA using the FRWP and EBMUD facilities to deliver transfer water the Hayward Intertie. As described in Section 2.5 of this TM, additional agreements or amendments to the Hayward Intertie Operating Agreement would be needed to use the Hayward Intertie to deliver the water to BAWSCA.

Section 3: Recommendations

A water transfer to BAWSCA would involve purchasing water from a willing seller, diverting the water using the FRWP intake, conveying the water through the FRWP facilities and EBMUD's raw water and treated water distribution system, and delivering the transfer water to BAWSCA via the Hayward Intertie. Even for a one-year pilot water transfer, a number of approvals and institutional issues would need to be addressed to successfully transfer water. The pilot water transfer would provide an opportunity to engage key stakeholders, test institutional arrangements, and obtain input on issues and concerns that may need to be addressed for a long-term water transfer project.

The following recommendations are provided that should be included in the schedule for the pilot water transfer that will be further developed in Task 5 of this study:

- Perform outreach to key stakeholders. EBMUD, BAWSCA, and the seller should jointly develop an outreach plan and priority for engaging key stakeholders in the planning process for the pilot water transfer. Key stakeholders would include regulatory agencies, resource agencies, and other agencies whose approval or cooperation is needed to successfully implement the pilot water transfer.

- Continue discussions on the potential to use the Hayward Intertie for water transfers and exchanges. In addition to performing outreach specific to the pilot water transfer, EBMUD, SFPUC, Hayward, and BAWSCA should discuss interest in amending the Hayward Intertie Operating Agreement to expand use of the facilities to cover transfers and water exchanges. This work could be done to support the pilot water transfer or independently to support other ongoing Bay Area efforts to improve regional water supply reliability.

Appendix A

Incidental Take Permit for Freeport Regional Water Project, Sacramento County, 2081-2010-031-03 (April 2011)

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DEPARTMENT OF FISH AND GAME

JOHN McCAMMAN, Director

Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
(707) 944-5500
www.dfg.ca.gov



April 18, 2011

Ms. Vicki Butler
Sacramento County Water Agency
827 7th Street, Room 301
Sacramento, California 95814

Dear Ms. Butler:

Subject: Incidental Take Permit for Freeport Regional Water Project, Sacramento County,
2081-2010-031-03

Enclosed are two originals of the Incidental Take Permit for the above referenced project, which have been signed by the Department of Fish and Game (DFG). Please read the permit carefully, sign the acknowledgement on both copies of the permit, and return one original no later than 30 days from DFG signature and prior to initiation of the ground-disturbing activities, to:

Department of Fish and Game
Habitat Conservation Branch, CESA Permitting
1416 Ninth Street, 12th Floor
Sacramento, California 95814

You are advised to keep the other original signature permit in a secure location and distribute copies to appropriate project staff responsible for ensuring compliance with the conditions of approval of the permit. Please note that you are required to comply with certain conditions of approval prior to initiation of ground-disturbing activities. Additionally, a copy of the permit must be maintained at the project work site and made available for inspection by DFG staff when requested.

The permit will not take effect until the signed acknowledgment is received by DFG. If you wish to discuss these instructions or have questions regarding the permit, please contact Ms. Corinne Gray, Staff Environmental Scientist, at (707) 944-5526; or Mr. Jim Starr, Environmental Program Manager, at (209) 941-1944.

Sincerely,

Carl Wilcox
Regional Manager
Bay Delta Region

Enclosures

cc: Department of Fish and Game
Jim Starr – Bay Delta Region
Corinne Gray – Bay Delta Region



California Department of Fish and Game
Bay Delta Region
7329 SILVERADO TRAIL
NAPA, CA 94558

California Endangered Species Act
Incidental Take Permit No. 2081-2010-031-03

FREERPORT REGIONAL WATER PROJECT

Authority: This California Endangered Species Act (CESA) Incidental Take Permit (ITP) is issued by the Department of Fish and Game (DFG) pursuant to Fish and Game Code section 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, section 783.0 et seq. CESA prohibits the take¹ of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species.² DFG, however, may authorize the take of any such species by permit if the conditions set forth in Fish and Game Code section 2081, subdivisions (b) and (c) are met. (See also Cal. Code Regs., tit. 14, § 783.4.)

| | |
|---------------------------|--|
| Permittee: | Freeport Regional Water Authority |
| Principal Officer: | Forrest Williams, General Manager |
| Contact Person: | Vicki Butler (916) 875-3544 |
| Mailing Address: | Sacramento County Water Agency 827 7th Street, Room 301 Sacramento, CA 95814 |

Effective Date and Expiration Date of this ITP:

This ITP shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by signature of the Permittee on the last page of this ITP and returned to DFG's Habitat Conservation Planning Branch at the address listed in the Notices section of this ITP. Unless renewed by DFG, this ITP's authorization to take the Covered Species shall expire on **December 31, 2030**.

Notwithstanding the expiration date on the take authorization provided by this ITP, Permittee's obligations pursuant to this ITP do not end until DFG accepts as complete the Permittee's Final Mitigation Report required by Condition 8.5 of this ITP.

¹ Pursuant to Fish and Game Code section 86, "Take" means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill."

² "Candidate species" are species of wildlife that have not yet been placed on the list of endangered species or the list of threatened species, but which are under formal consideration for listing pursuant to Fish and Game Code section 2074.2.

Project Location:

The Freeport Regional Water Project Intake Facility (Project) is located within the City and County of Sacramento. The Project is located approximately 0.8 miles north of the Town of Freeport, California at approximately 38°28'21"N, 121°30'23"W. The Project site is bounded by the Sacramento River to the west and Freeport Boulevard to the east.

Project Description:

Freeport Regional Water Authority (FRWA), a joint powers agency formed under state law by Sacramento County Water Agency (SCWA) and East Bay Municipal Utility District (EBMUD), proposes to operate a new water intake facility on the Sacramento River in conjunction with a new water pipeline from the intake facility to the Folsom South Canal in eastern Sacramento County, a new water treatment plant in central Sacramento County, a new water pipeline from the southern terminus of the Folsom South Canal to EBMUD's Mokelumne Aqueduct in San Joaquin County, and two water pumping stations between the Folsom South Canal and Mokelumne Aqueduct. These Project activities are jointly referred to as the Freeport Regional Water Project (FRWP). The primary purposes and objectives of the FRWP are to:

- Support acquisition of additional SCWA surface water entitlements to facilitate efficient conjunctive use of groundwater in the Zone 40 area consistent with the Sacramento Area Water Forum Agreement and County of Sacramento General Plan policies;
- Provide facilities through which SCWA can deliver existing and anticipated surface water entitlements to the Zone 40 area;
- Provide facilities through which EBMUD can take delivery of a supplemental supply of water that would substantially meet its need for water and reduce existing and future customer deficiencies during droughts; and
- Improve EBMUD system reliability and operational flexibility during droughts, catastrophic events, and scheduled major maintenance at Pardee Dam or Reservoir.

The new intake facility and pumping plant would allow the delivery of up to 185 million gallons per day (mgd) or 286 cubic feet per second (cfs). Up to 85 mgd of water would be diverted under SCWA's existing U.S. Bureau of Reclamation (Reclamation) water service contract and other anticipated water entitlements. This water would be used to meet municipal and industrial demands in the Zone 40 area of south Sacramento County, consistent with the Sacramento Area Water Forum Agreement. Up to 100 mgd of water would be diverted under EBMUD's amended Reclamation water service contract. This supplemental water would be used to reduce existing and future EBMUD customer deficiencies to manageable levels during drought conditions and would provide an alternative water supply in case of planned or unplanned outages at EBMUD's Mokelumne River diversion facilities. Under projected full water demands, combined SCWA and EBMUD operations would result in a maximum annual delivery of 147,000 acre-feet.

Incidental Take Permit
No. 2081-2010-031-03
FREEPORT REGIONAL WATER AUTHORITY
FREEPORT REGIONAL WATER PROJECT

The intake facility includes a fish exclusion system designed to meet National Marine Fisheries Service (NMFS), United States Fish and Wildlife Service (USFWS), and DFG criteria for adequate screen area, maintenance features, and facility hydraulics for protection of fish. The fish screen, at the interface of the intake structure and the Sacramento River, is approximately 175 feet long with a minimum depth of 10 feet. The fish screen consists of 1.75-millimeter stainless steel wedge-wire and has been designed to meet a maximum approach velocity (i.e., velocity perpendicular to the fish screen) of 0.2 feet per second (fps) in accordance with USFWS criteria for protection of delta smelt. These criteria exceed NMFS and DFG criteria for protection of juvenile salmonids. Because the diversion site is tidally influenced and subject to reverse flow, the criterion for sweeping velocity (i.e., velocity parallel to the screen face) will not always be met.

Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

| Name | CESA Status ³ |
|--|--------------------------|
| 1. Longfin smelt (<i>Spirinchus thaelichtys</i>) | Threatened ⁴ |
| 2. Delta smelt (<i>Hypomesus transpacificus</i>) | Endangered ⁵ |

These species and only these species are hereinafter referred to as "Covered Species."

Impacts of the Taking on Covered Species:

Project activities and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species through the long-term operation and maintenance of the Project (Covered Activities). Incidental take of individuals of the Covered Species may occur from the Covered Activities in the form of mortality ("kill") from entrainment, impingement, or predation at the intake structure, and as a result of reductions in river flow and associated effects on Delta and estuarine habitat. Reductions in freshwater inflows to the Delta and estuary can adversely affect the Covered Species through a number of factors, including larval transport, habitat availability, food supply, contaminants, predation, introduced species, and entrainment.

Incidental Take Authorization of Covered Species:

This ITP authorizes incidental take of the Covered Species and only the Covered Species. With respect to incidental take of the Covered Species, DFG authorizes the Permittee, its employees, contractors, and agents to take Covered Species incidentally in carrying out the

³ Under CESA, a species may be on the list of endangered species, the list of threatened species, or the list of candidate species. All other species are "unlisted."

⁴ See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(2)(E).

⁵ See Cal. Code Regs. tit. 14 § 670.5, subd. (a)(2)(O).

Covered Activities, subject to the limitations described in this section and the Conditions of Approval identified below. This ITP does not authorize take of Covered Species from activities outside the scope of the Covered Activities, take of Covered Species outside of the Project Area, take of Covered Species resulting from violation of this ITP, or intentional take of Covered Species. The Project Area is defined as the fish screen and river habitat adjacent to the intake facility.

Conditions of Approval:

Unless specified otherwise, the following measures shall pertain to all Covered Activities within the Project Area. DFG's issuance of this ITP and Permittee's authorization to take the Covered Species are subject to Permittee's compliance with and implementation of the following Conditions of Approval:

1. Legal Compliance. Permittee shall comply with all applicable State, federal, and local laws in existence on the effective date of this ITP or adopted thereafter.
2. CEQA Compliance. Permittee shall implement and adhere to the mitigation measures related to the Covered Species in the Biological Resources section of the Environmental Impact Report (SCH Number: 2002032132) certified by the lead agency, Freeport Regional Water Authority, for the Project pursuant to the California Environmental Quality Act (CEQA) on April 15, 2004.
3. LSA Agreement Compliance. Permittee shall implement and adhere to the mitigation measures and conditions related to the Covered Species in the Lake and Streambed Alteration (LSA) agreement (notification number 1600-2006-0321-R2) for the Project pursuant to Fish and Game Code section 1602 et seq.
4. ESA Compliance. Permittee shall implement and adhere to the terms and conditions related to the Covered Species in the NMFS (151422SWR01SA5822; BSK) and the USFWS (1-1-04-F-0224) Biological Opinions for the Project pursuant to the federal Endangered Species Act (ESA), unless those terms and conditions are less protective of the Covered Species or conflict with the conditions of this ITP.
5. ITP Time Frame Compliance. Permittee shall fully implement and adhere to the conditions of this ITP within the time frames set forth below and as set forth in the Mitigation Monitoring and Reporting Program (MMRP), which is included as Attachment 1 to this ITP.
6. CESA Compliance for New Water Deliveries. Permittee shall comply with the conservation measures of the SCWA P.L. 101-514 (Zone 40) biological opinion and provisions of the Memorandum of Agreement between SCWA, Sacramento Regional County Sanitation District, and the USFWS to ensure that new water deliveries by SCWA from the FRWP will not be provided unless the individual or entity that is to receive the

Incidental Take Permit
No. 2081-2010-031-03
FREEPORT REGIONAL WATER AUTHORITY
FREEPORT REGIONAL WATER PROJECT

new service can demonstrate compliance with ESA and CESA. Permittee shall withhold discretionary approval for projects (grading, tentative/final map, etc.) that could result in take of protected species until the individual or entity that is to receive the new service demonstrates compliance with ESA and CESA.

7. General Provisions:

- 7.1. Designated Representative. Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with DFG and overseeing compliance with this ITP. Permittee shall notify DFG in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify DFG in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.
- 7.2. Designated Biologist. Permittee shall submit to DFG in writing the name, qualifications, business address, and contact information of a biological monitor (Designated Biologist) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology and natural history of the Covered Species. The Designated Biologist shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain DFG approval of the Designated Biologist before starting Covered Activities, and shall also obtain approval in advance in writing if the Designated Biologist must be changed.
- 7.3. Designated Biologist Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall have authority to immediately stop any activity that is not in compliance with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species, or a species not covered by this ITP.
- 7.4. Education Program. Permittee shall conduct an education program for all persons directly responsible for performing fish screen operations and maintenance activities or who will be assisting with the hydraulic and/or biological monitoring activities before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided for any new workers before their performing work in the Project

Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures.

- 7.5. Hazardous Waste. Permittee shall immediately stop and follow pertinent State and federal statutes and regulations and arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.
- 7.6. DFG Access. Permittee shall provide DFG staff with reasonable access to the Project and mitigation lands under Permittee control, and shall otherwise fully cooperate with DFG efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP.

8. Monitoring, Notification and Reporting Provisions:

- 8.1. Notification of Non-compliance. The Designated Representative shall immediately notify DFG in writing if it determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to DFG within 24 hours.
- 8.2. Compliance Monitoring. The Designated Biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) check for compliance with all measures of this ITP; and (3) check the effectiveness of fish screens. Compliance inspections shall be conducted during biological monitoring activities described in the USFWS- and DFG-approved biological monitoring plan (see 8.4 below). Based on the currently proposed monitoring schedule, compliance inspections will occur monthly from December through July (coincident with proposed monitoring activities) in each year of the monitoring program. The Designated Representative or Designated Biologist shall prepare written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP.
- 8.3. Annual Compliance Report. The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Condition 8.2 into an Annual Compliance Report and submit it to DFG each year of the biological monitoring program beginning with issuance of this ITP and continuing until DFG

accepts the Final Mitigation Report identified below. Each Annual Compliance Report shall include, at a minimum: (1) a compilation of the observation and inspection records identified in Condition 8.2; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; and (6) information about other Project impacts on the Covered Species. The Compliance Reports shall be submitted to DFG's Regional Office by September 30 of each year of the biological monitoring program at the office listed in the Notices section of this ITP and via e-mail to DFG's Regional Representative. At the time of this ITP's approval, the DFG Regional Representative is Corinne Gray (cgray@dfg.ca.gov). DFG may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If DFG determines the reporting schedule must be changed, DFG will notify Permittee in writing of the new reporting schedule.

- 8.4. Fish Entrainment and Impingement Monitoring Plan. Permittee shall prepare and implement a monitoring plan to quantify both entrainment and impingement due to varying operational conditions as a result of tidal influence. This plan will determine the effectiveness of the fish screen in minimizing entrainment and impingement events on both the Covered Species and salmonids. DFG will coordinate with the USFWS and provide any comments or requested changes to the existing plan. Any proposed changes to the plan must be acceptable and approved by DFG and the USFWS before implementation of fish monitoring activities.
- 8.5. Final Mitigation Report. Permittee shall submit a Final Mitigation Report to DFG by December 31 of the final year of biological monitoring activities. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Annual Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.
- 8.6. Notification of Take or Injury. Permittee shall immediately notify the Designated

Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured. The Designated Biologist or Designated Representative shall provide initial notification to DFG by calling the Regional Office at (707) 944-5500. The initial notification to DFG shall include information regarding the location, species, number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send DFG a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible provide a photograph, explanation as to cause of take or injury, and any other pertinent information.

9. Take Minimization Measures:

The following requirements are intended to ensure the minimization of incidental take of Covered Species in the Project Area during Covered Activities. Permittee shall implement and adhere to the following conditions to minimize take of Covered Species:

- 9.1. Limit Water Intake. Permittee shall limit the initial capacity of water intake to 185 mgd or 286 cfs and a maximum annual volume of 147,000 acre feet.
- 9.2. Fish Screens. Permittee shall operate and maintain the fish screens in conformance to DFG, NMFS, and USFWS fish screen hydraulic and design criteria for the protection of delta smelt and juvenile salmonids. Permittee shall maintain an average approach velocity of 0.2 fps at the screen for the protection of delta smelt, which exceeds the criteria for juvenile salmonids. This criterion is assumed to provide adequate protection of longfin smelt based on general similarities in size and morphology of longfin smelt and delta smelt life stages. The criterion for sweeping velocity may not always be met because the FRWP intake is subject to tidal influence. Permittee shall implement coordinated operations with the Sacramento Regional County Sanitation District and City of Sacramento to reduce the frequency of such events, as described in the list of proposed conservation measures in the EIR for the Project.
- 9.3. Hydraulic Evaluation and Operations and Maintenance Plans. As required under the terms and conditions of the NMFS biological opinion for the Project, to ensure that the fish screen and associated structural and operational features of the intake facility are in compliance with established performance and design criteria, Permittee has (1) coordinated with NMFS to conduct a post-construction inspection of the intake structure and fish screen to ensure that the screen panels are properly installed and functional; (2) prepared a hydraulic evaluation plan to ensure that the fish screen is meeting established hydraulic criteria and obtained approval from NMFS; and (3) prepared an operations and maintenance manual for the intake structure and fish screen, which is currently being reviewed by NMFS. Permittee

shall implement the approved hydraulic evaluation plan and operations and maintenance plan as approved by NMFS.

- 9.4. Curtailing Diversion. Permittee shall curtail diversion to the greatest extent possible when any portion of the fish screen structure is damaged or removed for maintenance or repair which allows unscreened water to pass into the intake structure.
- 9.5. Fish Screen Hydraulic Evaluation. The Permittee shall implement the fish screen hydraulic evaluation plan submitted to DFG on September 1, 2010. Permittee shall prepare and submit a report of the test results to DFG within 30 days following implementation of hydraulic testing.

10. Habitat Management Land Acquisition and Restoration:

DFG has determined that permanent protection and perpetual management of compensatory habitat is necessary and required pursuant to CESA to fully mitigate Project-related impacts of the taking on the Covered Species that will result with implementation of the Covered Activities. This determination is based on factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and DFG's estimate of the acreage required to provide for adequate compensation.

To meet this requirement, the Permittee shall either purchase 0.4 acres of Covered Species credits from a DFG-approved mitigation or conservation bank (Condition 10.2) OR shall provide for the permanent protection and management of 0.4 acres of Habitat Management (HM) lands by completing the transfer of fee title to a DFG-approved public agency or the recordation of a conservation easement pursuant to Government Code 65965, and calculation and deposit of the management funds (Condition 10.3). Purchase of Covered species credits or acquisition, restoration, permanent protection and perpetual management of compensatory habitat must be complete before Permittee starts Covered Activities, or within 18 months of the effective date of this ITP if Security is provided pursuant to Condition 11 below.

10.1. Cost Estimates. DFG has estimated the cost of acquisition, restoration, protection, and perpetual management of the HM lands as follows:

- 10.1.1. Land acquisition costs for HM lands identified in Condition 10.3 below, estimated at \$10,000.00/acre for 0.4 acres: **\$4,000.00**. Land acquisitions costs are estimated using local fair market current value for lands with habitat values meeting mitigation requirements;
- 10.1.2. Start-up costs for HM lands, including initial site protection and enhancement costs as described in Condition 10.3.5 below, estimated at **\$32,000.00**;

Incidental Take Permit
No. 2081-2010-031-03
FREEPORT REGIONAL WATER AUTHORITY
FREEPORT REGIONAL WATER PROJECT

- 10.1.3. Interim management period funding as described in Condition 10.3.6 below, estimated at **\$10,000.00**;
- 10.1.4. Long-term management funding as described in Condition 10.4 below, estimated at \$10,000.00/acre for 0.4 acres: **\$4,000.00**. The long-term management endowment fund is estimated initially for the purpose of providing Security to ensure implementation of HM land management.
- 10.1.5. Related transaction fees including but not limited to account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM Lands to DFG as described in Condition 9.5, estimated at **\$3,000.00**.

10.2. Covered Species Credits. Prior to initiating Covered Activities, or no later than 18 months from the issuance of this ITP if Security is provided pursuant to Condition 11 below, the Permittee shall purchase 0.4 acres of Covered Species credits from a DFG-approved mitigation or conservation bank with a service area covering the Project Area.

OR:

10.3. Habitat Acquisition and Protection. Prior to initiating Covered Activities, or no later than 18 months from the issuance of this ITP if Security is provided pursuant to Condition 11 below, the Permittee shall provide for the acquisition and protection of the HM lands. The Permittee shall:

10.3.1. Fee Title/Conservation Easement. Transfer fee title to the HM lands to DFG pursuant to terms approved by DFG. Alternatively, a DFG-approved non-profit organization qualified pursuant to California Government Code section 65965 or DFG-approved public agency (collectively "approved entity") may hold fee title or act as grantee for a conservation easement over the HM lands. If an approved entity holds fee title, Permittee shall record a conservation easement in favor of DFG or a DFG-approved entity as grantee. If an approved entity holds a conservation easement, DFG shall be named third-party beneficiary. The Permittee shall obtain DFG approval of any conservation easement before its recordation;

10.3.2. HM Lands Approval. Obtain DFG approval of the HM lands before acquisition and/or transfer of the land by submitting, at least three months before acquisition and/or transfer of the HM lands, a formal Proposed Lands for Acquisition Form (see Attachment 2B) identifying the land to be purchased or

Incidental Take Permit
No. 2081-2010-031-03
FREEPORT REGIONAL WATER AUTHORITY
FREEPORT REGIONAL WATER PROJECT

property interest conveyed to an approved entity as mitigation for the Project's impacts on Covered Species;

- 10.3.3. HM Lands Documentation. Provide a recent preliminary title report, initial hazardous materials survey report, and other necessary documents (see Attachment 2A). All documents conveying the HM lands and all conditions of title are subject to the approval of DFG, and if applicable, the Wildlife Conservation Board and the Department of General Services;
- 10.3.4. Land Manager. Designate an interim and long-term land manager approved by DFG. The land manager may be the conservation easement grantee, land owner, or other party. Documents related to land management shall identify the land manager. Permittee shall notify DFG of any subsequent changes in the land manager within 30 days of the change. If DFG will hold fee title to the mitigation land, DFG will also act as long-term land manager unless otherwise specified.
- 10.3.5. Start-up Activities. Provide for the implementation of start-up activities, including the initial site protection and enhancement of HM lands, once the HM lands have been approved by DFG. Start-up activities include, at a minimum: (1) preparing a final management plan for DFG approval (see <http://www.dfg.ca.gov/habcon/conplan/mitbank/>); (2) conducting a baseline biological assessment and land survey report within 4 months of recording or transfer; (3) developing and transferring Geographic Information Systems (GIS) data if applicable; (4) establishing initial fencing; (5) conducting litter removal; (6) conducting initial habitat restoration or enhancement, if applicable; and (7) installing signage;
- 10.3.6. Interim Management (Initial and Capital). Provide for the interim management of the HM lands. The interim management period shall be a minimum of three years from the date of HM land acquisition and protection and full funding of the Endowment and includes expected annual management (described in the final management plan) following start-up activities. Interim management period activities include fence repair, continuing trash removal, site monitoring, and vegetation and invasive species management. Permittee shall either (1) provide a security to DFG for the three years interim management that the land owner, Permittee, or land manager agrees to manage at their own expense, (2) establish an escrow account with instructions to pay the land manager annually in advance, (3) establish a short-term enhancement sub-account with the National Fish and Wildlife Foundation (NFWF) for annual payment to the land manager, or (4) establish a short-term enhancement account with DFG for annual payment to the land manager.

- 10.3.7. Endowment Fund. After obtaining DFG approval of the HM lands, Permittee shall provide long-term management funding for the in-perpetuity management of the HM lands by establishing a long-term management fund (Endowment Fund). The Endowment Fund is a sum of money, held in a DFG-authorized trust fund that provides funds for the perpetual management, maintenance, monitoring, and other activities on the HM lands consistent with the management plan(s) required by Condition 10.3.5. Endowment Fund as used in this ITP shall refer to the endowment deposit and all interest, dividends, other earnings, additions and appreciation thereon.
- 10.3.8. Identify an Endowment Fund Manager. The Endowment Fund shall be held by NFWF or DFG;
- 10.3.9. Calculate the Endowment Funds Deposit. After obtaining DFG approval of the HM lands, long-term management plan, and Endowment Fund Manager, Permittee shall prepare a Property Analysis Record or similar type of analysis (PAR) to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). The Permittee shall submit to DFG for review and approval the results of the PAR before transferring funds to the Endowment Fund Manager.
- 10.3.9.1. Capitalization Rate and Fees. Permittee shall obtain the capitalization rate from the selected Endowment Fund Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees.
- 10.3.9.2. Endowment Buffers/Assumptions. Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment Fund:
- 10.3.9.2.1. 10 Percent Contingency. A 10 percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.
- 10.3.9.2.2. Three Years Delayed Spending. The endowment shall be established assuming spending will not occur for the first three years after full funding.
- 10.3.9.2.3. Non-annualized Expenses. For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual disbursement until the year of anticipated need or upon request to Endowment Fund Manager and DFG.

10.3.10. Transfer Long-term Endowment Funds. Permittee shall transfer the long-term endowment funds to the Endowment Fund Manager upon DFG approval of the Endowment Deposit Amount identified above. The approved Endowment Fund Manager may pool the Endowment Fund with other endowments for the operation, management, and protection of HM lands for local populations of the Covered Species but shall maintain separate accounting for each Endowment Fund.

10.4. Reimburse DFG. Permittee shall reimburse DFG for all reasonable expenses incurred by DFG such as transaction fees, account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM Lands to DFG.

11. Performance Security

The Permittee may proceed with Covered Activities only after the Permittee has ensured funding (Security) to complete any activity required by Condition 10 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:

11.1. Security Amount. The Security shall be in the amount of **\$53,000.00**. This amount is based on the cost estimates identified in Condition 10.1 above;

11.2. Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 3) or another form of Security approved in advance in writing by DFG's Office of the General Counsel;

11.3. Security Timeline. The Security shall be provided to DFG before Covered Activities begin or within 30 days after the effective date of this ITP, whichever occurs first;

11.4. Security Holder. The Security shall be held by DFG or in a manner approved in advance in writing by DFG;

11.5. Security Transmittal. If DFG holds the Security, Permittee shall transmit it to DFG with a completed Mitigation Payment Transmittal Form (see Attachment 4) or by way of an approved instrument such as escrow, irrevocable letter of credit, or other.

11.6. Security Drawing. The Security shall allow DFG to draw on the principal sum if DFG, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP;

11.7. Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after all secured requirements have been met as evidenced by:

- Timely submission of all required reports;
- An on-site inspection by DFG; and
- Written approval from DFG.

Even if Security is provided, the Permittee must complete the required acquisition, protection and transfer of all HM lands and record any required conservation easements no later than 18 months from the effective date of this ITP. DFG may require the Permittee to provide additional HM lands and/or additional funding to ensure the impacts of the taking are minimized and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.

Amendment:

This ITP may be amended as provided by California Code of Regulations, Title 14, section 783.6, subdivision (c), and other applicable regulations and law. This ITP may also be amended without the concurrence of the Permittee as required by law, including if DFG determines that continued implementation of the Project under existing ITP conditions would jeopardize the continued existence of the Covered Species or that Project changes or changed biological conditions necessitate an ITP amendment to ensure that impacts to the Covered Species are minimized and fully mitigated.

Stop-Work Order:

DFG may issue Permittee a written stop-work order to suspend any activity covered by this ITP for an initial period of up to 25 days to prevent or remedy a violation of any ITP condition(s) (including but not limited to failure to comply with reporting, monitoring, or habitat acquisition obligations) or to prevent the illegal take of an endangered, threatened, or candidate species. Permittee shall comply with the stop-work order immediately upon receipt thereof. DFG may extend a stop-work order under this provision for a period not to exceed 25 additional days, upon written notice to the Permittee. DFG may commence the formal suspension process pursuant to California Code of Regulations, Title 14, section 783.7 within five working days of issuing a stop-work order. Neither the Designated Biologist nor DFG shall be liable for any costs incurred in complying with stop-work orders.

Compliance with Other Laws:

This ITP contains DFG's requirements for the Project pursuant to CESA. This ITP does not necessarily create an entitlement to proceed with the Project. Permittee is responsible for complying with all other applicable State, federal, and local laws.

Notices:

The Permittee shall deliver a fully executed duplicate original ITP by registered first class mail or overnight delivery to the following address:

Incidental Take Permit
No. 2081-2010-031-03
FREEPORT REGIONAL WATER AUTHORITY
FREEPORT REGIONAL WATER PROJECT

Habitat Conservation Planning Branch
California Department of Fish and Game
Attention: CESA Permitting Program
1416 Ninth Street, Suite 1260
Sacramento, CA 95814

Written notices, reports and other communications relating to this ITP shall be delivered to DFG by registered first class mail at the following addresses, or at addresses DFG may subsequently provide the Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number (2081-2010-031) in a cover letter and on any other associated documents.

Original cover with attachment(s) to:

Carl Wilcox, Regional Manager
7329 Silverado Trail
Napa, CA 94558
Telephone (707) 944-5517
Fax (707) 944-5553

Copy of cover without attachment(s) to:

Office of the General Counsel
California Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

And:

Habitat Conservation Planning Branch
California Department of Fish and Game
1416 Ninth Street, Suite 1260
Sacramento, CA 95814

Unless Permittee is notified otherwise, DFG's Regional Representative for purposes of addressing issues that arise during implementation of this ITP is:

Corinne Gray, Staff Environmental Scientist
7329 Silverado Trail
Napa, CA 94558
Telephone (707) 944-5526
Fax (707) 944-5595

Compliance with the California Environmental Quality Act:

DFG's issuance of this ITP is subject to CEQA. DFG is a responsible agency pursuant to CEQA with respect to this ITP because of prior environmental review of the Project by the lead agency, FRWA. (See generally Pub. Resources Code, §§ 21067, 21069). The lead agency's prior environmental review of the Project is set forth in the EIR (State Clearinghouse

Incidental Take Permit
No. 2081-2010-031-03
FREEPORT REGIONAL WATER AUTHORITY
FREEPORT REGIONAL WATER PROJECT

#2002032132) that the FRWA certified for the Freeport Regional Water Project on April 15, 2004. At the time the lead agency certified the EIR and approved the Project it also adopted all mitigation measures described in the EIR as conditions of Project approval.

In fulfilling its obligations as a responsible agency, DFG's obligations pursuant to CEQA are more limited than those of the lead agency. DFG, in particular, is responsible for considering only the effects of those Project activities that it is required by law to carry out or approve, and mitigating or avoiding only the direct or indirect environmental effects of those parts of the Project that it decides to carry out, finance, or approve (Pub. Resources Code, § 21002.1, subd. (d); CEQA Guidelines, §§ 15041, subd. (b), 15096, subds. (f)-(g).)⁶ Accordingly, because DFG's exercise of discretion is limited to issuance of this ITP, DFG is responsible for considering only the environmental effects that fall within its permitting authority pursuant to CESA.

This ITP, along with DFG's CEQA findings for this ITP and Project, which are available as a separate document, provide evidence of DFG's consideration of the lead agency's EIR for the Project and the environmental effects related to issuance of this ITP (CEQA Guidelines, § 15096, subd. (f)). DFG finds that issuance of this ITP will not result in any previously undisclosed potentially significant effects on the environment or a substantial increase in the severity of any potentially significant environmental effects previously disclosed by the lead agency. Furthermore, to the extent the potential for such effects exists, DFG finds adherence to and implementation of the Conditions of Project Approval adopted by the lead agency, as well as adherence to and implementation of the Conditions of Approval imposed by DFG through the issuance of this ITP, will avoid or reduce to below a level of significance any such potential effects. DFG consequently finds that issuance of this ITP will not result in any significant, adverse impacts on the environment.

Findings Pursuant to CESA:

These findings are intended to document DFG's compliance with the specific findings requirements set forth in CESA and related regulations. (Fish and Game Code § 2081, subs. (b)-(c); Cal. Code Regs., tit. 14, §§ 783.4, subds. (a)-(b), 783.5, subd. (c)(2).)

DFG finds that issuance of this ITP complies and is consistent with the criteria governing the issuance of ITPs pursuant to CESA:

- (1) Take of Covered Species as defined in this ITP will be incidental to the otherwise lawful activities covered under this ITP;
- (2) Impacts of the taking on Covered Species will be minimized and fully mitigated through the implementation of measures required by this ITP and as described in the MMRP.

⁶ The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Measures include: (1) permanent habitat protection; (2) worker education; and (3) Annual Compliance Reports. DFG evaluated factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and DFG's estimate of the acreage required to provide for adequate compensation. Based on this evaluation, DFG determined that the protection and management in perpetuity of 0.4 acres of compensatory habitat that is contiguous with other protected Covered Species habitat along with the minimization, monitoring, reporting, and funding requirements of this ITP minimizes and fully mitigates the impacts of the taking caused by the Project;

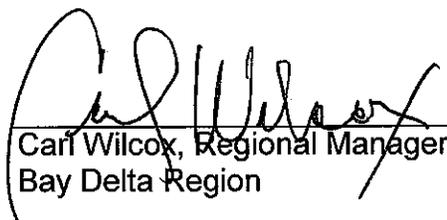
- (3) The take avoidance and mitigation measures required pursuant to the conditions of this ITP and its attachments are roughly proportional in extent to the impacts of the taking authorized by this ITP;
- (4) The measures required by this ITP maintain Permittee's objectives to the greatest extent possible;
- (5) All required measures are capable of successful implementation;
- (6) This ITP is consistent with any regulations adopted pursuant to Fish and Game Code sections 2112 and 2114;
- (7) Permittee has ensured adequate funding to implement the measures required by this ITP as well as for monitoring compliance with, and the effectiveness of, those measures for the Project; and
- (8) Issuance of this ITP will not jeopardize the continued existence of the Covered Species based on the best scientific and other information reasonably available, and this finding includes consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (1) known population trends; (2) known threats to the species; and (3) reasonably foreseeable impacts on the species from other related projects and activities. Moreover, DFG's finding is based, in part, on DFG's express authority to amend the terms and conditions of this ITP without concurrence of the Permittee as necessary to avoid jeopardy and as required by law.

Attachments:

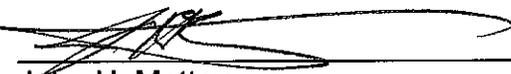
| | |
|-------------------|---|
| ATTACHMENT 1 | Mitigation Monitoring and Reporting Program |
| ATTACHMENT 2A, 2B | Habitat Management Lands Checklist; Proposed Lands for Acquisition Form |
| ATTACHMENT 3 | Letter of Credit Form |
| ATTACHMENT 4 | Mitigation Payment Transmittal Form |

ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND GAME

on 4-18-11



Carl Wilcox, Regional Manager
Bay Delta Region

APPROVED AS TO FORM:


John H. Mattox
Senior Staff Counsel

ACKNOWLEDGMENT

The undersigned: (1) warrants that he or she is acting as a duly authorized representative of Permittee, (2) acknowledges receipt of this ITP, and (3) agrees on behalf of Permittee to comply with all terms and conditions of this ITP.

By: _____ Date: _____

Printed Name: _____ Title: _____

Incidental Take Permit
No. 2081-2010-031-03
FREEPORT REGIONAL WATER AUTHORITY
FREEPORT REGIONAL WATER PROJECT

Attachment 1

CALIFORNIA DEPARTMENT OF FISH AND GAME MITIGATION MONITORING AND REPORTING PROGRAM (MMRP) CALIFORNIA ENDANGERED SPECIES ACT

INCIDENTAL TAKE PERMIT NO. 2081-2010-031-03

PERMITTEE: Freeport Regional Water Authority

PROJECT: Freeport Regional Water Project

PURPOSE OF THE MMRP

The purpose of the MMRP is to ensure that the impact minimization and mitigation measures required by the Department of Fish and Game (DFG) for the above-referenced Project are properly implemented, and thereby to ensure compliance with section 2081(b) of the Fish and Game Code and section 21081.6 of the Public Resources Code. A table summarizing the mitigation measures required by DFG is attached. This table is a tool for use in monitoring and reporting on implementation of mitigation measures, but the descriptions in the table do not supersede the mitigation measures set forth in the California Incidental Take Permit (ITP) and in attachments to the ITP, and the omission of a permit requirement from the attached table does not relieve the Permittee of the obligation to ensure the requirement is performed.

OBLIGATIONS OF PERMITTEE

Mitigation measures must be implemented within the time periods indicated in the table that appears below. Permittee has the primary responsibility for monitoring compliance of all mitigation measures and for reporting to DFG on the progress in implementing those measures. These monitoring and reporting requirements are set forth in the ITP itself and are summarized at the front of the attached table.

VERIFICATION OF COMPLIANCE, EFFECTIVENESS

DFG may, at its sole discretion, verify compliance with any mitigation measure or independently assess the effectiveness of any mitigation measure.

TABLE OF MITIGATION MEASURES

The following items are identified for each mitigation measure: Mitigation Measure, Source, Implementation Schedule, Responsible Party, and Status/Date/Initials. The Mitigation Measure column summarizes the mitigation requirements of the ITP. The Source column identifies the ITP condition that sets forth the mitigation measure. The Implementation Schedule column shows the date or phase when each mitigation measure will be implemented. The Responsible Party column identifies the person or agency that is primarily responsible for implementing the mitigation measure. The Status/Date/Initials column shall be completed by the Permittee during preparation of each Status Report and the Final Mitigation Report, and must identify the implementation status of each mitigation measure, the date that status was determined, and the initials of the person determining the status.

| Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|--|---------------------|--|-------------------|--------------------------|
| BEFORE COVERED ACTIVITIES | | | | |
| 1 Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with DFG and overseeing compliance with the ITP. Permittee shall notify DFG in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify DFG in writing if a substitute Designated Representative is selected or identified at any time during the term of the ITP. | ITP Condition # 7.1 | Before commencing Covered Activities Entire Project | Permittee | |
| 2 Permittee shall submit to DFG in writing the name, qualifications, business address, and contact information of a biological monitor (Designated Biologist) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology and natural history of the Covered Species. The Designated Biologist shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain DFG approval of the Designated Biologist before starting Covered Activities, and shall also obtain approval in advance in writing if the Designated Biologist must be changed. | ITP Condition # 7.2 | 30 days before starting Covered Activities Entire Project | Permittee | |
| 3 Permittee shall conduct an education program for all persons directly responsible for performing fish screen operations and maintenance activities or who will be assisting with the hydraulic and/or biological monitoring activities before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in the ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided for any new workers before their performing work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. | ITP Condition # 7.4 | Before commencing Covered Activities Entire Project | Permittee | |
| 4 Permittee shall prepare and implement a monitoring plan to quantify both entrainment and impingement due to varying operational conditions as a result of tidal influence. This plan will determine the effectiveness of the fish screen in minimizing entrainment and impingement events on both the Covered Species and salmonids. DFG will coordinate with the USFWS and provide any comments or requested changes to the existing plan. Any proposed changes to the plan must be acceptable and approved by DFG and the USFWS before implementation of fish monitoring activities. | ITP Condition # 8.4 | Before commencing Covered Activities Entire Project | Permittee | |
| 5 Permittee shall either purchase 0.4 acres of Covered Species credits from a DFG-approved mitigation or conservation bank (Condition 10.2) OR shall provide for the permanent protection and management of 0.4 acres of Habitat Management (HM) lands by completing the transfer of fee title to a DFG-approved public agency or the recordation of a conservation easement pursuant to Government Code 65965, and calculation and deposit of the management funds (Condition 10.3). Purchase of Covered species credits or acquisition, restoration, permanent protection and perpetual management of compensatory habitat must be complete before Permittee starts Covered Activities, or within 18 months of the effective date of the ITP if Security is provided pursuant to Condition 11 below. | ITP Condition # 10 | Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided. | Permittee | |

| Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|---|-------------------------------|---|-------------------|--------------------------|
| <p>6</p> <p>Prior to initiating Covered Activities, or no later than 18 months from the issuance of the ITP if Security is provided pursuant to Condition 11 below, the Permittee shall purchase 0.4 acres of Covered Species credits from a DFG-approved mitigation or conservation bank with a service area covering the Project Area.</p> <p>OR comply with Condition 10.3 and all subconditions</p> | <p>ITP Condition # 10.2</p> | <p>Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided.</p> | <p>Permittee</p> | |
| <p>7</p> <p>Prior to initiating Covered Activities, or no later than 18 months from the issuance of the ITP if Security is provided pursuant to Condition 11 below, the Permittee shall provide for the acquisition and protection of the HM lands.</p> | <p>ITP Condition # 10.3</p> | <p>Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided.</p> | <p>Permittee</p> | |
| <p>8</p> <p>Permittee shall transfer fee title to the HM lands to DFG pursuant to terms approved by DFG. Alternatively, a DFG-approved non-profit organization qualified pursuant to California Government Code section 65965 or DFG-approved public agency (collectively "approved entity") may hold fee title or act as grantee for a conservation easement over the HM lands. If an approved entity holds fee title, Permittee shall record a conservation easement in favor of DFG or a DFG-approved entity as grantee. If an approved entity holds a conservation easement, DFG shall be named third-party beneficiary. The Permittee shall obtain DFG approval of any conservation easement before its recordation</p> | <p>ITP Condition # 10.3.1</p> | <p>Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided.</p> | <p>Permittee</p> | |
| <p>9</p> <p>Permittee shall obtain DFG approval of the HM lands before acquisition and/or transfer of the land by submitting, at least three months before acquisition and/or transfer of the HM lands, a formal Proposed Lands for Acquisition Form (see Attachment 2B) identifying the land to be purchased or property interest conveyed to an approved entity as mitigation for the Project's impacts on Covered Species;</p> | <p>ITP Condition # 10.3.2</p> | <p>Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided.</p> | <p>Permittee</p> | |
| <p>10</p> <p>Permittee shall provide a recent preliminary title report, initial hazardous materials survey report, and other necessary documents (see Attachment 2A). All documents conveying the HM lands and all conditions of title are subject to the approval of DFG, and if applicable, the Wildlife Conservation Board and the Department of General Services;</p> | <p>ITP Condition # 10.3.3</p> | <p>Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided.</p> | <p>Permittee</p> | |
| <p>11</p> <p>Permittee shall designate an interim and long-term land manager approved by DFG. The land manager may be the conservation easement grantee, land owner, or other party. Documents related to land management shall identify the land manager. Permittee shall notify DFG of any subsequent changes in the land manager within 30 days of the change. If DFG will hold fee title to the mitigation land, DFG will also act as long-term land manager unless otherwise specified.</p> | <p>ITP Condition # 10.3.4</p> | <p>Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided.</p> | <p>Permittee</p> | |
| <p>12</p> <p>Permittee shall provide for the implementation of start-up activities, including the initial site protection and enhancement of HM lands, once the HM lands have been approved by DFG. Start-up activities include, at a minimum: (1) preparing a final management plan for DFG approval (see http://www.dfg.ca.gov/habcom/complan/mitbank/); (2) conducting a baseline biological assessment and land survey report within 4 months of recording or transfer; (3) developing and transferring Geographic Information Systems (GIS) data if applicable; (4) establishing initial fencing; (5) conducting litter removal; (6) conducting initial habitat restoration or enhancement, if applicable; and (7) installing signage.</p> | <p>ITP Condition # 10.3.5</p> | <p>Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided.</p> | <p>Permittee</p> | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|---|------------------------|--|-------------------|--------------------------|
| 13 | <p>Permittee shall provide for the interim management of the HM lands. The interim management period shall be a minimum of three years from the date of HM land acquisition and protection and full funding of the Endowment and includes expected annual management (described in the final management plan) following start-up activities. Interim management period activities include fence repair, continuing trash removal, site monitoring, and vegetation and invasive species management. Permittee shall either (1) provide a security to DFG for the three years interim management that the land owner, Permittee, or land manager agrees to manage at their own expense, (2) establish an escrow account with instructions to pay the land manager annually in advance, (3) establish a short-term enhancement sub-account with the National Fish and Wildlife Foundation (NFWF) for annual payment to the land manager, or (4) establish a short-term enhancement account with DFG for annual payment to the land manager.</p> <p>After obtaining DFG approval of the HM lands, Permittee shall provide long-term management funding for the in-perpetuity management of the HM lands by establishing a long-term management fund (Endowment Fund). The Endowment Fund is a sum of money, held in a DFG-authorized trust fund that provides funds for the perpetual management, maintenance, monitoring, and other activities on the HM lands consistent with the management plan(s) required by Condition 10.3.5. Endowment Fund as used in the ITP shall refer to the endowment deposit and all interest, dividends, other earnings, additions and appreciation thereon.</p> <p>Permittee shall identify an endowment fund manager. The endowment fund shall be held by NFWF or DFG</p> | ITP Condition # 10.3.6 | Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided. | Permittee | |
| 14 | <p>Permittee shall calculate the endowment funds deposit. After obtaining DFG approval of the HM lands, long-term management plan, and Endowment Fund Manager, Permittee shall prepare a Property Analysis Record or similar type of analysis (PAR) to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). The Permittee shall submit to DFG for review and approval the results of the PAR before transferring funds to the Endowment Fund Manager.</p> <p>Permittee shall obtain the capitalization rate from the selected Endowment Fund Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees.</p> <p>Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment Fund:</p> <p>A 10 percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.</p> <p>The endowment shall be established assuming spending will not occur for the first three years after full funding.</p> <p>For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual disbursement until the year of anticipated need or upon request to Endowment Fund Manager and DFG.</p> | ITP Condition # 10.3.7 | Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided. | Permittee | |
| 15 | <p>Permittee shall calculate the endowment funds deposit. After obtaining DFG approval of the HM lands, long-term management plan, and Endowment Fund Manager, Permittee shall prepare a Property Analysis Record or similar type of analysis (PAR) to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). The Permittee shall submit to DFG for review and approval the results of the PAR before transferring funds to the Endowment Fund Manager.</p> <p>Permittee shall obtain the capitalization rate from the selected Endowment Fund Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees.</p> <p>Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment Fund:</p> <p>A 10 percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.</p> <p>The endowment shall be established assuming spending will not occur for the first three years after full funding.</p> <p>For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual disbursement until the year of anticipated need or upon request to Endowment Fund Manager and DFG.</p> | ITP Condition # 10.3.8 | Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided. | Permittee | |
| 16 | <p>Permittee shall calculate the endowment funds deposit. After obtaining DFG approval of the HM lands, long-term management plan, and Endowment Fund Manager, Permittee shall prepare a Property Analysis Record or similar type of analysis (PAR) to calculate the amount of funding necessary to ensure the long-term management of the HM lands (Endowment Deposit Amount). The Permittee shall submit to DFG for review and approval the results of the PAR before transferring funds to the Endowment Fund Manager.</p> <p>Permittee shall obtain the capitalization rate from the selected Endowment Fund Manager for use in calculating the PAR and adjust for any additional administrative, periodic, or annual fees.</p> <p>Permittee shall include in PAR assumptions the following buffers for endowment establishment and use that will substantially ensure long-term viability and security of the Endowment Fund:</p> <p>A 10 percent contingency shall be added to each endowment calculation to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.</p> <p>The endowment shall be established assuming spending will not occur for the first three years after full funding.</p> <p>For all large capital expenses to occur periodically but not annually such as fence replacement or well replacement, payments shall be withheld from the annual disbursement until the year of anticipated need or upon request to Endowment Fund Manager and DFG.</p> | ITP Condition # 10.3.9 | Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided. | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|---|-------------------------|--|-------------------|--------------------------|
| 17 | Permittee shall transfer the long-term endowment funds to the Endowment Fund Manager upon DFG approval of the Endowment Deposit Amount identified above. The approved Endowment Fund Manager may pool the Endowment Fund with other endowments for the operation, management, and protection of HM lands for local populations of the Covered Species but shall maintain separate accounting for each Endowment Fund. | ITP Condition # 10.3.10 | Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided. | Permittee | |
| 18 | Permittee shall reimburse DFG for all reasonable expenses incurred by DFG such as transaction fees, account set-up fees, administrative fees, title and documentation review and related title transactions, expenses incurred from other state agency reviews, and overhead related to transfer of HM Lands to DFG. | ITP Condition # 10.4 | Before commencing Covered Activities or within 18 months of the effective date of the ITP if Security is provided. | Permittee | |

| Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|--|---------------------------|---|-------------------|--------------------------|
| <p>19</p> <p>The Permittee may proceed with Covered Activities only after the Permittee has ensured funding (Security) to complete any activity required by Condition 10 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:</p> <p>Security Amount. The Security shall be in the amount of \$53,000.00. This amount is based on the cost estimates identified in Condition 10.1 above;</p> <p>Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 3) or another form of Security approved in advance in writing by DFG's Office of the General Counsel;</p> <p>Security Timeline. The Security shall be provided to DFG before Covered Activities begin or within 30 days after the effective date of the ITP, whichever occurs first;</p> <p>Security Holder. The Security shall be held by DFG or in a manner approved in advance in writing by DFG;</p> <p>Security Transmittal. If DFG holds the Security, Permittee shall transmit it to DFG with a completed Mitigation Payment Transmittal Form (see Attachment 4) or by way of an approved instrument such as escrow, irrevocable letter of credit, or other.</p> <p>Security Drawing. The Security shall allow DFG to draw on the principal sum if DFG, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of the ITP;</p> <p>Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after all secured requirements have been met as evidenced by:</p> <p>Timely submission of all required reports;</p> <p>An on-site inspection by DFG; and</p> <p>Written approval from DFG.</p> <p>Even if Security is provided, the Permittee must complete the required acquisition, protection and transfer of all HIM lands and record any required conservation easements no later than 18 months from the effective date of the ITP. DFG may require the Permittee to provide additional HIM lands and/or additional funding to ensure the impacts of the taking are minimized and fully mitigated, as required by law, if the Permittee does not complete these requirements within the specified timeframe.</p> | <p>ITP Condition # 11</p> | <p>Before commencing Covered Activities</p> | <p>Permittee</p> | |
| <p>DURING COVERED ACTIVITIES</p> | | | | |
| <p>20</p> <p>Permittee shall comply with the conservation measures of the SCWA P.L. 101-514 (Zone 40) biological opinion and provisions of the Memorandum of Agreement between SCWA, Sacramento Regional County Sanitation District, and the USFWS to ensure that new water deliveries by SCWA from the FRWP will not be provided unless the individual or entity that is to receive the new service can demonstrate compliance with ESA and CESA. Permittee shall withhold discretionary approval for projects (grading, tentative/final map, etc.) that could result in take of protected species until the individual or entity that is to receive the new service demonstrates compliance with ESA and CESA.</p> | <p>ITP Condition # 6</p> | <p>During Covered Activities</p> | <p>Permittee</p> | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|--|---------------------|------------------------------------|-------------------|--------------------------|
| 21 | To ensure compliance with the Conditions of Approval of the ITP, the Designated Biologist shall have authority to immediately stop any activity that is not in compliance with the ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species, or a species not covered by the ITP. | TP Condition # 7.3 | During Covered Activities | Permittee | |
| 22 | Permittee shall immediately stop and follow pertinent State and federal statutes and regulations and arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site. | ITP Condition # 7.5 | During Covered Activities | Permittee | |
| 23 | Permittee shall provide DFG staff with reasonable access to the Project and mitigation lands under Permittee control, and shall otherwise fully cooperate with DFG efforts to verify compliance with or effectiveness of mitigation measures set forth in the ITP. | ITP Condition # 7.6 | During Covered Activities | Permittee | |
| 24 | The Designated Representative shall immediately notify DFG in writing if it determines that the Permittee is not in compliance with any Condition of Approval of the ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in the ITP and/or the MMRP. The Designated Representative shall report any non-compliance with the ITP to DFG within 24 hours. | ITP Condition # 8.1 | During Covered Activities | Permittee | |
| 25 | The Designated Biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) check for compliance with all measures of the ITP; and (3) check the effectiveness of fish screens. Compliance inspections shall be conducted during biological monitoring activities described in the USFWS- and DFG-approved biological monitoring plan (see 8.4 below). Based on the currently proposed monitoring schedule, compliance inspections will occur monthly from December through July (coincident with proposed monitoring activities) in each year of the monitoring program. The Designated Representative or Designated Biologist shall prepare written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by the ITP. | ITP Condition # 8.2 | During Covered Activities | Permittee | |
| 26 | The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Condition 8.2 into an Annual Compliance Report and submit it to DFG each year of the biological monitoring program beginning with issuance of the ITP and continuing until DFG accepts the Final Mitigation Report identified below. Each Annual Compliance Report shall include, at a minimum: (1) a compilation of the observation and inspection records identified in Condition 8.2; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of this table with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; and (6) information about other Project impacts on the Covered Species. The Compliance Reports shall be submitted to DFG's Regional Office by September 30 of each year of the biological monitoring program at the office listed in the Notices section of the ITP and via e-mail to DFG's Regional Representative. At the time of the ITP's approval, the DFG Regional Representative is Corinne Gray (cgray@dfg.ca.gov). DFG may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If DFG determines the reporting schedule must be changed, DFG will notify Permittee in writing of the new reporting schedule. | ITP Condition # 8.3 | Annually During Covered Activities | Permittee | |

| Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|---|----------------------------|---|-------------------|--------------------------|
| <p>27 Permittee shall immediately notify the Designated Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured. The Designated Biologist or Designated Representative shall provide initial notification to DFG by calling the Regional Office at (707) 944-5500. The initial notification to DFG shall include information regarding the location, species, number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send DFG a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible provide a photograph, explanation as to cause of take or injury, and any other pertinent information.</p> | <p>ITP Condition # 8.6</p> | <p>During Covered Activities</p> | <p>Permittee</p> | |
| <p>28 Permittee shall limit the initial capacity of water intake to 185 mgd or 286 cfs and a maximum annual volume of 147,000 acre feet.</p> | <p>ITP Condition # 9.1</p> | <p>During Covered Activities</p> | <p>Permittee</p> | |
| <p>29 Permittee shall operate and maintain the fish screens in conformance to DFG, NMFS, and USFWS fish screen hydraulic and design criteria for the protection of delta smelt and juvenile salmonids. Permittee shall maintain an average approach velocity of 0.2 fps at the screen for the protection of delta smelt, which exceeds the criteria for juvenile salmonids. This criterion is assumed to provide adequate protection of longfin smelt based on general similarities in size and morphology of longfin smelt and delta smelt life stages. The criterion for sweeping velocity may not always be met because the FRWP intake is subject to tidal influence. Permittee shall implement coordinated operations with the Sacramento Regional County Sanitation District and City of Sacramento to reduce the frequency of such events, as described in the list of proposed conservation measures in the EIR for the Project.</p> | <p>ITP Condition # 9.2</p> | <p>During Covered Activities</p> | <p>Permittee</p> | |
| <p>30 As required under the terms and conditions of the NMFS biological opinion for the Project, to ensure that the fish screen and associated structural and operational features of the intake facility are in compliance with established performance and design criteria, Permittee has (1) coordinated with NMFS to conduct a post-construction inspection of the intake structure and fish screen to ensure that the screen panels are properly installed and functional; (2) prepared a hydraulic evaluation plan to ensure that the fish screen is meeting established hydraulic criteria and obtained approval from NMFS; and (3) prepared an operations and maintenance manual for the intake structure and fish screen, which is currently being reviewed by NMFS. Permittee shall implement the approved hydraulic evaluation plan and operations and maintenance plan as approved by NMFS.</p> | <p>ITP Condition # 9.3</p> | <p>During Covered Activities</p> | <p>Permittee</p> | |
| <p>31 Permittee shall curtail diversion to the greatest extent possible when any portion of the fish screen structure is damaged or removed for maintenance or repair which allows unscreened water to pass into the intake structure.</p> | <p>ITP Condition # 9.4</p> | <p>During Covered Activities</p> | <p>Permittee</p> | |
| <p>32 Permittee shall submit a Final Mitigation Report to DFG by December 31 of the final year of biological monitoring activities. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Annual Compliance Reports and all ASRs; (2) a copy of this table with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of the ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.</p> | <p>ITP Condition # 8.5</p> | <p>By December 31 of the final year of biological monitoring activities</p> | <p>Permittee</p> | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|---|---------------------|---------------------------------|-------------------|--------------------------|
| 33 | The Permittee shall implement the fish screen hydraulic evaluation plan submitted to DFG on September 1, 2010. Permittee shall prepare and submit a report of the test results to DFG within 30 days following implementation of hydraulic testing. | ITP Condition # 9.5 | 30 days after hydraulic testing | Permittee | |

ATTACHMENT 2A
DEPARTMENT OF FISH AND GAME

HABITAT MANAGEMENT LAND ACQUISITION PACKAGE CHECKLIST FOR PROJECT APPLICANTS

The following checklist is provided to inform you of what documents are necessary to expedite Department processing of your Habitat Management Land acquisition proposal. Any land acquisition processing requests which are incomplete when received, will be returned. The Region contact will review and approve the document package and forward it to the Habitat Conservation Planning Branch Senior Land Agent with a request to process the land acquisition for formal acceptance.

To: _____
Carl Wilcox, Bay Delta Region

From: _____
Freeport Regional Water Authority

Phone: _____

Tracking #: _____
2081-2010-031-03

Project Name: _____

Enclosed is the complete package for the Conservation Easement OR Grant Deed

Documents in this package include:

Fully executed, approved as to form Conservation Easement Deed or Grant Deed.

Date executed: _____

Proposed Lands for Acquisition Form (PLFAF)

Phase I Environmental Site Assessment Report Date on report: _____

(An existing report may be used, but it must be less than two years old.)

Preliminary Title Report(s) for subject property is enclosed and has been reviewed for encumbrances and other easements. The title report must be less than six months old when final processing is conducted.

Included are additional documents:

document(s) to support title exceptions

document(s) to explain title encumbrances

a plot or map of easements/encumbrances on the property

Policy of Title Insurance (an existing title policy is not acceptable)

County Assessor Parcel Map(s) for subject property

Site Location Map (Site location with property boundaries outline on a USGS 1:24,000 scale topo)

Final Permit or Agreement (or other appropriate instrument)

Type of agreement: Bank Agreement Mitigation Agreement

Permit _____ Other: _____

(write in type of permit)

Final Management Plan (if required prior to finalizing permit or agreement or if this package is for a Grant Deed)

Biological Resources Report

Draft Summary of Transactions hard copy electronic copy (both are required)

PROPOSED LANDS FOR ACQUISITION FORM ("PLFAF")

Date: _____

TO: Regional Representative

Facsimile:

FROM: _____

Applicant proposes that the following parcel of land be considered for approval by the Department as suitable for purposes of habitat management lands to replace the adverse environmental impacts of the Project:

| <u>Section</u> | <u>Township</u> | <u>Range</u> | <u>Number of Acres</u> |
|----------------|-----------------|--------------|------------------------|
| _____ | _____ | _____ | _____ |

Current Legal Owner(s), include Parcel Number(s):

Location of Parcel:

APPROVED ___
REJECTED ___

By: _____

DATE: _____

Region

Explanation: _____

IRREVOCABLE STANDBY LETTER OF CREDIT NO. [number]

Issue Date: [date]

Beneficiary:

Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814
Attn: HCPB Mitigation Account Coordinator

Amount: U.S. \$[dollar number] [(dollar amount)]

Expiry: [Date] at our counters

Dear Sirs:

1. At the request and on the instruction of our customer, [name of applicant] ("Applicant"), we, [Name of Financial Institution] ("Issuer"), hereby establish in favor of the beneficiary, the California Department of Fish and Game ("Department"), this irrevocable standby letter of credit ("Credit") in the principal sum of U.S. \$[dollar number] [(dollar amount)] ("Principal Sum").
2. We are informed this Credit is and has been established for the benefit of the Department pursuant to the terms of the incidental take permit for the [name of project] issued by the Department to the Applicant on [date] (No. [number]) ("Permit").
3. We are further informed that pursuant to the Permit, the Applicant has agreed to complete certain mitigation requirements, as set forth in Conditions [numbers] in the Permit ("Mitigation Requirements").
4. We are finally informed that this Credit is intended by the Department and the Applicant to serve as a security device for the performance by the Applicant of the Mitigation Requirements.
5. The Department shall be entitled to draw upon this Credit only by presentation of a duly executed Certificate for Drawing ("Certificate") in the same form as Attachment A, which is attached hereto, at our office located at [name and address of Financial Institution].
6. The Certificate shall be completed and signed by an "Authorized Representative" of the Department as defined in paragraph 12 below. Presentation by the Department of a completed Certificate may be made in person or by registered mail, return receipt requested, or by overnight courier.

7. Upon presentation of a duly executed Certificate as above provided, payment shall be made to the Department, or to the account of the Department, in immediately available funds, as the Department shall specify.
8. If a demand for payment does not conform to the terms and conditions of this Credit, we shall give the Department prompt notice that the demand for payment was not effected in accordance with the terms and conditions of this Credit, state the reasons therefore, and await further instruction.
9. Upon being notified that the demand for payment was not effected in conformity with the Credit, the Department may correct any such non-conforming demand for payment under the terms and conditions stated herein.
10. All drawings under this Credit shall be paid with our funds. Each drawing honored by us hereunder shall reduce, *pro tanto*, the Principal Sum. By paying to the Department an amount demanded in accordance herewith, we make no representations as to the correctness of the amount demanded.
11. This Credit will be cancelled upon receipt by us of Certificate of Cancellation, which: (i) shall be in the form of Attachment B, which is attached hereto, and (ii) shall be completed and signed by an Authorized Representative of the Department, as defined in paragraph 12 below.
12. An "Authorized Representative" shall mean either the Director of the Department of Fish and Game, the General Counsel of the Department of Fish and Game, or a Regional Manager of the Department of Fish and Game.
13. This Credit shall be automatically extended without amendment for additional periods of one year from the present or any future expiration date hereof, unless at least sixty (60) days prior to any such date, we notify the Department in writing by registered mail, return receipt requested, or by overnight courier that we elect not to consider this Credit extended for any such period.
14. Communications with respect to this Credit shall be in writing and addressed to us at [**name and address of Financial Institution**], specifically referring upon such writing to this credit by number. The address for notices with respect to this Credit shall be: (i) for the Department: Department of Fish and Game, Habitat Conservation Planning Branch, 1416 Ninth Street, 12th Floor, Sacramento, California 95814-2090 Attn: HCPB Mitigation Account Coordinator; and (ii) for the Applicant: [**name and address of Applicant**].
15. This Credit may not be transferred.

16. This Credit is subject to the International Standby Practices 1998 ("ISP 98"). As to matters not covered by the ISP 98 and to the extent not inconsistent with the ISP 98, this credit shall be governed by and construed in accordance with the Uniform Commercial Code, Article 5 of the State of California.

17. This Credit shall, if not canceled, expire on [**expiration date**], or any extended expiration date.

18. We hereby agree with the Department that documents presented in compliance with the terms of this Credit will be duly honored upon presentation, as specified herein.

19. This Credit sets forth in full the terms of our undertaking. Such undertaking shall not in any way be modified, amended or amplified by reference to any document or instrument referred to herein or in which this Credit is referred to or to which this Credit relates and any such reference shall not be deemed to incorporate herein by reference any document or instrument.

[Name of Financial Institution]

By: _____
Name: _____
Title: _____

ATTACHMENT A

IRREVOCABLE STANDBY LETTER OF CREDIT NO. [number]
CERTIFICATE FOR DRAWING

To:

[Name and address of Financial Institution]

Re: Incidental Take Permit No. [permit number]

The undersigned, a duly Authorized Representative of the Department of Fish and Game ("Department"), as defined in paragraph 12 in the above-referenced Irrevocable Standby Letter of Credit ("Credit"), hereby certifies to the Issuer that:

1. **[Insert one of the following statements:** "In the opinion of the Department, the Applicant has failed to complete the Mitigation Requirements referenced in paragraph 3 of the Credit." **or** "As set forth in paragraph 13, the Issuer has informed the Department that the Credit will not be extended and the Applicant has not provided the Department with an equivalent security approved by the Department to replace the Credit."]
2. The undersigned is authorized under the terms of the Credit to present this Certificate as the sole means of demanding payment on the Credit.
3. The Department is therefore making a drawing under the Credit in amount of U.S. \$ _____.
4. The amount demanded does not exceed the Principal Sum of the Credit.

Therefore, the Department has executed and delivered this Certificate as of the ___ day of _____, _____.

CALIFORNIA DEPARTMENT OF FISH AND GAME

BY: _____

[Insert one of the following: "DIRECTOR" or "GENERAL COUNSEL" or "REGIONAL MANAGER, [NAME OF REGIONAL OFFICE]"]

ATTACHMENT B

IRREVOCABLE LETTER OF CREDIT NO. [number]
CERTIFICATE FOR CANCELLATION

To:

[Name of Financial Institution and address]

Re: Incidental Take Permit No. [permit number]

The undersigned, a duly Authorized Representative of the California Department of Fish and Game ("Department"), as defined in the paragraph 12 in the above-referenced Irrevocable Standby Letter of Credit ("Credit"), hereby certifies to the Issuer that:

1. **[Insert one of the following statements:** "The Applicant has presented documentary evidence of full compliance with the Mitigation Requirements referenced in paragraph 3 of the Credit." **or** "The natural expiration of this Credit has occurred."]
2. The Department therefore requests the cancellation of the Credit.

Therefore, the Department has executed and delivered this Certificate for Cancellation as of the ____ day of _____, _____.

CALIFORNIA DEPARTMENT OF FISH AND GAME

BY: _____
[Insert one of the following: "DIRECTOR" or "GENERAL COUNSEL" or "REGIONAL MANAGER, [NAME OF REGIONAL OFFICE]"]

California Department of Fish and Game
Mitigation Payment Transmittal Form

Project Applicant Instructions: Please fill out and attach this form to payment. For conservation banks, also attach the Bill(s) of Sale for credits sold. One form may be used for multiple transactions, **BUT YOU MUST USE A SEPARATE FORM FOR EACH CHECK YOU TRANSMIT.** Make sure to include Project Name, Project Tracking Number, and FASB Mitigation Tracking Number (if available) on the attached payment type.

- (1) **DATE:** _____
- TO:** Scott Wilson, Environmental Program Manager
7329 Silverado Trail, Napa, CA 94558
- (2) **FROM:** Freeport Regional Water Authority
827 7th Street, Room 301, Sacramento, CA 95814
(916) 875-3544
- (3) **RE:** Freeport Regional Water Project

(4) **AGREEMENT/ACCOUNT INFORMATION:**

(Check the applicable type)

- 2081 Permit Conservation Bank 1802 Agreement
 2835 NCCP Other _____

_____ 2081-2010-031-03 _____

[Project Tracking Number]

_____ [FASB Mitigation Tracking Number (if available)] _____

Index _____ PCA _____

- (5) **PAYMENT TYPE** (One check per form only): The following funds are being remitted in connection with the above referenced project:

Check information:

Total \$ _____ Check No. _____

Account No. _____ Bank Routing No. _____

a. Endowment: for Long-Term Management Subtotal \$ _____

b. Habitat Enhancement Subtotal \$ _____

c. Security:
1. Cash Refundable Security Deposit Subtotal \$ _____

2. Letter of Credit Subtotal \$ _____

1. Financial Institution: _____

2. Letter of Credit Number: _____

3. Date of Expiration: _____

Appendix B

- FRWA Joint Powers Agreement, Second Amended (November 2006)
- FRWA Settlement Agreements
- Principles for Use by other Parties of Unassigned EBMUD Capacity in the Freeport Regional Water Project (February 2005)

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**SECOND AMENDED
JOINT EXERCISE OF POWERS AGREEMENT
CONCERNING THE
FREEPORT REGIONAL WATER AUTHORITY
(FRWA)**

This Second Amended Joint Exercise of Powers Agreement ("Second Amended Agreement"), which replaces the Joint Exercise of Powers Agreement entered into on February 14, 2002 and the First Amended Joint Exercise of Powers Agreement (as amended, the "Agreement") entered into on November 26, 2002, is made and entered into as of the 28th day of November, 2006, by and between the East Bay Municipal Utility District and the Sacramento County Water Agency.

RECITALS

- A. The Members have agreed to jointly pursue development and implementation of a project that would involve construction of, among other features, a new surface water diversion on the Sacramento River with a capacity of 185 million gallons per day located approximately 6,500 feet upstream of the Freeport Bridge on the Sacramento River and those related facilities described in Attachment A, Section A-1 hereto.
- B. The purpose of this Second Amended Agreement is to provide the legal mechanism under which a joint powers authority may design, finance, construct and operate, the Freeport Regional Water Project ("FRWP") for the benefit of the Members.
- C. The Members have agreed to share in the costs of environmental documentation, design, permitting, financing, construction, and operating the FRWP as set forth in this Second Amended Agreement.
- D. The Members have an interest in the successful planning, design, construction and operation of the FRWP.
- E. The Members have the power to study, plan, develop, finance, acquire, condemn, lease, design, construct, maintain, repair, manage, operate, control and dispose of the FRWP and related property for the purpose of the production, treatment and distribution of water as provided herein.
- F. These powers can be exercised best through the cooperative action of the Members through a joint exercise of powers authority.
- G. Each of the Members is authorized to contract with the other for the joint exercise of these common powers under Article 1, Chapter 5, Division 7, Title 1 commencing with Section 6500 of the Government Code of the State of California.

- H. The Members previously entered into the Joint Exercise of Powers Agreement that created FRWA effective February 14, 2002.
- I. The Members, on November 26, 2002, entered into the First Amended Joint Exercise of Powers Agreement, which amended the Joint Exercise of Powers Agreement.
- J. The Agreement did not address a variety of issues relating to the operation and financing of the FRWP should it be constructed by FRWA.
- K. The Members desire to amend the Agreement by this Second Amended Agreement to address certain operational and financing issues so that they are in a position to proceed with the construction phase of the FRWP.

COVENANTS

The Members agree as follows:

I.

AGREEMENT SUPERCEDED

This Second Amended Agreement supersedes the Agreement in its entirety.

II.

DEFINITIONS

2.1 For the purpose of this Second Amended Agreement, the following words shall have the following meanings

- (a) "Act" means Chapter 5 of Division 7 of Title 1 of the California Government Code.
- (b) "Agreement" means the Joint Powers Agreement Creating the Freeport Regional Water Authority that became effective February 14, 2002, as amended on November 26, 2002.
- (c) "Associate Member" means any public entity that enters into an Associate Member Agreement as provided for in Section 3.2 hereof.

- (d) "Associate Member Agreement" means the agreement entered into between FRWA and any Associate Member.
- (e) "Board" means the Board of Directors established pursuant to Article III hereof.
- (f) "Capital Costs" mean the cost of constructing, financing, acquiring, planning, designing, permitting (including environmental review and any mitigation costs or filing fees related to the permitting process) FRWP Facilities, and the funding of a reasonable construction reserve.
- (g) "Construction" means the procurement of material, parts and equipment, conducting construction, construction management and related field services including project management activities and contractor management, design assistance during construction, as-built-drawings, and startup testing.
- (h) "Dedicated Capacity" means the capacity of the FRWA Facilities dedicated to each Member as set forth in Section 6.3 hereof.
- (i) "Defaulting Member" means a Member who fails to make any payment as required by Section 5.2(c) hereof.
- (j) "Director" means a member of the Board.
- (k) "EBMUD" means the East Bay Municipal Utility District.
- (l) "EBMUD Facility" or "EBMUD Facilities" means each facility or all facilities (as the case may be) identified in Attachment A, Section A-3 hereto.
- (m) "Environmental Documentation" means all activities required to comply with the National Environmental Policy Act (NEPA), the Corps of Engineers 404 Permit process, the federal Endangered Species Act, the California Endangered Species Act and the California Environmental Quality Act (CEQA) or any other federal or state statute requiring a permit for construction or operation of the FRWP.
- (n) "Executives" means the General Manager of EBMUD and the County Executive of Sacramento County, or the Director of Water Resources for Sacramento County if delegated this responsibility by the County Executive, collectively. An "Executive" means one of the two Executives.
- (o) "Final Engineering" means activities conducted after the certification of Environmental Documentation and approval of the FRWP required to develop final design plans, specifications, and bidding documents.

- (p) "Fiscal Year" means July 1 through June 30 or such other period as the Board shall determine.
- (q) "Fixed Operating Costs" means those monthly operating and maintenance costs of the FRWA Facilities that are incurred irrespective of the amount of water conveyed through the FRWA Facilities, including, but not limited to, consultant costs, employee salaries and expenses, debt service costs on any bonds or other indebtedness issued by FRWA, as provided in Section 6.6(a) hereof, to finance the Capital Costs of the FRWA Facilities, bond reserve funds, and the costs of bond or financing agreements described in Section 4.2(q) hereof.
- (r) "Force Majeure" means delays or defaults due to acts of God, government (other than acts or failure to act by the Members), litigation, including litigation challenging the validity of the Agreement or this Second Amended Agreement, or any element thereof, general strikes or other force or event beyond the responsible party's reasonable control.
- (s) "FRWA" means the joint exercise of powers authority created by the Agreement and continued in effect through this Second Amended Agreement.
- (t) "FRWA Facility" or "FRWA Facilities" means each facility or all facilities (as the case may be) identified in Attachment A, Section A-1 hereto.
- (u) "Freeport Point of Delivery" means a location on the Sacramento River sited consistent with the State Water Resources Control Board ("SWRCB") Order of July 29, 1999 or any subsequent order of the SWRCB regarding the Freeport point of delivery pertaining to permits 11315 and 11316 or other appropriate SWRCB Permits.
- (v) "Freeport Regional Water Project" or "FRWP" means those FRWA, EBMUD and SCWA Facilities described in Attachment A, Section A-2 hereto.
- (w) "Member" means either EBMUD or SCWA.
- (x) "Members" means EBMUD and SCWA collectively.
- (y) "Member's Point of Delivery" means the physical location in the FRWA Facilities at which each Member receives its deliveries of Member's Water and/or water for third parties delivered via the FRWA Facilities pursuant to provisions of this Second Amended Agreement. The Members' Points of Delivery are identified in Attachment A.

- (z) “Member’s Water” means the quantities of water available for withdrawal from the Sacramento River at the Freeport Point of Delivery by that Member for its use based on its supply contracts with third parties or its own water rights.
- (aa) “MGD” means millions of gallons per day.
- (bb) “Permitting” means all activities required to complete the regulatory and public approval process for the FRWP. Permitting activities will include, but are not limited to, conducting required studies, endangered species act consultation, environmental documentation and public notifications, preparation of local, state and federal permit applications, consultation and negotiations with involved parties including regulatory agencies.
- (cc) “Program Manager” means the FRWA Program Manager appointed pursuant to Section 3.11 hereof.
- (dd) “SCWA Facility” or “SCWA Facilities” means each facility or all facilities (as the case may be) identified in Attachment A, Section A-2 hereto.
- (ee) “Second Amended Agreement” means this Second Amended Joint Exercise of Powers Agreement.
- (ff) “Variable Operating Costs” mean those daily operating and maintenance costs, including, but not limited to, power and other costs that are dependent on the volume of water actually conveyed through the FRWA Facilities.

2.2 **Agreement and Attachment.** This Second Amended Agreement shall incorporate Attachment A, and shall be construed consistent with the terms set forth in said Attachment. In the event of conflict between the articles of this Second Amended Agreement and Attachment A, this Second Amended Agreement shall control.

III.

ORGANIZATION

- 3.1 **FRWA Created.** The public entity, separate from its Members, known as the Freeport Regional Water Authority, was formed by the Agreement pursuant to the provisions of the Act and continues in effect under the authority of this Second Amended Agreement.
- 3.2 **Membership.** The Members of FRWA shall be EBMUD and SCWA, and such other public entities that execute an amendment to this Second Amended Agreement, and which have not withdrawn from FRWA pursuant to the provisions of Article VIII hereof. Other public entities may also join FRWA as Associate Members upon the execution of

an Associate Member Agreement in a form approved by the Board. Any Associate Member shall be entitled to participate in public Board meetings regarding the planning, design and operation of the FRWP consistent with the terms and conditions of a fully executed Associate Member Agreement.

- 3.3 **Board of Directors.** FRWA shall be governed by a four (4) member Board of Directors comprised of two representatives of the governing board of each Member of FRWA. Each Director shall be entitled to one vote. Associate Members may appoint a non-voting member to the Board who shall sit with the four voting Directors at public meetings, and have the right to participate in public Board discussions consistent with the terms and conditions of a fully executed Associate Member Agreement.
- 3.4 **Selection of Directors.** Each Member shall designate and appoint two (2) representatives from its governing board to serve as Directors on the Board. Each Member also shall appoint an alternate Director from its governing board for each of its regular Directors. Any such alternates shall be empowered to cast votes in the absence of the regular Directors or, in the event of a conflict of interest preventing the regular Director from voting, to vote in the place of a Director recused because of conflict. If an alternate Director of a Member is unavailable, the other alternate Director of such Member may serve in place of such unavailable alternate. Each Member shall give written notice to the FRWA Secretary of the names of its Directors and alternate Directors. Each of the Directors and alternate Directors shall hold office from the first meeting of the Board after the appointment of the Director or alternate Director until a successor is selected in the same manner as the initial representatives were chosen. Directors and alternate Directors shall serve at the pleasure of the governing body of their appointing Members and may be removed at any time, with or without cause, at the sole discretion of such governing body.
- 3.5 **Compensation.** No Director shall receive any compensation from FRWA for serving as such, but shall be entitled to reimbursement for any expenditures actually incurred in connection with serving as a Director if the Board determines that such expenditure shall be reimbursed and there are unencumbered funds available for such purposes. Except as specifically provided in this Article, staff of the Members shall not be compensated for their time by FRWA.
- 3.6 **Principal Office.** The initial principal office of FRWA shall be a location of approximate equal travel times for both Members as designated by the Board. After award of the first construction contract for the FRWP, the principal office of FRWA shall be relocated to Sacramento County. The location of the principal office of FRWA specified in this section may be changed at the discretion of the Board.
- 3.7 **Meetings.** The time and place of regular meetings of the Board shall be determined by resolution adopted by the Board, with a copy of such resolution furnished to each Member. Regular meetings of the Board shall occur not less than annually. All meetings

of the Board shall be called, noticed, held and conducted subject to the provisions of the Ralph M. Brown Act (Chapter 9 (Sections 54950-54961) of Part 1 of Division 2 of Title 5 of the California Government Code) or any successor legislation.

3.8 **Quorum.** For the purposes of transacting the business of the Board, a quorum shall consist of three (3) Board Directors. A majority vote of the entire Board shall be required for any Board action.

3.9 **Organization of the Board.** The Board shall elect a Chair and a Vice-Chair to serve for a term of one (1) year commencing every January 1st, unless sooner terminated at the pleasure of the Board or until a successor Chair and/or Vice-Chair is appointed to complete a current one-year term; provided, however, the first Chair and Vice-Chair appointed shall hold office from the date of appointment to December 31 of the ensuing year. The position of Chair and Vice-Chair shall alternate between representatives of each Member. The initial Chair shall be a representative of EBMUD and the initial Vice-Chair shall be a representative of SCWA.

3.10 **Officers.**

(a) **Treasurer/Controller.** The Director of Finance of EBMUD shall serve as the FRWA Treasurer unless a different Treasurer is appointed by the Board. The Treasurer shall function as the combined offices of Treasurer and Auditor pursuant to Government Code Section 6505.6, and shall strictly comply with the provisions of statutes relating to the duties of such office found in the Act. Subject to the applicable provisions of any resolution, indenture or other instrument authorizing or securing bonds or other evidences of indebtedness providing for a trustee or other fiscal agent, the Treasurer shall be the depository and have custody of all money of FRWA from whatever source, and shall draw all warrants and pay demands against FRWA as approved by the Board. The Treasurer shall file an official bond in the amount of \$25,000 as required by Government Code Section 6505.1; provided that such bond shall not be required if FRWA does not possess or own property or funds with an aggregate value greater than \$500. The Treasurer shall cause an independent annual audit of the finances of FRWA to be made by a certified public accountant in compliance with Government Code Section 6505. The Treasurer shall serve at the pleasure of the Board. FRWA shall reimburse EBMUD for the costs of the services provided by the EBMUD Director of Finance pursuant to this subsection.

(b) **Secretary.** The Clerk of the SCWA Board of Directors shall serve as the Secretary of the Board unless a different Secretary is appointed by the Board. The Secretary shall maintain the records of FRWA. The Secretary shall serve at the pleasure of the Board. FRWA shall reimburse SCWA for the costs of the services provided by the SCWA Clerk pursuant to this subsection.

- (c) Legal Counsel. Unless a different legal counsel is required as a result of disqualification or conflict, Legal Counsel for FRWA shall be either the EBMUD General Counsel or the Sacramento County Counsel, upon mutual recommendation of both regarding the staff member who shall perform services in that capacity; and shall serve at the pleasure of the Board. FRWA shall reimburse the Member for the costs of the legal services provided. If the Board determines to retain special counsel, such retention shall be upon the mutual recommendation of the EBMUD General Counsel and the Sacramento County Counsel.
- (d) Additional Officers. The Board shall have the power to appoint such additional officers as it deems necessary.
- (e) Qualifications. Any officer, employee or agent of the Board also may be an officer, employee or agent of any of the Members. Except as specifically provided in this Article, no officer, employee or agent or attorney of any of the Members shall receive compensation from FRWA for time spent on FRWA matters, but may be compensated for expenditures actually incurred on FRWA matters.
- (f) Privileges, Liability and Immunity. All of the privileges and immunities from liability, exemption from laws, ordinances and rules, all pension, relief, disability, workmen's compensation and other benefits which apply to the activities of officers, agents, or employees of any of the Members when performing their respective functions shall apply to the same degree and extent while such individuals are engaged in the performance of any of the functions and other duties under this Second Amended Agreement. None of the officers, agents, or employees appointed by the Board shall be deemed by reason of their employment by the Board to be employed by any of the Members or subject to any of the requirements of such Members.

3.11 Program Manager. The Board shall appoint a Program Manager upon the recommendation of the Executives who shall be responsible to the Board for the proper and efficient administration of FRWA as directed by the Board pursuant to the provisions of this Second Amended Agreement or of any resolution or order of the Board not inconsistent with this Second Amended Agreement. During the planning and construction phase of the FRWP, the Program Manager shall be retained under contract with FRWA. After the FRWP becomes operational, the Board may at its discretion continue to retain the Program Manager under contract or it may appoint a Program Manager who is an employee of any of its Members. The Program Manager shall report directly to the Board and, upon request by the Executives, provide administrative support for the activities of the Executives in exercising their responsibilities as assigned by the Board pursuant to Section 3.12 hereof. Any communications, correspondence or other material that is furnished to the Board by the Program Manager shall also be furnished to the Executives unless the Program Manager is directed otherwise by the Executives. The

Program Manager shall serve at the pleasure of the Board. In addition to any other duties that may be assigned by the Board, the Program Manager shall have the following authority:

- (a) Under the policy direction of the Board, and in consultation with the Executives, to plan, organize and direct all activities of FRWA with the exception of operations and maintenance activities unless expressly so authorized by the Board;
- (b) To authorize expenditures, except for operations and maintenance activities unless expressly so authorized by the Board, within the designations and limitations of the budget approved by the Board;
- (c) To make recommendations to and requests of the Board concerning any matter which is to be performed, done or carried out by the Board;
- (d) To have the authority to assign, supervise and otherwise control the activities, except for operations and maintenance activities unless expressly so authorized by the Board, of any Member employees assigned to FRWA or contractors that may be retained by FRWA; and
- (e) To have charge of and handle any property of FRWA and have access to any property of FRWA.

3.12 Executives. The Executives shall have responsibility for operation and maintenance of the FRWA Facilities, and may be assigned other responsibilities by the Board. The Executives shall collaborate as necessary in exercising such responsibilities and shall establish checks and balances to ensure that the interests of all Members are equally well served. Unless specifically limited by the Board, such responsibilities may be delegated by the Executives to Member staff and/or committees comprising staff from all Members provided that such delegation conveys the obligation of assigned staff and/or committees to collaborate as necessary and to act in the interests of all Members. Responsibilities assigned to the Executives shall include the following:

- (a) Monitor the activities of FRWA on behalf of the Members and make such reports to the Board as the Board deems appropriate;
- (b) Make recommendations to the Board with respect to the appointment and termination of the Program Manager and the responsibilities of the Program Manager;
- (c) Provide oversight of the operation and maintenance of FRWA Facilities by FRWA and/or its operating agent appointed pursuant to Section 4.2(t) hereof and, after the FRWP becomes operational, report at least annually

to the Board on costs incurred in and the status of FRWA operations and maintenance activities:

- (d) Assign, supervise and otherwise control the operation and maintenance activities for FRWA Facilities of any Member employees assigned to FRWA or contractors that may be retained by FRWA;
- (e) Make recommendations to the Board with respect to budgets and policy issues regarding operation and maintenance of the FRWA Facilities;
- (f) Authorize expenditures for operations and maintenance activities for the FRWA Facilities within the designations and limitations of the budget approved by the Board; and
- (g) Execute contracts with consultants, contractors, Members, and other agencies for operations and maintenance services and/or agreements related to operation and maintenance of FRWA Facilities, subject to Board approvals and delegation of authority by the Board for execution of such contracts and agreements; provided that any contract between FRWA and a Member shall be executed on behalf of FRWA, pursuant to approvals and delegated authority by the Board, by the Executive of the other Member.

3.13 Staff. The Members may assign employees to perform services for FRWA at their exclusive discretion in which case the services of such assigned employees shall be at the expense of the respective Member with any reimbursement for the value of the services provided by such assigned employee to be subject to an agreement between the contributing Member and FRWA. FRWA may also at the discretion of its Board enter into appropriate contracts for staff services or employ staff directly. Assignments of staff shall be pursuant to written agreement between the Member and the Program Manager or the Member and the Executives.

3.14 Record of Meetings. The Secretary of the Board shall cause a record of all meetings of the Board to be kept, and shall cause a copy of such records to be forwarded to each Director, alternate Director, and the Executives.

3.15 Rules. The Board may adopt from time to time such rules and regulations for the conduct of its affairs as it may deem necessary.

IV.

PURPOSE AND POWERS

- 4.1 **Purpose.** Each Member has in common the power to study, plan, develop, finance, acquire, condemn, lease, design, construct, maintain, repair, manage, operate, control and dispose of the FRWP and related property, either alone or in cooperation with other public or private entities, as described in Attachment A. The purpose of this Second Amended Agreement is to jointly exercise some or all of the foregoing common powers, as appropriate, and for the exercise of such additional powers as may be authorized by law in the manner herein set forth, in order to prepare the environmental documentation for the FRWP and then, if construction of the FRWP is approved pursuant to Section 6.2 hereof, provide for the most cost-efficient and timely design, financing, construction, operation and maintenance of the FRWP. The FRWP shall be designed consistent with applicable SCWA and EBMUD design standards and operational criteria.
- 4.2 **Powers.** All of the power and authority of FRWA shall be exercised by the Board. Subject to Section 4.1 hereof and the conditions and restrictions contained in this Second Amended Agreement, FRWA, in its own name, shall have the power to study, plan, develop, finance, acquire, condemn, design, and construct the FRWP and related property, and, additionally, to lease, repair, manage, operate, maintain, control and dispose of the FRWA Facilities. FRWA is authorized in its own name to do all acts necessary or convenient to the exercise of said powers for said purposes, including but not limited to any or all of the following:
- (a) To exercise jointly the common powers of its Members in studying, planning, designing and implementing water supply projects consistent with this Second Amended Agreement.
 - (b) To make and enter contracts, and to execute leases, installment sale contracts or installment purchase contracts for the purposes and in accordance with procedures and requirements as permitted by law.
 - (c) To contract for the services of engineers, attorneys, planners, financial consultants or other agents.
 - (d) To design, acquire, construct, manage, maintain and operate any buildings, works, or improvements and to enter into contracts relating to such activities.
 - (e) To acquire real or personal property, including, without limitation, by purchase, lease, gift, bequest, devise, or exercise of the power of eminent domain; to hold, lease and dispose of any such property.
 - (f) To incur debts, liabilities, or obligations subject to limitations herein set forth.

- (g) To sue and be sued in its own name.
- (h) To receive gifts, contributions and donations of property, funds, services and other forms of assistance from persons, firms, corporations and any governmental entity.
- (i) To apply for an appropriate grant or grants and/or loan or loans under any federal, state or local programs for assistance in developing the FRWP, or any future authorized modifications to the FRWP.
- (j) To enter into arrangements for the transmission, purchase and sale of electrical power, or the trading of electrical power, related to operation of the FRWA Facilities.
- (k) To obtain, in its own name, all necessary permits and licenses, opinions and rulings.
- (l) To procure public liability and other insurance as it deems advisable to protect FRWA and each of its Members.
- (m) Whenever necessary to facilitate the exercise of its powers, form and administer nonprofit corporations to do any part of what FRWA could do, or to perform any proper corporate function, and enter into agreements with such a corporation.
- (n) To issue revenue bonds in accordance with the following laws:
 - I. Article 2, Chapter 5, Title 1, Division 7 of the California Government Code, commencing with Section 6540.
 - II. Chapter 6, Title 5, Division 2 of the California Government Code, commencing with Section 54300.
 - III. Article 4, Chapter 5, Title 1, Division 7 of the California Government Code, commencing with Section 6584.
 - IV. Any other applicable law.
- (o) To use other financing acts, including, but not limited to, the Mello-Roos Community Facilities District Act of 1982, the Municipal Improvement Act of 1913 and the Improvement Bond Act of 1915.
- (p) To exercise any of the powers set forth in the Marks-Roos Local Bond Pooling Act of 1985 (Article 4 (commencing with Section 6584) of the Act), or as otherwise permitted by law.

- (q) To enter into agreements incident to the issuance of bonds for the purpose of enhancing the credit or liquidity of such bonds, or to place such bonds on a different interest rate, currency, cash-flow, or other basis, by entering into an interest rate swap, cap or similar instrument, or in connection with the investment of the proceeds of such bonds.
- (r) To enter into agreements with the Members for the construction of those EBMUD or SCWA Facilities identified in Attachment A, Sections A-2 and A-3 hereto.
- (s) To sell Dedicated Capacity in the FRWA Facilities to a Member or to a joint exercise of powers agency or nonprofit corporation for resale to a Member.
- (t) To operate the FRWA Facilities either directly or through agreement with an operating agent who may be one of the Members or a qualified third party operator.
- (u) To design, finance, lease, purchase, condemn, acquire, construct, operate, maintain, sell, hypothecate or otherwise dispose of the FRWA Facilities and related property for the purpose of the production, treatment and distribution of water as provided herein.

Such powers shall be exercised subject only to such restrictions upon the manner of exercising such powers as are imposed upon EBMUD in the exercise of its powers. Notwithstanding the foregoing, FRWA shall have any additional powers conferred under the Act, or as otherwise permitted by law, insofar as such additional powers may be necessary or desirable to accomplish the purposes of FRWA as set forth herein.

4.3 Use of FRWA Facilities to Serve Third Parties. FRWA shall operate, or cause to be operated, the FRWA Facilities to ensure that the Dedicated Capacity set forth in Section 6.3 hereof is, at all times, fully available for each Member's use. No Member may make its Dedicated Capacity available to a third-party if the use of such capacity by a third-party would interfere with any water rights or contractual entitlement of another Member or would otherwise violate the terms of any resolution, indenture, or other instrument authorizing or securing bonds or other evidences of indebtedness incurred for financing the FRWA Facilities.

Any person desiring to use a portion of a Member's Dedicated Capacity shall contract directly with that Member. Each Member agrees to hold the FRWA and any other Member harmless from (1) any additional costs incurred by the FRWA or any Member from such use by third persons; and (2) any impact on the Dedicated Capacity rights of any other Member. Notwithstanding any provision in this section to the contrary, (a) EBMUD shall be prohibited from contracting for the use of its Dedicated Capacity for the delivery of water for use within the County of Sacramento without the prior approval of the SCWA; and (b) SCWA shall be prohibited from contracting for the use of its

Dedicated Capacity for the delivery of water for use outside the County of Sacramento without the prior approval of EBMUD.

- 4.4 **Use of a Member's Dedicated Capacity by Another Member.** Upon written agreement, one Member may make a portion of its Dedicated Capacity in the FRWA Facilities available for use by the other Member. Conditions for use of that capacity and compensation for such use shall be defined by written agreement.
- 4.5 **Delivery of Members' Water.** FRWA shall use the FRWA Facilities to deliver to each Member's Point of Delivery that Member's Water up to the limits of the Member's Dedicated Capacity and, to the extent a Member's Dedicated Capacity is not fully utilized for delivery of its Member Water, its deliveries of water to another Member or to third parties pursuant to Section 4.3 hereof. FRWA and each of the Members may enter into an agreement specifying the roles and responsibilities of FRWA and each of the Members for delivery of water and the associated cost-share responsibilities for operation and maintenance of the FRWA Facilities.

V.

ALLOCATION OF COSTS BETWEEN MEMBERS

- 5.1 **Recovery of Costs.** The costs incurred by FRWA in carrying out its functions shall be allocated between its Members as follows:
- (a) Capital Costs and other Fixed Operating Costs for the FRWA Facilities, together with the cost of Environmental Documentation for the FRWP, shall be allocated between the Members based on the following percentage shares of Dedicated Capacity in the FRWA Facilities: EBMUD-54.054% and SCWA-45.946%.
 - (b) Variable Operating Costs for FRWA Facilities shall be allocated between the Members based on the cost of their proportionate share of the volume of use of the FRWA Facilities or such other method as may be established by the Board or by mutual agreement of FRWA and its Members.
- 5.2 **Payment Obligations.**
- (a) Each of the Members agrees to be responsible for paying its respective share of all annual costs, including, but not limited to, Capital Costs, Fixed Operating Costs and Variable Operating Costs, of FRWA in accordance with the payment schedule adopted by the Board pursuant to subsection (b) below, and consistent with the cost allocation methodology set forth in Section 5.1 hereof and any bonds or financing agreements entered into by FRWA.

- (b) All costs of FRWA shall be annually assessed on the Members by the Board in amounts sufficient to meet the obligations of FRWA for that Fiscal Year as set forth in FRWA's annual budget. The Board shall also establish a payment schedule for each annual assessment consistent with the projected cash flow needs of FRWA and any bonds or financing agreements entered into by FRWA. Each Member will be responsible for the payment of this annual assessment whether or not the FRWA Facilities are constructed, operating, damaged or destroyed, whether or not the Dedicated Capacity of each Member established pursuant to Section 6.3 hereof is actually utilized by the Member or a third party, and regardless of the occurrence of any Force Majeure event.
- (c) Notwithstanding anything to the contrary herein, each of the Members shall be individually liable to the other Member for its failure to pay its respective share of FRWA's annual costs (including but not limited to debt service on any bonds or related obligations). In the event that a Member fails to make any payment of such costs, the non-defaulting Member may make such payment on behalf of the Defaulting Member, but the Defaulting Member shall remain obligated to reimburse the non-defaulting Member for such advance with interest calculated at one and one-half the rate of return earned by the treasury of the non-defaulting Member during the time period of the default. If the Defaulting Member has not repaid the non-defaulting Member for such advance by the end of the Fiscal Year in which the default first occurs, the non-defaulting Member may take such legal action as it deems appropriate to enforce payment of such obligation.

5.3 **Revenue Deficit.** If insufficient revenue is collected by FRWA to satisfy all of its annual costs (other than by reason of a failure of any Member to pay its share of costs), then such deficiency will be assessed by FRWA against all Members in the same manner as costs were allocated to each Member for the preceding Fiscal Year in which such deficit was incurred.

5.4 **Budget Reserves and Excess Revenues.** The Board shall determine on an annual basis, prior to the beginning of each Fiscal Year, a level of reasonable cash reserves to be accumulated by FRWA. This reserve shall be accumulated from revenues collected in excess of all actual costs of FRWA. Once the targeted reserve level is reached, all additional revenues collected in excess of the actual costs of FRWA shall be considered excess revenue and, subject to any limitation in any bond or other financing agreement, carried forward as revenue for the next Fiscal Year and serve to reduce each Member's respective assessment for such subsequent Fiscal Year.

5.5 **Additional Capital Costs and Excess Capital Cost Funds.**

- (a) If the Board determines that additional funds are necessary for Capital Costs, FRWA may (1) issue bonds or other indebtedness to finance such additional

Capital Costs as provided in Section 6.6(a) hereof or (2) require the Members to pay for such costs as an additional payment for the acquisition of Dedicated Capacity in the manner set forth in Section 6.6(b) hereof.

- (b) If the Board determines that funds held for the payment of Capital Costs are in excess of the amount needed for Capital Costs, (1) if FRWA has issued bonds or other indebtedness to finance Capital Costs as provided in Section 6.6(a) hereof, excess amounts shall be applied to the payment of such bonds or other indebtedness, and (2) if Members have purchased Dedicated Capacity as provided in Section 6.6(b) hereof, excess amounts shall be returned to Members in proportion to their Dedicated Capacity (EBMUD – 54.054%; SCWA – 45.946%).

VI.

FACILITIES AND CAPACITY

- 6.1 **Authorized Facilities.** Subject to the preparation and certification of any environmental documentation, as required by law, FRWA is authorized to construct, operate and maintain the FRWA Facilities described in Attachment A, Section A-1 hereto, and to construct those EBMUD and SCWA Facilities described in Attachment A, Sections A-2 and A-3 hereto where the affected Member has entered into an agreement with the FRWA authorizing such construction by FRWA. Any changes to the FRWA Facilities described in Attachment A, Section A-1 hereto shall require the written approval of each Member.
- 6.2 **Expenditure Controls.** FRWA shall secure the approval of each Member before incurring any obligations, or expending any FRWA funds, for either of the following (1) Final Engineering as defined in Section 2.1(o) hereof; or (2) Construction as defined in Section 2.1(g) hereof.
- 6.3 **Dedicated Capacity.** Each Member shall acquire the following Dedicated Capacity from FRWA in the manner set forth in Section 6.6 hereof and shall thereupon be entitled to exclusive use of the following Dedicated Capacity in the FRWA Facilities without regard to whether the Member actually uses such facilities for the delivery of water:

| | | |
|-----|---------------|----------------|
| (1) | EBMUD | 100 MGD |
| (2) | SCWA | 85 MGD |
| | Total: | 185 MGD |

- 6.4 **Reduction in Capacity of FRWA Facilities.** If the delivery capacity of FRWA Facilities is less than 185 MGD at any time, and such reduction is not due to the act or omission of any Member, then the available capacity shall be allocated between the Members based on their percentage share of Dedicated Capacity as set forth in Section 5.1 hereof, unless a different allocation is agreed to pursuant to a written agreement between both Members. If the reduction is due to the act or omission of any Member, such Member shall be responsible for absorbing the amount of the reduction attributable to its act or omission from its share of Dedicated Capacity as set forth in Section 6.3 hereof.
- 6.5 **Ownership of Facilities.** All of the FRWA Facilities shall be owned by and held in the name of FRWA for the benefit of its Members in accordance with the terms of this Second Amended Agreement. Any EBMUD or SCWA Facilities constructed by FRWA shall be owned and held in the name of the Member on whose behalf FRWA is undertaking the construction as set forth in the construction agreement between FRWA and the Member. Unless otherwise agreed to by the Members in writing, all costs relating to the construction, acquisition, operation or maintenance of an EBMUD Facility or a SCWA Facility shall be the sole responsibility, respectively, of EBMUD or SCWA.
- 6.6 **Financing of Capital Costs.** Capital Costs of the FRWA Facilities may be financed in only one of the following manners:
- (a) FRWA may issue bonds or other evidences of indebtedness to finance such Capital Costs. In such event, each Member shall be entitled to its Dedicated Capacity and shall be responsible for its related percentage share of debt service on such bonds or other indebtedness and the cost of related bond reserve funds and bond or financing agreements described in Section 4.2(q) hereof, all of which costs shall constitute Fixed Operating Costs.
 - (b) FRWA may sell the Dedicated Capacity in the FRWA Facilities to the Members (either to a Member directly or to a joint exercise of powers agency or a nonprofit corporation for resale to a Member). In such event, the amount paid by or for each Member shall be in proportion to such Member's Dedicated Capacity (EBMUD – 54.054%; SCWA – 45.946%) and each Member shall be entitled to the Dedicated Capacity so purchased. Such payment shall not, however, preclude FRWA from requiring additional payment for such Dedicated Capacity as provided in Section 5.5 hereof.

VII.

FINANCE AND ACCOUNTING

- 7.1 **Annual Budget.** Within ninety (90) days after the first meeting of the Board, and thereafter prior to the commencement of each Fiscal Year, the Board shall adopt a budget, including a projection of Fixed Operating Costs and Variable Operating Costs, for FRWA for the ensuing Fiscal Year.
- 7.2 **Reconciliation of Fixed and Variable Costs.** As soon as practicable following the commencement of a Fiscal Year, the Board shall, upon recommendation of the Treasurer, reconcile Fixed Operating Costs and Variable Operating Costs for the prior Fiscal Year. The amount so reconciled shall then be factored into the calculation of projected Fixed Operating Costs and Variable Operating Costs for the next Fiscal Year.
- 7.3 **Accounting Procedures.** Full books and accounts shall be maintained for FRWA in accordance with practices established by, or consistent with, those utilized by the Controller of the State of California for like public entities. In particular, the Treasurer shall comply strictly with requirements of the Act.
- 7.4 **Audit.** On an annual Fiscal Year basis, FRWA shall contract with an independent certified public accountant to perform a financial audit of the accounts and records of FRWA. Copies of such audit reports shall be filed with the State Controller and each Member within six months of the end of the audited Fiscal Year.

VIII.

WITHDRAWAL AND DISSOLUTION

- 8.1 **Term.** FRWA shall continue in existence until dissolved in accordance with the terms of this Article VIII.
- 8.2 **Withdrawal.** Prior to the issuance of any bonds or other indebtedness by FRWA, as provided in Section 6.6 hereof, or independently by one or both of the Members, either Member may terminate this Second Amended Agreement upon giving the other Member and the Board ninety (90) days prior written notice of termination; provided, however, the Member shall be obligated for its share of all liabilities and expenses of FRWA incurred prior to the effective date of such termination. If the Board has received such notice of termination, it shall be prohibited from issuing any bonds or other indebtedness or awarding any contracts for Construction.

- 8.3 **Dissolution.** FRWA shall not be dissolved until all debts and liabilities of the FRWA have been discharged.
- 8.4 **Dissolution Agreement.** Subject to Section 8.3 above, FRWA may be dissolved pursuant to an agreement in writing approved by both Members.
- 8.5 **Disposition of Property Upon Dissolution.** Upon dissolution of FRWA, any surplus funds on hand shall be disposed of consistent with the dissolution agreement provided for in Section 8.4 above. Upon approval of a dissolution agreement in accordance with Section 8.4 above, the Board shall offer any FRWA Facilities, rights and interests of FRWA for sale to the Members on such terms and conditions established by the Board. If no such sale is consummated within a reasonable period of time, the Board shall then offer such FRWA Facilities, rights and interests for sale on the open market for good and adequate consideration. The net proceeds from any sale shall be distributed among the then Members consistent with the dissolution agreement. The Members shall arrange for the salvage of any remaining FRWA Facilities.

IX.

MISCELLANEOUS

- 9.1 **Amendments.** This Second Amended Agreement may be amended upon written approval of any amendment by all Members. The approval by a Member of an amendment to this Second Amended Agreement shall not be effective until a certified copy of the resolution of the governing body of such Member approving such amendment is filed with the Secretary of the FRWA, together with a fully executed original of such amendment.
- 9.2 **Notices** Any notice required to be given or delivered hereunder shall be delivered via the United States Postal Service.
- 9.3 **Choice of Law.** This Second Amended Agreement shall be governed by the laws of the State of California.
- 9.4 **Severability.** If one or more clauses, sentences, paragraphs or provisions of this Second Amended Agreement shall be held to be unlawful, invalid or unenforceable, it is hereby agreed by the Members that the remainder of the Second Amended Agreement shall not be affected thereby.

- 9.5 **Initial Notice.** Within thirty (30) days of the effective date of the Second Amended Agreement, FRWA shall cause a notice of the Second Amended Agreement to be prepared in the manner set forth in Section 6503.5 of the Government Code and filed with the Office of the Secretary of State.
- 9.6 **Additional Notices.** Within thirty (30) days of the effective date of any amendment to the Second Amended Agreement, FRWA shall prepare and file with the Office of the Secretary of State the notice required by Section 6503.5 of the Government Code.
- 9.7 **Liabilities.** The debts, liabilities and obligations of FRWA shall be the debts, liabilities or obligations of FRWA alone and not of the Members. However, a Member separately may contract for, or otherwise assume responsibility for specific debts, liabilities, or obligations of FRWA, and no other Member then shall be liable therefore.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATED: Dec. 14, 2006 By: William B. Patterson
President

DATED: Dec. 14, 2006 Attested: Suzelle M. Lewis
Secretary

Approved as to Form:
Thomas J. Hunter, General Counsel

SACRAMENTO COUNTY WATER AGENCY

DATED: November 13, 2006 By: Don Nottoli
Chairman

DATED: 11/15/06 Attested: Cathy A. Turner
Secretary

Approved as to Form:
Roy C. Spivey, County Counsel

Attachments: Attachment A: Definition of FRWA and Member Facilities

Attachment A

Definition of FRWA and Member Facilities

The following definitions, although illustrated by referring to Figures A-1 to A-5, shall override the depictions in Figures A-1 to A-5. Depictions in Figures A-2 to A-5 may change in final design drawings or as-built drawings.

A-1. FRWA Facilities

All FRWA Facilities defined in this Section A-1 shall be owned by FRWA with capital cost-sharing responsibilities allocated between the Members according to the percentages stated in Section 5.1(a) of the Second Amended JPA.

FRWA Intake: All facilities and improvements within the boundary of the FRWA property immediately west of the South Sacramento Drainage Channel, and those projecting into the channel of the Sacramento River adjacent to the FRWA property. These facilities shall include the intake structure (fish screens, forebay, and pump building), the training walls and plaza surrounding the intake structure, the valve vault, the surge tanks, the meter vault, the substation, the equipment building, the sediment settling basins, and site work (roads, drainage and landscaping). Dedicated Capacity in the FRWA Intake shall be consistent with Section 6.3 of the Second Amended JPA.

Joint Pipeline: The 84-inch-diameter pipeline between the FRWA Intake and the Bifurcation, including the fiber-optic cable and conduit system along the pipeline alignment, cathodic protection systems, air relief valves, blowoffs, and associated vaults. The boundary between the FRWA Intake and the Joint Pipeline shall be 10 feet downstream of the outer wall of the meter vault. The boundary between the Joint Pipeline and the Bifurcation shall be 10 feet upstream of the centerline of the tee where the SCWA Extension pipeline branches off the Joint Pipeline. Dedicated Capacity in the Joint Pipeline shall be consistent with Section 6.3 of the Second Amended JPA.

Bifurcation: The facilities connecting the Joint Pipeline with the SCWA Extension and the EBMUD Extension, including pipelines, isolation valves, surge control tank and compressor, flow meter, programmable logic controller, telemetry facilities, and associated structures and site improvements. The boundary between the Bifurcation and the SCWA Extension shall be 10 feet downstream of the outer wall of the vault for the SCWA isolation valve. This boundary shall be the SCWA Point of Delivery. The boundary between the Bifurcation and the EBMUD Extension shall be 10 feet downstream of the outer wall of the vault for the flow meter on the pipeline to the EBMUD Extension. This boundary shall be the EBMUD Point of Delivery. Dedicated Capacity in the Bifurcation shall be consistent with Section 6.3 of the Second Amended JPA.

Flow Control Station: The facility at the downstream end of the SCWA Extension, including the isolation valves, flow meters, sleeve valves, bridge crane, programmable logic controller,

telemetry facilities, and associated building and valve vault. The boundary between the Flow Control Station and the SCWA Water Treatment Plant shall be 10 feet downstream of the outer wall of the building.

Instrumentation, Control and Telecommunication Facilities: In addition to the instrumentation, control facilities contained within the FRWA Facilities described above:

- a) The fiber-optic cable and conduit system between the Bifurcation and the Flow Control Station shall be FRWA Facilities.
- b) The fiber-optic cable and conduit system between the Bifurcation and the Terminal Weir Structure shall be FRWA Facilities.
- c) The instrumentation to gauge water level in the Terminal Weir Structure and in the Folsom South Canal near the Terminal Weir Structure, instrumentation to monitor water quality in or near the Terminal Weir Structure, and the associated programmable logic controller(s), fiber-optic cable and conduit system, radio system, and/or other telemetry facilities shall be FRWA Facilities.
- d) The monitoring and telemetry equipment provided by FRWA and to be located at the U.S. Bureau of Reclamation's (USBR) Deer Creek gate structure, as required to convey electronic signals between USBR and FRWA, shall be FRWA facilities.

A-2. SCWA Facilities

All SCWA Facilities defined in this Section A-2 shall be owned by SCWA and SCWA shall be responsible for all of the capital costs for such facilities.

SCWA Extension: The 66-inch-diameter pipeline between the Bifurcation and the Flow Control Station, including cathodic protection systems, air relief valves, blowoffs, and associated vaults. The boundary between the SCWA Extension and the Flow Control Station shall be the upstream outer wall of vault for the isolation valves for the Flow Control Station building.

SCWA Water Treatment Plant: The 85 MGD Zone 40 surface water treatment plant (or "Vineyard Surface Water Treatment Plant") to be located north of the Bifurcation.

A-3. EBMUD Facilities

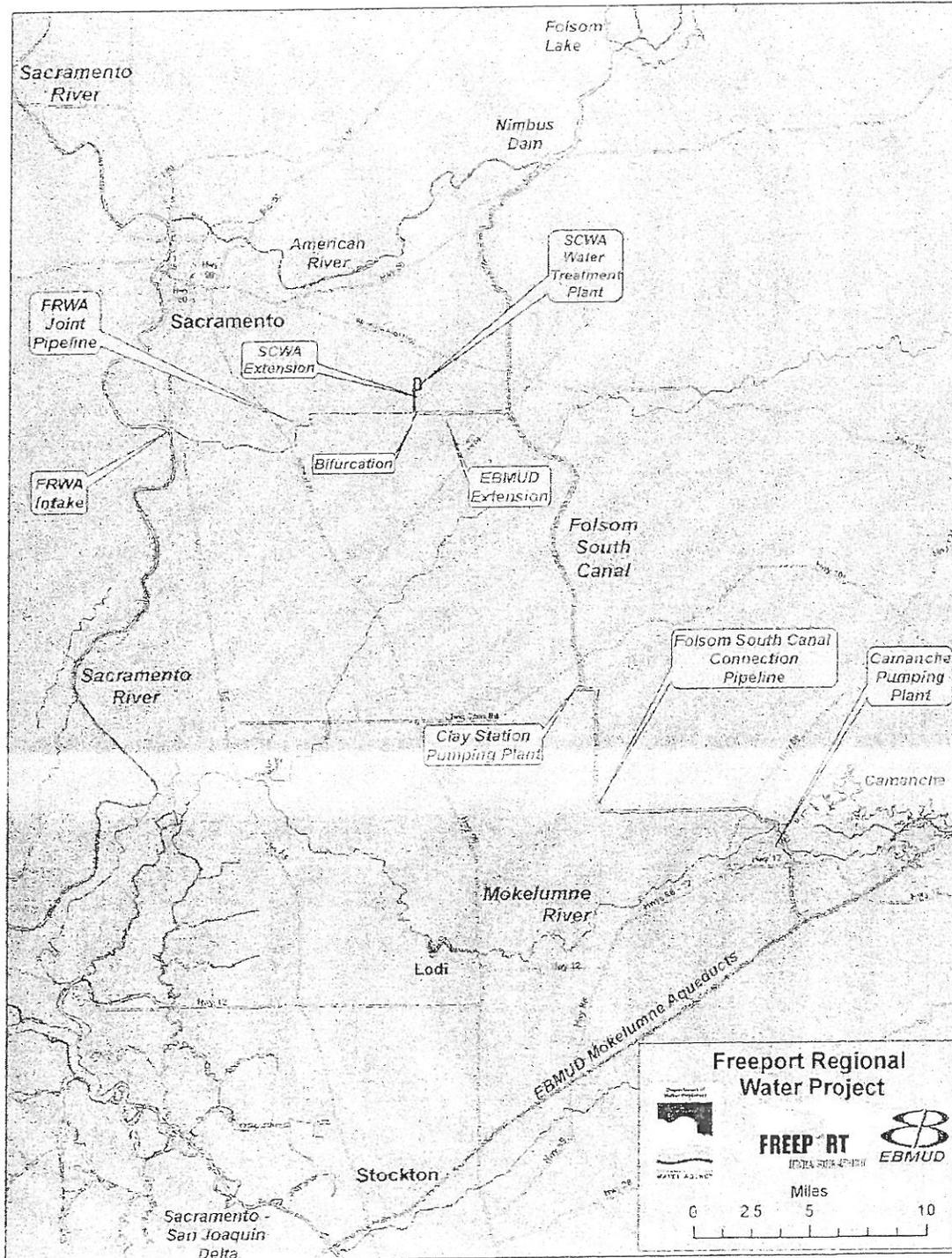
All EBMUD Facilities defined in this Section A-3 shall be owned by EBMUD and EBMUD shall be responsible for all of the capital costs for such facilities.

EBMUD Extension: The 72-inch-diameter pipeline between the Bifurcation and the Terminal Weir Structure, including cathodic protection systems, air relief valves, blowoffs, and associated vaults. The boundary between the EBMUD Extension and the Terminal Weir Structure shall be 15 feet upstream of the outer wall of the Terminal Weir Structure.

Terminal Weir Structure: The facility at the downstream end of the EBMUD Extension, including the slide gate, weir, connection with the U.S. Bureau of Reclamation's Folsom South Canal, and associated site improvements.

Folsom South Canal Connection: The facilities required to convey water from near the end of the Folsom South Canal to EBMUD's Mokelumne Aqueducts. These facilities include Clay Station Pumping Plant, Camanche Pumping Plant, a 72-inch-diameter pipeline connecting the two pumping plants, and a 72-inch-diameter pipeline connecting Camanche Pumping Plant to the Mokelumne Aqueducts.

Figure A-1: Freeport Regional Water Project



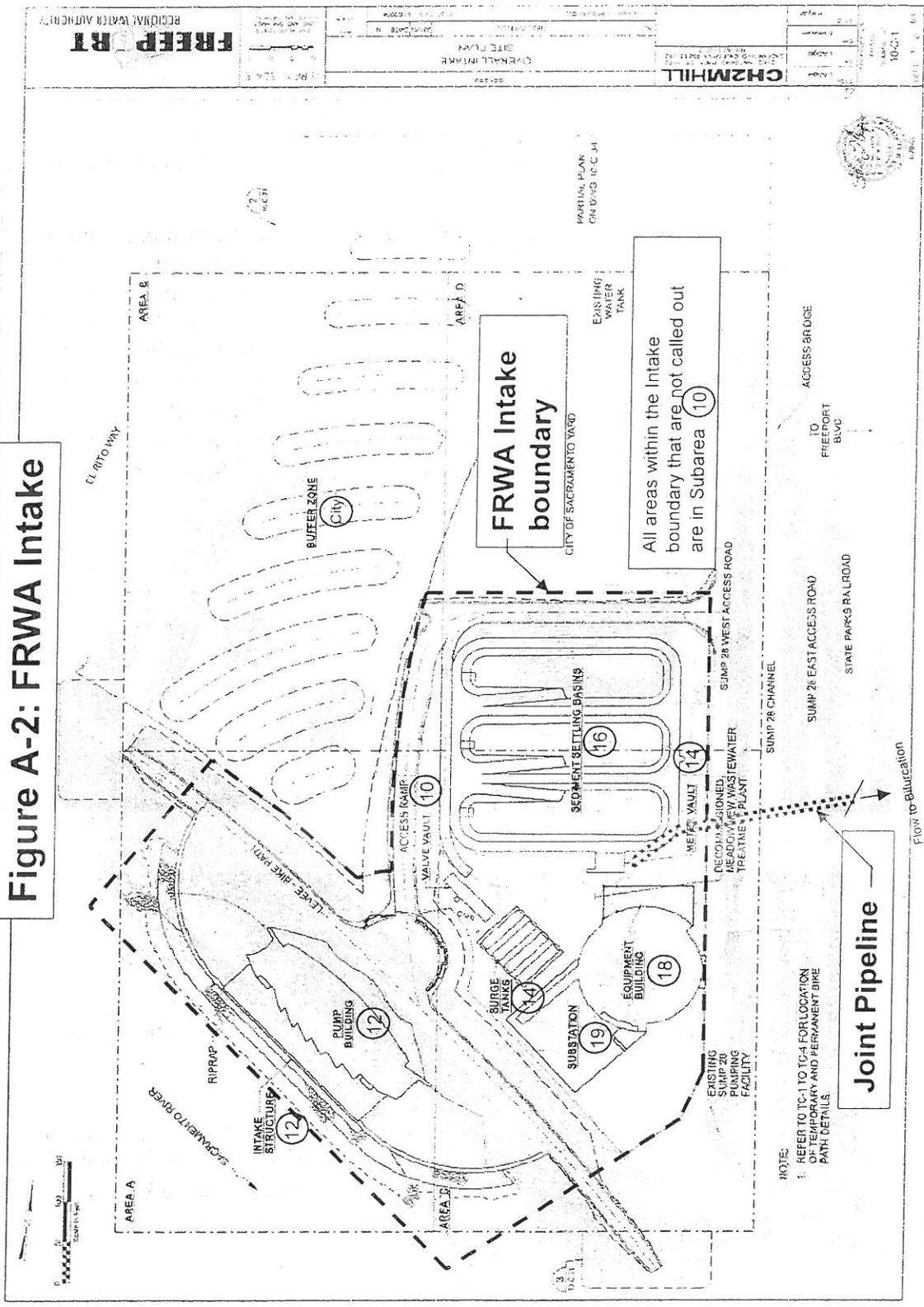


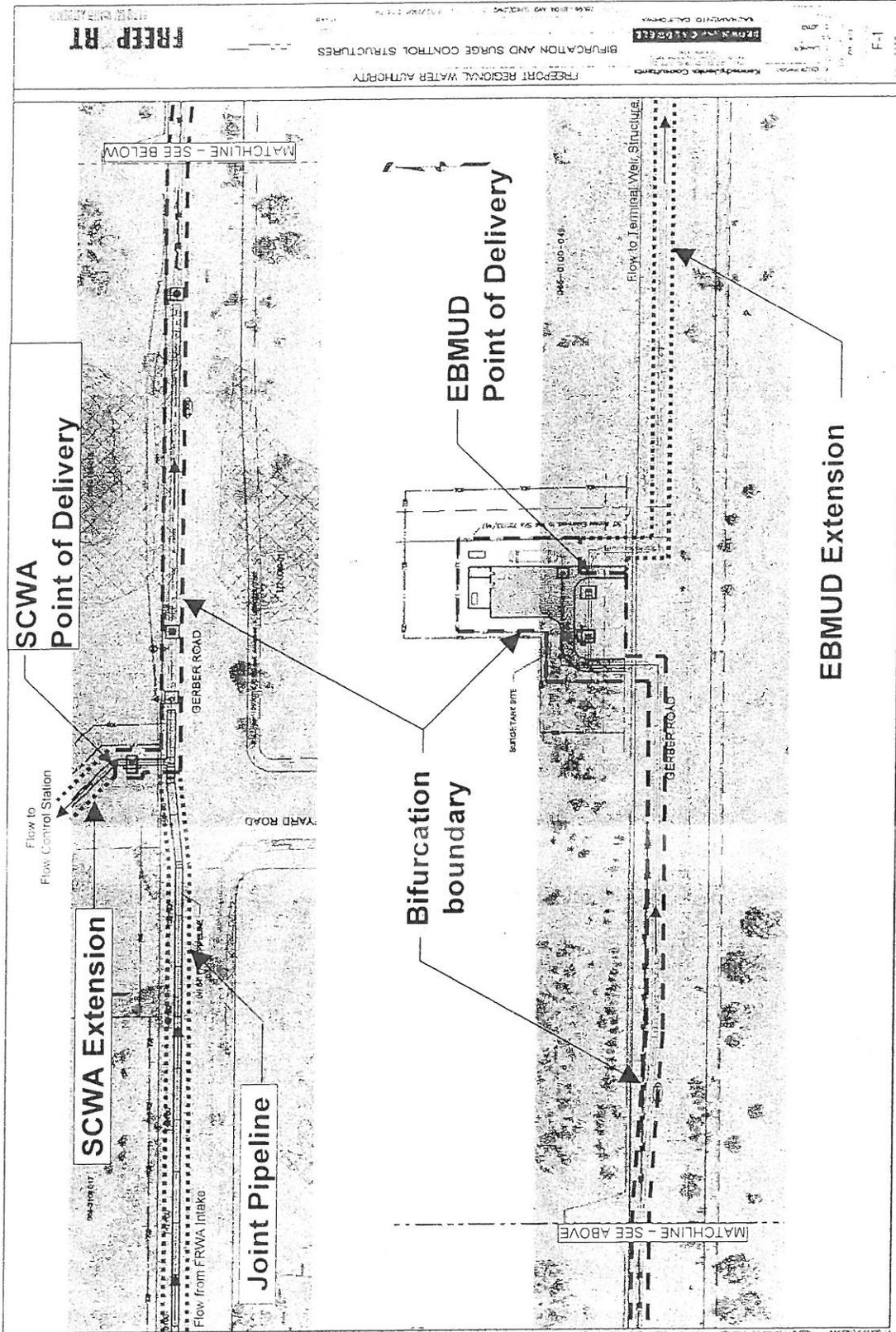
Figure A-2: FRWA Intake



NOTE:
 1. REFER TO TC-1 TO TC-4 FOR LOCATION OF TEMPORARY AND PERMANENT BIKE PATH DETAILS

Joint Pipeline

Figure A-3: Bifurcation



**Financial Settlement Agreement
for Mitigation of
the Freeport Regional Water Project (FRWP)**

This Financial Settlement Agreement ("Agreement"), dated July 30, 2004, is between the Sacramento Municipal Utility District ("SMUD"), the Freeport Regional Water Authority, an agency established pursuant to Articles 6500 through 6599, inclusive, of the California Government Code ("FRWA"), and its members East Bay Municipal Utility District ("EBMUD") and the Sacramento County Water Agency ("SCWA").

SMUD understands the benefits that the Freeport Regional Water Project ("Freeport Project") will provide to SCWA and EBMUD, and acknowledges that the project has regional benefits, including reducing the potential for groundwater overdraft. SMUD supports this project, provided that the water quality impacts to its Rancho Seco Nuclear Generating Station decommissioning operations, Cosumnes Power Plant (Phases 1 and 2), and Rancho Seco Lake (hereafter "Rancho Seco facilities") are mitigated as set forth herein.

SMUD's three areas of concern regarding the operation of the Freeport Project are:

- 1) Continuing to meet public health requirements (including fish habitat) associated with Rancho Seco Lake and preserving its aesthetic value.
- 2) Meeting the California Energy Commission's water use and zero discharge requirements for the new Cosumnes Power Plant while ensuring the plant's reliable operation.
- 3) Meeting all present and future National Pollution Discharge Elimination System Permit requirements for the Rancho Seco Nuclear Generating Station, including compliance with the California Toxics rule requirements.

SMUD's Rancho Seco Nuclear Generating Station decommissioning operations use water within the Folsom South Canal ("FSC") and its Cosumnes Power Plant, currently under construction, will also use water from the FSC. The source of the water currently within the FSC is the American River. When the Freeport Project is operational, there will be times when the introduction of Sacramento River water into the FSC will change the quality of water in the FSC.

The parties agree that the extent of the Freeport Project water quality impacts on SMUD's Rancho Seco facilities has been identified in the February 2004 report prepared by GE Water Technologies Inc., and other technical analyses, including MFG Inc.'s study entitled *Folsom South Canal Water Quality Study* dated February 11, 2003; CH2MHill's Technical Memorandum 1-4 entitled *Suspended Sediment Loading and Transport in the Freeport Regional Water Project* dated November 22, 2002; the Freeport Regional Water Authority's comments dated February 11, 2003, on the *Folsom South Canal Water Quality Study*; MFG, Inc.'s *Response to Freeport Regional Water Authority's Comments on Folsom South Canal Water Quality Study* dated June 23, 2003; RMC's Technical Memorandum entitled *Water Quality*

Evaluation of FRWP Effects on SMUD Facilities (Rancho Seco Lake and Rancho Seco Nuclear Generating Station Decommissioning NPDES Permit), dated April 12, 2004; and MFG's Preliminary Comments dated April 27, 2004, on FRWA's Draft Technical Memorandum, Water Quality Evaluation of FRWP Effects on SMUD Facilities (Rancho Seco Lake and Rancho Seco Nuclear Generating Station Decommissioning NPDES Permit).

FRWA, EBMUD and SCWA support SMUD's power generation at Rancho Seco, and acknowledge the Cosumnes Power Plant's significance in meeting a critical need for local generation to support area load growth and to comply with the reliability criteria established by the National Electric Reliability Council and the Western Electric Coordinating Council. Generation from the Cosumnes Power Plant will protect SMUD's ratepayers from unstable prices and potential future blackouts.

FRWA, EBMUD and SCWA agree that SMUD should not bear significant increased operation and maintenance ("O&M") costs or capital costs for operation of its Rancho Seco facilities as a result of changed water quality related to operation of the Freeport Project. Further, the costs for preparation of any environmental documentation or additional permitting necessary to implement mitigation measures for the Freeport Project should not be borne by SMUD.

FRWA, EBMUD and SCWA agree that in light of the Freeport Project and its potential to affect operations at SMUD's Rancho Seco facilities, FRWA, EBMUD and SCWA will fund mitigation of water quality impacts to SMUD's Rancho Seco Nuclear Generating Station and Cosumnes Power Plant in a manner consistent with the recommendations of GE Water Technologies, Inc. in their February 2004 report ("GE Report"). If it is determined in the future that there are water quality impacts to Rancho Seco Lake due to the operation of the Freeport Project, the parties agree SMUD may draw on the Mitigation Trust Fund established in Section 3 of this Agreement to pay for appropriate mitigation measures.

FRWA, EBMUD, SCWA and SMUD therefore agree as follows:

1. Payment to SMUD. FRWA and its members agree to reimburse SMUD for actual incremental capital expenses incurred to mitigate the effects on the Cosumnes Power Plant and on the Rancho Seco NPDES permit requirements of changed water quality in the FSC due to operation of the Freeport Project, up to a maximum amount of \$5.0 million, as evidenced by appropriate documentation submitted by SMUD to FRWA. In addition, upon commencement of initial discharges by FRWA into the FSC, FRWA shall reimburse SMUD for the ongoing actual incremental O&M costs associated with the operation of the mitigation measures installed by SMUD. These incremental O&M costs shall be evidenced by appropriate documentation invoiced by SMUD to FRWA. SMUD shall submit this invoice by March 1st of each year for the prior calendar year's expenses, and FRWA shall transmit payment to SMUD within 60 days of receipt. These funds represent the parties' estimation of the incremental permitting, capital and O&M expenses associated with implementing measures generally consistent with the recommendations of the GE Report, which are designed to mitigate water quality impacts to SMUD's Rancho Seco Nuclear Generating Station decommissioning operations and Cosumnes Power Plant Phase 1 (refer to Section 5 for mitigation of Phase 2). Subject to the provisions of

Section 3, all parties accept the risk that these payments may not accurately represent the cost of implementing mitigation measures consistent with the recommendations of the GE Report.

2. Installation of Equipment. After FRWA and its members authorize construction of the Freeport Project, SMUD will implement mitigation measures consistent with the recommendations of the GE Report, subject to engineering refinement, correction and detailing. SMUD must give FRWA written notice when it has implemented the recommendations of the GE Report. Once SMUD has given notice that it has implemented the recommendations of the GE Report, but not before the Freeport Project is on line and water from the Project has first been discharged into the FSC, SMUD is eligible to withdraw money from the Mitigation Trust Fund, as described in Section 3, to pay for mitigation measures related to impacts associated with the presence of Sacramento River water in the FSC. Any disagreement over how the recommendations in the GE Report are implemented must be settled by the dispute resolution procedure set out in Section 4.

3. Mitigation Trust Fund.

3.1 Establishment of Mitigation Trust Fund. Within 30 days of the date of authorizing construction of the Freeport Project, FRWA and its members shall establish a \$0.95 million interest bearing escrow account at a bank acceptable to SMUD, with SMUD as the named payee ("Mitigation Trust Fund"). Interest earned on this account shall accrue and be added to the Mitigation Trust Fund balance. The Mitigation Trust Fund will remain in place from the above date until 10 years following the date that FRWA gives SMUD written notice that the discharges from the Sacramento River into the FSC via the Freeport Project are 95 mgd or greater for three (3) consecutive months. Any amounts remaining in the Mitigation Trust Fund following this period will revert to FRWA and its members.

3.2 Use of Mitigation Trust Fund. SMUD may draw on the Mitigation Trust Fund for the following purposes relating to mitigation of the effects of discharges by FRWP into the FSC: (1) reimbursement of SMUD's incremental capital expenses described in Section 1 to the extent such expenses exceed \$5.0 million; (2) taking additional steps reasonably necessary to (i) ensure that the limits within SMUD's NPDES permit are not exceeded, (ii) ensure that exceedences of the values listed in the column "FWP - High Extreme" set out in Table 1 of the GE Report do not negatively impact SMUD's ability to meet the California Energy Commission's water use and zero discharge requirements for the new Cosumnes Power Plant or negatively impact the plant's reliable operation, and (iii) alleviate impacts to Rancho Seco Lake. At least semi-annually, SMUD shall send FRWA documentation of actual expenditures funded from the Mitigation Trust Fund and withdrawals from the Trust Fund.

3.3 Notice. Before SMUD withdraws any funds from the Mitigation Trust Fund, it must provide FRWA with written notice describing the specific impact of concern, including documentation supporting the existence of the impact, and SMUD's proposal for addressing the impact, including a cost estimate for mitigation. FRWA has 90 days to provide to SMUD in writing (1) an alternate means for resolving the impact that meets SMUD's satisfaction and/or (2) evidence that the impact does not exist or is not significant. After the earlier of (1) 90 days, (2) FRWA

presents its alternative, or (3) FRWA states that it has no objection to SMUD's proposal, SMUD may withdraw money from the Mitigation Trust Fund to address the impact it has identified.

3.4 Emergency. In that situation where SMUD gives FRWA written notice describing an imminent violation of its NPDES permit or imminent water quality degradation that requires shutting down the Cosumnes Power Plant along with SMUD's proposal for addressing the issue, FRWA has five days to provide to SMUD in writing (1) an alternate means for resolving the impact that meets SMUD's satisfaction and/or (2) evidence that there is no imminent violation of SMUD's NPDES permit or water quality degradation that requires shutting down the Cosumnes Power Plant. If FRWA does not respond within five days, or SMUD finds FRWA's alternate unsatisfactory or disagrees with its conclusion that no immediate action is required, SMUD may withdraw money from the Mitigation Trust Fund to address the identified impact or to reimburse itself for actions taken to address the imminent violation of its NPDES permit or imminent water quality degradation.

3.5 Recourse for Misuse of Mitigation Trust Fund. If FRWA disagrees with SMUD's use of the Mitigation Trust Fund, contending either that FRWA presented to SMUD a less expensive alternative that addressed the impact that SMUD did not implement or that the impact SMUD complained of did not exist or did not require immediate action under Sections 3.3 and 3.4, FRWA may invoke the dispute resolution procedure, as set out in Section 4. If the conclusion of the dispute resolution procedure set out in Section 4 is that SMUD was incorrect in its rejection of a less expensive alternative offered by FRWA, SMUD must repay to the Mitigation Trust Fund the difference between the cost of the method SMUD implemented and the approximate cost of the method FRWA proposed. If the conclusion of the dispute resolution procedure set out in Section 4 is that no impact existed that required mitigation, SMUD must pay to the Mitigation Trust Fund the full amount of the funds it withdrew.

4. Dispute Resolution.

4.1 Dispute Resolution Required. Prior to initiating any litigation, a party must first address any dispute arising under this Agreement through the dispute resolution procedure set out in this Section. A party shall commence the dispute resolution procedure by submitting to the other party a written notice of dispute describing the contested issue and the basis for the party's position. For purposes of this dispute resolution process, EBMUD and SCWA will act through FRWA.

4.2 Meet and Confer. After delivery of a notice of dispute, the parties will meet and confer in good faith for purposes of negotiating a resolution of the contested issues. Each party will designate a member of the party's executive management to conduct the good faith discussion. The meet and confer period will commence upon delivery of the notice and will continue for 15 days, unless extended by mutual written agreement of the parties. If the parties are unable to resolve the contested issues within the meet and confer period, the dispute will be referred to a panel of experts for determination, as described in Sections 4.3 and 4.4.

4.3 Designation of Expert Panelists. Within 20 days following the end of the meet and confer period, FRWA and SMUD will each designate an expert to participate on the dispute-resolution

panel. Within 20 days following designation of the party-experts, the party experts shall designate a neutral third expert that has not worked for SMUD or FRWA or any of its member agencies during the prior three years. The three experts must have specific educational and work experience commensurate with the status of expert in the field that is the subject of the dispute. FRWA and SMUD shall provide resumes for their respective experts for the other party's records. The resume of the third expert shall be provided to both parties for their records. FRWA and SMUD will each pay the cost of their own expert, and will equally share the cost of the designated third expert.

4.4 Dispute Resolution Procedure. Within 20 days of designation of the expert panel, FRWA and SMUD will deliver a written report to each member of the expert panel all information that the parties believe is relevant to the panel's inquiry ("Written Reports"). The panel may make written requests of the parties for additional information, and may request interviews of any employee of any party. Both parties will be given copies of all correspondence to or from the panel, and any party may be present at the interviews conducted by the panel. The three experts shall meet as frequently as necessary to discuss the progress of their work and to confirm they are conducting their review based upon the same underlying factual information. It is the parties' intent that the panel completes its gathering and review of information within 60 days of receipt of the Written Reports ("Review Period"). Within 45 days of the end of the Review Period, the expert panel will render a written determination of the contested issues and written factual conclusions supporting the determination. The factual conclusions and determination shall be made solely based on the information contained in the Written Reports and the information gathered as a result of the interviews described above. The Review Period or the period for rendering a determination may be extended for additional 30-day periods, with mutual concurrence of FRWA and SMUD. If an extension is not mutually agreeable, the panel is unable to render a determination, or either party is dissatisfied with the decision of the expert panel (collectively "Triggering Event"), that party may bring an action in the Sacramento Superior Court for de novo review of the contested issue within 120 days of the Triggering Event. The parties stipulate that venue and jurisdiction of any dispute arising under this Agreement shall reside with the Superior Court of Sacramento County.

5. Additional Mitigation Required for Phase 2 of Cosumnes Power Plant Project. None of the funding for mitigation described in Sections 1 or 3 of this Agreement is intended to mitigate for impacts to Phase 2 of the Cosumnes Power Plant Project. FRWA and its members will provide a separate funding arrangement for Freeport Project water quality impacts to Phase 2 of the Cosumnes Power Plant Project. FRWA's obligation to provide mitigation funding for Phase 2 of the Cosumnes Power Plant Project is contingent upon SMUD awarding a contract for the construction of Phase 2 within five (5) years of the date of this Agreement. In such an event, the parties will negotiate the Phase 2 mitigation funding consistent with the assumptions, criteria and principles used as the basis for the Cosumnes Power Plant Phase 1 financial settlement, as set forth in this Agreement.

6. Agreement Limited to Impacts for Discharges as Described in FEIR/S. The funding provided under this Agreement is intended to address water quality and public health impacts associated with discharges into the FSC by or for EBMUD and Contra Costa Water District ("CCWD") to the extent such discharges are described on Exhibit A, attached hereto and incorporated herein

by reference. If FRWA or its members consider a different and/or additional use of the Freeport Project and the FSC (whether for FRWA, its members or third parties) which would involve different and/or additional discharges to the FSC, FRWA and its members must consult with SMUD regarding any potential impacts to SMUD's Rancho Seco facilities, and must perform environmental review consistent with CEQA and as required under NEPA. The parties agree that any such different and/or additional discharges to the FSC through the Freeport Project will trigger a re-opener of this settlement agreement for the purpose of reaching consensus on mitigation for any impacts to SMUD due to changes in FSC water quality. To the extent permitted by law, FRWA and its members may not permit or undertake such different and/or additional use unless and until impacts to SMUD associated with the different and/or additional use are mitigated.

7. Increased O&M Charges for Sediment Removal from FSC. FRWA shall pay SMUD's share of any future increased O&M charges for sediment removal that SMUD reasonably determines are assessed on SMUD by the operator of the FSC (currently the U.S. Bureau of Reclamation) from the operation of the Freeport Project, as those operations are described in Exhibit A. This obligation to pay for removal of sediment within the FSC attributable to the operation of the Freeport Project shall survive termination of this Agreement unless otherwise agreed in writing by all parties.

8. Duty to Share Water Quality Information and Operational Data. During periods when FRWA introduces water into the FSC, FRWA shall provide SMUD with the results of water quality monitoring it conducts for the FRWP flow entering the FSC and in the FSC, both upstream of the FRWP connection with the FSC and in the vicinity of SMUD's intake. For the duration of the Mitigation Trust Fund specified in Section 3.1, this monitoring shall include monthly measurements of flow rate, turbidity, total suspended solids ("TSS"), calcium hardness, magnesium hardness, and silica, and quarterly measurements of copper and pesticides. SMUD shall provide FRWA with the results of water quality monitoring it conducts in the FSC, Rancho Seco Lake, and at the monitoring points specified in the NPDES permit for the Rancho Seco Nuclear Generating Station. Shared monitoring data shall be transmitted in a timely manner once the measurements are finalized. In addition, all parties will provide operating data and forecasts that might have an effect on the operations of any party. The parties will use their best efforts to develop a mutually agreeable communications plan and protocol to allow effective exchange of information.

9. Waivers and Releases. Subject to all of its rights under this Agreement, including the rights of re-opener, SMUD waives and releases any and all claims that SMUD may have against FRWA or its members related to water quality and public health impacts from discharges into the FSC by or for EBMUD and CCWD as those discharges are described in Exhibit A.

10. Entire Agreement and Amendments. This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof. No modification or amendments are valid unless in writing and signed by the parties.

11. Duplicate Counterparts. The parties may execute this Agreement in any number of counterparts. The Agreement may be executed and delivered by facsimile.

12. Notice. All notices, requests, demands or other communications under this Agreement shall be in writing. Notice is sufficiently given for all purposes as follows:

- (1) Personal delivery. When personally delivered to the recipient, notice is effective on delivery.
- (2) First-class mail. When mailed first class to the last address of the recipient known to the party giving notice, notice is effective 3 (three) mail delivery days after deposit in a United States Postal Service office or mailbox. Any notice received on a nonbusiness day is deemed received on the next business day.
- (3) Certified mail. When mailed certified mail, return receipt requested, notice is effective on receipt, if delivery is confirmed by a return receipt. Any notice received on a nonbusiness day is deemed received on the next business day.
- (4) Overnight delivery. When delivered by overnight delivery, charges prepaid or charged to the sender's account, notice is effective on delivery, if delivery is confirmed by the delivery service. Any notice received on a nonbusiness day is deemed received on the next business day.
- (5) Email or facsimile transmission. When sent by email or fax to the last email address or fax number of the recipient known to the party giving notice, notice is effective on receipt, provided that (a) a duplicate copy of the notice is promptly given by first-class or certified mail or by overnight delivery, or (b) the receiving party delivers a written confirmation of receipt. Any notice given by email or fax is deemed received on the next business day if it is received after 4:30 p.m. (recipient's time) or on a nonbusiness day.

James Shetler, SMUD
Address P.O. Box 15830
Sacramento, CA 95852
Phone 916-732-6757
Fax 916-732-6562
Email jshetle@smud.org

Eric Mische, FRWA
Address 1510 J Street #140
Sacramento, CA 95814
Phone 916-326-5485
Fax 916-444-2137
Email eric.mische@parsons.com

Dennis Diemer, EBMUD
Address 375 11th Street, MS 804
Oakland, CA 94607
Phone 510-287-0101
Fax 510-287-0188
Email dennisd@ebmud.com

Keith DeVore, SCWA
Address 827 7th Street, Room 301
Sacramento, CA 95818
Phone 916-874-7282
Fax 916-874-8693
Email devorek@saccounty.net

Any party may change its address, email, or fax number by giving the other parties notice of the change in any manner described above

FRWA, EBMUD, SCWA, and SMUD hereby execute this Agreement.

Law/Regal

Jan Schori
SMUD Jan Schori
General Manager

FRWA

SCWA

EBMUD

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612507.1

FRWA, EBMUD, SCWA, and SMUD hereby execute this Agreement.

Eric J. M... July 30, 2004
FRWA

SMUD

[Signature] July 28, 2004
SCWA

EBMUD

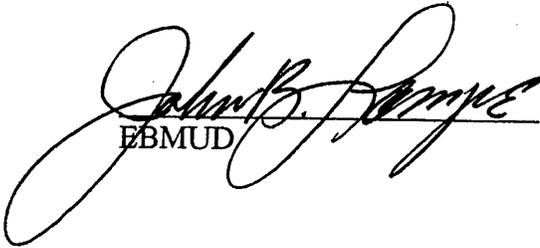
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FRWA, EBMUD, SCWA, and SMUD hereby execute this Agreement.

FRWA

SMUD

SCWA



EBMUD

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EXHIBIT "A" TO FINANCIAL SETTLEMENT AGREEMENT FOR MITIGATION OF THE FREEPORT REGIONAL WATER PROJECT

Description of FRWP discharges into the Folsom South Canal addressed by the agreement between SMUD, FRWP, EBMUD and SCWA.

Discharges of Sacramento River water by or for EBMUD into the Folsom South Canal through the Freeport Project

Discharges of water diverted under article 3(a)(1) of EBMUD's amendatory water service contract with the United States Bureau of Reclamation dated July 20, 2001, which provides as follows. EBMUD is able to take delivery of Sacramento River water via FRWA's intake in any year in which the March 1 forecast of EBMUD's October 1 total system storage, as revised monthly through May 1, is less than 500,000 acre-feet (af). When this condition is met, the amendatory contract entitles EBMUD to take up to 133,000 af annually, but such deliveries shall not exceed a total of 165,000 af in any three-consecutive-year period in which EBMUD's total system storage forecast remains below 500,000 af. Deliveries to EBMUD are further limited to its portion of the diversion capacity of the FRWP (100 million gallons per day (MGD)), which is equivalent to approximately 112,000 af/yr. Deliveries to EBMUD are also subject to curtailment pursuant to Central Valley Project (CVP) shortage conditions. Under terms of EBMUD's settlement agreement with the Santa Clara Valley Water District (SCVWD) dated November 24, 2003, CVP deliveries to EBMUD may be reduced by up to 6,500 af in the first year of a drought cycle in which EBMUD may take delivery of Sacramento River water, and increased by up to the amount of decrease in the second or third year of the drought cycle if EBMUD continues to take delivery of CVP water.

EBMUD will take delivery of its CVP entitlement at a maximum rate of 100 MGD, diverted from the Sacramento River at the FRWP intake and conveyed through a portion of the Folsom South Canal. Deliveries to EBMUD will start at the beginning of the CVP contract year (March 1) or any time afterward. Deliveries will cease when EBMUD's CVP allocation for that contract year (as adjusted by the SCVWD agreement) is reached, when the 165,000 af limitation is reached, or when EBMUD no longer needs the water, whichever comes first.

Discharges of Sacramento River water by or for Contra Costa Water District into the Folsom South Canal through the Freeport Project

Under section 2. of a settlement agreement between FRWA and its members and Contra Costa Water District (CCWD) dated January 30, 2004, FRWA and EBMUD may wheel up to 3,200 af of CCWD's Sacramento River water to CCWD in any year via the Folsom South Canal for use in CCWD's service area. The rate of delivery of the wheeled water will be determined each year in conjunction with development of the wheeling schedule. The maximum wheeling rate will be 155 cfs, which is equivalent to 100 MGD.

Limitations on Combined Discharges by EBMUD and CCWD

The combined discharges for EBMUD and CCWD into the FSC through the FRWP shall not exceed a rate of 155 cfs.

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**SETTLEMENT AND GENERAL RELEASE AGREEMENT BETWEEN
CONTRA COSTA WATER DISTRICT
AND
FREEPORT REGIONAL WATER AUTHORITY
EAST BAY MUNICIPAL UTILITY DISTRICT
SACRAMENTO COUNTY WATER AGENCY**

This Settlement and General Release Agreement (“Settlement Agreement”) is made as of January __, 2004, by and between East Bay Municipal Utility District (hereinafter referred to as “EBMUD”), the County of Sacramento and Sacramento County Water Agency (hereinafter referred to as “Sacramento”), Freeport Regional Water Authority (hereinafter referred to as “FRWA”), and the Contra Costa Water District (hereinafter referred to as “CCWD”). Throughout this Settlement Agreement, EBMUD, Sacramento, FRWA and CCWD may be collectively referred to as the “Parties” or individually as a “Party.”

AGREEMENT

PREAMBLE

1. As further detailed in this Agreement, if the Freeport Regional Water Project (the “FRWP”) is approved and constructed, the Parties intend:
 - a. To wheel CCWD’s water in an efficient manner to minimize wheeling costs, while maintaining operating flexibility for both CCWD and EBMUD/FRWA.
 - b. To coordinate operations planning and cooperatively develop schedules, operational arrangements, and estimated costs in a manner that meets the goals set out in (a) above.
 - c. That the wheeling operational arrangements and the corresponding costs follow good utility practices and are coordinated in a manner that minimizes adverse operational impacts to all Parties.

WATER

2. Each water year (October 1 to September 30), upon request by CCWD, FRWA and EBMUD will provide CCWD access to the FRWP and EBMUD facilities (when capacity is not needed to meet the water supply needs of EBMUD customers due to abnormal, unusual or emergency conditions) for the purpose of wheeling to CCWD up to 3200 acre-feet (AF) of CCWD water, diverted from the Sacramento River at Freeport, for use within its service area. Such wheeling will be provided from Freeport to the Los Vaqueros Pipeline via the FRWP facilities and EBMUD’s Mokelumne Aqueduct facilities, the latter of which intersect with CCWD’s Los Vaqueros Pipeline in Brentwood, California. Subject to mutual agreement by the Parties, wheeled water may be delivered at an alternative location (e.g. Contra Costa Canal at Lone Tree Way in Antioch, CA.).

Settlement Agreement Between
Freeport Regional Water Authority and
Contra Costa County Water District

3. Abnormal, unusual or emergency conditions, as referred to in paragraph 2 above, shall be deemed to exist when unavoidable conditions which reduce the flow capacity of the aqueduct system, including the FRWP intake and pipeline, Folsom South Canal Connection ("FSCC") facilities, Mokelumne Aqueducts, Walnut Creek Pumping Plant and EBMUD terminal reservoirs, are present and, as a result of such reduced capacity, EBMUD is unable to wheel water to CCWD pursuant to this Agreement without adversely affecting EBMUD's ability to deliver water to its customers through the aqueduct system at quantities sufficient to meet the then current demands of its customers, in accordance with EBMUD's standard operating practices. CCWD will not be charged any fixed maintenance costs in any year that EBMUD is unable to wheel water to CCWD due to abnormal, unusual or emergency conditions. Upon correction of the abnormal, unusual or emergency conditions, the Parties will utilize their best efforts to develop a new schedule to wheel to CCWD as much water as is feasible during the remainder of the year. An example of an unavoidable condition which reduces the flow capacity of the aqueduct system would be a seismic induced failure of one of the Mokelumne Aqueducts which impacts EBMUD's ability to deliver adequate quantities of water to their customers.
4. Wheeled water shall be delivered to CCWD at a maximum rate of 155 cfs and at a pressure adequate to deliver the water to CCWD's Transfer Tank at elevation 226 feet, pursuant to the Schedule developed in accordance with paragraph 5 below.
5. By December 1 of each year, the Parties shall develop a schedule ("Schedule") for wheeling the CCWD water, specifying the dates, times, and rates of delivery. It is the intent of the parties that the schedule provide for delivery of water at times when the Los Vaqueros pipeline is available to move water into Los Vaqueros Reservoir. It is also the intent of the parties to cooperate in the development of the Schedule in a manner that minimizes CCWD's wheeling costs by wheeling water under conditions, at times, and at a rate that will avoid or minimize pretreatment costs, utilize unused gravity capacity in the Mokelumne Aqueducts, avoid or minimize the need to pump EBMUD's displaced water at the EBMUD Walnut Creek Pumping Plant, minimize startup and shutdown costs, and minimize power costs for FRWP and Folsom South Canal Connection pumping. The Parties shall cooperate to obtain and use lower cost sources of power, including supporting efforts by CCWD to make USBR CVP Project power available at Freeport.
6. The rate of delivery of the wheeled water shall be determined each year in conjunction with development of the Schedule. The Parties recognize that wheeling water to CCWD via an aqueduct dedicated solely for conveying CCWD's water during the wheeling period, and completing the wheeling in as short a time as feasible may provide mutual benefits. The Parties shall use best efforts to wheel water to CCWD in order to obtain such mutual benefits and to minimize costs of wheeling.
7. Notwithstanding the above, the Parties may agree in writing to modify the Schedule and wheeling provisions set forth in this Agreement.

Settlement Agreement Between
Freeport Regional Water Authority and
Contra Costa County Water District

8. EBMUD and CCWD shall cooperate with respect to construction of an interconnection facility, as described herein, to provide for delivery of the wheeled water from the EBMUD's Mokelumne Aqueducts into the Los Vaqueros Pipeline. CCWD shall, at its cost, design and construct the interconnection; subject to EBMUD review and approval of design of the interconnection facility. EBMUD shall not unreasonably withhold its approval of the design. To the extent feasible, the interconnection shall be located within existing rights-of-way at the intersection of the Los Vaqueros Pipeline and the Mokelumne Aqueducts. To the extent the interconnection cannot reasonably be placed within existing rights-of-way, EBMUD and CCWD shall cooperate to create easements and make conveyances and other arrangements as may be necessary for the location, design and construction of the interconnection. The design capacity of the interconnection will be specified after the Parties determine which of the three Aqueducts will be interconnected with the Los Vaqueros Pipeline. The interconnection will be designed and constructed to the full capacity of the FRWP, 155 cfs. The interconnection facility shall be designed and constructed in a manner that will minimize interference with EBMUD's current or future use, modification, or maintenance of its Mokelumne Aqueducts. EBMUD shall bear its own costs related to design review and approval, and construction inspection. EBMUD and CCWD shall each bear their own costs of work related to establishing easements and making conveyances and other arrangements as may be necessary.

9. Nothing in this "Water" section shall be construed to require FRWA or EBMUD to operate their facilities to wheel water to CCWD in a manner that results in adverse cost, water supply, or water quality impacts to them, for the purpose of reducing wheeling costs to CCWD.

WHEELING COSTS

10. CCWD shall pay the cost of wheeling its water through the FRWA and EBMUD facilities, in accordance with Attachment A entitled Wheeling Cost Accounting Methodology, and made a part hereof. The wheeling costs charged to CCWD shall include variable costs and fixed costs as more fully set forth in Attachment A. Capital recovery costs shall not be included in the cost of wheeling up to 3200 AF per year.

11. In years when EBMUD is not taking water from the FRWA facilities, EBMUD shall use best efforts to coordinate startup and shutdown activities of the FSCC facilities used to wheel water to CCWD with annual facility operations and maintenance activities related to those facilities in a manner that minimizes startup and shutdown costs.

12. In those years when EBMUD will take Freeport water, and in order to avoid the need to pre-treat the wheeled water or utilize the Walnut Creek Pumping Plant, EBMUD shall use its best efforts to schedule CCWD wheeling during a period when EBMUD is not taking Freeport water and not fully utilizing available gravity capacity in the Mokelumne Aqueducts.

Settlement Agreement Between
Freeport Regional Water Authority and
Contra Costa County Water District

13. EBMUD and CCWD shall coordinate their respective operations during the wheeling period to enable wheeled water to be delivered to CCWD at times and in quantities that will avoid or minimize any additional pumping of the Mokelumne Aqueducts at Walnut Creek. Intermittent deliveries of wheeled water may be scheduled to avoid the need to operate the Walnut Creek Pumping Plant.

14. Nothing in this "Wheeling Costs" section shall be construed to require FRWA or EBMUD to operate their facilities to wheel water to CCWD in a manner that results in adverse cost, water supply or water quality impacts to them, for the purpose of reducing wheeling costs to CCWD, or to operate in a manner that does not comply with Department of Health Services treatment requirements.

FINANCIAL

15. FRWA will make a lump sum, one time cash payment of \$2 million to CCWD one year following award of the first construction contract related to construction of the Folsom South Canal Connection pipeline and pumping plants.

16. FRWA, at its cost, will address this wheeling agreement in the FRWP FEIR/S; provided, however, that the FEIR/S will only address the incremental impact of the diversion of 3,200 afa of water to be wheeled to CCWD, if any. CCWD shall be responsible for any other environmental documentation required for the interconnection facility.

17. CCWD will pay wheeling costs within 30 days of receipt of an itemized bill. CCWD shall have the right to audit all charges on an annual basis. If necessary, a reconciliation of costs shall be completed and determination made of any required additional payment, or credit due, by December 15 of the following water year.

18. The parties will work together immediately after execution of this Settlement Agreement on Federal Legislation to:

a. Increase Folsom South Canal Deferred Use to reflect actual municipal and industrial (M&I) use and capacity needs (similar to Sly Park and Sugar Pine)

b. Revise M&I conveyance cost pool to realign cost to reflect repayment obligation for contractors on the basis of percentage of individual facility use.

c. Include the concept of a "Stand-by" charge in the current evaluation and update of the Interim M&I Rate Policy.

19. Interim Financial Considerations:

Settlement Agreement Between
Freeport Regional Water Authority and
Contra Costa County Water District

- a. Following dismissal of the litigation referenced below, EBMUD will make a payment to CCWD in the amount of \$117,000 on January 31, 2004, January 31, 2005 and January 31, 2006, to offset CCWD's CVP M&I O&M costs.
- b. EBMUD will continue to accept the 55 TAF CVP projected water delivery base used in allocating capital and calculating annual capital and deficit rates.

LITIGATION SETTLEMENT

20. Upon concurrence by the U.S. Bureau of Reclamation with the wheeling concept described herein, this agreement shall become effective and CCWD shall dismiss with prejudice its State Court litigation pending in the Third District Court of Appeal and its litigation involving the Parties pending in the Fresno Division of the Eastern District Federal Court. The Parties agree to pay their own attorney's fees and costs, and EBMUD shall withdraw its request for attorneys' fees related to CCWD's CEQA challenge to the Freeport Project EIR, which is now pending in the Sacramento County Superior Court.

21. This agreement resolves all issues among the FRWA, Sacramento, EBMUD, and CCWD with respect to construction of the FRWP and its use to provide water to Sacramento and EBMUD. CCWD shall not file any actions challenging the FRWP EIR/EIS for or the construction of the Freeport Regional Water Project or any elements thereof, and will not oppose the Freeport Regional Water Project.

22. The FRWA and EBMUD acknowledge and accept CCWD's desire to improve its source water quality, support its efforts to improve water quality, and will not do anything to adversely affect such efforts. In that connection, FRWA and EBMUD agree to support implementation of water quality improvement projects included within the CALFED Record of Decision and being considered by CCWD. Notwithstanding the foregoing, this paragraph shall not be interpreted to require support for, or non-opposition to, CCWD positions, projects or proposals that (i) would result in a reduction in either the quantity or quality of water available to the FRWA partners from any source, (ii) would be in conflict with settlements reached with other parties in this litigation; or (iii) are adverse to proposals, programs or projects of the Sacramento Regional County Sanitation District.

GENERAL

23. Any disputes regarding wheeling charges will be resolved as follows. The Parties shall first negotiate in good faith to resolve the dispute. In the event the Parties are unable to resolve the dispute, the Parties shall submit such dispute to binding arbitration. If the parties cannot agree on a single arbitrator, then CCWD and the FRWA partners each shall appoint one person who together will select a third person. The three persons shall constitute the arbitration panel to hear and resolve the matter submitted to it.

Settlement Agreement Between
Freeport Regional Water Authority and
Contra Costa County Water District

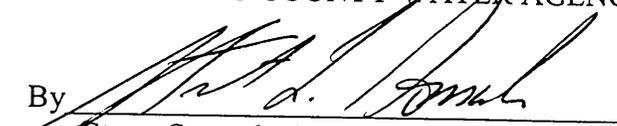
Dated: January 27, 2004

EAST BAY MUNICIPAL UTILITY DISTRICT

By  *Reid*
Dennis M. Diemer, General Manager

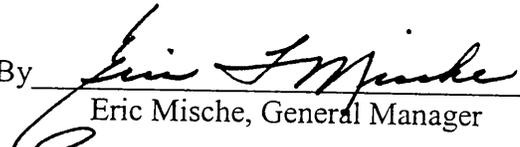
Dated: January 30, 2004

COUNTY OF SACRAMENTO and
SACRAMENTO COUNTY WATER AGENCY

By 
Stuart Somach, Attorney for County of
Sacramento and Sacramento County
Water Agency

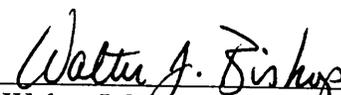
Dated: January 28, 2004

FREEPORT REGIONAL WATER AUTHORITY

By 
Eric Mische, General Manager

Dated: January 27, 2004

CONTRA COSTA WATER DISTRICT

By 
Walter J. Bishop, General Manager

ATTACHMENT A

Wheeling Cost Accounting Methodology

This document specifies the methodology for assessing costs to CCWD for wheeling water from the FRWP intake to CCWD's system.

GENERAL PROVISIONS

1. All water wheeled will be CCWD's water diverted at Freeport on the Sacramento River; obtained from the CVP, a water transfer, or via a CCWD water right.
2. Variable costs will be allocated based on the ratio of water delivered to CCWD over the total volume of water passing through each required facility, as herein described and set forth.
3. Fixed costs will be allocated based on the ratio of capacity allocated to CCWD over the total capacity of each required facility, as herein described and set forth in paragraphs 4, 5, 6, 7 and 8 below.
4. CCWD's allocated capacity is 3,200 acre-feet in any single year (October 1 – September 30).
5. The capacity of the FRWP intake and the pipeline to the SCWA turnout is 207,000 acre-feet per year (185 mgd). CCWD's allocated share of capacity is 1.55% ($3,200 \div 207,000$).
6. The capacity of the pipeline from the SCWA turnout to the Folsom South Canal is 112,000 acre-feet per year (100 mgd). CCWD's allocated share of capacity is 2.86% ($3,200 \div 112,000$).
7. The capacity of the Folsom South Canal Connection facilities is 112,000 acre-feet per year (100 mgd). CCWD's allocated share of capacity is 2.86% ($3,200 \div 112,000$).
8. The maximum gravity capacity of the Mokelumne Aqueducts is approximately 200 mgd. The capacity can be increased to 300 mgd (336,000 acre-feet per year), to meet peak demands, with the Walnut Creek pumping plants. CCWD's allocated share of capacity is 0.95% ($3,200 \div 336,000$). This share of capacity is adjusted based on the length of the aqueducts used by CCWD, 45.6 miles out of 83.5 miles or 55% ($45.6 \div 83.5$). The adjusted capacity is 0.52% (0.95×0.55).
9. Labor costs shall include direct operating and maintenance personnel and supervisors. Full overhead will be applied to all labor costs. Full overhead includes paid absences, fringe benefits, departmental overhead, and administrative and general overhead. The administrative and general overhead multiplier shall not exceed 1.20. The parties recognize that operating and maintenance labor may be provided by either EBMUD or the FRWA and that, therefore, the percentages applied to the overhead factors may vary.
10. Direct costs for power and chemicals are defined as actual amounts invoiced by the vendor or utility with no markup by EBMUD or FRWA.

METHODOLOGY

Costs will be tracked by each facility, and the facilities have been grouped into three cost centers:

- FRWA Cost Center: The FRWP facilities that will be built and operated by FRWA and will include the EBMUD connection to the Folsom South Canal;
- FSCC Cost Center: The FSCC that will be built and operated by EBMUD (these facilities are expected to be operated intermittently); and
- Aqueduct Cost Center: The existing Mokelumne Aqueducts and pumping plants are owned and operated by EBMUD.

Costs within each cost center have been divided into three cost categories:

- A. Variable \$ per acre-ft costs calculated on a monthly basis;
- B. Variable cost of operation calculated on an annual cost basis; and
- C. Fixed costs

CCWD will be billed on actual costs for the billing period. For costs that are based on monthly charges, the billing period will begin on the 1st of the month. For costs that are based on yearly charges, the billing period will begin at the start of the water year, October 1st.

CCWD water deliveries will be measured and recorded at the CCWD turnout on a daily basis. Flow for the other facilities will be measured and recorded at each facility on a daily basis.

EBMUD will operate the pretreatment facility as required by EBMUD to meet DHS delivered water requirements.

FRWA will bill EBMUD for charges associated with delivery of water to CCWD. EBMUD will charge CCWD based on the information provided in the FRWA billings.

The table below summarizes the wheeling cost allocation methodology.

Table 1

| Cost Center | Facility | Variable Costs | | | | | Fixed Costs | |
|-------------|-------------------------------|----------------|-----------|------------------|-------------------|------------------|-------------------|----------------------|
| | | Power | Chemicals | Operations labor | Conveyance charge | Startup/shutdown | Maintenance labor | Maintenance supplies |
| FRWA | FRWA intake | A | A | A | | B | C | C |
| | FRWA Pipeline to SCWA turnout | | | A | | B | C | C |
| | EBMUD pipeline to FSC | | | A | | B | C | C |
| FSCC | USBR Folsom South Canal | | | | A | | | |
| | FSCC canal pumping plant | A | A | A | | B | C | C |
| | FSCC pipeline | | | A | | B | C | C |
| | FSCC pretreatment plant | A | A | A | | B | C | C |
| | FSCC aqueduct pumping plant | A | A | A | | B | C | C |
| Aqueduct | Mokelumne Aqueducts | | | A | | B | C | C |
| | Walnut Creek pumping plants | B | | B | | B | C | C |

- A. Variable costs calculated on a monthly basis
- B. Variable costs calculated on an annual basis
- C. Fixed costs

COST CATEGORY DETAILS

A. VARIABLE \$ PER ACRE-FT COSTS CALCULATED ON A MONTHLY BASIS

These are variable costs that are associated with the direct operation of the facilities, as shown on Table 1, and will be expressed in \$ per acre-ft unit basis. The variable costs are calculated each month based on the volume of water that is conveyed through each facility and the cost to operate each facility for each variable cost component. The \$ per acre-ft will be multiplied by the number of acre-ft delivered to CCWD to calculate the total CCWD charge under this cost category.

1. Power Costs (except for the Walnut Creek Pumping Plants as described in Section B)

The monthly power costs to operate each facility will be documented by the energy provider for each pumping plant and the pretreatment plant. The power costs will include all charges including the unit energy costs, demand charge, and all

surcharges. A \$ per acre-ft charge will be calculated for the power costs for each facility.

2. Chemicals

Chemical use at each facility will be measured on a monthly basis. The cost of the chemicals used will be based on the most recent purchase price of the chemicals. The total monthly chemical cost divided by the volume of water treated yields the \$ per acre-ft for chemicals for each facility. Treatment chemicals and pretreatment operations will be implemented as required by EBMUD to meet DHS delivered water requirements. Examples of chemicals used include:

- a. For transmission: lime and chlorine.
- b. For pretreatment: coagulants, polymers, chlorine, and oxygen for ozone treatment.

3. Operation Labor

The variable operation labor cost will be expressed as a \$ per acre-ft unit cost. Job numbers will be set up for each facility and will track labor costs directly associated with conveying or treating water for the Freeport project. Operation labor does not include any labor costs for maintenance, start up, shut down or non-operating periods that are accounted for in other categories. The labor costs will be for direct operating personnel and line supervisors. Full overhead will be applied to all labor costs as described in the General Provisions, paragraph 9, of this Attachment A..

4. Conveyance of water through the Folsom South Canal

The Folsom South Canal is owned and operated by the Bureau of Reclamation. The Bureau charges a conveyance charge per acre-ft conveyed through the canal. The Bureau publishes the rate annually. EBMUD will assess CCWD the then current Bureau FSCC conveyance charge for each acre-ft delivered to CCWD via the Freeport project.

B. VARIABLE COST OF OPERATION CALCULATED ON AN ANNUAL COST BASIS

There are annual operating variable costs for all three cost centers that do not lend themselves to an allocation on a \$ per acre-ft unit basis. These include costs that are incurred with start up and shut down of the system's pumping, transmission, and treatment facilities, as shown in Table 1. The start up and shut down costs for wheeling will be the actual cost of starting up and shutting down facilities during the water year, October 1 – September 30, in which the wheeling occurred. CCWD's share of the start up and shut down costs will be the total actual costs multiplied by the amount of water wheeled to CCWD, divided by the total flow through the facilities. Job numbers will be

set up for each start up/shut down episode so that those costs can be tracked separately from operations and from each episode. The projected delivery schedules for the Freeport project between EBMUD and CCWD will be coordinated at the beginning of each water delivery season to minimize the number of start up/shut downs.

The energy charge at Walnut Creek pumping plants will be based on the annual cost of pumping averaged over all three aqueducts, which are separately metered for the water year, October 1 – September 30, in which the wheeling occurred, divided by the total amount of water pumped in aqueducts. The CCWD Walnut Creek pumping plant charge will be based on this average annual per acre-ft energy charge. Water delivered to CCWD under unused gravity conditions will not be included in the calculation.

C. FIXED COSTS

There are two fixed costs, facility maintenance and capital recovery that apply to all three cost centers. These costs will be assessed on an annual basis from the date the facilities become operational, as follows:

- Facility maintenance – Job numbers will be established to track maintenance costs for each facility and cost center. CCWD allocated capacity share for each cost center is as follows:
 - FRWA Cost Center:
 - FRWA intake to SWCA turnout: 1.55%
 - SWCA turnout to FSCC: 2.86%
 - FSCC Cost Center: 2.86%
 - Aqueduct Cost Center: 0.52%
- Capital recovery – Based on the full capital costs incurred to construct the facilities. Capital recovery will not be assessed for deliveries up to 3,200 acre-feet.

CCWD will not be charged any fixed facility maintenance costs in any year that EBMUD is unable to wheel water to CCWD due to abnormal, unusual or emergency conditions as described in Section II paragraph a of the settlement agreement to which this Attachment A is attached.

If for 3 years preceding the billing date the Walnut Creek Pumping Plants portion of the Aqueduct Cost Center shown on Table 1 was not used to wheel water to CCWD, then CCWD will not be charged for fixed maintenance costs for those pumping plants in the then current billing. If for 3 years preceding the billing date the Pretreatment Plant portion of the FSCC Cost Center shown on Table 1 was not used to wheel water to CCWD, then CCWD will not be charged fixed maintenance costs for that pretreatment plant in the then current billing.



OCT 14 2003

October 10, 2003

Mr. Dennis Diemer
East Bay Municipal Utility District
Box 94055
Oakland, CA 94623

Subject: EBMUD Settlement Terms

Gentlemen:

Enclosed are two original executed copies of the above subject settlement for your records. One original executed copy of the same has been mailed to Tom Birmingham, Westlands Water District, and one to Dan Nelson, San Luis & Delta-Mendota Water Authority, for their records.

If you have any questions, please feel free to call us. Thank you.

Sincerely,


Susan Mussett

Encl.

cc: Tom Birmingham – w/ enclosure
Dan Nelson – w/ enclosure
Jon Rubin – w/ enclosure

842 SIXTH STREET

SUITE 7

P.O. BOX 2157

LOS BANOS, CA

93635

209 826-9696

209 826-9698 FAX

September 18, 2003

Mr. Kirk Rodgers
Regional Director
Bureau of Reclamation
2800 Cottage Way, Room E-1604
Sacramento, CA 95825-1898

Dear Mr. Rodgers:

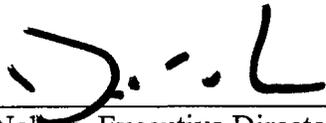
As you are aware, EBMUD and Sacramento County Water Agency have been in settlement discussions with the Delta Water Users ("DWUs") regarding pending lawsuits over EBMUD's Amendatory CVP Contract.

We are pleased to report that we have arrived at terms of agreement for settlement with the San Luis & Delta-Mendota Water Authority and Westlands Water District that address their concerns and provide for the Authority's and Westlands' withdrawal from the litigation pending in the Fresno Division of the Eastern District Federal Court that involves the Department of the Interior and other Federal agencies, as well as the pending State Court litigation. The terms of agreement are attached for your information.

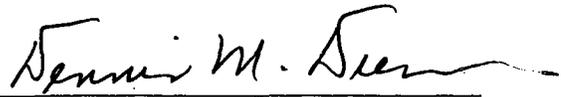
The Authority's Executive Director and Westlands General Manager have approved the terms of the agreement and the EBMUD Board of Directors favorably reviewed the matter at their September 10, 2003 meeting. In the coming weeks, we will continue to work with the Contra Costa Water District in an effort to resolve their issues related to the Freeport project and achieve a comprehensive settlement with all the DWUs.

We will keep you apprised of further developments. Please call if you have any questions regarding the settlement with the Authority and Westlands.

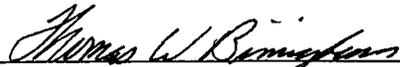
Sincerely,



Dan Nelson, Executive Director
San Luis & Delta-Mendota Water Authority



Dennis M. Diemer, General Manager
East Bay Municipal Utility District



Thomas Birmingham, General Manager
Westlands Water District

Attachment

SETTLEMENT AGREEMENT BETWEEN
FREEPORT REGIONAL WATER AUTHORITY ("FRWA"),
SAN LUIS & DELTA MENDOTA AUTHORITY ("AUTHORITY"), AND WESTLANDS
WATER DISTRICT

1. The East Bay Municipal Utility District ("EBMUD") will make a one time lump sum payment in the amount of \$2,390,000 to the San Luis & Delta Mendota Authority ("Authority"). The lump sum payment is intended to compensate the Authority for the decrease in water delivered to the Authority during drought due to the Freeport Regional Water Project (FRWP).
2. In the event that the Freeport Regional Water Authority ("FRWA") uses excess capacity of the Freeport Regional Project, then FRWA shall work together with the Authority and Westlands Water District ("Westlands") in good faith to develop the project and the project operations in a way that avoids water supply impacts on the Authority.
3. The Authority and Westlands agree to dismiss the State Court litigation pending in the Third District Court of Appeal and the litigation pending in the Fresno Division of the Eastern District Federal Court. The Parties agree to pay their own attorneys' fees and costs. FRWA agrees to continue good faith efforts to reach agreement on all outstanding issues with remaining litigants prior to the rescheduled Federal Court hearing date.
4. The Lump Sum Payment Amount shall be paid by EBMUD to the Authority upon completion of construction and prior to FRWP operation.
5. This agreement resolves all of the issues between the FRWA, the Authority and Westlands, and the Authority and Westlands shall not challenge the EIR/EIS for or the construction of the Freeport Regional Water Project and will support the Freeport Regional Water Project.

SETTLEMENT AND GENERAL RELEASE AGREEMENT

This Settlement and General Release Agreement ("Settlement Agreement") is made as of October __, 2003, by and between East Bay Municipal Utility District, (hereinafter referred to as the "EBMUD"), the County of Sacramento and Sacramento County Water Agency, (hereinafter referred to as the "Sacramento"), Freeport Regional Water Authority, (hereinafter referred to as the "FRWA"), Santa Clara Valley Water District, (hereinafter referred to as "SCVWD"). Throughout this Settlement Agreement, EBMUD, Sacramento, FRWA, and SCVWD may be collectively referred to herein as the "Parties" or individually as a "Party."

I. RECITALS

The Parties are entering into this Settlement Agreement with reference to the following facts:

A. In 1997, the United States Bureau of Reclamation ("Reclamation") and EBMUD released a joint, draft environmental impact statement/environmental impact report ("EIS/EIR") for EBMUD's Supplemental Water Supply Project. After circulating the 1997 draft EIR/EIS and receiving comments, Reclamation and EBMUD decided to revise the EIS/EIR, and in October 2000, Reclamation and EBMUD completed a supplemental EIS/recirculated EIR. Two months later, in December 2000, Reclamation and EBMUD released a final EIS/EIR; and

B. On or about January 19, 2001, Reclamation issued its record of decision for amendment of the existing 1970 water service contract (#14-06-200-5183A) between Reclamation and EBMUD ("Amendatory Contract"), which presented Reclamation's decision to execute the Amendatory Contract; and

C. On or about June 26, 2001, EBMUD and the EBMUD Board of Directors certified the final EIS/EIR and approved the Amendatory Contract; and

D. On or about July 20, 2001, Mr. Michael J. Ryan for Reclamation and Ms. Katy Foulkes for EBMUD executed the Amendatory Contract; and

E. On or about July 26, 2001, SCVWD, with others, filed the action of *State Water Contractors, et al. v. East Bay Municipal Utility District, et al.*, Sacramento County Superior Court, Case No. 01CS01076, which challenges the EIS/EIR, EBMUD's certification thereof, and its approval of the Amendatory contract; and

F. On or about July 26, 2001, SCVWD, with others, filed the action of *San Luis & Delta-Mendota Water Authority v. East Bay Municipal Utility District, et al.*, Case No. 01CS01077, which challenges the EIS/EIR, EBMUD's certification thereof, and its approval of the Amendatory contract. Case Nos. 01CS01076 and 01CS01077 were later consolidated and are now on appeal, Court of Appeal of the State of California Third Appellate District, Case No. C042652 ("State Action"); and

G. Sacramento was granted amicus curie status in the State Action and

10/29/03

participated in proceedings before the Superior Court and on appeal; and

H. On or about February 10, 2003, SCVWD, with others, filed the action of the *Kern County Water Agency v. United States Department of the Interior et al.*, ("Federal Action"), United States District Court Eastern District of California, Case No. CIV-F-03-5175, which challenges multiple actions by the United States Department of the Interior et al. taken in support of the Amendatory Contract; and

I. EBMUD was named as a real-party in interest and Sacramento intervened in the Federal Action; and

J. The United States, EBMUD, and Sacramento opposed the challenges raised by SCVWD in the State and Federal Actions; and

K. Subsequent to commencement of the State and Federal Actions, SCVWD, EBMUD, Sacramento, FRWA, and others successfully negotiated terms for settlement of the State and Federal Actions. The terms of the settlement were initially memorialized informally. The document containing the informal settlement terms is attached hereto as exhibit A ("Informal Settlement Document"). It is now the intention and desire of the Parties to memorialize and formally agree to terms and conditions set forth in the Informal Settlement Document; and

L. FRWA, although not a party to either the State Action or Federal Action, maintains an interest in having the State and Federal Actions resolved so that it may continue to guide the financing, ownership, development, construction, and operation of the Freeport Project – a joint water project developed by EBMUD and Sacramento County Water Agency, which involves a new intake facility on the Sacramento River near the community of Freeport – without challenges to (1) the EIS/EIR, EBMUD's certification thereof, and its approval of the Amendatory contract, or (2) multiple actions by the United States Department of the Interior et al. taken in support of the Amendatory Contract; and

M. Through this Settlement Agreement, the Parties formally settle, compromise and resolve in good faith any differences, disagreements and disputes which existed or may exist between the Parties related to the actions taken in support of the Amendatory Contract and challenged in the State and Federal Actions.

II. SETTLEMENT AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth in this Settlement Agreement and in the Informal Settlement Document, which is attached hereto as exhibit A, the Parties agree as follows:

I. Effective Date. This Settlement Agreement shall be effective ("Effective Date") when fully executed by all Parties, when dismissals have been filed with all appropriate courts in the forms attached hereto as exhibits B and C, and when EBMUD has, with respect to SCVWD, withdrawn its request for attorneys' fees in the State Action.

2. Terms Of Settlement. The Parties agree that a true and correct copy of the Informal Settlement Document is attached hereto as exhibit A, and the Parties hereby incorporate herein each and every term and condition set forth in the Informal Settlement Document as though set forth herein in full. In the event of any conflict between this Settlement Agreement and the Informal Settlement Document, the Informal Settlement Document shall control.

3. Release. In exchange for the consideration listed herein, the Parties hereby mutually release and discharge each other from any and all claims, damages, and demands for compensation arising from and/or related to the multiple actions by EBMUD taken in support of the Amendatory Contract and challenged in the State and Federal Actions.

4. Withdrawal of Motion For Attorneys' Fees. Upon completion of the settlement conference scheduled to commence on October 29, 2003, in the federal court for the Eastern District of California, EBMUD shall withdraw its motion for attorneys' fees in the State Action.

5. Dismissal Of State And Federal Actions. Upon completion of the settlement conference scheduled to commence on October 29, 2003, in the federal court for the Eastern District of California, SCVWD shall move to dismiss with prejudice the claims of SCVWD in the State and Federal Actions, including the appeal of SCVWD in the State Action, with each party to bear its own attorneys fees and costs.

6. Notice. Each Party shall notify the other when it executes this Settlement Agreement.

7. Waiver Under Section 1542. The Parties hereby waive any and all rights or benefits that it may have under section 1542 of the Civil Code of the State of California, which provides:

A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor.

The Parties represent and warrant that they understand the effect of this waiver of section 1542 and has had the opportunity to discuss the effect of this waiver with counsel of their choice.

8. Integration. The Parties declare and represent that no promise, inducement or other agreement has been made conferring any benefit upon any Party except those contained herein. The Parties further declare and represent that the Settlement Agreement contains the entire agreement of the Parties pertaining to the subject matter thereof, and that the Settlement Agreement supersedes any prior or contemporaneous negotiations, representations, agreements, and understandings of the Parties with respect to such matters, whether written or oral. Parol evidence shall be inadmissible to show agreement by and among the parties to any term or condition

contrary to or in addition to the terms and conditions contained in the Settlement Agreement. The Parties acknowledge that each has not relied on any promise, representation or warranty, expressed or implied, not contained in this Settlement Agreement.

9. Fees And Costs. Each Party will bear its own and waive any right to the recovery of costs, fees (including attorneys' fees), litigation expenses, interest and expenses in connection with this Settlement Agreement and the State and Federal Actions and proceedings described in the Recitals above.

10. Choice Of Law. This Settlement Agreement is made under and will in all respects be interpreted, enforced and governed by the laws of the State of California without regard to rules regarding conflicts or choice of law.

11. Amendment. This Settlement Agreement cannot be altered, amended or modified in any respect, except by a writing duly executed by the Party against which the alteration, amendment or modification is charged.

12. Construction. The Settlement Agreement has been jointly negotiated and drafted. The language of this Settlement Agreement shall be construed as a whole according to its fair meaning and not strictly for or against either of the Parties.

13. Enforcement. If there is litigation of any kind to enforce the provisions of this Settlement Agreement, the prevailing party shall be entitled to recover from the defaulting Party the reasonable attorneys' fees incurred in connection with such litigation or appeal thereof.

14. Counterparts. This Settlement Agreement may be executed in counterparts and has the same force and effect as if all the signatures were obtained in one document.

15. Authority. The Parties represent and warrant that they have all requisite power, authority and legal right necessary to execute and deliver this Settlement Agreement and to perform and carry out the transactions contemplated by the Settlement Agreement upon the terms and subject to the conditions of this Settlement Agreement. Each of the individuals executing this Settlement Agreement on behalf of a Party represents that he/she has been duly authorized by such Party to execute this Settlement Agreement on its behalf.

Dated: Oct. 29, 2003

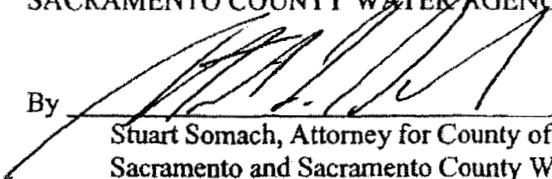
EAST BAY MUNICIPAL UTILITY DISTRICT

By Dennis M. Diemer
Dennis M. Diemer, General Manager

Dated: 10/27, 2003

COUNTY OF SACRAMENTO and
SACRAMENTO COUNTY WATER AGENCY

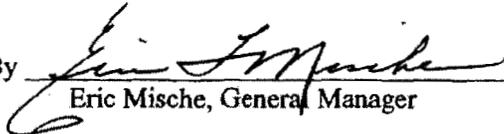
By


Stuart Somach, Attorney for County of
Sacramento and Sacramento County Water
Agency

Dated: ⁸²²
11/24, 2003

FREEPORT REGIONAL WATER AUTHORITY

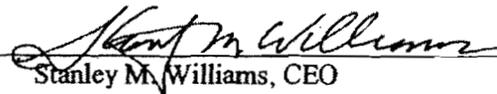
By


Eric Mische, General Manager

Dated: ⁸²²
11/24, 2003

SANTA CLARA VALLEY WATER DISTRICT

By


Stanley M. Williams, CEO

753894.1

**SETTLEMENT AGREEMENT BETWEEN
FREEPORT REGIONAL WATER AUTHORITY AND
SANTA CLARA VALLEY WATER DISTRICT**

1. Water Supply

In order to help the Santa Clara Valley Water District (SCVWD) manage impacts of East Bay Municipal Utility District's (EBMUD's) diversions at Freeport, and to increase flexibility for EBMUD in managing multi-year droughts, a long-term exchange agreement will be drafted to accomplish the following principles, and submitted to the U.S. Bureau of Reclamation (USBR) for approval:

a. EBMUD will make available 6,500 AF of its Central Valley Project (CVP) allocation in the first year of its 3-year consecutive drought cycle to offset SCVWD's water supply impacts. If EBMUD's 3-year consecutive drought continues, then SCVWD will be obligated to return up to 100% of the water in the second year, or, at EBMUD's discretion, the water may be returned in the third year. However, if EBMUD's 3-year consecutive drought does not continue in the second and/or third years, then SCVWD will keep EBMUD's CVP water, and compensate EBMUD for its USBR costs.

b. Operationally, SCVWD will take delivery of EBMUD's CVP water at Tracy Pumping Plant, and EBMUD will take delivery of SCVWD's CVP water at Freeport.

c. The cost of water for EBMUD and SCVWD will be as specified under each agency's USBR water service contract.

d. The Parties will work together to ensure that any carriage losses are managed to mutual satisfaction.

2. Federal Legislation to Resolve Financial Issues

The Parties will work together immediately on Federal Legislation to:

a. Increase Folsom South Canal cost deferral to reflect actual M&I use and capacity needs (similar to Sly Park and Sugar Pine).

b. Revise the M&I conveyance cost pool to realign costs to reflect repayment obligation for contractors on the basis of percentage of individual facility use.

c. Include the concept of a "Standby Charge" in the current evaluation and update of the Interim M&I Ratesetting Policy.

EXHIBIT A

3. Interim Financial Consideration

a. Upon the dismissal of the state and federal court actions as provided in Section 4, Litigation Settlement (below), EBMUD will make a payment to SCVWD of \$125,000 on October 31, 2003, on October 31, 2004, and on October 31, 2005, to offset SCVWD's CVP M&I Operations & Maintenance costs.

b. EBMUD will continue to accept the 55,000 acre-feet projected delivery base used in allocating CVP capital and calculating annual capital and deficit rates.

4. Litigation Settlement

a. Subject to written USBR concurrence with the exchange concept described in Section 1, Water Supply (above), SCVWD agrees to dismiss the State Court litigation proceeding in the Third District Court of Appeal and the litigation pending in the Fresno Division of the Eastern District Federal Court. The Parties agree to pay their own attorney's fees and costs. The Freeport Regional Water Authority agrees to continue good faith efforts to reach agreement on all outstanding issues with the remaining litigant prior to the rescheduled Federal Court hearing date.

b. This agreement, combined with the State Water Contractor and San Luis & Delta-Mendota Water Authority Ag Service Contractor agreements, resolves all of the issues between the Freeport Regional Water Authority and the Authority partners and the SCVWD, and SCVWD shall not challenge the EIR/EIS for the construction of the Freeport Regional Water Project and will support the Freeport Regional Water Project.

COURT OF APPEAL OF THE STATE OF CALIFORNIA

THIRD APPELLATE DISTRICT

STATE WATER CONTRACTORS,
et al,

Plaintiffs and Appellants,

v.

EAST BAY MUNICIPAL
UTILITY DISTRICT, et al.,

Defendants and Respondents.

NO. C042652

Superior Court No. 01CS01076
consolidated with 01CS01077

REQUEST FOR DISMISSAL

Appeal from the Judgment of the Superior
Court of California

Honorable Lloyd G. Connelly
Judge of the Superior Court

THOMAS M. BERLINER, State Bar No. 83256
KAREN L. DONOVAN, State Bar No. 194424
DUANE MORRIS LLP
1 Market, Spear Tower
San Francisco, CA 94105-1104
Telephone: (415) 371-2200
Facsimile: (415) 371-2201

Attorneys for Plaintiffs SANTA CLARA VALLEY
WATER DISTRICT

Pursuant to California Rules of Court, Rule 20(c), Defendant,
EAST BAY MUNICIPAL UTILITY DISTRICT, BOARD OF
DIRECTORS OF THE EAST BAY MUNICIPAL UTILITY
DISTRICT, and Appellant SANTA CLARA VALLEY WATER
DISTRICT hereby request this Court to enter an order dismissing the
appeal of SANTA CLARA VALLEY WATER DISTRICT with
prejudice. All parties to bear their own costs.

Dated: October 28, 2003

DUANE MORRIS LLP

By



KAREN L. DONOVAN
Attorneys for Appellant SANTA CLARA
VALLEY WATER DISTRICT

Dated: November 4, 2003

BEST, BEST & KRIEGER

By Arthur L. Littleworth
Arthur L. Littleworth

Attorneys for Respondents
EAST BAY MUNICIPAL UTILITY
DISTRICT

REQUEST FOR DISMISSAL

1 CLIFFORD W. SCHULZ, State Bar No. 039381
2 SCOTT A. MORRIS, State Bar No. 172071
3 JON D. RUBIN, State Bar No. 196944
4 MADELINE E. DOMS, State Bar No. 221568
5 KRONICK, MOSKOVITZ, TIEDEMANN & GIRARD
6 A Professional Corporation
7 400 Capitol Mall, 27th Floor
8 Sacramento, CA 95814-4416
9 Telephone: (916) 321-4500
10 Facsimile: (916) 321-4555

11 Attorneys for Plaintiffs KERN COUNTY WATER
12 AGENCY; STATE WATER CONTRACTORS;
13 CONTRA COSTA WATER DISTRICT; SAN LUIS &
14 DELTA-MENDOTA WATER AUTHORITY; and
15 WESTLANDS WATER DISTRICT

16 UNITED STATES DISTRICT COURT
17 EASTERN DISTRICT OF CALIFORNIA

18 KERN COUNTY WATER AGENCY, et al.,

19 Plaintiff,

20 v.

21 U.S. DEPARTMENT OF THE INTERIOR, et
22 al.,

23 Defendant.

24 COUNTY OF SACRAMENTO;
25 SACRAMENTO COUNTY WATER
26 AGENCY,

27 Defendants in Intervention.

28 EAST BAY MUNICIPAL UTILITY
DISTRICT, et al.,

Real Parties in Interest.

CASE NO. CIV-F-03-5175 OWW DLB

STIPULATION OF DISMISSAL

1 IT IS HEREBY STIPULATED by and between the parties to this action, KERN
2 COUNTY WATER AGENCY, STATE WATER CONTRACTORS, METROPOLITAN
3 WATER DISTRICT OF SOUTHERN CALIFORNIA, SANTA CLARA VALLEY WATER
4 DISTRICT, SAN LUIS & DELTA-MENDOTA WATER AUTHORITY, WESTLANDS
5 WATER DISTRICT, and CONTRA COSTA WATER DISTRICT, by and through their attorneys
6 of record, that the claims of certain parties, KERN COUNTY WATER AGENCY, STATE
7 WATER CONTRACTORS, METROPOLITAN WATER DISTRICT OF SOUTHERN
8 CALIFORNIA, SANTA CLARA VALLEY WATER DISTRICT, SAN LUIS & DELTA-
9 MENDOTA WATER AUTHORITY, and WESTLANDS WATER DISTRICT, be and hereby are
10 dismissed with prejudice pursuant to FRCP 41(a)(1).

11
12 Dated: October ^{11/24} ⁸⁴ 2003

13 KRONICK, MOSKOVITZ, TIEDEMANN & GIRARD
14 A Professional Corporation

15
16 By


17 CLIFFORD W. SCHULZ
18 Attorneys for Plaintiff KERN COUNTY WATER
19 AGENCY; STATE WATER CONTRACTORS;
20 CONTRA COSTA WATER DISTRICT; SAN LUIS
21 & DELTA-MENDOTA WATER AUTHORITY;
22 and WESTLANDS WATER DISTRICT

23
24 Dated: October 27, 2003

25 METROPOLITAN WATER DISTRICT OF SOUTHERN
26 CALIFORNIA

27
28 By


29 JAMES ROBERTS
30 Attorneys for Plaintiff METROPOLITAN
31 WATER DISTRICT OF SOUTHERN
32 CALIFORNIA

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Dated: October , 2003

DUANE MORRIS LLP

By *Karen Donovan*
KAREN L. DONOVAN
Attorneys for Plaintiff SANTA CLARA VALLEY
WATER DISTRICT

Dated: October 29, 2003

SOMACH, SIMMONS AND DUNN
By *Stuart Somach*
STUART SOMACH
Attorneys for Defendants in Intervention
SACRAMENTO COUNTY WATER AGENCY

Dated: October 29, 2003

BEST BEST & KREIGER, LLP
By *Arthur L. Littleworth*
ARTHUR L. LITTLEWORTH
Attorneys for Real Party in Interest EAST BAY
MUNICIPAL UTILITY DISTRICT

November
Dated: October 5, 2003

By *Maria Iizuka*
MARIA IIZUKA
Attorney for Defendants U.S. DEPARTMENT OF
THE INTERIOR, et al.

Settlement Agreement Between State Water Contractors and Freeport Regional Water Authority

The Freeport Regional Water Authority (FRWA) project partners have reached agreement with the State Water Project Contractors on settlement terms that address their concerns regarding the Freeport Regional Project. The State Water Contractors (SWC) directly or indirectly represent 67 public water agencies throughout California, including the Metropolitan Water District of California and the Kern County Water Agency and their member agencies.

Under the terms of agreement:

- The US Bureau of Reclamation would account for Freeport Project deliveries of CVP water to EBMUD in a manner that essentially eliminates water delivery impacts to SWP contractors.
- The SWC and the FRWA project partners will work together in good faith to avoid Endangered Species Act impacts on the SWC from FRWA operations.
- The SWC will withdraw their lawsuits challenging EBMUD's contract for a supplemental water supply from the CVP.
- The FRWA project partners will support the State Water Project being able to increase export pumping rates up to the current installed capacity.
- The SWC will support the Freeport Regional Water Project.

The parties will continue to work with the remaining plaintiffs in the lawsuit to attempt over the next several weeks to reach a global settlement of all concerns of all parties. The remaining plaintiffs include the San Louis Delta Mendota Water Authority and its 32 member water agencies, including the Westlands Water District and the Santa Clara Valley Water District, and the Contra Costa Water District.

August 8, 2003

Mr. Kirk Rodgers
Regional Director
Bureau of Reclamation
2800 Cottage Way, Room E-1604
Sacramento, CA 95825-1898

Dear Mr. Rodgers:

As you are aware, EBMUD and Sacramento County Water Agency have been in settlement discussions with the Delta Water Users ("DWUs") regarding pending lawsuits over EBMUD's Amendatory CVP Contract.

We are pleased to report that we have arrived at terms of agreement for settlement with the State Water Contractors that address their concerns and provide for their withdrawal from the litigation pending in the Fresno Division of the Eastern District Federal Court that involves the Department of Interior, as well as the pending State Court litigation.

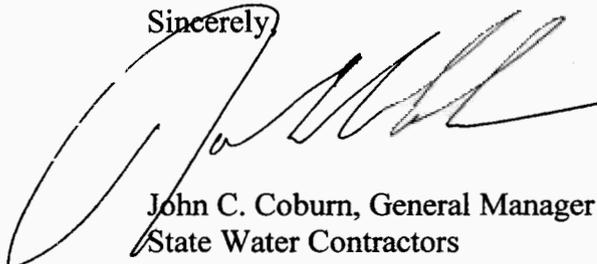
The spirit of the agreement is to work together to support the development of both parties needed water supply facilities in a manner which does not adversely impact the other party.

The terms of agreement are attached for your information. We wanted to call to your attention, in particular, paragraph 1.1(d). The provisions of this paragraph require that "CVP water diverted by or on behalf of EBMUD under its amendatory contract shall be accounted for as an export use of CVP water by the USBR." It is our understanding that such designation as an export use is consistent with the proposition reached between the CVP and SWP as part of your discussions in Napa, California on July 18, 2003.

The State Water Contractors reviewed and approved the terms of the agreement at their August 4, 2003 Board of Directors' meeting. The EBMUD Board of Directors is scheduled to consider the matter at their August 12, 2003 meeting. In the coming weeks, we will continue to work with the other members of the DWUs in an effort to resolve their issues related to the Freeport Regional Water Project and achieve a comprehensive settlement with all the DWUs, including the State Water Contractors.

We will keep you apprised of further developments. Please call if you have any questions regarding the settlement with the SWP interests.

Sincerely,



John C. Coburn, General Manager
State Water Contractors



Dennis M. Diemer, General Manager
East Bay Municipal Utility District

Attachment

Mutual Assurances with Respect to the Freeport Project

1. State Water Project (“SWP”) Water Supply Related Assurances

1 EBMUD Diversions Will Be Treated As CVP Water Diversions

- (a) The Freeport Project will divert water from the Sacramento River for use in Sacramento, Alameda and Contra Costa Counties.**
- (b) The Parties agree that (i) Central Valley Project water diverted and used in Sacramento County shall be considered a use of water within the Sacramento Basin; and (ii) water, if any, diverted pursuant to water rights held by Sacramento County or the Sacramento County Water Agency shall be considered water to be used within the “watershed of origin” as that terms is used in California law.**
- (c) The Parties further recognize that water diverted for use in Sacramento County which is not consumptively used or stored in the underground will return to the Sacramento River system above the points of SWP and CVP diversion and rediversion.**
- (d) The EBMUD diversion, in contrast to the Sacramento County diversions, is not used in the Sacramento Basin and the water diverted is not used in the watershed of origin. Moreover, water not consumptively used within EBMUD does not return to the Sacramento River system. Therefore, in order to provide assurance that water diverted at Freeport and delivered to an EBMUD facility will not adversely affect existing and future SWP facilities operations, all Parties, including the Bureau of Reclamation, agree that at all**

times, CVP water diverted by or on behalf of EBMUD under its amendatory contract with the USBR shall be accounted for as an export use of CVP water.

1.2 The provisions of the above Paragraph 1.1 shall be final and binding among all parties to the settlement agreement. No party shall contend or argue in any other proceeding, administrative, judicial, or otherwise, that any existing or future agreement, decree, administrative order or action (other than an amendment of the settlement agreement executed by all parties) authorizes or requires water delivered to EBMUD to be accounted for in a manner different than that set forth above.

1.3 Endangered Species Assurances. Take limits are imposed on Delta export pumping at various times of the year to protect a variety of fish species. The established limits may reduce or eliminate pumping when a certain number of fish have been “taken” at the pumps. The Parties intend to avoid a situation in which the Freeport Project operations adversely affect the existing take limits associated with Delta export pumping. In this context, it is anticipated that the Freeport Project diversion will be fully screened and operated to avoid take and that the Freeport Project’s incidental take of listed species associated with downstream flow reductions, water quality impairment or changes in Delta environment, if any, will fall under the umbrella of the biological opinion for the CVP-OCAP. In any event, the Freeport Project will work with involved state and federal fishery agencies to avoid a biological opinion with respect to the Freeport Project that would diminish SWP or CVP export pumping or increase the incidence of pumping restrictions

placed on the State and Federal pumps. In the event that the biological opinion for the Freeport Project causes the diminution of SWP or CVP export pumping or increases the incidence of pumping restrictions placed on the State and Federal pumps, then the SWP and CVP Contractors and the FRWA shall work together in good faith to develop alternative operations that avoid the water supply impacts related to such restrictions.

1.4 The FRWA recognizes and accepts the SWP's past and existing use of the full installed capacity of the Harvey O. Bands Pumping Plant, supports the SWP being able to maximize its ability to operate at these higher capacities, and will not do anything that would adversely affect the State's existing and planned full use of its existing pumping capacity. Notwithstanding the foregoing, this paragraph shall not be interpreted to impact or limit the FRWA's rights to divert water according to the provisions of the applicable CVP contracts.

1.5 Reciprocating Benefits. The SWP contractors shall dismiss, without prejudice, the State Court litigation pending in the Third District Court of Appeal and the litigation pending in the Fresno Division of the Eastern District Federal Court. So long as all of the protections afforded by this agreement are provided, the SWP contractors shall not challenge the EIR/EIS for or the construction of the Freeport Project and will support the Freeport Project.

**Principles for Use by Other Parties of Unassigned EBMUD Capacity in
Freeport Regional Water Project Facilities
February 8, 2005**

Definition:

Unassigned East Bay Municipal Utility District (EBMUD) capacity means any capacity dedicated to EBMUD remaining in the Freeport Regional Water Project (FRWP) facilities after meeting all EBMUD needs.

Purpose:

EBMUD anticipates interest on the part of third parties regarding EBMUD's unassigned capacity of the FRWP facilities. These principles are intended to guide decisions related to the use of the unassigned capacity.

EBMUD Objectives: Uses of the unassigned capacity should meet one or more of the following:

1. Deliver water to improve reliability for EBMUD customers.
2. Deliver water as an alternate supply to facilitate maintenance of Mokelumne facilities.
3. Protect and restore or enhance the environment of the Delta and its tributaries, and meet water conservation and recycling objectives as defined by the Bay-Delta program.
4. Minimize EBMUD capital and operation cost for FRWP.

Conditions for Use:

1. Any proposed use of the FRWP unassigned EBMUD capacity must be consistent with the Freeport Regional Water Authority (FRWA) Joint Powers Agreement between EBMUD and the Sacramento County Water Agency (SCWA), and the settlement agreements between FRWA and the state and federal water contractors. The Joint Powers Authority agreement between EBMUD and SCWA prohibits EBMUD from contracting for the use of its Dedicated Capacity for the delivery of water for use within the County of Sacramento without the prior approval of SCWA.
2. Any proposed use of the unassigned EBMUD capacity will include a complete project description and shall be subject to applicable environmental regulations and laws including the California Environmental Quality Act (CEQA), the National Environmental Protection Act (NEPA), the Endangered Species Act (ESA), the Clean Water Act (CWA), the state and federal Wild and Scenic Rivers Acts, and all others that may also be applicable. This shall include providing a project description with full environmental review and permitting.
3. Any proposed use of the EBMUD unassigned capacity shall neither lengthen the FRWP implementation schedule nor negatively impact project performance for FRWA member agencies, including water quantity and water quality.

4. The proposed use shall not negatively impact EBMUD or SCWA water rights, contract rights, water

quality, or customer rates. The proposed use shall not interfere with current or future needs of EBMUD customers.

5. Any proposed use of the EBMUD unassigned capacity that requires conveyance through the Folsom South Canal must have the approval of the U.S. Bureau of Reclamation. It is the FRWA agencies' expectation and preference that any uses of the unassigned capacity shall have a diversion point only on the Sacramento River.
6. Proposed uses shall be guided by the CALFED solution principles. In particular, proposed uses shall:
 - ◆ Not diminish water quality, environmental, reliability, or recreational benefits unless mitigated.
 - ◆ Not redirect impacts from one sensitive fishery of concern to another, and preferably provide net benefits to fish and wildlife.
 - ◆ Utilize the best available scientific analysis within an open and inclusive stakeholder process.
7. In the event of competing applications for use of the unassigned capacity, the project that is deemed to best meet EBMUD objectives and result in the greatest environmental benefit will be favored. Environmental benefits may include, but are not limited to increased releases for fisheries, wetland creation, surface and groundwater quality improvements, groundwater basin recovery, or increased surface water flows in dry years.
8. Proponents for use of EBMUD's unassigned capacity should work with relevant agencies to ensure any use of unassigned EBMUD capacity is consistent with the CALFED ROD, including ROD assumptions of regulatory flows of Tier I b(2) water as defined in the final Interior policy, plus Tier II and Tier III requirements. Such use of EBMUD's unassigned capacity is further conditioned on continued compliance with all applicable State Board standards and decisions.
9. Proponents for use of EBMUD's unassigned capacity shall pay all costs of operation related to their use of the unassigned capacity and a negotiated share of capital and financing costs of the EBMUD portion of the FRWP capacity. Proponents shall also pay all additional capital costs that result specifically from the proponents' use.
10. Approval of any future contracts or agreements concerning use of EBMUD's unassigned capacity will be publicly noticed by the EBMUD Board of Directors, with opportunity for public comment.

Appendix C

- Draft Initial Study, Mitigated Negative Declaration, and Mitigation Monitoring and Reporting Program for the SFPUC-COH-EBMUD Water System Emergency Intertie Project, February 24, 2003

- DWR Proposition Public Agency Grant Funding Agreement No. 50060301: EBMUD-Hayward-SFPUC Intertie Second Amendment, JPA for Design and Construction Exhibit C, June 22, 2006

- First Amended Joint Exercise of Powers Agreement between City and County of San Francisco Public Utilities Commission, East Bay Municipal Utility District, and City of Hayward for Long Term Operation and Maintenance of the Emergency/Maintenance Water System Intertie Project, July 10, 2007)

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**SFPUC-COH-EBMUD WATER
SYSTEM EMERGENCY
INTERTIE PROJECT**

*Initial Study, Mitigated Negative Declaration,
and Mitigation Monitoring and Reporting
Program*

February 24, 2003

Prepared for:

City of Hayward (COH)

*in association with
San Francisco Public Utilities Commission (SFPUC)
East Bay Municipal Utility District (EBMUD)
Alameda County Water District (ACWD)*

TABLE OF CONTENTS

SFPUC – COH – EBMUD WATER SYSTEM EMERGENCY INTERTIE PROJECT INITIAL STUDY / DRAFT MITIGATED NEGATIVE DECLARATION, AND MITIGATION MONITORING AND REPORTING PROGRAM

| | <u>Page</u> |
|---|-------------|
| 1. PROJECT OVERVIEW AND DESCRIPTION | 1-1 |
| 1.1 Introduction | 1-1 |
| 1.2 Background | 1-1 |
| 1.3 Project Objectives and Need | 1-6 |
| 1.4 CEQA Compliance | 1-7 |
| 1.5 Existing and Proposed Facilities | 1-7 |
| 1.6 Schedule | 1-21 |
| 1.7 Authorizations, Approvals, or Permit Requirements | 1-21 |
| 2. EVALUATION OF ENVIRONMENTAL IMPACTS | 2-1 |
| 3. MITIGATION MEASURES | 3-1 |
| 4. REPORT PREPARERS | 4-1 |

LIST OF TABLES

| | | |
|------------|--|------|
| Table 1-1. | Intertie Project - Proposed Facilities and Improvements | 1-8 |
| Table 1-2 | Proposed Pipelines | 1-13 |
| Table 1-3 | Proposed Ball Valve Replacement Locations | 1-14 |
| Table 1-4 | Delivery Scenarios and Water Allocation | 1-17 |
| Table 2-1 | Localized Contamination at the Hayward Executive Airport | 2-23 |
| Table 2-2 | Noise Compatibility Standards for Affected Jurisdictions | 2-34 |

LIST OF FIGURES

| | | |
|-----------|---|------|
| Figure 1. | Project Location and Overview of Proposed Improvements | 1-2 |
| Figure 2. | Proposed Intertie Facilities in Hayward Executive Airport | 1-3 |
| Figure 3. | Proposed Skywest Pump Station, Pipeline, and Surrounding Uses | 1-9 |
| Figure 4. | Intertie System Layout | 1-10 |
| Figure 5. | Skywest Pump Station Layout | 1-12 |
| Figure 6. | SFPUC Improvements at Newark Turnout | 1-16 |

SECTION 1

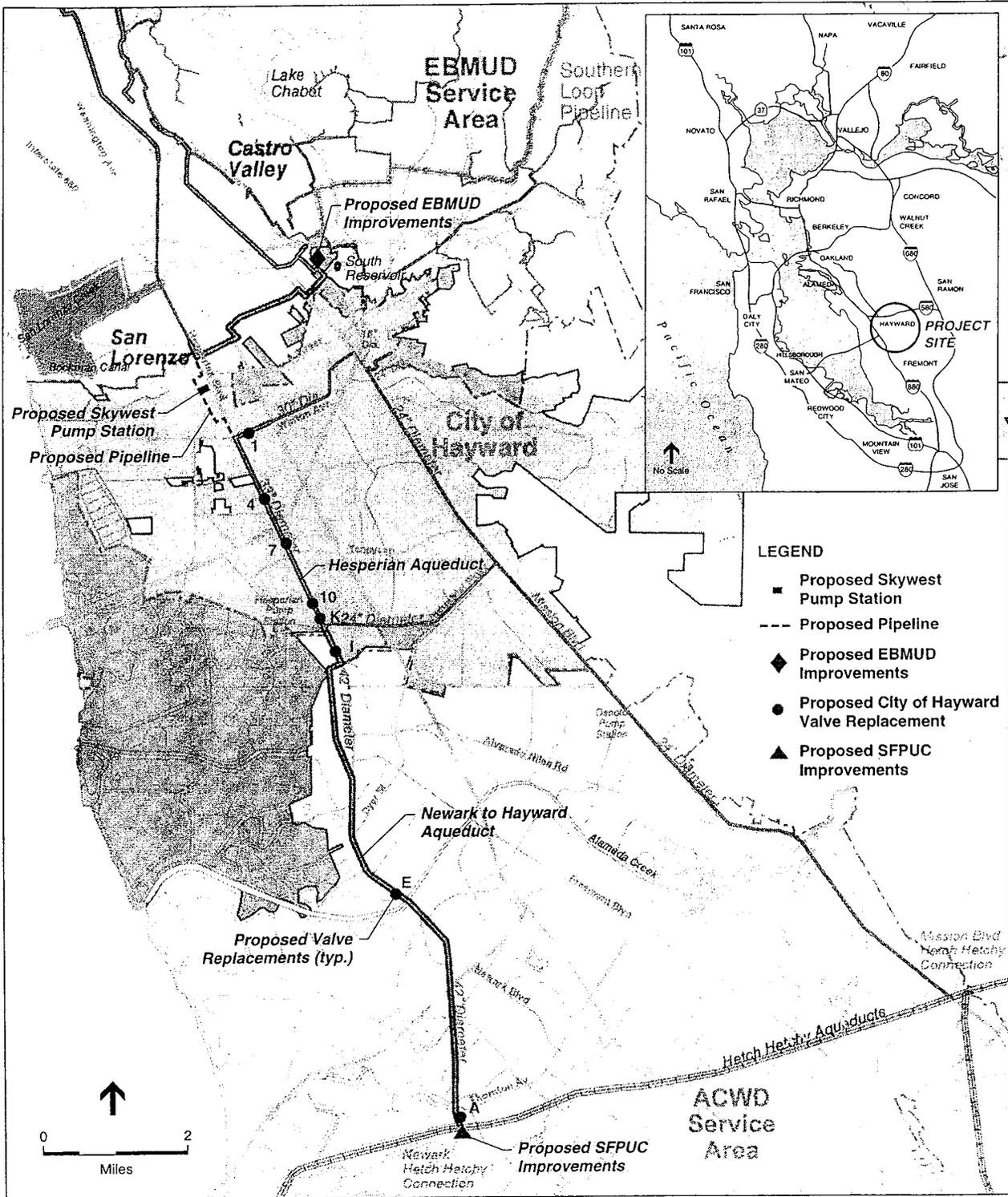
PROJECT DESCRIPTION

1.1 INTRODUCTION

The City of Hayward (City), in association with San Francisco Public Utilities Commission (SFPUC), East Bay Municipal Utility District (EBMUD), and Alameda County Water District (ACWD), proposes to construct a pump station and approximately 1.5 miles of pipeline that would connect the EBMUD and SFPUC water systems in the event of an emergency such as natural disaster or outage associated with repairs. The proposed project would be located within the three service areas of EBMUD, Hayward, and ACWD (see **Figure 1**), but primarily on the City of Hayward Executive Airport property in the City of Hayward (see **Figure 2**). The proposed pump station (“Skywest” Pump Station) would be located on an unoccupied parcel off of Skywest Drive adjacent to the existing La Quinta Inn and Home Depot. The proposed pipeline, connecting the Skywest Pump Station and the EBMUD and SFPUC systems, would be located along Skywest Drive and Hesperian Boulevard. Other minor improvements to be constructed include valve replacements and minor pipe and bypass installations.

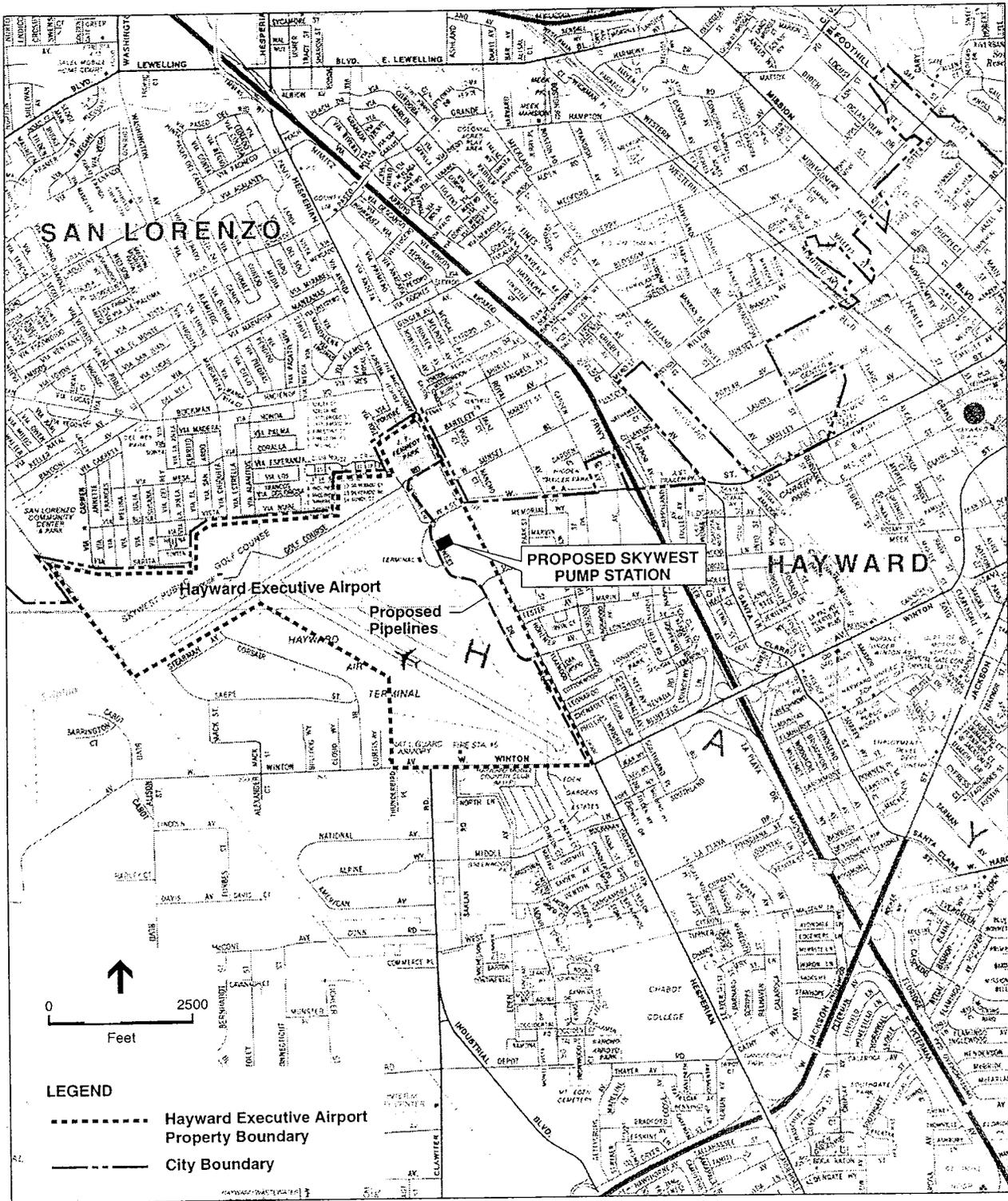
It is the intent of the agencies to make good faith efforts to supply water to the others in the event of an emergency without significantly impacting the supplying agency’s own customers. However, each agency has the sole right to determine whether it has sufficient water supplies available to provide water to the other agencies during an emergency.

This Initial Study/Mitigated Negative Declaration (IS/MND) was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), the State CEQA guidelines, and California Administrative Code, Title 14, Division, Chapter 3. This report is organized as follows: Section 1, Project Description, provides an introduction, background, needs and objectives, and discusses the proposed structures and appurtenant facilities. Section 2, Evaluation of Environmental Impacts, presents the CEQA Initial Study Environmental Checklist analyzing environmental impacts resulting from the project and describing the mitigation measures that would be incorporated into the project to avoid or reduce impacts to less-than-significant levels. Section 3, Summary of Mitigation Measures and Mitigation Monitoring and Reporting Program, presents a summary of mitigation measures and a mitigation monitoring program, which have been incorporated into the project.



SOURCE: City of Hayward

Figure 1
Project Location and
Overview of Proposed
Improvements



SOURCE: Environmental Science Associates

City of Hayward SFPUC-COH-EBMUD Intertie Project IS/MND / 202702 ■

Figure 2
Proposed Intertie Facilities & Improvements
Vicinity Map

The facilities described herein could also be used to connect the EBMUD and SFPUC systems in the event of a major system outage associated with planned repair of facilities. Any such activity will be subject to all necessary environmental review, including permitting.

1.2 BACKGROUND

Figure 1 shows the location of the three service areas that are within the project area. These include, from north to south, EBMUD, City of Hayward, and ACWD. Each agency operates and maintains its own network of water facilities. The SFPUC Hetch Hetchy Aqueducts pass through the ACWD service area. A discussion of each agency is provided below.

EAST BAY MUNICIPAL UTILITY DISTRICT

EBMUD is a publicly owned utility formed under the Municipal Utility District Act passed by the California Legislature in 1921, which permits formation of multipurpose government agencies to provide public services on a regional basis. EBMUD provides water service to 20 incorporated cities and 15 unincorporated areas in Alameda and Contra Costa Counties, which encompass a 325-square mile area and approximately 1.3 million people. The EBMUD service area extends from Crockett to San Lorenzo, and from the San Francisco Bay to Walnut Creek, including the San Ramon Valley. EBMUD also has two existing small intertie connections with the City of Hayward that could provide approximately 8 million gallons per day (mgd) of water between the two systems during an emergency.

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

The SFPUC is a subdivision of the City and County of San Francisco. It provides retail water to San Francisco, and wholesale water to 29 service providers in three other Bay Area counties. SFPUC provides water to 2.4 million people in San Francisco, Santa Clara, Alameda and San Mateo counties, including the City of Hayward and ACWD. The regional system includes a series of dams, pipelines and tunnels, which convey water from the Sierra Nevada Mountains westward to the San Francisco Bay Area. Water flowing west from the mountains is diverted at various points in the East Bay: 1) to the Sunol Valley Water Treatment Plant for treatment; 2) to Calaveras Reservoir for storage; 3) to Bay Division Pipelines (BDPL) 3 and 4, two parallel pipelines serving the South Bay; and 4) to BDPL No. 1 and No. 2, two parallel pipelines serving the City of Hayward, ACWD, and the peninsula. Water is treated at chlorination points near the City of Livermore prior to delivery to individual cities. The 60-inch BDPL No. 1 and 66-inch BDPL No. 2 pass through ACWD's service area within the southern portion of the proposed project area, and are connected to both City of Hayward and ACWD turnouts. Connection to the City of Hayward's pipeline facilities are shown on **Figure 1**, at the Newark and Mission Turnouts. ACWD is supplied water via four turnouts between the Mission and Newark turnouts. The dual aqueducts provide the only source of alternative conveyance during emergency events, in which one could be shut off while another is being repaired. There are no redundant delivery

mechanisms that could supply water during emergency events in this part of the system should both pipelines fail.

CITY OF HAYWARD

The City of Hayward Public Works Department is responsible for planning, constructing, and maintaining all public infrastructure facilities in Hayward, including operation of the City's water system. The City of Hayward obtains 100 percent of its water from SFPUC (average water delivery of approximately 18 mgd). The City of Hayward has emergency supply provided by five wells (approximately 15 mgd), and existing small emergency interties with EBMUD and ACWD, as described above.

ALAMEDA COUNTY WATER DISTRICT

ACWD was established in 1914 by the state legislature under the California County Water District Act. Originally, the District was created to protect the groundwater basin, conserve the waters of the Alameda Creek Watershed, and develop supplemental water supplies, primarily for agricultural use. In 1930, urban water distribution became an added function of the District. Today, the District provides drinking water to the more than 318,000 people living within a 101 square mile service area encompassing the cities of Fremont, Newark, and Union City. ACWD obtains its water from several sources, including SFPUC, State Water Project (SWP) deliveries via the South Bay Aqueduct (SBA), and from local surface and groundwater supplies. The average water delivery from SFPUC to ACWD is approximately 12.4 mgd (1997 data).

1.3 PROJECT OBJECTIVES AND NEED

In California, utility districts and water agencies have recognized the potential for major earthquake events and similar emergency events that could damage portions of local and regional systems. The primary and secondary effects of earthquakes could result in structural damage to water treatment, storage, and transmission facilities. When such damage occurs, water delivery may be halted indefinitely to local customers, until such time that facilities could be repaired. The lack of water to municipal, industrial, and agricultural users may have an adverse, long-term effect on the regional economy. As the possibility of an earthquake along the San Andreas, Hayward, and other nearby faults are probable within the next 30 years, utility districts and water agencies are investigating alternative water supplies or conveyance that would allow for sustained delivery to their customers in the event of such an emergency, until such time that the existing delivery systems are repaired. Other scenarios that may result in water supply shortages and interruptions would include a significant water quality event or repairs of critical water supply facilities that requires one of the utilities to shutdown a substantial portion of its system for a period of time. The possibility of any of these scenarios has resulted in further investigations of alternative emergency supply. Scenarios involving shutdown of facilities for planned repairs will be subject to all necessary environmental review, including permitting.

In September 2002, Carollo Engineers, in coordination with the City of Hayward, EBMUD, and SFPUC, conducted a feasibility study on the proposed Intertie Project. The study evaluated the viability of conveying treated water between the EBMUD and SFPUC systems using existing and proposed facilities in the City of Hayward in the event that a serious disruption in supply capacity occurs. The study evaluated six delivery scenarios (delivering from 20 to 40 mgd between agencies) to assess the water system's ability to operate under varying delivery volumes for an extended time period. The study found that there would be a significant increase in capital improvements requirements when the proposed intertie capacity is increased from 30 to 40 mgd. To maximize the use of the existing infrastructure and to meet the requirements of two-directional flow and overcoming the pressure differential between the various water systems, the study recommended an intertie pump station in the City of Hayward. In addition, the study recommended construction of approximately 1.5 miles of pipeline to connect the two water systems, and a series of valve replacements and minor improvements to the EBMUD and SFPUC systems.

On October 25, 2002, the City of Hayward, EBMUD, SFPUC, and ACWD signed a Memorandum of Agreement (MOA) to enter into the initial phase of the Intertie Project, which requires development of CEQA environmental documentation on the proposed intertie system. The MOA establishes cost sharing between the parties, and individual member's decision to participate in future phases of the project (including Design and Construction, and Operation and Maintenance) if the environmental review identifies a viable project.

The September 2002 feasibility study and October 2002 MOA specify the project purpose and need. The purpose of the Intertie Project is identified in the MOA "to provide mutual aid by supplying potable water to the Parties during emergencies or planned critical work." An emergency is defined as "1) an actual or imminent failure of facilities, such as major pipelines, treatment plants, or pumping plants; or 2) major disruptions in water supply caused by natural conditions, manmade disasters or temporary regulatory conditions." These emergency scenarios may include an earthquake, a significant water quality event such as a failure at a water treatment plant, or an event that may require repair of critical water supply facilities. Specific objectives of the project, which incorporate the individual agency's mission statements, include:

- Provide redundancy and reliability to the regional system in the event of an emergency;
- Provide a reliable, high quality water supply to customers during an emergency event;
- Reduce direct and indirect costs to customers associated with increased regional system redundancy and reliability;
- Plan, design, construct and operate intertie facilities efficiently, effectively and safely, bearing in mind the agencies' responsibility to be a good neighbor and a good steward of the environment; and

- Responsibly manage the resources by reducing impacts to the environment associated with construction and implementation of this project to the extent feasible.

As noted previously, it is the intent of the agencies to make good faith efforts to supply water to the others in the event of an emergency without significantly impacting the supplying agency's own customers. However, each agency has the sole right to determine whether it has sufficient water supplies available to provide water to the other agencies during an emergency.

1.4 CEQA COMPLIANCE

Per CEQA Guidelines Section 15367, the City of Hayward will act as Lead Agency for the proposed Intertie Project, as the City "has the principal responsibility for carrying out or approving a project" because it must approve siting and construction of the pump station and 1.5 miles of pipeline within City boundaries. EBMUD, SFPUC, and ACWD are Responsible Agencies per CEQA definitions, as they provide funding for the project, and would also have the responsibility for carrying out and approving the project.

The City of Hayward (lead agency), in association with SFPUC, EBMUD, and ACWD, has prepared this Mitigated Negative Declaration (MND) to provide the public, and Responsible and Trustee Agencies reviewing this project, with information about the potential effects, both beneficial and adverse, on the local and regional environment. This MND was prepared in compliance with Section 15070 of the California Environmental Quality Act (CEQA) Guidelines of 1970 (as amended), and California Administrative Code, Title 14, Division, Chapter 3. In accordance with Section 15070, a Mitigated Negative Declaration shall be prepared if the following criteria are met:

- There is no substantial evidence that the project may have a significant effect; or
- Where there may be a potentially significant effect, revisions to the project would avoid or mitigate the effects to a point where clearly no significant effects would occur.

In accordance with Section 15073 of the CEQA Guidelines, this document is being circulated to local, state and federal agencies and to interested organizations and individuals who may wish to review and comment on the report. Written comments may be forwarded to:

Henry Louie
City of Hayward
Department of Public Works
777 B Street, Hayward
CA 94541-5007

Supporting documentation is available for review during regular business hours at the Hayward Public Works Office, at the above address.

1.5 EXISTING AND PROPOSED FACILITIES

EXISTING FACILITIES AND OPERATION

The facilities of relevance to this project include portions of the City of Hayward's water system, SFPUC's BDPL Nos. 1 and 2, and portions of EBMUD's water system. As shown in **Figure 1**, the Hayward water system is situated between the EBMUD and SFPUC systems, thereby making it a preferable locale for the siting of the proposed facilities. The City of Hayward's water system consists of two major northwest / southeast trending transmission facilities that are connected to the BDPL Nos. 1 and 2.

During normal conditions, the City of Hayward receives approximately 18 mgd of treated water on average from SFPUC via its two turnouts (2001 data). ACWD received approximately 12.4 mgd of treated water from SFPUC (1997 data) via its four existing turnouts. EBMUD has its own source of water, and conveyance, treatment, and storage facilities. The average daily demand for EBMUD service area is about 220 mgd. The average daily demand for the southern portion of EBMUD's Central Pressure Zone is approximately 25 mgd.

PROJECT DESCRIPTION

The proposed project consists primarily of improvements within the City of Hayward (see **Figure 2**), with minor improvements to the EBMUD and SFPUC systems. No improvements are required for the ACWD system. **Table 1-1** summarizes improvements required as part of the proposed project. The discussion below provides detailed descriptions of the proposed project components. These improvements are shown in **Figure 1**.

**TABLE 1-1
PROPOSED INTERTIE PROJECT FACILITIES AND IMPROVEMENTS**

| Proposed Facility / Improvements | Location | Jurisdiction | Service Area | Responsible Agency |
|--|-------------------------------------|---|--------------|--------------------|
| Skywest Pump Station | Skywest Drive | Hayward Executive Airport Property within City of Hayward | Hayward | Hayward |
| Pipelines connecting Skywest Pump Station and EBMUD / Hayward systems (~1.5 miles) | Skywest Drive / Hesperian Boulevard | City of Hayward | Hayward | Hayward |

TABLE 1-1 (continued)
PROPOSED INTERTIE PROJECT FACILITIES AND IMPROVEMENTS

| Proposed Facility / Improvements | Location | Jurisdiction | Service Area | Responsible Agency |
|--|----------------------------|---|--------------|--------------------|
| Valve replacements along the City of Hayward's 33-inch and 42-inch Aqueducts | Various | Hayward, Newark, Fremont, and unincorporated Alameda County | Hayward | Hayward |
| Bypass installation at EBMUD Oak Rate Control Station | Oak Street, near Grove Way | Castro Valley (unincorporated Alameda County) | EBMUD | EBMUD |
| SFPUC's Newark Turnout Improvements | End of Hickory Street | City of Newark SFPUC (easement) | ACWD | SFPUC |

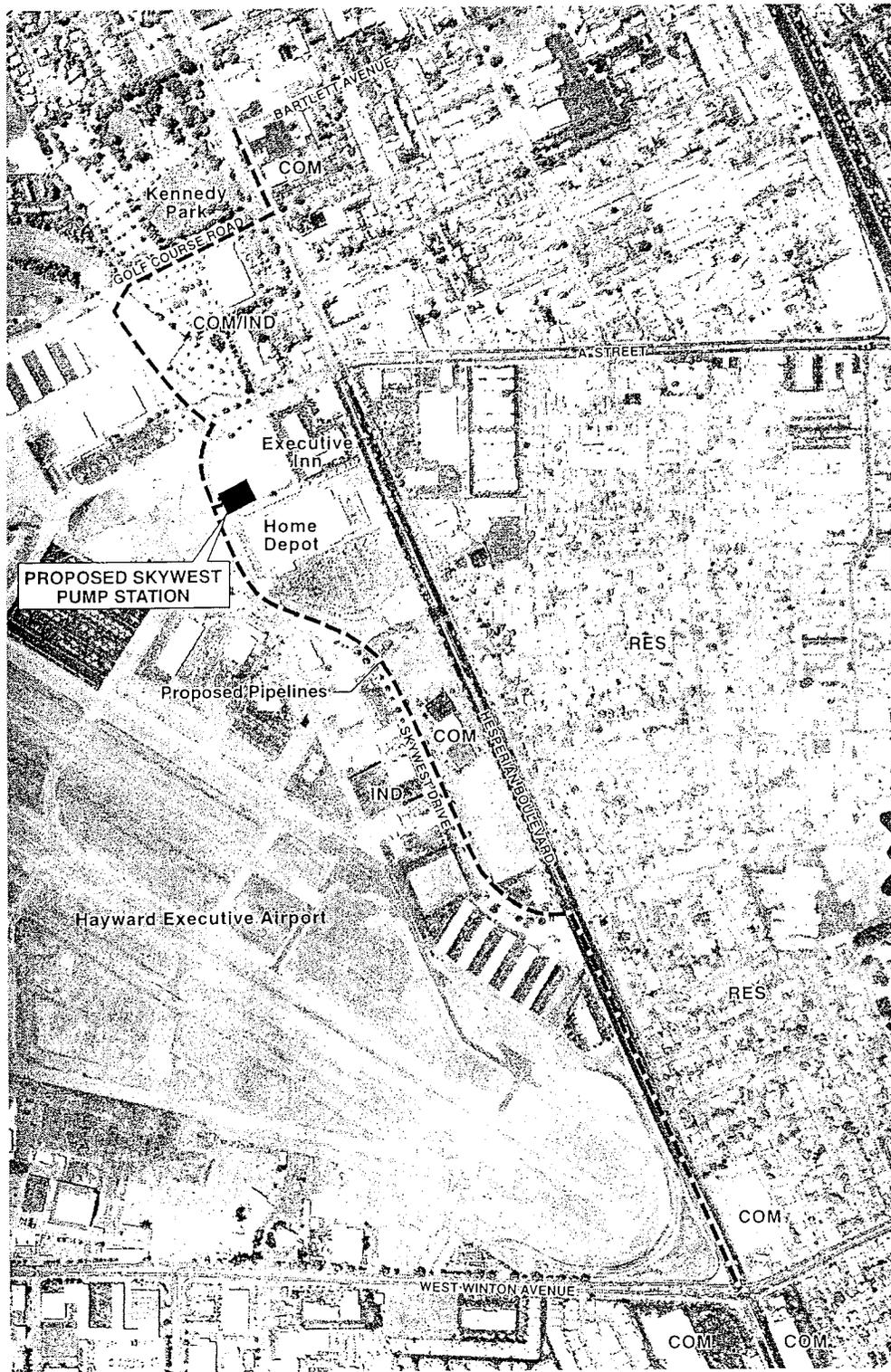
SKYWEST PUMP STATION

As shown in **Figure 1**, to take advantage of the proximity to the EBMUD and SFPUC water systems, the City of Hayward's existing infrastructure, as well as the hydraulic criteria, the proposed Skywest pump station would be located in the City of Hayward. The site is located on a parcel within the City of Hayward Executive Airport, owned and operated by the City of Hayward (see **Figure 2**). It is located off Skywest Drive, near the intersection of West A Street. **Figures 3 and 4** show land uses adjacent to the proposed facilities. The Skywest Pump Station would be located on the southwest corner of an existing undeveloped parcel, immediately north of an existing Home Depot and west of the existing La Quinta Inn. The City of Hayward will grant a lease to SFPUC and EBMUD for use of this property.

Figure 5 shows the conceptual layout of the pump station, which would consist of an approximately 100- by 40-foot structure made of masonry block material, with a maximum height of 18 feet. The building would include a pump room with up to five pumps and an emergency generator room for a diesel driven generator. The pumps would allow reverse pumping to facilitate bi-directional flows. An approximated eight-foot high, twelve-inch thick block wall would have a clearance of approximately 30 feet on all sides of the proposed structure. The fence would provide security and added noise attenuation. The clearance would allow sufficient space for driving, parking, or equipment staging during maintenance activities. Exterior lighting would be installed for security and nighttime maintenance. Landscaping would be planted outside of the block fencing fronting Skywest Drive.

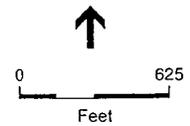
The proposed pumps would be exercised approximately once a week for several hours each time to ensure that facilities are in good working order. The generators would be exercised once a month. Testing of the pump and emergency generator would be confined to daytime hours when surrounding uses, including La Quinta Inn, would be less sensitive to noise.

During both start-up and shut-down of the intertie facilities, water in the system would be recycled back into the system or discharged from the pump station. The treated water would be



LEGEND

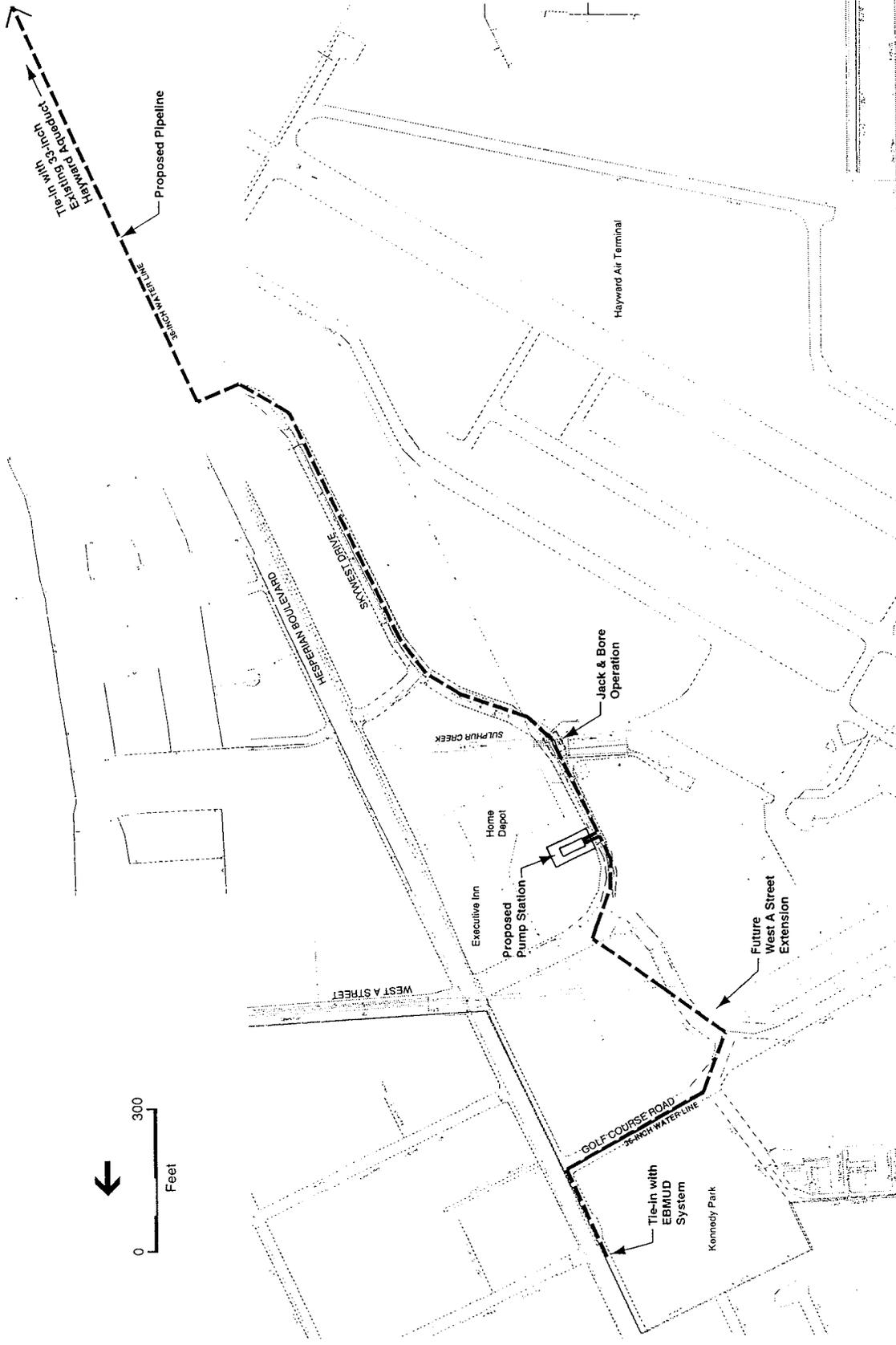
- RES Residential
- COM Commercial
- IND Industrial



SOURCE: Environmental Science Associates

City of Hayward SFPUC-COH-EBMUD Inertic Project IS/MND / 202702 ■

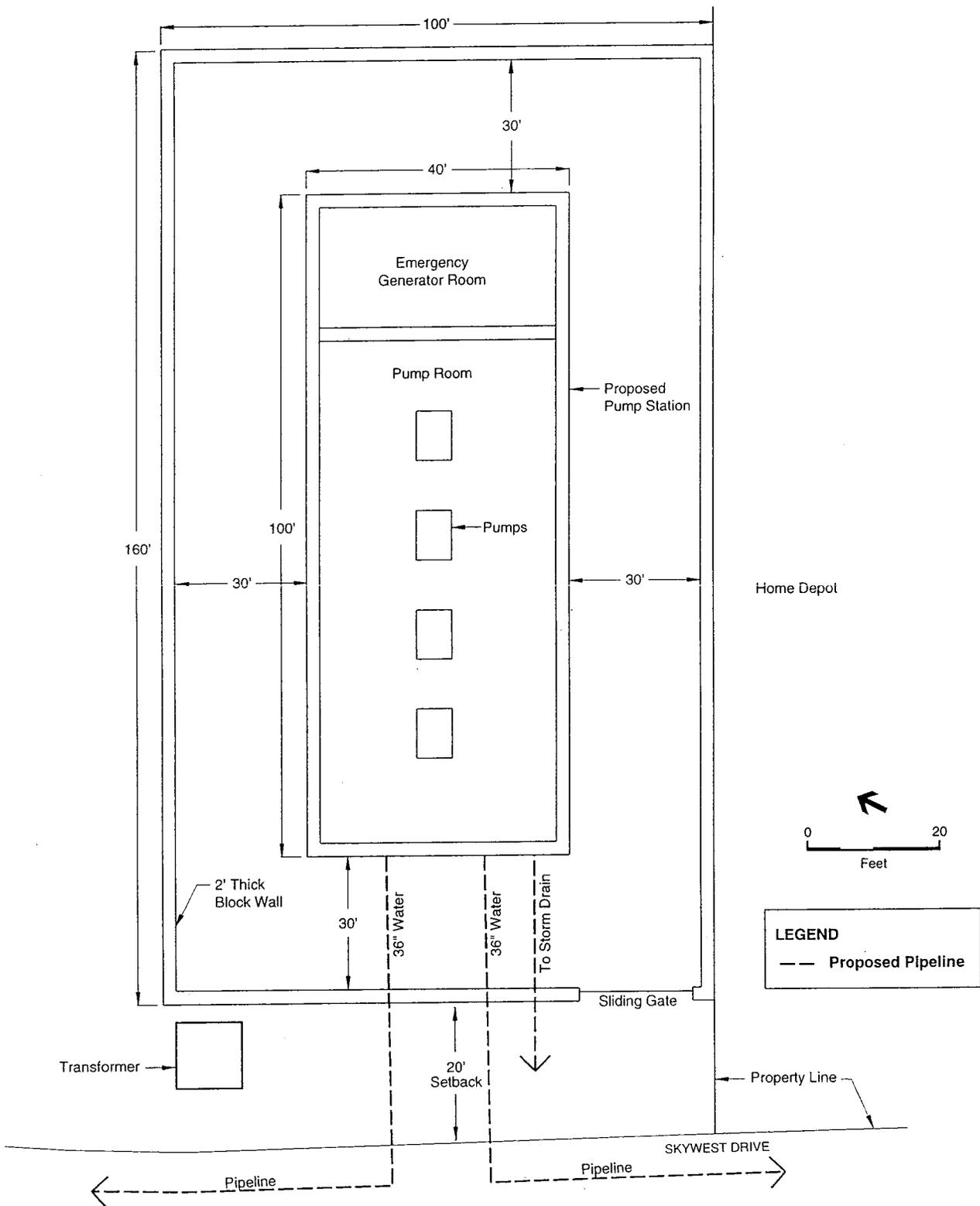
Figure 3
Proposed Skywest Pump Station,
Pipeline, and Surrounding Uses



City of Hayward SFPUC-COH-EBMUD Intertie Project IS/MND / 202702

Figure 4
Intertie System Layout

SOURCE: Environmental Science Associates



SOURCE: City of Hayward

City of Hayward SFPUC-COH-EBMUD Intertie Project IS/MND / 202702 ■

Figure 5
Skywest Pump Station Layout

reused to the extent feasible, otherwise it would be discharged into the existing sewer or storm drain system. If treated water is discharged to the storm drain system, dechlorination prior to discharge in accordance with American Water Works Association (AWWA) guidelines would occur. All planned discharges of dechlorinated water in the storm drain system or natural drainages would require authorization from the San Francisco Bay Regional Water Quality Control Board (RWQCB).

PIPELINES

The City proposes to build approximately 1.5 miles of new 36-inch welded, jointed steel pipeline to connect the proposed Skywest Pump Station to the existing tie-ins to the EBMUD and Hayward Transmission systems. **Table 1-2** describes the routing of the two pipeline segments. **Figures 2, 3 and 4** show the location of the pipeline segments relative to the proposed pump station, surface streets, and surrounding uses. The existing land uses in the project area (Skywest Drive) include industrial (airport-related facilities), and commercial uses (Home Depot and offices). John F. Kennedy Memorial Park is located off Golf Course Road and Hesperian Boulevard. Hesperian Boulevard consists of primarily commercial uses, including large retail stores and restaurants, as well as some residential uses.

**TABLE 1-2
PROPOSED PIPELINES**

| Pipeline | Location / Distance | Construction Technique | Length |
|--|---|---|---------------|
| Northern Segment from Skywest Pump Station to 42-inch EBMUD pipeline | Skywest Drive / Golf Course Road / Hesperian Boulevard (to Bartlett Avenue) | Open Trench | ~0.5 mile |
| Southern Segment from Skywest Pump Station to 33-inch Hayward Aqueduct | Skywest Drive / Hesperian Boulevard (to West Winton Avenue) | Open Trench Jack & Bore at Sulphur Creek | ~1 miles |

The northern pipeline route to the EBMUD system would follow Skywest Drive east on Golf Course Road, and north along Hesperian Boulevard to Bartlett Avenue, to connect to the existing 42-inch EBMUD pipeline. The northern segment of Skywest Drive, between West A Street and Golf Course Road, would be realigned in the future as part of the “West A Street Extension” Project by the City of Hayward (see **Figure 4**). The proposed pipeline would be located in the realigned new road in anticipation of the realignment.

The southern route would trend south and east on Skywest Drive to Hesperian Boulevard, where it would continue south to West Winton Avenue and connect to the existing 33-inch diameter Hesperian Aqueduct.

The pipelines would be open trenched, with the exception of the crossing of Sulphur Creek at Skywest Drive, which would require jack and bore technique (see **Figure 4** for the location). The pipeline alignment would be located in the northbound lane of Skywest Drive, the eastbound lane of Golf Course Road, and would be confined within the shoulder of the southbound lane on Hesperian Boulevard, with minor crossing of the northbound lane to connect to the EBMUD's existing 42-inch pipeline. Pipeline installation activities would require closure of one lane of traffic on all affected roads. Because of the high volume of traffic along Hesperian Boulevard, the City proposes to limit construction along this street during the off-peak traffic hours. The City evaluated the possibility of nighttime construction along Hesperian Boulevard to avoid potentially adverse impacts on traffic. However, in recognition of the resulting adverse noise impacts on the residences along approximately 1,400 feet of Hesperian Boulevard, the City decided to limit construction to the daytime off-peak traffic hours only.

BALL VALVE REPLACEMENT

The project includes replacing eight (8) undersized ball valves on the existing 33-inch Hesperian Aqueduct and 42-inch Newark - Hayward Aqueduct with new valves matching the existing pipe diameter of the aqueducts to meet design flows through the pipeline. These valves control water flow through the pipeline and allow for isolated pipeline repairs when valves are shut off. Four (4) 20-inch ball valves on the 33-inch Hesperian Aqueduct would be replaced with new valves to match the pipe diameter. Four (4) 30-inch valves on the 42-inch Newark - Hayward Aqueduct would be replaced with new valves to match the existing pipe diameter. **Table 1-3** describes the approximate location of each valve. These valves are situated primarily beneath roadways within the cities of Hayward, Newark, Fremont, and unincorporated Alameda County, as described in **Table 1-3** (see also **Figure 1**). A variety of uses are located in the vicinity of the valve sites, including residential, commercial, industrial, and open space uses.

**TABLE 1-3
PROPOSED BALL VALVE REPLACEMENT LOCATIONS**

| No. | Jurisdiction | Street Location | Specific Location |
|---------------------------|--------------|---|-------------------|
| <i>Hesperian Aqueduct</i> | | | |
| 1 | Hayward | Hesperian Blvd., at Wright Drive | Next to median |
| 4 | Hayward | Hesperian Blvd., 100' South of Cathy Wy | Next to median |
| 7 | Hayward | Hesperian Blvd., 450' south of Aldengate Wy | Middle lane |
| 10 | Hayward | Hesperian Blvd., 100' South of Arf Ave | Middle lane |

**TABLE 1-3 (continued)
PROPOSED BALL VALVE REPLACEMENT LOCATIONS**

| No. | Jurisdiction | Street Location | Specific Location |
|----------------------------------|-------------------------------|--|------------------------------------|
| <i>Newark - Hayward Aqueduct</i> | | | |
| K | Hayward | Industrial Pkwy W. and Hesperian Boulevard | Middle of intersection |
| I | Unincorporated Alameda County | Hesperian Blvd., 40' North of ACFCWD Line "A" Drainage Channel | Middle of the road |
| E | Fremont (SFPUC easement) | Union City Blvd., 100' north of Lowry Rd. | Next to dirt access road |
| A | Newark (SFPUC easement) | End of Hickory Street, at Hetch Hetchy Connection (Newark Turnout) | Within existing vault in open area |

REVERSE FLOW PIPING AT HESPERIAN PUMP STATION

To facilitate two-way flow through the current Hesperian Aqueduct and Newark - Hayward Aqueduct, the City of Hayward proposes the installation of reverse flow piping at the Hesperian Pump Station. Reverse flow piping consists of less than 50 feet of 42-inch piping. The installation would occur as part of the Hesperian Pump Station replacement, which is currently under design to increase the water pressure in the northeastern part of the City's service area. The excavation and disturbance area associated with the proposed pipe would be contained within the construction footprint of the Hesperian Pump Station improvements.

EBMUD IMPROVEMENTS

EBMUD proposes to install two 12- to 16-inch bypasses ("T-connection") to provide emergency pump connections at its existing Oak Rate Control Station (ORCS), located on Oak Street north of Grove Way in Castro Valley. The bypasses would be equipped with flexible connections to allow hookup with EBMUD's portable pumps. These pumps would have a capacity of three to six mgd, such that water could be pumped north of the ORCS as needed. Surrounding uses include single-family dwellings. The bypasses would be housed within buried concrete structures on the northeast and southwest sides of the existing buried rate control station. The ORCS is currently situated in the shoulder of the road, and there would be sufficient room for a portable pump (mounted to a trailer) to park along side the T-connections for hook-up without disruption to traffic. Due to the surrounding residential uses, operation of diesel pumps would increase ambient noise levels. Therefore, during operation of the diesel pumps, temporary noise barriers would be installed around the pumps or pumps with noise-reduction enclosures would be used to reduce noise levels.

SFPUC IMPROVEMENTS

SFPUC proposes bypass piping and valves at the Newark Turnout to facilitate flows coming from EBMUD to SFPUC. The existing site consists of small, separate SFPUC and City of Hayward vaults containing meters and valves. These facilities are located generally in an undeveloped area south of Union Sanitary District's sewage treatment plant and west of the Ohlone Wildlife Rehabilitation Center. A railroad corridor traverses south of the site. **Figure 6** shows the site layout with the existing and proposed facilities.

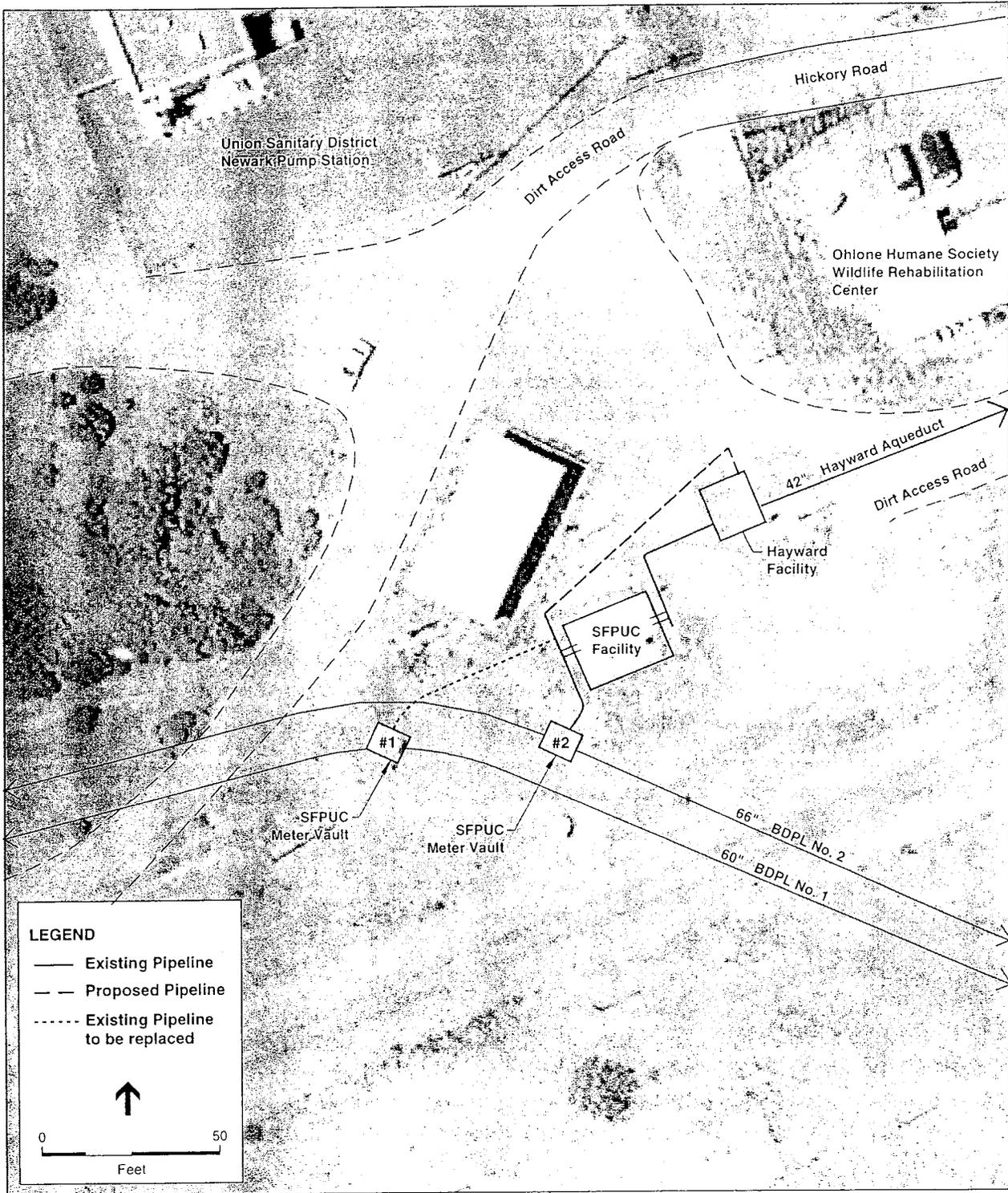
Proposed improvements include installation of up to 75 feet of 42-inch mortar-coated steel pipe, and replacement of up to 30 feet of an existing 20-inch welded steel pipe with a 24-inch mortar-coated and lined steel pipe. In addition, SFPUC proposes to install new valves and a flow meter. The additional piping is necessary to receive flows from north to south (EBMUD to SFPUC), in the opposite direction of its existing flow regime. Installation of this piping would minimize the work involved in conversion of the existing facilities at the turnout to accommodate reverse flow operation. The valves and meter would be housed in a concrete vault with dimensions of up to 20- by 12- by 6-feet (length, width, and depth), depending on the equipment selected and the clearance requirements by maintenance staff. The majority of the vault would be located below-ground, with approximately one foot of the structure located aboveground to prevent traffic from running over the vault. All improvements would be located within SFPUC's existing easements.

OPERATION

The project proposes delivery of up to 30 mgd of treated water between the two major water suppliers (EBMUD and SFPUC). The intertie system would be equipped with pumps and reverse flow piping such that water can be moved in both directions. One of three scenarios may result in the use of the intertie system:

- During an emergency event in which the EBMUD system is partially or entirely disabled, either from an earthquake, water quality event, or during major repairs requiring pipeline outages; or
- During an emergency event in which the SFPUC system is partially or entirely disabled, either from an earthquake, water quality event, or during major repairs requiring pipeline outages; or
- During an emergency event in which the Hayward Aqueduct is partially or entirely disabled, either from an earthquake, water quality event, or during major repairs requiring pipeline outages.

Any such activity associated with planned outages as described above will be subject to all necessary environmental review, including permitting.



SOURCE: SFPUC City of Hayward SFPUC-COH-EBMUD Interline Project IS/MND / 202702 ■

Figure 6
SFPUC Improvements
at Newark Turnout

Depending on the nature of the system outage (e.g., planned outage for pipeline repair versus unplanned outage resulting from an earthquake), deliveries may vary in duration. Water supply deliveries would be conveyed via the proposed and existing facilities, including EBMUD's existing 42-inch pipeline, the proposed 36-inch pipeline, the proposed Skywest Pump Station, the City of Hayward's Hesperian Pump Station (currently in design), existing Decoto Pump Station, Hesperian Aqueduct, Newark - Hayward Aqueduct, and BDPL No. 1 and 2. Water delivery to SFPUC customers south of Hayward may require reverse flow in the BDPL Nos. 1 and 2. Reverse flow in the BDPL is possible as pumping in the Skywest pump station and Hesperian Pump Station would create enough pressure for water to flow east once it enters the Hetch Hetchy aqueducts.

Table 1-4 shows the three delivery scenarios between the water suppliers under both the planned maintenance and an emergency event. During a maintenance or emergency event within the EBMUD service area, 30 mgd of treated water could be delivered from the SFPUC system to EBMUD.

**TABLE 1-4
DELIVERY SCENARIOS AND WATER ALLOCATION ^a**

| Delivery Scenario | Planned Maintenance | Emergency |
|-------------------|---------------------|-----------|
| SFPUC to EBMUD | 30 mgd | 30 mgd |
| EBMUD to SFPUC | 30 mgd | 30 mgd |
| EBMUD to COH | 15 mgd | 15 mgd |

^a Actual delivered supply would depend on the demand and water availability during the time of repairs.

During a maintenance or emergency event within the SFPUC service area, 30 mgd of treated water could be delivered from the EBMUD system to the SFPUC system. Depending on whether the shutdown is for planned maintenance or emergency, the allocation of the 30 mgd to SFPUC customers would vary.

Under an emergency event in which SFPUC cannot deliver water to the City of Hayward, EBMUD could provide 15 mgd of treated water to the City.

Implementation of the Intertie system during either an emergency or planned outage event would likely result in mandatory short-term demand management measures in the affected agencies, as the amount of water provided to each party would likely be less than actual demand under normal circumstances. All agencies have existing conservation measures that are implemented during water shortages. In the event of an emergency in which the intertie is used to send water from EBMUD to Hayward and/or SFPUC, EBMUD anticipates relying on its local water rights to support the provision of that emergency water, while SFPUC would rely on its water rights to support the provision of water to EBMUD. In the event of an outage due to planned critical

work, to the extent there are water rights issues, it is anticipated that those issues will be addressed as part of the project specific environmental documentation.

As the City of Hayward's existing infrastructure would be an integral part of the Intertie system, it was critical to ensure that the proposed system would not adversely affect the City's existing facilities or operation. The capacity of the Intertie system was designed to meet the City of Hayward's existing operations requirement. Under the three emergency delivery scenarios, the 15 mgd (average wintertime demand) provided to the City of Hayward by SFPUC would not allow refill of the City of Hayward's reservoir. To maintain enough pressure (40 psi) for fire fighting, the reservoir must have sufficient water. Therefore, subsequent to the emergency events, flows must be adjusted to refill the reservoir to maintain reliability of the City of Hayward's water system. As part of the Intertie Project, the collaborating agencies would prepare an operational plan that facilitates making maximum use of the intertie taking into consideration use of existing facilities and refilling the City's reservoirs when necessary. In addition, the parties would prepare an operational plan that addresses water quality issues associated with reversing flows.

CONSTRUCTION

SKYWEST PUMP STATION

Construction of the proposed pump station would involve grading, excavation, structural erection, and back filling. The existing parcel consists of a concrete slab, which would be removed prior to excavation. The foundation would be excavated (and shored) to a depth of approximately seven feet, followed by construction of the facility. Staging would occur in the adjacent empty lot next to the proposed site. All trench spoil would be loaded directly into dump trucks or stockpiled in the empty lot until it could be loaded directly into dump trucks, and hauled away for disposal per requirements of the City of Hayward. Alternatively, the spoil would be reused per requirements of the City of Hayward. Access to the project site would be from Skywest Drive. Construction of the pump station would last up to approximately 14 months.

PIPELINE INSTALLATION

Open Trench Construction

The entire pipeline alignment, with the exception of the crossing at Sulphur Creek, would be constructed using open-cut trenching. The trench would average six feet wide and eight feet deep. Trenches would be braced using a trench box or shoring. All soil removed from trenches would be loaded directly into dump trucks and hauled away for disposal or reuse per requirements of the City of Hayward. Most of the backfill material would be imported and stockpiled near the open trench. Once filled and compacted, the area would be resurfaced using either asphalt or concrete to match the surrounding material. A temporary patch would be used

until final repaving occurs, between two to six weeks after pipeline installation is complete within a given street segment.

The active work area along the open trench would be about 5 feet on one side of the trench and 10 to 12 feet on the other side for access by trucks and loaders, resulting in a construction easement width of approximately 25 feet. The pace of work is estimated at 100 feet per day per crew along the entire route, and the overall active work zone on any given work day would average 300 to 600 feet in length. Staging areas would occur at various locations along the construction routes for storage of pipe, but would primarily be located in the empty parcel next to the proposed Skywest Pump Station.

Jack and Bore Construction

Special construction methods would be needed to cross beneath Sulphur Creek. This method would involve use of a horizontal boring machine or auger to drill a hole, and a hydraulic jack to push a casing through the hole under the crossing. As the boring proceeds, a steel casing pipe is jacked into the hole using a large hydraulic jack in a pit located at one end of the crossing; the pipeline is then installed in the casing. The jacking pit is excavated (and shored) with typical dimensions of 12 to 15 feet wide, 30 to 35 feet long, and 10 to 12 feet deep. Shoring, appropriate to the pit depth, would be used to secure the walls. An additional area of 2,000 square feet would be needed around the pit for temporary storage of pipe sections and for loading material removed from the bore. The receiving pit at the other end of the bore is smaller, encompassing approximately 1,000 square feet for the pit and staging.

BALL VALVE REPLACEMENTS

Replacement of each valve would involve excavation of an area of approximately 8- by 8-feet, to a depth of 8 feet. The disturbance area would extend beyond the excavation area for equipment staging and material storage. Construction activities would involve excavation and shoring, drainage of aqueducts, removal of existing valves, and installation of new valves. Construction activities would last approximately two days per site, and would require lane closures where valves are located beneath roadways. At Ball Valve K, more than one lane of traffic may be closed as this site is located in the middle of the Hesperian Boulevard and Industrial Boulevard intersection. Traffic control would be implemented at all road locations to minimize traffic hazard and ensure vehicular and worker safety. At Ball Valve A near the Newark Turnout, the existing vault box containing the 30-inch valve may be reconstructed depending on whether additional clearance is required.

Construction activities for the ball valves would occur during the winter, when the water demand is low and an outage of the pipeline could occur without interruption to water service. The 33-inch Hesperian Aqueduct and 42-inch Newark - Hayward Aqueduct would be drained prior to construction activities. Treated water would be discharged to nearby sewer system or

dechlorinated prior to discharge to nearby storm drains or natural drainages. Dechlorination would be in accordance with standard O&M practices, as well as per AWWA Guidelines. In addition, the City of Hayward would obtain authorizations from the RWQCB and affected jurisdictions in advance of discharge to storm drains or natural drainages. Appropriate erosion and sediment control devices would be used at discharge points as necessary to prevent sedimentation into nearby drainages and storm drains.

EBMUD IMPROVEMENTS

Installation of the bypasses would require an excavation area of approximately 6- by 6 feet, to a depth of approximately 6 feet at each end of the ORCS. The disturbance area would extend beyond the excavation area for equipment staging and material storage. Construction would last approximately three to six weeks, for excavation of the existing 24-inch diameter pipeline, welding the new prefabricated connections to the existing pipeline, and construction of a buried concrete box around each connection. A segment of the existing 24-inch diameter pipeline would be drained to facilitate construction activities at the ORCS. EBMUD would dechlorinate the treated water prior to discharge into nearby storm drains in accordance with standard O&M practices and in accordance with AWWA guidelines. In addition, EBMUD would obtain authorizations from the RWQCB and Alameda County prior to discharge of dechlorinated water into storm drains or natural drainages. Construction would require closure of one lane of traffic, but one through lane would be maintained. Appropriate erosion and sediment control devices would be used at discharge points as necessary to prevent sedimentation into nearby drainages and storm drains.

SFPUC IMPROVEMENTS

Pipeline installation and replacement would require open-cut trenching technique. Construction of the vault box containing valves and meters would require excavation and shoring, to approximate dimensions of 20- by 12-feet, and 6 feet deep. A small area southwest of the work zone considered to have potential wetland characteristics would be fenced and isolated prior to construction activities. Staging would be accommodated on site. Construction activities would last several days, and would require at least one day of pipeline outage for tie-in to the new facility. As part of the shut-down, treated water would be dechlorinated and discharged. Dechlorination of the pipeline would be conducted in accordance with existing O&M procedures, as outlined in SFPUC's *Disinfection /Dechlorination Standard Operating Procedures, Version 0700* and would require notification of the RWQCB and the City of Newark. Appropriate erosion and sediment control devices would be used at discharge points as necessary to prevent sedimentation into nearby drainages and storm drains.

CONSTRUCTION CREW AND EQUIPMENT

The typical crew size would be 10 to 12 people, plus inspectors, but would depend on the actual work involved. Several crews may be working simultaneously on any part of the project.

Typical construction equipment would include: pavement saws/jack hammers, excavators, backhoes, ten-wheel dump trucks, front-end loaders, forklifts, flatbed delivery trucks, paving equipment (asphalt and/or concrete trucks, rollers), and vibratory compactors.

1.6 SCHEDULE

Construction of the facilities is expected to start as early as in fall 2003. Construction is expected to last up to approximately 14 months, and would occur generally Monday through Fridays, from 7:30 a.m. to 4:30 p.m., with the exception of Hesperian Boulevard. Construction along Hesperian Boulevard would be limited to off-peak traffic hours, from 9:00 a.m. to 5:30 p.m. in the south bound lane, and 9:00 a.m. to 3:00 p.m. in the northbound lane. Tie-ins to the existing transmission facilities would occur during weekend daytime hours.

1.7 AUTHORIZATION, APPROVAL, OR PERMIT REQUIREMENTS

The following authorizations, approval, or permits are required for implementation of this project:

- Authorization from RWQCB, the City and/or County for discharge of dechlorinated water to nearby creeks or storm drains for planned maintenance activities. Water would be dechlorinate per AWWA guidelines and regulatory limits.
- Encroachment permits from Alameda County and the cities of Hayward, Newark and Fremont for construction within public rights-of-way.
- Permit for emergency, diesel generators from Bay Area Air Quality Management District (BAAQMD) and City of Hayward Fire Department.
- Bay Conservation and Development Commission (BCDC) permits are not required as the proposed project sites are not within BCDC jurisdiction.

REFERENCES

EBMUD, *SFPUC/EBMUD Intertie Feasibility Study*, September 12, 2002.

Memorandum of Agreement Between City and County of San Francisco Public Utilities Commission, East Bay Municipal Utility District, City of Hayward, and Alameda County Water District – to Pursue CEQA Documentation for an Emergency / Maintenance Water System Intertie Project, October 19, 2002.

Lau, Bob, EBMUD Project Engineer, personal communication, November 2002.

Patel, Suresh, SFPUC Project Manager, personal communication, November 2002.

SECTION 2.0

EVALUATION OF ENVIRONMENTAL IMPACTS

1. **Project Title:** SFPUC – COH – EBMUD Water System Emergency Intertie Project
2. **Lead Agency Name and Address:** City of Hayward
Department of Public Works
777 B Street
Hayward, CA 94541-5007
3. **Contact Person and Phone Number:** Henry Louie, P.E.
Project Manager
(510) 583-4715
4. **Project Location:** All components within County of Alameda. Locations of specific elements are listed below:
 - Skywest Pump Station – Skywest Drive (City of Hayward)
 - Pipelines – Skywest Dr. / Golf Course Road / Hesperian Boulevard (City of Hayward)
 - Ball Valve Replacement – Various, in Hayward, Newark, and Fremont
 - EBMUD Improvements – Castro Valley
 - SFPUC Improvements - Newark
5. **Project Sponsor’s Name and Address:** See No. 2., Lead Agency, above.
6. **General Plan Designation:** Commercial (Hayward Executive Airport Master Plan); the City of Hayward General Plan identifies the western and southern Hayward as an Industrial Corridor (2002c)
7. **Zoning:** AT-C (Air Terminal Commercial)
8. **Description of Project:** See Section 1.0, Project Description
9. **Surrounding Land Uses and Setting.** Commercial / Industrial; Hayward Executive Airport and facilities to west; Home Depot to south; La Quinta Inn to east; Vagabond Inn to north.
10. **Other public agencies whose approval is required:**
 - Authorization from RWQCB, the City and/or County for discharge of dechlorinated water to nearby creeks or storm drain for planned maintenance activities. Water would be dechlorinated per AWWA guidelines and regulatory limits.
 - Encroachment permits from Alameda County, City of Hayward, Newark, and Fremont for construction within public rights-of-way.
 - Permit for emergency diesel generators with engines greater than 50 horsepower from BAAQMD.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Incorporation of mitigation measures identified in this document would reduce all impacts to a less than significant level.

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology / Soils |
| <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning |
| <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing |
| <input type="checkbox"/> Public Services | <input checked="" type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation / Traffic |
| <input type="checkbox"/> Utilities / Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance | |

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

For

POTENTIAL ENVIRONMENTAL IMPACTS:

| Issues (and Supporting Information Sources): | <u>Potentially Significant Impact</u> | <u>Less Than Significant With Mitigation Incorporation</u> | <u>Less Than Significant Impact</u> | <u>No Impact</u> |
|--|---|--|---|-------------------------------------|
| I. AESTHETICS -- Would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

a,b) Skywest Pump Station: The proposed project includes installation of an approximate 100- by 40-foot pump station structure with a maximum height of 18 feet. The Skywest Pump Station would be built of masonry wall and surrounded on all sides by a eight-foot high, twelve-inch thick block wall of the same material. The pump station would be located on the southwest corner of an undeveloped parcel within the City of Hayward's Executive Airport property, off Skywest Drive. Nearby streets include West A Street and Hesperian Boulevard. The Skywest Pump Station would be along an existing commercial / industrial corridor, with Home Depot to the south, motels to the west and north, and airport facilities (control tower, hangars) to the west. The proposed pump station would be designed in accordance with the City's Design Guidelines (adopted November 9, 1993) for industrial uses, and would therefore visually integrate with the architectural appearance of the surrounding commercial / industrial uses. As the proposed site is located within a industrial corridor fronting the Hayward Executive Airport, there are no scenic vistas or scenic resources (i.e., scenic highway) in the vicinity.

As discussed in the Project Description, the City would provide landscaping in front of the Skywest Pump Station along Skywest Drive. Landscaping would be planted in accordance with the City's Design Guidelines, and would soften the industrial appearance of the pump station. The presence of the Skywest Pump Station would not alter substantially the industrial / commercial appearance of the surrounding area. The proposed project would not have an adverse effect on scenic vistas or scenic resources, nor degrade the existing visual character of the surrounding area.

Ball Valve Replacements and EBMUD Improvements: Proposed ball valve replacements and EBMUD improvements would not have any long-term visual impacts as all the improvements would be buried underground.

SFPUC Improvements: Proposed SFPUC improvements would consist of underground pipelines and a vault box containing valves and meters. The proposed vault would be primarily buried

underground, with approximately one foot of the box daylighted. The proposed vault would also be fenced to provide security. The proposed site is located around similarly fenced areas containing vault and metering boxes, including SFPUC's SCADA system, vaults containing access to BDPL Nos. 1 and 2, and the City of Hayward's access vault to Ball Valve A. Within the vicinity, Union Sanitary District's sewage treatment plant, the Ohlone Humane Society Wildlife Rehabilitation Center, and the railroad tracks are visible from the proposed site. The proposed SFPUC improvements would be consistent with surrounding industrial facilities, and therefore would not result in degradation to the surrounding visual environment. As there are no scenic vistas or scenic resources in the vicinity of the project site, no impacts to these resources would occur.

- c) All Components: Please refer to Item (a), above, for a discussion of the individual project component's effect on the surrounding visual quality. Operation of the proposed project would not result in degradation to the existing visual character or quality of the surrounding environment.

Construction activities would have a temporary, adverse effect on the visual quality of the project sites' surrounding land uses. Proposed improvements would be located along or in the middle of roadways, and would be visible from surrounding commercial, industrial, and residential areas. However, as all the improvements are located on flat terrain, views of the construction sites would be limited to adjacent areas only. Due to the limited duration of construction activities and the agencies' commitment to restore disturbed areas (see **Measure AES-1**), potential impacts would be reduced to a less-than-significant level. Restoration of the project site to its pre-construction condition would reduce the potential for short-term construction impacts to become long-term visual impacts.

- d) Skywest Pump Station: The project proposes outdoor lighting at the Skywest pump station for security and night maintenance purposes. Long-term light and glare may be generated by new lighting. The contribution of light and glare would be reduced by the orientation of the light downwards (see **Measure AES-2**) and the intervening landscaping that would be planted along Skywest Drive as part of the proposed project. Therefore, the project would not create a new source of light or glare that would adversely affect day or nighttime views in the area.

All Other Components: The project does not propose outdoor lighting for the pipeline or other components. As construction would occur during the daytime, light and glare impacts would not result.

Mitigation Measures

Measure AES-1 This measure applies to all project components. The City of Hayward or its contractors shall restore disturbed areas to their pre-project conditions, such that short-term construction disturbance does not result in long-term visual impacts.

Measure AES-2: This measure applies to the Skywest Pump Station. The City, or its contractors, shall ensure that all permanent exterior lighting at the Skywest Pump Station is directed downward and oriented away from sensitive uses to ensure that diffuse light does not affect surrounding land uses.

Implementation of these measures would reduce potential impacts to the visual environment to a less-than significant level.

| Issues (and Supporting Information Sources): | <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|---|---|--|---|-------------------------------------|
| II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project: | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

a,b,c) All Components: The proposed project sites are located in urban settings surrounded by either industrial, commercial, and / or residential uses. There are no agricultural resources located on any of the project sites; therefore, no effect on agricultural resources would occur.

| Issues (and Supporting Information Sources): | <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|---|---|--|---|-------------------------------------|
| III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

a,b,c) All Components: The proposed project is located within the San Francisco Bay Area Air Basin. The entire Bay Area is designated as “nonattainment” for the state standards for ozone and PM-10. The basin is designated “nonattainment” for the federal ozone standard and as a “maintenance” area relative to the national 8-hour-average carbon monoxide standard. As a result of the “non-attainment” status, air quality plans have been adopted.

The proposed project would not conflict with or obstruct the implementation of the applicable air quality plans because operational air emissions would be met through compliance with acquisition and implementation of air-quality permits (see discussion below) and construction-phase emissions are accounted for in the Bay Area Air Quality Management District’s (BAAQMD’s) emission inventory. This inventory is the basis for regional air quality plans. Thus, construction-related emissions are not expected to impede attainment or maintenance of ozone or carbon monoxide standards in the Bay Area.

Skywest Pump Station: Direct air emissions generated by the proposed project would be associated with the operation of the proposed emergency diesel-powered generator at the Skywest Pump Station. The proposed generator would be used only during an emergency event or during monthly maintenance as described in the Section 1.0, Project Description. Operation of the proposed

generator would require permits from BAAQMD, including an Authority to Construct permit which sets the operational parameters and emissions standards for the emergency generator (see **Measure AQ-1**). A Permit to Operate is granted if after testing, the engine achieves the standards outlined in the Authority to Construct permit. The permit review process would ensure that all air emissions associated with the facility would comply with applicable BAAQMD standards. Best Available Control Technology (BACT) would be required as part of the Authority to Construct permit, and would include, but is not limited to, the following: constraints on the use of the generator, implementation of BAAQMD approved sources tests to verify compliance with emissions standards, and preparation of monthly reporting materials to be made available to BAAQMD upon request. BAAQMD Guidelines state that "sources of air pollutant emissions complying with all applicable District regulations generally will not be considered to have a significant air quality impact"(BAAQMD, 1999).

EBMUD Improvements: The operation of the proposed bypasses at EBMUD's ORCS would require use of a diesel-powered portable pump. EBMUD currently owns portable pumps that can be trucked to work sites during an emergency. This option would be implemented under the SFPUC to EBMUD emergency water delivery scenario, when water is required in the area north of the ORCS. EBMUD has obtained permits from BAAQMD for operations of these pumps. Therefore, operation of the pumps would not result in emissions violations or associated air quality impacts.

- d) All Components: Residential areas are considered to be sensitive to air pollutants where residents such as children and the elderly tend to be at home for extended periods of time, resulting in sustained exposure to pollutants present. There are no sensitive receptors such as residences adjacent to the Skywest Pump Station and the SFPUC improvements. However, for the pipeline component, ball valve replacements and EBMUD improvements, the closest residence would be located approximately 50 to 100 feet from the project sites. Project construction would result in a temporary increase in air pollutant emissions such as dust. The main sources would be particulate matter (including PM-10) from earthmoving operations, and other criteria air pollutants, primarily from excavation activities and operation of heavy equipment. Construction dust could impact sensitive receptors at these residences; however, due to the temporary nature of construction activities, impacts would be reduced to a less-than-significant level with the implementation of dust control measures (see **Measure AQ-2**). Measures include, but are not limited to, watering and sweeping the active construction areas.
- e) All Components: No objectionable odors would be expected to result from the construction or operation of the emergency intertie system; only treated drinking water would be delivered.

Mitigation Measures

Measure AQ-1: This measure applies to the Skywest Pump Station. The City shall acquire relevant permits from the BAAQMD associated with the use of a diesel-powered generator. Compliance with the permit conditions (including implementation of Best Available Control Technology (BACT)) would ensure that pollutants emitted from operation of the generator would meet emissions standards and thus would reduce potential air quality impacts to less-than-significant levels. Examples of these conditions include, but are not limited to: constraints

on the use of the generator, implementation of BAAQMD approved sources tests to verify compliance with emissions standards, and preparation of monthly reporting materials to be made available to BAAQMD upon request.

Measure AQ-2: The list of measures below is recommended by BAAQMD as feasible control measures to reduce construction dust emissions. The construction contractor shall implement dust control, which includes but are not limited to, the following elements:

- Water all active construction areas daily;
- Discontinue construction grading activity in wind conditions that cause excessive neighborhood dust problems;
- Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer) in accordance with Section 23114 of the California Vehicle Code during transit to and from the site;
- Pave, apply water or (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites;
- Sweep daily (preferably with water sweepers) all paved access roads, parking areas and staging areas at construction sites;
- Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets; and
- Designate a person or persons to oversee the implementation of a comprehensive dust control program and to increase watering, as necessary.

Implementation of these mitigation measures would reduce impacts associated with air quality to less-than-significant levels.

Issues (and Supporting Information Sources):

| | | | |
|---|--|---|----------------------|
| <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|---|--|---|----------------------|

IV. BIOLOGICAL RESOURCES -- Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a) Skywest Pump Station and Proposed Pipeline: The Hayward Executive Airport Master Plan, Final Environmental Assessment / Environmental Impact Report (EA / EIR) identified and evaluated biological resources, including Special Status Species, that occur within the Airport property. As the proposed Skywest Pump Station and pipelines are located within this property, the information presented in the Final EA / EIR is relevant. The Final EA / EIR was compiled from a variety of sources, including 1) a list of biological resources provided by the USFWS for the Hayward and San Leandro USGS 7.5 minute quadrangles; 2) the California Natural Diversity Data Base (CNDDDB) for these quadrangles; 3) a previous biological reconnaissance of the airport

vicinity (City of Hayward, 2002a); and 4) a general wildlife survey conducted at the Airport on June 2, 2000 by staff of Environmental Science Associates.

Animal Species: The proposed pump station is located less than 300 feet west of Sulphur Creek. The pipeline would be installed under Sulphur Creek using jack and bore construction technique. The Final EA / EIR determined that special-status animal species potentially occurring in the wetland area of Sulphur Creek include one threatened species, the California red legged frog (*Rana aurora draytonii*), and two species of special concern, the California tiger salamander (*Ambystoma californiense*) and the burrowing owl (*Athene cunicularia*) (City of Hayward, 2002a). Sulphur Creek provides a small amount of potential habitat for red-legged frogs and marginal habitat for California tiger salamanders. Burrowing owls are present on the grassland portions of the Airport (Hayward, 2002a). A number of other special status animal species were listed by the CNDDDB for the Airport area. These include species associated with wetlands, grasslands, and riparian habitat, as well as bats, fish, birds, and invertebrates.

The Final EA / EIR indicated that suitable habitat for CRLF and CTS includes areas consisting of permanent water, extensive emergent vegetation, and areas of grasslands containing ponds. The proposed Skywest Pump Station would be located within disturbed, mostly paved areas away from Sulphur Creek; therefore, special status species would not occur at this site. The proposed pipeline would be confined within paved roadways, and would cross Sulphur Creek via jack and bore technique, thereby avoiding any direct impacts to riparian habitat. It is unlikely that CRLF and CTS would be present along the pipeline corridor due to the absence of permanent water, vegetation and grassland habitats; therefore, potential impacts to CRLF and CTS for this component would be considered less than significant.

Flat, open lands characterized by low-growing vegetation and limited tree cover is considered suitable habitat for the burrowing owl. Burrowing owls have been seen at the Airport, generally during breeding season, although they are not present every year (City of Hayward, 2002a). A daytime survey for the burrowing owl at the adjacent Home Depot site in June 1997 did not result in any evidence of owls or their burrows (City of Hayward, 1999). It is unlikely that burrowing owls would be present at the Skywest Pump Station site due to the presence of the concrete slab and because the remaining site area was recently graded, which have completely cleared the area of vegetation. The proposed pipeline would be located entirely within the paved road. Potential impacts to burrowing owls are considered less than significant for both components.

Plant Species: The Final EA / EIR indicated that the CNDDDB listed nine special status species found within the quads containing the Airport. However, no special status plant species are expected to occur on Airport property as required habitat was not found there, due to past and ongoing habitat modifications and disturbance. As discussed above, the Skywest Pump Station and proposed pipeline are located within paved or recently graded areas that are devoid of vegetation. Therefore, special status plant species would not occur at the project site.

Ball Valve Replacements and EBMUD Improvements: Proposed ball valve replacements and EBMUD improvements would be confined within the middle of roadways in urban areas, with the exception of Ball Valve E, which is located adjacent to a dirt road surrounded by fennel plants. Fennel is an invasive, non-native plant without any special status. Special status species are not expected to be present at any of these sites due to the paved condition or disturbed nature of the sites. Therefore, impacts to special status plants and animals would not occur.

SFPUC Improvements and Ball Valve A Replacement: The SFPUC improvements and Ball Valve A replacement would be located within a generally open area defined by industrial uses. The proposed facilities would be located adjacent to other similar access vaults and buried pipelines. A preliminary biological survey was conducted on November 21, 2002 by an Environmental Science Associates biologist at the SFPUC Improvements and Ball Valve A Replacement sites. A narrow drainage ditch with freshwater wetland vegetation parallels the BDPL and extends to within approximately 120 feet of the site, and provides marginally suitable habitat for California clapper rail, a state and federal endangered species, and California black rail, a state threatened species and federal candidate for listing as threatened or endangered. California clapper rail has been identified within the marshes of Newark Slough, approximately 0.5 to 2.0 miles north and west of the SFPUC Improvements site (CNDDDB, 2002). California black rail has been observed at Dumbarton Point, three miles southwest of the site. Previously, regulatory agencies imposed restrictions on SFPUC as a result of construction activities within clapper rail habitat. Specifically, construction work was restricted within a 700 foot radius of any clapper rail nest during the rail breeding season (February 1 through August 31). USFWS has indicated that the likelihood of rail occurrences decreases in the eastern sections of the BDPL, i.e., in the vicinity of the SFPUC Improvements and Ball Valve A Replacement sites. A biologist from Ibis Environmental conducted a habitat assessment of the project site and vicinity on February 16, 2002, and confirmed that the area within 700 feet of the project site is unsuitable for clapper rail. The survey showed the first signs of any salt marsh vegetation occurring more than 600 feet away from the proposed construction area. At 700 feet, the salt marsh vegetation does not exhibit habitat suitability for clapper rail nesting. Therefore, construction activities occurring at the project site would not result in significant impacts to rails, and no mitigation measures are required or recommended.

- b,c) Proposed Pipeline and SFPUC Improvements: The proposed project would be located primarily within developed, paved areas. Potential riparian habitat and sensitive natural community include Sulphur Creek, which would be crossed by the proposed pipeline via jack and bore construction technique, and an isolated wetland located due southwest of the proposed work activities at the SFPUC improvements site. Installation of the pipe via jack and bore construction would avoid impacts to Sulphur Creek. The wetland near the SFPUC improvements site consists of a localized small depression (approximately 35 by 15 feet) that retains surface water. Soil saturation is evident, and the area supports saltgrass (*Distichlis spicata*) and alkali heath (*Frankenia salina*), both wetland indicator plant species. The site would not likely qualify as a jurisdictional wetland since the U.S. Army Corps of Engineers no longer assumes jurisdiction

over isolated wetlands. Construction activities would not occur within the wetland, and measures are proposed to prevent inadvertent encroachment by construction vehicles, staging and storage of equipment and material, and trampling by foot that could result in potentially significant impacts. Installation of exclusion fencing prior to construction activities would ensure that potential impacts to the sensitive wetland resource would be reduced to less-than-significant levels (see **Measure BIO-1**).

All Other Components: There are no riparian habitat, wetlands, or other sensitive natural community at the other project sites.

- d) All Components: The proposed project would be constructed within existing developed areas that do not serve as migratory corridors for fish or wildlife. In addition, there are no native wildlife nursery sites in the vicinity of the project areas. Therefore, no impacts would occur.
- e) All Components: The proposed project would not conflict with any local policies or ordinances protecting biological resources, including native trees. The proposed project would not require removal of any trees. Therefore, it would not conflict with any local policies or ordinances protecting biological resources.
- f) All Components: The project site is not subject to a Habitat Conservation Plan, Natural Conservation Community Plan or other habitat conservation plan.

Mitigation Measures

Measure BIO-1: This measure applies to SFPUC improvements. The City or its contractors shall install exclusion silt fencing around the potential wetland due southwest of the SFPUC improvements site prior to start of construction. The City or its contractors shall retain a qualified biologist to direct the contractor on placement of the fencing. The fencing shall be keyed into a shallow (i.e., 4-6 inch deep) trench, and shall be maintained in good condition throughout the course of construction. No construction vehicles, equipment and materials shall be allowed on the protected side of the fence. Movement of the fence for any purpose shall be approved by the qualified biologist.

| Issues (and Supporting Information Sources): | <u>Potentially Significant Impact</u> | <u>Less Than Significant With Mitigation Incorporation</u> | <u>Less Than Significant Impact</u> | <u>No Impact</u> |
|---|---------------------------------------|--|-------------------------------------|-------------------------------------|
| V. CULTURAL RESOURCES -- Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

a) Skywest Pump Station and Proposed Pipeline: A literature search of recorded cultural resources and inventories of historic resources was conducted by the Northwest Information Center (NWIC) for the Skywest Pump Station and proposed pipeline corridor. There are no historic resources located along the project corridor (NWIC, 2002; City of Hayward, 2002a). A pre-1955 airplane hanger in the project vicinity was identified as a historical resource, but was determined not to be eligible for listing in the National Registry of Historic Places. As no historical resources would be located within the construction zone, the proposed project would not have any impacts on known historical resources.

All Other Components: The City ball valve replacements, and EBMUD and SFPUC improvements would be located within previously disturbed areas within roadways or dirt roads. No structures are located adjacent to the work zone; therefore, no impacts to historical resources would occur.

b, c) Skywest Pump Station and Proposed Pipeline: The Hayward Executive Airport is located within a designated “moderate” sensitivity zone for archaeological resources (City of Hayward, 2002a). A site-specific search of the proposed Skywest Pump Station site and pipeline corridor by the NWIC indicated that the project site contains no recorded archaeological resources (NWIC, 2002). The potential for encountering and disturbing known or unknown cultural resources may occur, but would be minimized to a less-than-significant level with the implementation of **Measure CR-1** and **Measure CR-2**.

All other components: The City’s ball valve replacements, EBMUD improvements, and portions of the SFPUC improvements would be built or installed within previously excavated areas. In general, the potential for construction activities to affect cultural resources at these sites is considered low, as all excavation would occur within land that was previously disturbed during installation of existing aqueducts, pipelines, and vaults. Therefore, it is unlikely that known or unknown paleontological or cultural resources would be encountered during excavation. The potential for encountering and disturbing known or unknown cultural resources may occur, but

would be minimized to a less than significant level with the implementation of **Measure CR-1** and **Measure CR-2**.

- d) *All Components:* Native American archaeological sites in this portion of Alameda County tend to be situated near drainages transecting the bayshore plain. Within the proposed Skywest Pump Station site and pipeline corridor, the potential to encounter Native American sites, including burials, is considered low (NWIC, 2002). For all other components, no human remains are known or expected to occur in the project area, due to the presence of previously disturbed soils. However, **Measure CR-2** addresses the procedures that should be implemented in the event that human remains are unearthed during construction. The potential for encountering and disturbing human remains would be reduced to a less-than-significant level with the implementation of this measure.

Mitigation Measures

Measure CR-1: The following measure shall be implemented to minimize potential adverse impacts to unknown cultural resources during construction and applies to all project components:

If cultural resources are encountered during construction of the project, the contractor shall avoid altering the materials and discontinue earthwork within 100 feet of the find. At this time, the contractor must contact a qualified archaeologist, one certified by the Registry of Professional Archeologists (RPA), to evaluate the situation. Any identified archaeological resources shall be recorded by the archaeologist on form DPR 422 (archaeological sites) and/or DPR 523 (historic properties) or similar forms. Project personnel shall not collect cultural resources. Procedures for stopping construction in the event that cultural resources are exposed shall be part of the project plans and specifications. In anticipation of discovering cultural deposits, procedures shall be in place so that the contractor can move on to another phase of work, thus allowing sufficient time to evaluate the nature and significance of the find and implement appropriate management procedures.

Measure CR-2: The following measure shall be implemented in the event that human remains are unearthed during construction and applies to all project components:

In the event that prehistoric human remains are encountered, there shall be no further excavation or disturbance of the site or any nearby areas reasonably suspected to overlie adjacent human remains until the County coroner makes a determination. If the coroner determines that the remains are Native American, then the Native American Heritage Commission in Sacramento shall be contacted within 24 hours, along with the Most Likely Descendant(s) of the deceased Native American. The dignified treatment or disposition of Native American burial remains and artifacts shall be agreed upon by the City and the appropriate Native Americans in advance of construction (as provided by Public Resources Code Section 5097.98) and shall be written into construction specifications.

Implementation of these measure would reduce potential impacts to unknown cultural resources to less-than significant levels.

Issues (and Supporting Information Sources):

| | | | | |
|--|---|--|---|----------------------|
| | <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|--|---|--|---|----------------------|

VI. GEOLOGY AND SOILS -- Would the project:

- | | | | | |
|--|---|---|---|--|
| <p>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</p> <p>ii) Strong seismic ground shaking?</p> <p>iii) Seismic-related ground failure, including liquefaction?</p> <p>iv) Landslides?</p> | <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> |
|--|---|---|---|--|

Discussion

- a) The proposed project would not expose people to substantial adverse risks of loss, injury, or death since the proposed project does not include construction of habitable structures. The project sites are not located within an Alquist-Priolo "Earthquake Fault Zone" for fault rupture hazard, and the potential for fault rupture to damage any of the facilities is considered low. However, due to the location within the seismically active region of Northern California and proximity to the Hayward fault, the project area may be subject to strong ground shaking.

All Components: The Skywest Pump Station is located two miles west of the Hayward fault, so the project area may be subject to ground shaking. The United States Geologic Survey (USGS) estimates that the probability for an earthquake of magnitude greater than 6.7 on the southern Hayward fault segment is 17 percent. An earthquake of the same magnitude or greater on the entire

Hayward system is 32 percent. According to ABAG's Earthquake Hazard Map, a 6.9 magnitude earthquake on the southern segment of the Hayward fault would result in shaking intensities from Violent to Very Violent. These shaking intensities correspond with heavy to extreme damage on the Modified Mercalli Intensity Scale (ABAG, 2002a).

Secondary hazards of earthquakes include liquefaction and landslides. According to ABAG's Liquefaction Susceptibility Map, liquefaction potential within project sites vary from High to Very High. Landslide potential is considered low due to the flat terrain. Extreme earth movement could impact the integrity of the Skywest Pump Station and associated facilities causing system failure or rupture.

The project would consist of new and upgraded water facilities that are non-habitable structures, thereby minimizing risks to people. To reduce the risk of damage from seismic groundshaking and associated secondary seismic impacts to a level of acceptable risk, and therefore to a less-than-significant impact under CEQA, project design would be in accordance with applicable sections and editions of the 2001 California Building Code (CBC) and local building code provisions (see **Measure GEO-1**). Compliance with these provisions would reduce potential seismic impacts on these facilities to a less-than-significant level. In addition, compliance with **Measure GEO-2**, which provides for an analysis of liquefiable soils as part of the geotechnical foundations survey, would ensure that potential impacts associated with liquefaction triggered by an earthquake event would be considered less than significant.

The construction of a new intertie pump station and upgrades of existing facilities is intended to provide alternative sources of water when damages to water facilities occur on any one of the three water systems during emergency events such as earthquakes. The project would be designed to maintain water flow to customers in the affected service area(s) during such an emergency event until facilities are restored. Therefore, implementation of the project, in compliance with **Measures GEO-1** and **GEO-2**, would be considered beneficial.

- b) All Components: Construction activities involving soil disturbance, such as excavation, stockpiling, and grading, could result in increased erosion and sedimentation to surface waters. Substantial erosion could affect water quality in Sulphur Creek, which is located in proximity (less than 300 feet) to the Skywest Pump Station and crossed by the proposed pipeline. Construction activities would be confined within paved areas, and the proposed pipeline would cross the channel via jack and bore technique. Implementation of standard engineering erosion-control techniques and best management practices would reduce potential impacts to water quality to a less-than-significant level (see **Measure WQ-1** in **Section VIII, Hydrology and Water Quality**).
- c,d) Proposed Skywest Pump Station and Pipeline: The Soils Conservation Survey's *Soil Survey of Alameda County, California, Western Part*, (1981) has identified the presence of the following surface soils at the proposed sites where new structures would be constructed: Danville silty clay loam, Botello loam, and Reyes clay. Danville silty clay loam, a very deep, well drained soil that formed on low terraces in alluvium and derived from sedimentary rock (SCS, 1981), is found generally within the Skywest Pump Station area. This soil type has slow permeability, high shrink-swell potential and low strength. The proposed pipeline traverses both the Danville silty clay loam and Botella loam, the latter of which is also a very deep, well drained soil on low terraces and

alluvial fans deriving from sedimentary rock. This soil is defined by moderately slow permeability, moderate shrink-swell potential, and low strength.

Because of the proposed Skywest Pump Station's function as an intertie system that would be used during an emergency, including earthquakes, subsurface investigations would be necessary as part of project design to analyze potential hazards for unstable soils to occur at the project site. Due to the likelihood of shrink-swell soils to be present at the proposed Skywest Pump Station, the City would conduct a geotechnical study to assess the potential for expansive soils (see **Measure GEO-2**). The City shall implement the recommendations of the study; these recommendations may include, but are not limited to the following: removal of expansive soils, replacement of expansive soils with engineered fill, mixture of the expansive soil with coarse material or lime, or incorporation of a rigid, reinforced concrete slab design.

SFPUC Improvements: The proposed SFPUC improvements, which include installation of a new pipeline segment connecting the City's Newark - Hayward Aqueduct to the Hetch Hetchy system, would be located generally on Reyes clay. This soil is characterized as a very deep, very poorly drained soil found on tidal flats, with very slow permeability and highly acid when drained.

There is a potential that surface soils at the site are considered potentially corrosive. Corrosive soils could create problems for concrete structures, if it is in contact with the soil. The proposed project would require installation of a mortar-coated and lined pipeline to reduce damage to the pipelines from corrosive soils. In addition, implementation of **Measure GEO-3** would reduce potential impacts associated with corrosive soils to less than significant.

Implementation of **Measure GEO-3** would also reduce impacts associated with unstable soils, including lateral spreading, subsidence, liquefaction, or collapse, to less-than-significant levels.

All Other Components: No soil hazards are expected at the ball valve replacement locations, as these are located on engineered fill that was previously placed during the installation of the City's aqueducts. Similarly, no soil hazards are expected at the EBMUD improvements site, as the proposed facility would be located on engineered fill that was previously placed during installation of the ORCS.

As described in Item VI(a), above, landslide potential is considered low due to the flat terrain.

- e) All Components: No septic tanks are proposed for the project; therefore, no impacts are anticipated.

Mitigation Measures

Measure GEO-1: This measure is applicable to the Skywest Pump Station. Proposed facilities would be designed in accordance with the 2001 California Building Code (based on 1997 Uniform Building Code) requirements for seismic activity or more stringent local building code provisions.

Measure GEO-2: This measure is applicable to the Skywest Pump Station and Proposed Pipeline. An analysis of expansive and liquefiable soils shall be conducted as part of the geotechnical investigation for the proposed Skywest Pump Station and proposed pipeline. The investigation shall be conducted by a licensed geotechnical engineer. The study shall provide recommendations applicable to foundation design, earthwork, and site preparation prior to or during the project design phase. Recommendations shall address site specific and adverse soil conditions associated with unstable soils that could affect development of the project. Measures to reduce potential impacts associated with expansive or liquefiable soils include, but are not limited to, the following:

- Removal of the unstable soil, and placement and compaction of select engineered fill for the building pad and foundation support in accordance with ASTM Test Method D 1557; and/or
- Lime treatment of the native expansive clay soils;
- Mixture of the unstable soil with coarse material; or
- Incorporation of a rigid, reinforced concrete slab design.

Measure GEO-3: This measure is applicable to the SFPUC improvements. Due to the potential presence of corrosive soils at the SFPUC improvements site, an analysis of corrosive soils shall be conducted prior to design of the pipeline. Measures to reduce potential impacts associated with corrosive soils include, but are not limited to removal of the corrosive soil and placement and compaction of select engineered fill in accordance with ASTM Test Method D 1557.

Implementation of these measures would reduce potential impacts associated with geologic hazards to less-than significant levels.

Issues (and Supporting Information Sources):

| | | | |
|---|--|---|----------------------|
| <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|---|--|---|----------------------|

VII. HAZARDS AND HAZARDOUS MATERIALS --

Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

a,b) Proposed Skywest Pump Station: Operation of the Skywest Pump Station would not require the routine transport, use, or disposal of hazardous materials, and therefore would not create a significant hazard to the public or the environment through its normal operations. However, as diesel fuel would be required for the generator at the pump station during emergency events, infrequent transport and disposal, as well as long-term storage of the diesel would be necessary. The fuel would be contained in storage tanks located either aboveground within the generator room

or below ground. With proper handling and storage methods, and adequate design of secondary containment facilities based on local, state and federal regulations, potential on- or off-site consequences associated with accidental spills or releases of these chemicals are considered minimal. If diesel storage exceeds 55 gallons, the City will prepare a Hazardous Materials Business Plan (HMBP) for the Skywest Pump Station (see **Measure HM-1**). The plan would include a hazardous materials inventory listing chemicals stored and used at the Skywest Pump Station. This document will be provided to the City's Fire Department to meet the requirements of the Department's Hazardous Waste Program.

The State Regional Water Control Board (SRWCB) administers the Aboveground Storage Tank Program. The Program requires that "facilities storing 'petroleum' in a single tank greater than 1,320 gallons or facilities storing 'petroleum' in aboveground tanks or containers with a cumulative storage capacity of greater than 1,320 gallons" would be subject to SWRCB regulations. The Program requires that the owners or operators file a storage statement, pay a facility fee, and prepare and implement a federal Spill Prevention Control and Countermeasure (SPCC) Plan. The Plan would discuss the procedures, methods, and equipment in place at the facility to prevent discharges of petroleum from reaching navigable waters. If diesel storage equals or exceeds 1,320 gallons, the City would be required to establish and implement the SPCC (see **Measure HM-2**). Implementation of this measure would reduce potential impacts to less-than-significant levels.

All Components: Construction activities would require the use of certain potentially hazardous materials such as fuels, oils, and solvents. These materials would generally be used for excavation equipment, generators, and other construction equipment and would be contained within vessels engineered for safe storage. Due to the rate of construction, storage of significant quantities of these materials at the construction site is not anticipated. Rather, tender vehicles would most likely provide fuel and lubricant to construction equipment on a daily basis and would be mobilized from an off-site location. Spills during on-site fueling of equipment or an upset condition (i.e., puncture of a fuel tank through operator error), could result in a release of fuel or oils into the environment, including sensitive waterways (i.e., Sulphur Creek). Inclusion of hazardous materials management/spill prevention measures listed in **Measure HM-3** in contractor specifications would reduce impacts from hazardous materials release to a less-than-significant level. Implementation of Best Management Practices for sediment and erosion control (see **Measure WQ-1**) would further reduce the risks associated with hazardous materials release.

- c) EBMUD Improvements: Strobridge School is located approximately one-quarter mile from EBMUD's proposed bypasses at the ORCS. Operation of the bypasses would require use of the portable pump station that is diesel-powered. However, as the diesel would be stored within containment that meet federal, state, and local standards, and the frequency of use would likely be minimal, the potential for accidental release of hazardous materials would be considered less than significant.

Ball Valve Replacements: Mt. Eden High School is located less than one-quarter mile east of the project site. Due to the short duration and limited extent of construction activity, the potential for accidental release of hazardous materials associated with construction activities to affect the nearby school would be considered less-than-significant.

All Other Improvements : There are no existing or proposed schools within one-quarter mile of the other projects components. Therefore, no impacts would occur.

- d) Proposed Skywest Pump Station and Pipeline: The proposed Skywest Pump Station is located on an existing empty lot, which had been used previously as a military base (City of Hayward, 1999). The proposed pipeline is located along Skywest Drive, Golf Course Road, and Hesperian Boulevard. The proposed Skywest Pump Station would not be located on a site that is on a list of hazardous materials sites (*Hazardous Waste and Substances Site List*) compiled pursuant to Government Code Section 65962.5 (State of California, 1998). In accordance with the City's standard procedures, a Phase I Environmental Assessment would be conducted prior to development of the Skywest Pump Station to assess the presence or absence of hazardous materials onsite.

Hazardous materials releases have occurred at the Airport that have resulted in localized contamination (City of Hayward, 2002a). These incidents are summarized in **Table 2-1**, below.

**TABLE 2-1
LOCALIZED CONTAMINATION AT THE HAYWARD EXECUTIVE AIRPORT**

| Site | Summary Description |
|--|--|
| American Air Craft Sales, 21015 Skywest Drive | Five underground tanks were removed from this site in April of 1999. Total Petroleum Hydrocarbons (TPH) were found in the soil and groundwater. Notes in the case file indicate that the tank removal contractor may have punctured the tank during the removal process. There is no indication of remedial action within the case file. |
| Flightcraft, 19990 Skywest Drive | Four underground tanks were removed from this site in September 1989. The site has been remediated and the case closed by Hayward Fire Department (HFD). However, the Closure Report requires that any soil or groundwater subsequently removed from this site be characterized. |
| Silver Wings Aviation, 21587 Skywest Drive | A fuel spill from an aircraft onto the tarmac occurred on December 29, 1994. Fuels were contained and absorbed with the assistance of the Hayward Fire Department. |
| Valley Oil Co. (Flightcraft), 20511 Skywest Drive. | Three underground tanks were removed from this site in January of 1997. Upon closure in 1998 groundwater contamination had been reduced. |
| FAA, 20305 Skywest Drive | An underground tank was removed in October 1995. Groundwater samples have been collected, and contamination was recorded in the most recent monitoring report (1997). There is no indication of remedial action at this site within the case file. |

TABLE 2-1 (continued)
LOCALIZED CONTAMINATION AT THE HAYWARD EXECUTIVE AIRPORT

| Site | Summary Description |
|--|--|
| Air National Guard, 1525 Winton Avenue | The portion of the Airport occupied by the Air National Guard is currently undergoing an Installation Restoration Program (IRP). Two contaminated areas have been identified. A Preliminary Assessment of the site is anticipated to start at the end of 2000. |
| JT's Fuel & Oil, 20499 Hesperian Boulevard | Four underground tanks were removed from this site in October 1992. The plume is moving toward the south and west and may have commingled with releases from existing and former service stations on the other side of Hesperian Boulevard. |

Source: City of Hayward, 2002a

Based on the types of existing and past industrial land uses located in the vicinity of the pump station site and pipeline corridor, and the incidents located in the vicinity of the proposed work sites, there is a potential that site disturbance activities such as excavation could expose hazardous materials from known or unrecorded spills. Encountering of hazardous material may create a significant hazard to the public or the environment. Both the federal and California Division of Occupational Safety and Health Administrations (OSHA) regulate worker exposure and safety during construction activities. Construction workers have to comply with all state and federal regulations for the cleanup, removal, and disposal of hazardous materials, if found, including those set forth by the California Environmental Protection Agency (EPA) and the Department of Toxic Substances Control (DTSC). Implementation of **Measure HM-4**, inclusion of procedures in contractor specifications to follow in the event that contaminated soils are encountered, would reduce impacts from hazardous materials release to a less-than-significant level. This measure would ensure that contaminated material are excavated and disposed of appropriately.

All Other Improvements: Other improvements would be confined to areas previously excavated during installation of water pipelines. It is possible that excavation activities would encounter contaminated soils, if there is migration of contaminated groundwater. However, implementation of **Measure HM-4** would ensure that potential impacts are reduced to less-than-significant levels.

e,f) Proposed Skywest Pump Station: The Skywest Pump Station and associated pipelines are located within the City of Hayward Executive Airport boundary. These are not habitable structures. Operation of these facilities would not require permanent staff working at the pump station site, but would require routine maintenance by City staff once a week. Maintenance and use of the intertie system during emergency events would not interfere with airport operations, and therefore would not result in safety hazards or risk for people working in the project area.

All Other Components: The other components of the project are located between one to ten miles from the Hayward Executive Airport. Maintenance of the buried pipelines would not expose staff to safety hazards or risks.

- g) *All Components:* The proposed project is an intertie system consisting of a pump station and associated buried facilities. Emergency operation of the intertie system would not interfere with an emergency response plan or emergency evacuation plan. Please refer to **Section XV, Transportation / Traffic** for a discussion of emergency access during construction.
- h) *All Components:* The proposed project is located within an urban setting and would not expose people to wildfire risks; therefore, no impacts are anticipated.

Mitigation Measures

Measure HM-1: This measure applies to the Skywest Pump Station if 55 gallons or more of diesel is stored onsite. The City shall prepare a HMBP for the Skywest Pump Station prior to its operation; the Plan shall specify the emergency response procedures identified below in the event of a chemical emergency. The City shall provide a copy of the HMBP to the City's Fire Department as part of the Hazardous Materials Program.

- A fire, spill, release or threatened release of hazardous materials or hazardous waste is immediately reported to the facility supervisor during normal working hours and during off hours. If emergency assistance is required, the initial observer or supervisor calls 911.
- The supervisor and/or on-site personnel will notify appropriate City staff or regulatory agencies and/or initiate site-specific response plans or procedures, as appropriate.
- Concurrent with notification, trained personnel or outside contractors will begin cleanup and/or containment of the spill or release as soon as it is safe to do so.
- Should evacuation be necessary, the facility supervisor or incident commander will direct personnel to evacuate the facility. Upon notification, all employees will immediately secure their area and proceed to the assembly area prescribed by the evacuation plan map.
- In the event of an earthquake, conflagration, flood or other major emergency, the evacuation and response plans will be invoked.
- In the event that an employee experiences a serious chemical exposure, illness, or injury, 911 is called and the victim will be transported to the nearest hospital or treated as determined by the paramedics responding to the call. For lesser exposures, any affected employee will be transported to a local medical facility in accordance with City procedures.

Measure HM-2: This measure applies to the Skywest Pump Station if 1,320 gallons of diesel is stored in aboveground storage tanks. The City shall retain a Registered Chemical Engineer to prepare a SPCC Plan in accordance with the guidelines contained in the United States Environmental Protection Agency's regulations on oil pollution prevention (40 CFR 112). This plan discusses procedures, methods, and equipment in place at the facility to prevent discharges of petroleum from reaching navigable waters. A complete copy of the Plan shall be maintained on site.

Measure HM-3: This measure applies to all components. The following hazardous materials management, spill prevention, and spill response/cleanup measures shall be included in contractor specifications for all proposed facilities:

- A facility site plan, including delineation of hazardous material and hazardous waste storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas;
- Materials Safety Data Sheets for all chemicals used and stored at the construction site;
- Spill control and countermeasures, including employee spill prevention/response training;
- An inventory list of emergency equipment;
- Off-loading, safety, and handling procedures for each chemical;
- Notification and documentation procedures.

Measure HM-4: The following procedures shall be included in contractor specifications, in the event that contaminated soils are identified (either visually or through odor detection) during construction activities:

- Stop work in areas of contact;
- If necessary, call responsible agencies. Typically, the Alameda County Health Care Services Agency and the Department of Environmental Health, would be the responsible agency; the San Francisco Bay Regional Water Quality Control Board could be involved if the groundwater or surface water is contaminated, and the California Department of Toxic Substances Control could become involved if soils are contaminated;
- Fence off areas of contamination;
- Perform appropriate clean-up procedures; and
- All contaminated soils would be segregated, profiled, and disposed of appropriately off-site. Required disposal method will depend on the types and concentrations of chemicals identified in the soil. Any site investigations or remediations will be performed in accordance with applicable laws.

Implementation of these measures would reduce potential impacts to less-than significant levels.

| Issues (and Supporting Information Sources): | <u>Potentially Significant Impact</u> | <u>Less Than Significant With Mitigation Incorporation</u> | <u>Less Than Significant Impact</u> | <u>No Impact</u> |
|---|---|--|---|-------------------------------------|
| VIII. HYDROLOGY AND WATER QUALITY -- Would the project: | | | | |
| a) Violate any water quality standards or waste discharge requirements? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion of siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Otherwise substantially degrade water quality? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation of seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a) *Proposed Skywest Pump Station and Pipeline:* Sulphur Creek crosses the proposed pipeline, and is located less than 300 feet southwest of the Skywest Pump Station. The San Francisco RWQCB is responsible for protecting and regulating water quality in the San Francisco Bay. The RWQCB has developed a Water Quality Control Plan (Basin Plan) (1995) that establishes water quality policies and standards for water bodies in the San Francisco Bay region. Sulphur Creek is not identified in the Basin Plan, but is presumed to share the same beneficial uses as the nearest downstream segment for which uses are specifically identified (San Francisco Bay located approximately 1.5 miles west of the Hayward Executive Airport)¹. The Basin Plan also provides qualitative and numeric water quality standards for the various beneficial uses. Construction activities may contribute to soil erosion and degradation in downstream surface water quality. In addition, effluent from dewatering activities may contain substantial sediment loads. The potential for water quality impacts would be reduced by the use of standard erosion control techniques during project construction activities (see **Measure WQ-1**). These include use of silt fencing, sediment traps, sandbags, baker tanks, and other erosion control devices to control contamination of surface water, as specified in the California Storm Water Best Management Practices Handbook (Stormwater Quality Task Force, 1993) and/or the Manual of Standards for Erosion and Sediment Control Measures (ABAG, 1995).

All Other Components: There are no creeks in the vicinity of the other project elements. However, construction activities may result in water quality degradation of downstream waterways through sedimentation into local storm drains. Implementation of **Measure WQ-1** would reduce potential water quality impacts to a less-than-significant level.

All Components: The proposed construction activities would disturb less than one acre of land. Therefore, the project would not be subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit), and a Storm Water Pollution Prevention Plan (SWPPP) is not required.

- b) *All Components:* The proposed project would not require the withdrawal of groundwater resources. Construction operations may include dewatering at excavations that are located in areas with high groundwater. Groundwater within the airport is located at depths of approximately 5 to 20 feet below ground surface, but which fluctuates with seasonal variations in precipitation (City of Hayward, 2002a). Dewatering would result in short-term, localized alterations in groundwater levels near the surface in the immediate vicinity of construction sites. These surficial alterations in groundwater levels would not affect groundwater production. Therefore, potential impacts to groundwater resources are considered less than significant.

- c,d,e) *All Components:* The installation of proposed, new structures, including the Skywest Pump Station and the SFPUC vault would not alter the existing drainage pattern of the project sites because no alteration of streams would occur and there would be minimal new impermeable surfaces. The Skywest Pump Station would be located in an area partially overlain by concrete. Limited new

¹ Beneficial Use of Surface Waters for the Lower San Francisco Bay include: 1) Ocean, commercial and sport fishing; 2) Estuarine Habitat; 3) Industrial Service Supply; 4) Fish migration; 5) Navigation; 6) Preservation of rare and endangered species; 7) Water contact recreation; 8) Noncontact water recreation; 9) Shellfish harvesting; and 10) Wildlife Habitat.

impermeable surface would be associated with the Skywest Pump Station and a vault box at the SFPUC Improvements site. Potential impacts to existing drainage patterns would be considered less than significant.

f) Please refer to **Sections VI(b), Geology and Soils**, and Item a, above.

g,h,i) All Components: The project does not propose housing or structures within the 100-year flood boundary (FEMA, 1986; FEMA, 1987); therefore, the proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding. As new facilities are limited in size, they would not impede or redirect flood flows. Therefore, no impacts relative to flooding are anticipated.

j) All Components: The project sites are not located on or at the foot of hilly terrain or next to large bodies of water. Therefore, they are not subject to seiches, tsunamis, or mudflows, and no impacts are anticipated.

Mitigation Measures

Measure WQ-1: This measure applies to all project components. Best Management Practices shall be implemented to minimize potential water quality impacts during construction.

The City, SFPUC, and EBMUD shall require contractors to implement Best Management Practices (BMPs) for construction activities as specified by the California Storm Water Best Management Practices Handbook (Stormwater Quality Task Force, 1993) and/or the Manual of Standards for Erosion and Sediment Control Measures (ABAG, 1995). The BMPs include measures guiding the management and operation of construction sites to control and minimize the potential contribution of pollutants to storm runoff from these areas. These measures address procedures for controlling erosion and sedimentation and managing all aspects of the construction process to ensure control of potential water pollution sources. Erosion and sedimentation control practices include installation of silt fencing, straw wattle, soils stabilization, revegetation, and runoff control to limit increases in sediment in storm water runoff (e.g., detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sand bag dikes).

This measure would reduce potential impacts to water quality to a less-than significant level.

Issues (and Supporting Information Sources):

| | <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|--|---|--|---|----------------------|
|--|---|--|---|----------------------|

IX. LAND USE AND PLANNING – Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a) All Components: The proposed intertie system consists of a pump station, pipelines, and improvements on existing pipelines that connect the SFPUC and EBMUD systems. These improvements are located generally within industrial areas or roadways. The majority of the improvements would be buried underground; of the two facilities that are located above ground, they would be situated in industrial areas that would not result in a disruption, physical division, or isolation of existing residential areas. Therefore, no land use impacts would occur.
- b) Proposed Skywest Pump Station and Pipeline: The majority of the project elements are located within the City of Hayward. Both the Skywest Pump Station and proposed pipelines would be subject to the City of Hayward’s General Plan, as well as the Hayward Executive Airport Master Plan and other airport related documents due to the proposed facilities’ locations within Airport boundaries.

Hayward Executive Airport Master Plan (April 2002) is a comprehensive development plan for the Hayward Executive Airport. It identifies existing facilities, aviation demand forecasts, as well as a development program for the airport to meet future growth. The Master Plan evaluates alternatives to meet air- and land-side development needs to accommodate aviation demand for the Airport service area over the next twenty years. The Master Plan identifies a recommended Master Plan Concept that maximizes developable properties at the airport for aviation and non-aviation related development. In the northern portion of the property east of the control tower, the Master Plan proposes hangars, helicopter parking positions, a public-use terminal building, paving, and realignment of Skywest Drive / West A Street. The Master Plan does not identify any proposed development on the unoccupied parcel that is the site of the proposed Skywest Pump Station. As the proposed Skywest Pump Station would be located on a parcel that is not intended for airport operations, and the proposed pipeline segment has also been routed to accommodate future road realignment, the project would be consistent with the Master Plan. Therefore, no impacts would result.

Development within the airport property is subject to the Federal Aviation Administration (FAA) policies and regulations, California Department of Transportation's guidelines, and Alameda County Airport Land Use Commission's (ALUC) Airport Land Use Policy Plan (ALUP). The ALUC adopts height restriction policies on new structures and vegetation within the height referral boundary.

ALUC Height Referral Area Planning Boundaries provides formulas to calculate whether the proposed development would be within the Referral Area. The Hayward Executive Airport has two runways, the southern of which is 5,024 feet in length. "For an airport runway more than 3,200 feet in length, a sloping surface identifies the airspace above one foot in height for each 100 feet (100:1) horizontally from the nearest point of the nearest runway, up to 20,000 feet" (City of Hayward, 2002a). The proposed Skywest Pump Station is located approximately 1,800 feet east of the runway. At the ratio of 100:1, the maximum height of a structure allowable at this distance would be 18 feet. The proposed project would have a maximum height of 18 feet and would be allowable. Since it would not exceed the 18-foot maximum height level, it would not be considered within the ALUC Height Referral Area which would require consultation. Therefore, the proposed development is consistent with ALUC height restrictions. The proposed project would also be consistent with height restrictions established in FAR Part 77.

Airport policies and regulations protect critical, designated zones (i.e., runway protection zone, inner safety zone, inner turning zone, outer safety zone, sideline safety zone, traffic pattern zone). These zones are intended to be obstacle-free with the exception of specific functions associated with airport operations. As the proposed Skywest Station would be located outside of these designated zones, it would not conflict with relevant airport plans. Therefore, the implementation of the proposed facilities within the airport facilities would not have an adverse effect on airport operations and no impacts would occur.

All Other Components: Other City improvements (ball valve replacements) are located within the City of Hayward, Fremont, Newark, and unincorporated Alameda County. EBMUD improvements are located within unincorporated Castro Valley, and SFPUC improvements are located within the City of Newark. With the exception of the SFPUC vault box, these improvements would not result in new structures. Once in place, these improvements would be consistent with existing uses, and thus would not conflict with plans and policies of affected jurisdictions. The proposed SFPUC improvements consist of installation of up to 75 feet of 42-inch pipe and replacement of up to 30 feet of an existing 20-inch pipe. These improvements would be consistent with adjacent SFPUC and City of Hayward facilities, and would not conflict with plans and policies of the City of Newark. As construction of these improvements would occur within public rights-of-way, the City would be required to obtain necessary encroachment permits from affected jurisdictions (see **Measure LU-1**).

Please see Air Quality, Noise, and Traffic for a discussion of disturbance of land uses during construction.

- c) Please see Section IV.f. No conflicts would occur.

Mitigation Measures

Measure LU-1: This measure applies to all project components except SFPUC Improvements. The City of Hayward Public Works Department and EBMUD shall obtain necessary encroachment permits from affected jurisdictions for construction activities within public rights-of-way.

| Issues (and Supporting Information Sources): | <u>Potentially Significant Impact</u> | <u>Less Than Significant With Mitigation Incorporation</u> | <u>Less Than Significant Impact</u> | <u>No Impact</u> |
|---|---|--|---|-------------------------------------|
| X. MINERAL RESOURCES -- Would the project: | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

a,b) All Components: The project sites are located primarily on urban lands (unoccupied parcels or roadways), with the exception of the SFPUC improvements and Ball Valve A replacement which are located on an industrial area surrounded by open space. The only aggregate mineral resource of significance is located at the La Vista Quarry (City of Hayward, 2002c). None of the proposed project sites are located within the quarry; therefore, no impacts to mineral resources of value would result from project implementation.

Mitigation Measures

None required or recommended.

| Issues (and Supporting Information Sources): | <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|---|---|--|---|-------------------------------------|
| XI. NOISE -- Would the project result in: | | | | |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

a,b,d) The regional noise environment of the Proposed Project is dominated by noise from transportation sources such as aircraft, freeways, highways, and major arterials. Aircraft operations contribute to the regional environment primarily during takeoff and landing operations, which occur at the City of Hayward Executive Airport. Project construction would result in intermittent, elevated, temporary noise levels in and around the project sites. Construction noise would result from operation of equipment and vehicles. Peak noise levels are associated with backhoes and excavators, which can generate noise levels ranging from approximately 71 to 95 dBA² at 50 feet (Bolt, Baranek, and Newman, 1971; Harns, 1979). Construction noise would fluctuate depending on construction phase, equipment type, and duration of use; distance between noise source and receptor; and presence or absence of barriers between noise source and receptor. Noise from construction activities generally attenuates six to nine dBA per doubling of distance.

Each jurisdiction establishes noise compatibility standards, as shown in **Table 2-2**. Typically, noise levels associated with construction activities are not restricted to the standards outlined below as

² A decibel (dB) is a unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called "sound level") measured in dB. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels.

these are criteria relevant to permanent development projects. However, they provide guidelines on the acceptable, external noise environment.

**TABLE 2-2
NOISE COMPATIBILITY STANDARDS FOR AFFECTED JURISDICTIONS**

| Jurisdiction | Noise Compatibility Standards |
|---|--|
| City of Hayward | For single family residences and mobile homes: exterior noise environment up to 55 DNL is considered normally acceptable For multi-family residences and hotels, the acceptable noise levels: up to 65 DNL; conditionally acceptable – up to 70 DNL |
| Castro Valley (unincorporated Alameda County) | For noise-sensitive land uses, acceptable noise levels: up to 60 dBA, L_{dn} ³ |
| City of Fremont | For residential land use, acceptable noise levels: less than 60 L_{dn} . |
| City of Newark | For Industrial uses, acceptable is 75 dB DNL; conditionally acceptable – up to 80 dB DNL |

Source: City of Hayward General Plan, 2002; Alameda County ECAP, 1993; City of Fremont General Plan, 1991; City of Newark General Plan, 1992.

Construction would vary from a couple days to up to approximately 14 months, depending on the project element. Potentially significant impacts would result if the project exposes people to a substantial amount of noise or if the project exceeds the established standards identified in local plans and ordinances. Construction of the proposed project would temporarily increase ambient noise levels at nearby sensitive receptors (residences). Sensitive residential receptors are located approximately 50 to 100 feet away from construction activities along Hesperian Boulevard (where the proposed pipeline installation and some ball valve replacements would occur) and at Oak Street (where the proposed EBMUD improvements would occur). The Ohlone Humane Society Wildlife Rehabilitation Center, located adjacent to SFPUC improvements and Ball Valve A, would be considered potentially sensitive as it houses rehabilitating animals in their preparation to return to the wild. This center is located within approximately 25 feet of proposed work sites.

Proposed Skywest Pump Station: The Skywest pump station is located in an industrial corridor that is surrounded by motels to the north and west. The Skywest Pump Station is located more than 200 feet from the nearest motel. Assuming that peak noise levels associated with construction activity

³ L_{eq} , the energy-equivalent noise level (or “average” noise level), is the equivalent steady-state continuous noise level which, in a stated period of time, contains the same acoustic energy as the time-varying sound level that actually occurs during the same period. L_{dn} , the day-night average noise level, is a weighted 24-hour noise level. With the L_{dn} descriptor, noise levels between 10:00 p.m. and 7:00 a.m. are adjusted upward by 10-dBA to take into account the greater annoyance of nighttime noise as compared to daytime noise.

operation is 95 dBA (as indicated above), at 200 feet, noise levels would attenuate to 77 to 83 dBA. Construction activities would be intermittent and thus would not be sustained at peak levels throughout its duration. Given the distance of construction activities from nearby sensitive receptors, its timing during the daytime hours when it would not cause sleep disturbance, and implementation of **Measures N-1** (use of noise controls on equipment), construction-related noise generated by the proposed Skywest Pump Station would be considered less than significant.

Proposed Pipeline: The proposed pipeline along Skywest Drive, Golf Course Drive, and Hesperian Boulevard would be installed during the day. No sensitive residential receptors are located along Skywest Drive and Golf Course Drive. Residences are located along approximately 1,400 linear feet of Hesperian Boulevard (east side) between Skywest Drive and West Winton Avenue. As previously noted, peak noise levels associated with backhoes and excavators can range as high as 95 dBA at 50 feet. As construction would occur during the daytime hours (when noise standards are less restrictive and sleep disturbance is not an issue), and construction noise would be temporary and intermittent, potential impacts would be reduced to less-than-significant levels with implementation of **Measure N-1**, below. **Measure N-1** identifies methods to reduce noise levels during construction activities, including the use of best available noise control techniques such as mufflers and noise jackets on equipment and tools.

Ball Valve Replacements, EBMUD Improvements, SFPUC Improvements: Construction at the above sites would occur during the daytime hours. The Ball Valve Replacement sites are located generally within major roadways, some of which are within 50 feet of residential uses. The SFPUC improvements are located within an industrial area, but adjacent to a Wildlife Rehabilitation Center. Construction activities may increase temporary noise levels in the immediate vicinity. However, as construction would occur during the daytime hours, when noise standards are less restrictive and sleep disturbance is not an issue, potential impacts at the Ball Valve Replacement and EBMUD improvement sites would be reduced to less-than-significant levels with implementation of **Measure N-1**. Depending on the presence of recovering wildlife present at the Rehabilitation Center, potential noise impacts may be considered potentially significant. The City and SFPUC would coordinate with the Center's staff to ensure that staff are aware of construction schedules and can take actions to protect wildlife during this construction, including the relocation of the animals if necessary (**Measure N-2**). Implementation of **Measure N-2** would ensure that potential impacts to rehabilitating wildlife would be reduced to less-than-significant levels.

- c) Proposed Skywest Pump Station: Operation of the proposed Skywest Pump Station would generate temporary increases in ambient noise levels when it is operating for maintenance or emergency events. The proposed facility would be designed to comply with the City's noise compatibility standard for uses adjacent to hotels. As shown in Table 2-2, above, the acceptable and conditionally acceptable external noise levels for hotels are 65 to 70 DNL, respectively. Due to the emergency nature of the proposed use for this pump station facility and infrequency of use, the conditionally acceptable noise level may be adequate. The City would design the proposed pump station such that the appropriate standard is met at the property line of the nearest sensitive receptors.

Weekly maintenance activities and exercising of the pumps, and monthly exercising of the generators would occur during the daytime hours. Operation during an emergency or planned

outage may occur both in the day and night. Based on the likely infrequent pump station use and implementation of **Measure N-3** (design of the pump station to meet noise compatibility standards), potential noise impacts associated with operation of an emergency pump station on surrounding sensitive receptors would be considered less than significant regardless of whether the pumps are operated during the day or night.

EBMUD improvements: Operation of the EBMUD bypasses would require use of a diesel-powered portable pump. The nearest sensitive receptors are located approximately 50 feet to the east and west of the proposed work area. As discussed in Section 1.0, Project Description, EBMUD would install temporary noise barriers or use pumps with noise-reduction enclosures during operations of the portable pumps to minimize noise impacts on surrounding residential uses. The portable pump would be operated only during an emergency or planned outage event. It is not possible to predict the duration of its use. Operation of the pump station may be considered significant if it were operated throughout the evening hours, depending on the level of noise reduction achieved by noise enclosures or barriers. Due to the infrequent nature of use, use of pumps with noise enclosures or installation of noise barriers, and implementation of **Measure N-4** (provision of hotel options for sensitive receptors significantly affected by the diesel pump) potential impacts would be reduced to a less than significant level.

- e,f) *Skywest Pump Station:* The Skywest Pump Station is located within the Hayward Executive Airport. As discussed, no permanent staff would be stationed at the proposed site. Therefore, there are no impacts associated with exposing workers to excessive noise levels from airport activities.

All Other Components: No permanent staff would be stationed at the proposed sites. Therefore, no impacts associated with exposing workers to excessive noise levels from airport activities would occur,

Mitigation Measures

Measure N-1: The following measures apply to all components and shall be implemented to minimize potential noise impacts during construction:

To reduce noise impacts due to construction, the City shall require that construction contractors muffle or control noise from construction equipment through implementation of the following measures:

- Equipment and trucks used for construction should utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, installation of sound blanket around the project site, wherever feasible and necessary). Construction vehicles should be properly maintained and equipped with exhaust mufflers that meet state standards;
- Impact tools (e.g., jack hammers and pavement breakers) used for construction should be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of

pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust should be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves should be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures should be used such as drilling rather than impact equipment whenever feasible; and

- Stationary noise sources should be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, they should be muffled to the extent feasible and enclosed within temporary sheds.

Measure N-2: This measure applies to construction at the Newark Turnout (SFPUC improvements and Ball Valve A replacement). The City and SFPUC shall coordinate with the Humane Society Wildlife Rehabilitation Center to alert Rehabilitation Center staff of the construction dates for the few days of construction near the center. The Center's staff could then monitor the rehabilitating animals during these construction days or move them from the site if necessary.

Measure N-3: This measure applies to the Skywest Pump Station. The City shall design the pump station with noise attenuation such that external noise levels at the property line of the closest sensitive receptor would not exceed 65 or 70 DNL, as appropriate. After completion of the project and during testing of the pump station, the City shall conduct noise tests to ensure that this noise standard is met.

Measure N-4: This measure applies to operation of diesel-powered, portable pump at the proposed bypasses. EBMUD shall coordinate with adjacent residents regarding operation of the diesel-powered portable pumps during night-time hours. EBMUD could offer hotel stays to adjacent residents in cases where nighttime operation exceeds three continuous nights due to an emergency, and where the noise level from the portable pumps exceeds 60 dBA at their properties on a continuous level (exterior) during night-time hours.

Implementation of these measures would reduce potential construction noise impacts to a less-than significant level.

Issues (and Supporting Information Sources):

| | <u>Potentially Significant Impact</u> | <u>Less Than Significant With Mitigation Incorporation</u> | <u>Less Than Significant Impact</u> | <u>No Impact</u> |
|--|---|--|---|----------------------|
|--|---|--|---|----------------------|

XII. POPULATION AND HOUSING -- Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a) All Components: As discussed in Section 1.0, Project Description, and as established in the MOA signed on October 25, 2002, the proposed Intertie system would “provide mutual aid by supplying potable water to the Parties [water agencies] during emergencies or planned critical work.” The proposed improvements would not be used on a routine basis to serve existing demands and would not be used to serve additional growth. Therefore, no impact would occur.
- b,c) All Components: The proposed Intertie system consists of new facilities in industrial areas or improvements to existing facilities. The proposed project would not displace existing housing. Therefore, this project would not necessitate the construction of replacement housing elsewhere.

Mitigation Measures

None required or recommended.

Issues (and Supporting Information Sources):

| | | | | |
|--|---|--|---|----------------------|
| | <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|--|---|--|---|----------------------|

XIII. PUBLIC SERVICES --

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

| | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a) All Components: Construction of the proposed Intertie System does not involve alteration of government facilities. In addition, as the proposed project would not induce growth (see **Section XII(a), Population and Housing**, above), nor would it result in the need for or creation of increased public services. Therefore, no physical or environmental impacts associated with the provision of new or altered governmental facilities would result.

Mitigation Measure

None required or recommended.

Issues (and Supporting Information Sources):

| | | | | |
|--|---|--|---|----------------------|
| | <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|--|---|--|---|----------------------|

XIV. RECREATION --

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

| | | | |
|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

a,b) Proposed Pipelines: The proposed northern pipeline segment would be located along Golf Course Road and Hesperian Boulevard, roads which front John F. Kennedy Memorial Park. Golf Course Road provides ingress and egress to both the park and Skywest Golf Course (see **Figure 3**), although alternative access is available on West A Street and Skywest Drive, as well as the unnamed road on the northern perimeter of the park. The proposed pipeline would be located on the eastbound lane of Golf Course Road and southbound lane of Hesperian Boulevard. Open trench construction would require closure of one lane of traffic on both roadways, but it would not result in direct impacts to recreational facilities as the construction zones would be confined within the road. Through traffic would also be maintained such that access to the recreation facilities would be unaffected. Indirect effects on nearby recreational users include increased dust, noise, as well as safety hazards. Implementation of mitigation measures identified in **Section III, Air Quality, Section XI, Noise, Section XV, Transportation / Traffic, and Measure R-1** (installation of appropriate signage and fencing) would reduce potential construction-related impacts to less-than-significant levels. No short- or long-term activities or programs would be affected at John F. Kennedy Memorial Park or the Skywest Golf Course as a result of the proposed project.

Ball Valve E is located along a dirt road accessed via the East Bay Regional Park District's Alameda Creek Regional Trail / Stables recreational facility entrance. Construction activity would not have any direct impacts on recreational users, as the work location is not located on or near the trail. Construction-related vehicle access effects on recreational uses at this facility would be considered less than significant.

All Other Components: There are no recreational facilities located within any of the other improvement sites.

Mitigation Measures

Measure R-1: This measure applies to the proposed pipeline component. The City shall place signage in the vicinity of John F. Kennedy Memorial Park warning of ongoing construction activities along Golf Course Road and Hesperian Boulevard. The signage shall provide an estimated duration of construction. In addition, the City shall place construction tape or fencing around the construction zone to reduce safety hazards to those who use the park, especially children.

| Issues (and Supporting Information Sources): | <u>Potentially Significant Impact</u> | <u>Less Than Significant With Mitigation Incorporation</u> | <u>Less Than Significant Impact</u> | <u>No Impact</u> |
|--|---------------------------------------|--|-------------------------------------|------------------|
| | | | | |

XV. TRANSPORTATION / TRAFFIC -- Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

a, b) **Existing Regional and Local Roadway System:** Regional access to the proposed Skywest Pump Station, and other City improvement sites is provided by Interstate 880 (I-880) (see **Figure 1**). I-880 provides access to Oakland to the north and San Jose to the south, and connects to the network of other regional highways serving the project area (including I-238, I-580, State Route (SR) 92, and SR 84).

Skywest Pump Station and Proposed Pipeline: The Skywest Pump Station is accessed via I-880, Hesperian Boulevard, West A Street, and Skywest Drive (see **Figure 2**). The proposed pipeline is located on Skywest Drive, Hesperian Boulevard, and Golf Course Road. These roads are accessed via I-880, Hesperian Boulevard, and West A Street (see **Figure 2**).

Ball Valve Replacements: The ball valves replacement sites are located along roadways (including Hesperian Boulevard and Union City Boulevard) and nearby flood control channels, as identified in **Table 1-3** of the Project Description. City valve replacement sites are assessed via I-880, Hesperian Boulevard and Union City Boulevard.

EBMUD Improvements: The EBMUD improvement site is located on Oak Street in Castro Valley, a local residential street which is accessed via either Grove Way or Apple Avenue, via I-580 and Foothill Boulevard.

SFPUC Improvements and Ball Valve A Replacement: The SFPUC improvements and Ball Valve A replacement sites are located at the Newark Turnout, which is accessed via Thornton Avenue and Hickory Street. Hickory Street provides access primarily to the Cargill salt ponds located west of the project area, as well the Union Sanitary District sewage treatment plant and the Ohlone Humane Society Wildlife Rehabilitation Center.

Construction Vehicle Trip Generation: Traffic-generating construction activities would include trucks importing / exporting soils and hauling equipment and materials, and the daily arrival and departure of construction workers to and from the work sites.

Skywest Pump Station: Excavation would generate the most off-site construction truck trips. An estimated 1,000 cubic yards (cy) of soil would be excavated for the pump station component. Using the conservative assumption that all soils would be disposed off-site, and an average truck load of 10 cy, approximately 20 one-way truck trips per day would be generated for the Skywest Pump Station on a two week, five working-days per week period⁴. Miscellaneous trips associated with delivery of materials to and from work sites would also occur.

There would be up to 12 workers at the Skywest Pump Station on a daily basis. Assuming that each worker would travel in his own vehicle to and from the work site, and that some midday worker trips would occur, this would result in an estimated 50 construction worker vehicle one-way trips per day.

Based on the number of one-way truck and worker trips calculated above, the peak total traffic trips associated with the Skywest Pump Station component could be up to 75 one-way trips per day. However, actual daily truck trips would depend on the type and intensity of construction activity, as well as the length of the excavation phase.

Proposed Pipeline: An estimated 4,300 cubic yards (cy) of soil would be excavated for the pipeline component. Using the conservative assumption that all soils would be disposed of off-site, and an average truck load of 10 cy, approximately 20 one-way truck trips per day would be generated for the pipeline component on a two month, five working-days per week period⁵. Miscellaneous trips associated with delivery of materials to and from work sites would also occur.

There would be up to 12 workers working along the pipeline route on a daily basis, potentially scattered in more than one location. Assuming that each worker would travel in his own vehicle to and from the work site, and that some midday worker trips would occur, this would result in an estimated 50 construction worker vehicle one-way trips per day.

Based on the number of one-way truck and worker trips calculated above, the peak total traffic trips associated with the pipeline component could be up to 75 one-way trips per day. However, actual daily truck trips would depend on the type and intensity of construction activity, as well as the length of the excavation phase.

⁴ 1000 cy / 10 cy per truck / 10 days (2 weeks at 5 days per week) = 10 round trips or 20 one-way trips per day

⁵ 4,300 cy / 10 cy per truck / 40 days = 10.7 round trips or 21.5 one-way trips (approximately 20)

Other sites: Construction at the other sites would vary from a couple days to several weeks, and would contribute minor truck trips for short durations relative to the entire project due to the limited excavation required and limited crew involved.

Traffic Impacts

Skywest Pump Station: Construction staging and materials storage for this component would be contained within the existing open parcel adjacent to the proposed site. Traffic-related impacts would result from increased traffic volume on roadways associated with delivery of equipment and materials, import and export of soil, and worker commuting to and from the work site. Impacts associated with increased trips include off-site impacts from the movement of construction trucks. These include short-term and intermittent lessening of roadway capacities due to slower movements of trucks and larger turning radii of the trucks compared to passenger vehicles.

The Final Hayward Executive Airport EA / EIR for the Airport Master Plan provided existing traffic conditions at the airport, and evaluated traffic impacts associated with each airport development scenario (City of Hayward, 2002a). Seventeen study intersections were selected for analysis in the Final EA / EIR. Most of these intersections are located on Hesperian Boulevard, within the project vicinity, and therefore are applicable to the proposed project. As identified in the Final EA / EIR, all of the study intersections currently operate at acceptable levels during both the morning and afternoon peak periods, except at the unsignalized study intersections including the one on Hesperian and Sueirro (City of Hayward, 2002a). Signals at the Sueirro Drive and Hesperian Boulevard intersection has since been installed as part of the Home Depot project.

As calculated above, the proposed pump station construction may generate up to 75 one-way trips per day. Worker trips would be limited primarily to the start and end of work, and the remainder of the trips would be dispersed throughout the day. Traffic volumes would not significantly affect local circulation due to the dispersal of the truck trips and the temporary nature of construction activities, particularly as most of the truck trips are concentrated during the excavation period. Based on these factors and the proximity to the freeway system, potential impacts associated with increased traffic congestion and delays would be reduced to less than significant levels with preparation and implementation of a Traffic Control Plan (**Measure T-1**).

Operation of the proposed Skywest Pump Station would result in an average of one round trip per week associated with maintenance of the facility. The number of truck trips could be higher during an emergency or planned outage. However, this contribution would not result in any long-term degradation in operating conditions of the roadway through increase in traffic volume.

Proposed Pipeline: One lane each of Skywest Drive, Golf Course Road, and Hesperian Boulevard would require temporary closure during pipeline installation. Pipeline installation on all project roadways would occur during the daytime hours. Skywest Drive is a two-lane road that provides local circulation for the City of Hayward Executive Airport property, and Golf Course Road is a two-lane road that provides access to the Skywest Golf Course and John F. Kennedy Memorial Park. Both of these land uses has alternative access via Skywest Drive and an unnamed access road north of John F. Kennedy Memorial Park. Open trench construction would occur at a rate of approximately 100 feet per day, thereby limiting the length of roadway affected by lane closure on

any particular day. Due to the short-term nature of construction, maintenance of traffic flows along affected segments, proximity to the freeway system, and implementation of a Traffic Control Plan (see **Measure T-1**), potential traffic impacts associated with closure of a lane along these roads would be considered less than significant.

Hesperian Boulevard is a six-lane arterial which provides an alternative route to I-880. Traffic impacts associated with decreased roadway capacity from closure of one lane of Hesperian Boulevard compounded with the increase of overall construction-related truck traffic during the daytime hours could be considered significant if it occurs during the peak commute hours, as it would result in increased traffic congestion and delays on a highly traveled road. Implementation of **Measure T-1**, limiting construction activities to off-peak traffic hours during the weekdays (9:00 a.m. to 5:30 p.m. in the southbound lane and 9:00 to 3:00 p.m. in the northbound lane) would be required to reduce potentially significant impacts to less-than-significant levels. Due to the short-term nature of construction, maintenance of traffic flows, proximity to the freeway system, implementation of a Traffic Control Plan (including limitations of work hours, potential traffic impacts associated with closure of a lane would be considered less than significant (see **Measure T-1**).

Traffic impacts associated with increased traffic (up to 80 one-way trips per day) on the local roadway system would be similar to those identified for the proposed Skywest Pump Station, and would be considered less than significant as truck trips would be dispersed throughout the day.

Operation of the proposed pipeline would not result in increases in permanent traffic volumes. Therefore, no impacts would occur.

Ball Valve Replacements: Replacements of the ball valves would occur during the daytime. Construction activities along several ball valve replacement sites on Hesperian Boulevard may require closure of portions of one lane of traffic or intersection, including at Hesperian Boulevard and Industrial Parkway, where the ball valve replacement would occur in the middle of the intersection. Construction activities associated with lane closure may result in traffic congestion and delays. However, due to the limited excavation required at these sites, two-way traffic would be maintained at all sites. Due to the temporary nature of construction and with the implementation of **Measure T-1**, which requires preparation and implementation of a Traffic Control Plan and limitations on work hours, potential traffic impacts would be reduced to less than significant levels. Construction-generated traffic would not result in any long-term degradation in operating conditions or level of service on affected roadways. Operation-related truck trips associated with this component are considered less than significant as manual operation of the ball valves would occur only during emergency or planned outage events, which are anticipated to be infrequent.

EBMUD Improvements: Construction activities would require closure of one lane of traffic (less than 50 feet in length) in the immediate vicinity of the ORCS (near Grove Way). As the road at the work site is wide, it would accommodate one lane of through traffic during construction activities. Due to available alternative access to this street, maintenance of one-lane of traffic flow using flagger control (see **Measure T-1**), and the temporary nature of construction activities (three to six weeks), potential traffic impacts associated with reduced roadway capacity would be considered less-than-significant. Traffic impacts associated with an increase of construction-related vehicles

within the local roadway system would be considered less-than-significant due to the minor vehicles generated from this component.

Operation-related truck trips associated with this component would require hook-up of a portable pump (parked along the shoulder of the road) to the proposed tie-in. Due to the infrequent use (during emergency or planned outage events only), and the existing roadway width, potential impacts would be considered less-than-significant.

SFPUC Improvements and Ball Valve A Replacement: Construction staging and activities for the proposed project would be confined within existing SFPUC easements south of Hickory Street, and would not affect ingress or egress into the salt ponds or adjacent land uses. Potential impacts associated with increased traffic volumes and congestion would be considered less than significant due to minor traffic that would result from this component and the proximity to the highway system. Operation-related truck trips associated with these components are considered less than significant as manual operation of the SFPUC valves and the City's ball valve would require one or two staff accessing the site only during emergency or planned outage events, which would likely be infrequent.

- b) The Alameda County Congestion Management Agency (CMA) prepared and adopted the Alameda County Congestion Management Plan (August 2001), that describes strategies to address congestion problems in the County. Level of Service standards identified in the Plan are intended to regulate long-term traffic increases from future development within the roadway network, and do not apply to temporary construction projects.
- c) The proposed project is an intertie system that is intended to convey treated water between public agencies. It would not affect air traffic patterns; therefore, no impact would occur.
- d) The proposed project does not include design features that would result in safety risks. The majority of the improvements would be located underground. Proposed structures would be located within parcels away from roadways. However, during construction activities, lane closure could increase safety hazards for pedestrians and bicyclists. Potential safety impacts are considered less than significant with the implementation of **Measure T-2**, below.
- e) Construction activities would not result in inadequate emergency access as through traffic would be maintained at all project roadways. Access to adjacent land uses (i.e., residential, commercial, industrial, and park uses) may be blocked during pipeline installation. There are no highly sensitive land uses such as police, fire, medical centers with emergency services, or schools located adjacent to any construction work site. A fire station is located along an access road leading to Ball Valve E; due to its distance from the construction work zone, access into and out of the fire station would be unaffected. To minimize disruption of access to driveways of adjacent residential, commercial, or industrial uses, and thereby reduce the potential for inadequate emergency access, contractor(s) will be required to maintain steel trench plates at the construction sites to restore access across open trenches (see **Measure T-1**). Implementation of this measure would reduce potential impacts to less-than-significant levels.

- f) Construction-related equipment and trucks for the proposed Skywest Pump Station and proposed pipeline would likely be stored within the empty lot adjacent to the Skywest Pump Station. Pipeline installation along Golf Course Road, Skywest Drive, as well as installation of the bypasses at EBMUD's ORCS would temporarily displace parking along these roadways, including parking for the users of John F. Kennedy Memorial Park along Golf Course Road. Additional parking is available along the north end of the park for park users. Pipeline construction would not require closure of all roadway segments simultaneously. Therefore, parking spaces would also not be displaced at the same time. Due to the temporary nature of construction activities, as well as the limited parking spaces displaced, potential parking impacts are considered less than significant.
- g) The Alameda Contra Costa Transit District (AC Transit) provides bus service in the project vicinity. Bus stops are located along the Hesperian Boulevard. Pipeline installation could affect operation of the bus lines. Disruption to bus service would be minimized with implementation of **Measure T-3**, which requires coordination with AC Transit and relocation of bus stops as necessary. Implementation of this measure would reduce potential impacts to less-than-significant levels. As the proposed pipeline would be installed underground, no long-term impacts to bus service would result. Therefore, the proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation.

Mitigation Measures

Measure T-1: This measure applies to the following components: proposed Skywest Pump Station, proposed pipeline, ball valve replacements, and EBMUD improvements. The City and EBMUD shall incorporate into contract specifications the following requirement: The contractor(s) shall prepare a traffic control plan(s) in accordance with professional traffic engineering standards to show specific methods for maintaining traffic flows on roadways directly affected by pipeline installation, ball valve replacements, and EBMUD improvements. Limitations and restrictions established in the Traffic Control Plan include, but are not limited to the following:

- The City shall restrict hours of construction along Hesperian Boulevard. Specifically, construction would be limited to 9:00 a.m. to 5:30 p.m. in the southbound lane and 9:00 a.m. to 3:00 p.m. on the northbound lane.
- The City shall restrict construction activities for the Skywest Drive / Golf Course Road portion of the pipeline installation to 7:30 a.m. to 4:30 p.m..
- The City shall restrict construction activities for the ball valve sites located in the middle of roadways or intersections to the hours established for construction on Hesperian Boulevard above.
- Contractors shall provide flagger-control along pipeline installation sites to manage traffic control and flows.
- Contractors shall limit the construction work zone in each block to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone.
- To minimize disruption of access to driveways to adjacent land uses, contractor(s) will be required to maintain steel trench plates at the construction sites to restore access across open trenches. Construction trenches in streets will not be left open after work hours.

- Construction work areas will be secured (i.e., fencing) such that the public is not endangered as a result of construction activities.
- Contractors shall post advanced warning of construction activities to allow motorists to select alternative routes in advance.
- The City shall notify emergency service providers in advance of construction activities for the pipeline component.

Measure T-2: This measure applies to the proposed pipeline, ball valve replacement, and EBMUD improvements components to reduce potential safety hazards to bicyclists and pedestrians. The City and EBMUD shall install appropriate barriers or fencing around construction zones and put up signage showing detours to ensure the safety of bicyclists and pedestrians.

Measure T-3: This measure applies to the City's improvements along Hesperian Boulevard. The City shall coordinate with AC Transit, and incorporate into contract specifications the following requirements: The City shall incorporate a plan, as needed, for the temporary relocation of bus stops on Hesperian Boulevard.

Implementation of these measures would reduce potential impacts to a less-than significant level.

Issues (and Supporting Information Sources):

| | <u>Potentially Significant Impact</u> | <u>Less Than Significant With Mitigation Incorporation</u> | <u>Less Than Significant Impact</u> | <u>No Impact</u> |
|--|---|--|---|----------------------|
|--|---|--|---|----------------------|

XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a) The proposed Intertie system consists of pumping and conveyance facilities to deliver treated water during emergency or planned outage events. The proposed project would not generate wastewater, and therefore would not exceed wastewater treatment requirements. No impacts would occur.
- b) The proposed Intertie system does not propose nor would it result in the construction of new water or wastewater treatment facilities. Therefore, no impacts would occur.
- c) The proposed project does not propose or result in the construction of new storm water drainage facilities or expansion of existing facilities. The proposed Skywest Pump Station may require connection to the existing storm drain to facilitate discharge of dechlorinated water during pump station start-up and shut-down. Construction and operation of the drainage connection would be considered less than significant due to its limited size and infrequent use.

- d) The proposed project would not require acquisition of additional water supplies beyond the amount already used by the agencies. The Intertie system would be implemented as an emergency facility that would deliver up to 30 mgd of existing water supply from SFPUC to EBMUD or vice versa, and up to 15 mgd of existing water supply from EBMUD to the City of Hayward. As no new water supplies or entitlements would be required, no impacts would occur.
- e) The proposed project consists of an intertie system to pump and convey water from one agency to another during an emergency or planned outage. It would not require wastewater capacity; therefore, no impacts would result from implementation of the project.
- f) Solid waste generation would be limited to construction activities, and would not affect available solid waste disposal capacity in the region. No long-term solid waste generation would be associated with the proposed project and no impacts would occur.
- g) The contractor would be required to comply with all pertinent regulations regarding the disposal of solid waste generated by construction activities.

Mitigation Measures

None required or recommended.

Issues (and Supporting Information Sources):

| | | | | |
|--|---|--|---|----------------------|
| | <i>Potentially Significant Impact</i> | <i>Less Than Significant With Mitigation Incorporation</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i> |
|--|---|--|---|----------------------|

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Discussion

- a) Without mitigation, the proposed project does have the potential to degrade the quality of the environment, and to adversely affect potential wetlands habitat (refer to Section IV, Biological Resources). However, with the mitigation measures included as part of this Initial Study, all potentially significant impacts would be reduced to a less-than significant level.
- b) Chapter 5 of the Hayward Executive Airport Master Plan Final EA / EIR evaluated cumulative impacts of the airport development alternatives in combination with 12 residential and four non-residential projects east of I-880, bounded to the north and south by the San Leandro limit and Highway 92, respectively (City of Hayward, 2002a). Due to the location of the proposed Intertie Project within the Airport, the cumulative analysis in the Final EA / EIR would be applicable. The cumulative analysis reviewed impacts in areas including: noise; compatible land use; air quality, water quality; historic, architectural, archaeological and cultural resources; biotic communities; endangered and threatened species of flora and fauna; wetlands; floodplains; farmlands; light emissions; solid waste; design, art and architecture; geology and seismicity; and hazardous materials. The majority of the impacts reviewed would not result in cumulatively considerable incremental effects nor contribute to significant cumulative effects. For those impacts which have that potential to result in incremental significant impacts, implementation of mitigation measures would reduce potential effects to less than cumulatively considerable.

Cumulative construction impacts were evaluated separately. The Final EA / EIR concluded that construction impacts are temporary and of relatively short duration, and that such impacts under the

Airport development alternatives would not result in cumulatively considerable impacts nor contribute to significant cumulative impact.

The proposed project's environmental impacts would be limited to short-term construction impacts which would be reduced to less-than-significant levels with implementation of mitigation measures identified in this document. Therefore, the project would not contribute to cumulatively considerable impacts.

- c) Without mitigation, the project does have the potential to adversely affect human beings, primarily associated with construction activities. However, these impacts would be temporary, lasting only for the duration of construction, and the mitigation measures included as part of this Initial Study would reduce these impacts to a less-than significant level.

REFERENCES:

- Alameda County, *East County Area Plan*, (Draft), February 1993.
- Alameda County Congestion Management Agency, *Alameda County Congestion Management Plan*, August 2001.
- Association of Bay Area Governments (ABAG), *Earthquake Liquefaction Hazards Map (interactive map)*, <http://www.abag.ca.gov/bayarea/eqmaps/liquefac/liquefac.html>.
- ABAG, *Earthquake Hazard Map for Hayward / Union City / San Lorenzo – Scenario: South Hayward Segment of the Hayward-Rodgers Creek Fault System*, <http://www.abag.ca.gov/cgi-bin/pickmapx.pl>, posted 13 October 1999.
- ABAG, *Earthquake Hazard Map for Fremont / Newark – Scenario: South Hayward Segment of the Hayward-Rodgers Creek Fault System*, <http://www.abag.ca.gov/cgi-bin/pickmapx.pl>, posted 13 October 1999.
- Bay Area Air Quality Management District, BAAQMD, *BAAQMD CEQA Guidelines - Assessing the Air Quality Impacts of Projects and Plans*, December 1999.
- City of Fremont, *Fremont General Plan*, 1991.
- City of Hayward, *General Policies Plan*, amended 24 February 1998.
- City of Hayward, *Department of Community and Economic Development, Mitigated Negative Declaration for Planned Development 99-120-01 – Greenberg Farrow Architecture (Applicant) / City of Hayward (Owner)*, June 29, 1999.
- City of Hayward, *Hayward Executive Airport Master Plan – Final Environmental Assessment / Environmental Impact Report*, 20 February 2002 (2002a).
- City of Hayward, *Hayward Executive Airport Master Plan – Final Technical Report, April 2002* (prepared by Coffman Associates, Inc., Airport Consultants in association with Environmental Science Associates) (2002b).
- City of Hayward, *Draft General Plan*, adopted March 12, 2002, last amended November 5, 2002 (2002c).

City of Newark, *Newark General Plan*, 1992.

Federal Emergency Management Agency (FEMA), *Flood Insurance Rate Map, City of Hayward, California, Alameda County, Community Panel No. 065033 0010 D*, Revised 19 December 1986.

FEMA, *Flood Insurance Rate Map, City of Newark, California, Alameda County, Community Panel No. 06009 0005 D*, Revised 16 July 1987.

Ibis Environmental, Inc., *Habitat Assessment for Clapper Rail*, February 2003.

Soil Conservation Survey, *Soil Survey of Alameda County, California, Western Part*, issued March 1981.

State Clearinghouse, Office of Planning and Research, *CEQA Guidelines*, 2002.

Sonoma State University, Northwest Information Center, 2002.

State of California, *Hazardous Wastes and Substances Sites List*, April 1998.

SECTION 3

SUMMARY OF MITIGATION MEASURES AND MITIGATION MONITORING AND REPORTING PROGRAM

The following is a summary of mitigation measures integrated into the project which are adequate to reduce all potentially significant impacts to a less-than-significant level.

The MMRP is organized in a table format, keyed to each significant impact and each mitigation measure incorporated into the project. The tables following each measure provide a breakdown of how mitigation measure would be implemented, who would be responsible, and when it would occur. They consist of four column headings which are defined as follows:

- **Implementation Procedure:** If needed, this column provides additional information on how the mitigation measures will be implemented.
- **Monitoring and Reporting Actions:** This column contains an outline of the appropriate steps to verify compliance with the mitigation measure.
- **Monitoring Responsibility:** This column contains an assignment of responsibility for the monitoring and reporting tasks.
- **Monitoring Schedule:** The general schedule for conducting each monitoring and reporting task, identifying where appropriate both the timing and the frequency of the action.

3.1 AESTHETICS

Measure AES-1 This measure applies to all project components. The City of Hayward or its contractors shall restore disturbed areas to their pre-project conditions, such that short-term construction disturbance does not result in long-term visual impacts.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|---|---------------------------|---|
| 1. The City of Hayward, SFPUC, and EBMUD shall include restoration requirements in contractor specifications | 1. The City, SFPUC, and EBMUD review construction specifications. | 1. City | 1. Prior to construction |
| 2. Contractor restores disturbed areas. | 2. Documentation by City, SFPUC, and EBMUD that measures are being implemented. | 2. City | 2. During construction and final Inspection |

Measure AES-2: This measure applies to the Skywest Pump Station. The City, or its contractors, shall ensure that all permanent exterior lighting at the Skywest Pump Station is directed downward and oriented away from sensitive uses to ensure that diffuse light does not affect surrounding land uses.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|---|---------------------------|---|
| 1. The City shall include permanent lighting requirements in contractor specifications. | 1. The City reviews construction specifications. | 1. City | 1. Prior to construction |
| 2. Contractor directs permanent and temporary lighting downwards during construction activities. | 2. Documentation by the City that measures are being implemented. | 2. City | 2. During construction and final inspection |

3.2 AIR QUALITY

Measure AQ-1: This measure applies to the Skywest Pump Station. The City shall acquire relevant permits from the BAAQMD associated with the use of a diesel-powered generator. Compliance with the permit conditions (including implementation of Best Available Control Technology (BACT)) would ensure that pollutants emitted from operation of the generator would meet emissions standards and thus would reduce potential air quality impacts to less-than-significant levels. Examples of these conditions include, but are not limited to: constraints on the use of the generator, implementation of BAAQMD approved sources tests to verify compliance with emissions standards, and preparation of monthly reporting materials to be made available to BAAQMD upon request.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|--------------------------|
| 1. The City shall submit permit applications to BAAQMD | 1. Retain application forms and all supporting material in the Administrative file. | 1. City | 1. Prior to construction |
| 2. The City shall obtain Authority to Construct from BAAQMD | 2. Retain Authority to Construct in Administrative File. | 2. City | 2. Prior to construction |
| 3. The City shall obtain a Permit to Operate from BAAQMD. | 3. Retain Permit to Operate along with emissions test results showing compliance with standards established in the Authority to Construct | 3. City | 3. Prior to operation |

Measure AQ-2: The list of measures below is recommended by BAAQMD as feasible control measures to reduce construction dust emissions. The construction contractor shall implement dust control, which includes but are not limited to, the following elements:

- Water all active construction areas daily;

- Discontinue construction grading activity in wind conditions that cause excessive neighborhood dust problems;
- Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer) in accordance with Section 23114 of the California Vehicle Code during transit to and from the site;
- Pave, apply water or (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites;
- Sweep daily (preferably with water sweepers) all paved access roads, parking areas and staging areas at construction sites;
- Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets; and
- Designate a person or persons to oversee the implementation of a comprehensive dust control program and to increase watering, as necessary.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|---|
| 1. The City, SFPUC, and EBMUD include dust abatement requirements in contractor specifications. | 1. City, SFPUC, and EBMUD reviews dust abatement program. | 1. City | 1. Prior to construction |
| 2. Contractor implements measures in the program. | 2. City, SFPUC, and EBMUD document that measures are being implemented. | 2. City | 2. During construction and final inspection |

3.3 BIOLOGICAL RESOURCES

Measure BIO-1: This measure applies to SFPUC improvements. The City or its contractors shall install exclusion silt fencing around the potential wetland due southwest of the SFPUC improvements site prior to start of construction. The City or its contractors shall retain a qualified biologist to direct the contractor on placement of the fencing. The fencing shall be keyed into a shallow (i.e., 4-6 inch deep) trench, and shall be maintained in good condition throughout the course of construction. No construction vehicles, equipment and materials shall be allowed on the protected side of the fence. Movement of the fence for any purpose shall be approved by the qualified biologist.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|--------------------------|
| 1. The City shall include silt fencing requirements in contractor specifications. | 1. City and SFPUC reviews construction specifications | 1. City and SFPUC | 1. Prior to construction |
| 2. City retains a qualified biologist to install silt fencing. | 2. The City retains contract with biologist in Administrative Record. City and SFPUC documents that measures are being implemented. | 2. City and SFPUC | 2. During Construction |

3.4 CULTURAL RESOURCES

Measure CR-1: The following measure shall be implemented to minimize potential adverse impacts to unknown cultural resources during construction and applies to all project components:

If cultural resources are encountered during construction of the project, the contractor shall avoid altering the materials and discontinue earthwork within 100 feet of the find. At this time, the contractor must contact a qualified archaeologist, one certified by the Registry of Professional Archeologists (RPA), to evaluate the situation. Any identified archaeological resources shall be recorded by the archaeologist on form DPR 422 (archaeological sites) and/or DPR 523 (historic properties) or similar forms. Project personnel shall not collect cultural resources. Procedures for stopping construction in the event that cultural resources are exposed shall be part of the project plans and specifications. In anticipation of discovering cultural deposits, procedures shall be in place so that the contractor can move on to another phase of work, thus allowing sufficient time to evaluate the nature and significance of the find and implement appropriate management procedures.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|--|---------------------------|--------------------------|
| 1. The City, SFPUC, and EBMUD shall review contractor specifications to ensure procedures for cultural resources discovery are included. | 1. The City, SFPUC, and EBMUD review construction specifications. | 1. The City | 1. Prior to construction |
| 2. In the event that cultural resources are found, construction shall stop and a qualified archaeologist shall be consulted. | 2. The Contractor shall notify the City, SFPUC, or EBMUD of any cultural resource discovery. Copies of DPR 422 or 523 shall be retained in the administrative files. | 2. The City | 2. During construction |

Measure CR-2: The following measure shall be implemented in the event that human remains are unearthed during construction and applies to all project components:

In the event that prehistoric human remains are encountered, there shall be no further excavation or disturbance of the site or any nearby areas reasonably suspected to overlie adjacent human remains until the County coroner makes a determination. If the coroner determines that the remains are Native American, then the Native American Heritage Commission in Sacramento shall be contacted within 24 hours, along with the Most Likely Descendant(s) of the deceased Native American. The dignified treatment or disposition of Native American burial remains and artifacts shall be agreed upon by the City and the appropriate Native Americans in advance of construction (as provided by Public Resources Code Section 5097.98) and shall be written into construction specifications.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|--------------------------|
| 1. The City, SFPUC, and EBMUD shall review contractor specifications to ensure procedures for human remains discovery are included. | 1. The City, SFPUC, and EBMUD review contractor specifications. | 1. The City | 1. Prior to construction |
| 1. In the event prehistoric human remains are found, work shall stop and procedures identified above shall be followed. | 2. The contractor shall notify the City, SFPUC, and EBMUD of any historic human remains discovery. The City, SFPUC, and EBMUD retain agreement with Native Americans in administrative files and the agreed upon treatment of the find. | 2. The City | 2. During construction |

3.6 GEOLOGY AND SOILS

Measure GEO-1: This measure is applicable to the Skywest Pump Station. Proposed facilities would be designed in accordance with the 2001 California Building Code (based on 1997 Uniform Building Code) requirements for seismic activity or more stringent local building code provisions.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|---|---------------------------|---------------------|
| 1. The City shall include requirements of the California Building Code in facility design. | 1. The City, SFPUC and EBMUD shall review designs to ensure design incorporates seismic requirements. | 1. The City | 1. During design |

Measure GEO-2: This measure is applicable to the Skywest Pump Station and Proposed Pipeline. An analysis of expansive and liquefiable soils shall be conducted as part of the geotechnical investigation for the proposed Skywest Pump Station and proposed pipeline. The investigation shall be conducted by a licensed geotechnical engineer. The study shall provide recommendations applicable to foundation design, earthwork, and site preparation prior to or during the project design phase. Recommendations shall address site specific and adverse soil conditions associated with unstable soils that could affect development of the project. Measures to reduce potential impacts associated with expansive or liquefiable soils include, but are not limited to, the following:

- Removal of the unstable soil, and placement and compaction of select engineered fill for the building pad and foundation support in accordance with ASTM Test Method D 1557; and/or
- Lime treatment of the native expansive clay soils;
- Mixture of the unstable soil with coarse material; or
- Incorporation of a rigid, reinforced concrete slab design.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|---|
| 1. The City shall retain a qualified geotechnical engineer to contact a geotechnical investigation of the proposed Skywest Pump Station site. | 1. The City, SFPUC, and EBMUD retain contract in administrative files. | 1. The City | 1. Prior to construction |
| 2. The City shall incorporate recommendations of the geotechnical report in contract specifications/ | 2. The City, SFPUC and EBMUD review construction specifications. | 2. The City | 2. Prior to Construction |
| 3. The contractor implements recommendations. | 3. The City, EBMUD, and SFPUC document that measures are being implemented. | 3. The City | 3. During construction and final inspection |

Measure GEO-3: This measure is applicable to the SFPUC improvements. Due to the potential presence of corrosive soils at the SFPUC improvements site, an analysis of corrosive soils shall be conducted prior to design of the pipeline. Measures to reduce potential impacts associated with corrosive soils include, but are not limited to removal of the corrosive soil and placement and compaction of select engineered fill in accordance with ASTM Test Method D 1557.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|--|---------------------------|---|
| 1. The City and SFPUC shall incorporate requirements in contract specifications. | 1. City and SFPUC reviews construction specifications. | 1. City | 1. Prior to construction |
| 2. The contractor implements recommendations. | 3. City and SFPUC documents that measures are being implemented. | 2. City | 2. During construction and final inspection |

3.7 HAZARDS AND HAZARDOUS MATERIALS

Measure HM-1: This measure applies to the Skywest Pump Station if 55 gallons or more of diesel is stored onsite. The City shall prepare a HMBP for the Skywest Pump Station prior to its operation; the Plan shall specify the emergency response procedures identified below in the event of a chemical emergency. The City shall provide a copy of the HMBP to the City's Fire Department as part of the Hazardous Materials Program.

- A fire, spill, release or threatened release of hazardous materials or hazardous waste is immediately reported to the facility supervisor during normal working hours and during off hours. If emergency assistance is required, the initial observer or supervisor calls 911.
- The supervisor and/or on-site personnel will notify appropriate City staff or regulatory agencies and/or initiate site-specific response plans or procedures, as appropriate.
- Concurrent with notification, trained personnel or outside contractors will begin cleanup and/or containment of the spill or release as soon as it is safe to do so.
- Should evacuation be necessary, the facility supervisor or incident commander will direct personnel to evacuate the facility. Upon notification, all employees will immediately secure their area and proceed to the assembly area prescribed by the evacuation plan map.
- In the event of an earthquake, conflagration, flood or other major emergency, the evacuation and response plans will be invoked.
- In the event that an employee experiences a serious chemical exposure, illness, or injury, 911 is called and the victim will be transported to the nearest hospital or treated as determined by the paramedics responding to the call. For lesser exposures, any affected employee will be transported to a local medical facility in accordance with City procedures.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|---|
| 1. The City shall prepare a HMBP for the Skywest Pump Station if more than 55 gallons of diesel is stored onsite. | 1. The City shall review HMBP for accuracy. | 1. City | 1. Prior to construction |
| 2. The City shall submit the HMBP to the City's Fire Department. | 2. The City retains submittal or signs-off that a copy of the HMBP was submitted to the City's Fire Department. | 2. City | 2. During construction / prior to operation |
| 3. The City shall retain a copy of the HMBP at the pump station. | 3. The City shall signs-off that a copy is being kept at the pump station. | 3. City | 3. During operation |

Measure HM-2: This measure applies to the Skywest Pump Station if 1,320 gallons of diesel is stored in aboveground storage tanks. The City shall retain a Registered Chemical Engineer to prepare a SPCC Plan in accordance with the guidelines contained in the United States Environmental Protection Agency's regulations on oil pollution prevention (40 CFR 112). This plan discusses procedures, methods, and equipment in place at the facility to prevent discharges of petroleum from reaching navigable waters. A complete copy of the Plan shall be maintained on site.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|---|
| 1. The City shall retain a registered chemical engineer to prepare a SPCC Plan if more than 1,320 gallons of diesel is stored in aboveground storage tanks. | 1. The City shall retain contract in administrative files and review SPCC for accuracy. | 1. City | 1. During construction / prior to operation |
| 2. The City shall retain a copy of the HMBP at the pump station. | 2. The City signs-off that a copy is being kept at the pump station. | 2. City | 2. During operation |

Measure HM-3: This measure applies to all components. The following hazardous materials management, spill prevention, and spill response/cleanup measures shall be included in contractor specifications for all proposed facilities:

- A facility site plan, including delineation of hazardous material and hazardous waste storage areas, access and egress routes, waterways, emergency assemble areas, and temporary hazardous waste storage areas;
- Materials Safety Data Sheets for all chemicals used and stored at the construction site;
- Spill control and countermeasures, including employee spill prevention/response training;

- An inventory list of emergency equipment;
- Off-loading, safety, and handling procedures for each chemical;
- Notification and documentation procedures.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|--------------------------|
| 1. The City, SFPUC, and EBMUD shall incorporate requirements in contract specifications | 1. The City, SFPUC, and EBMUD review construction specifications. | 1. City | 1. Prior to construction |
| 2. The contractor implements recommendations. | 3. The City, SFPUC, and EBMUD document that measures are being implemented. | 2. City | 2. During Construction |

Measure HM-4: The following procedures shall be included in contractor specifications, in the event that contaminated soils are identified (either visually or through odor detection) during construction activities:

- Stop work in areas of contact;
- If necessary, call responsible agencies. Typically, the Alameda County Health Care Services Agency and the Department of Environmental Health, would be the responsible agency; the San Francisco Bay Regional Water Quality Control Board could be involved if the groundwater or surface water is contaminated, and the California Department of Toxic Substances Control could become involved if soils are contaminated;
- Fence off areas of contamination;
- Perform appropriate clean-up procedures; and
- All contaminated soils would be segregated, profiled, and disposed of appropriately off-site. Required disposal method will depend on the types and concentrations of chemicals identified in the soil. Any site investigations or remediations will be performed in accordance with applicable laws.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|---|---------------------------|--------------------------|
| 1. The City, SFPUC, and EBMUD shall incorporate procedures in the event that contaminated soils are identified in contract specifications. | 1. The City, SFPUC, and EBMUD review construction specifications. | 1. City | 1. Prior to construction |
| 2. The contractor implements recommendations if contaminated soils are encountered. | 3. The City, SFPUC, and EBMUD document that measures are being implemented. | 2. City | 2. During Construction |

3.8 HYDROLOGY AND WATER QUALITY

Measure WQ-1: This measure applies to all project components. Best Management Practices shall be implemented to minimize potential water quality impacts during construction.

The City, SFPUC, and EBMUD shall require contractors to implement Best Management Practices (BMPs) for construction activities as specified by the California Storm Water Best Management Practices Handbook (Stormwater Quality Task Force, 1993) and/or the Manual of Standards for Erosion and Sediment Control Measures (ABAG, 1995). The BMPs include measures guiding the management and operation of construction sites to control and minimize the potential contribution of pollutants to storm runoff from these areas. These measures address procedures for controlling erosion and sedimentation and managing all aspects of the construction process to ensure control of potential water pollution sources. Erosion and sedimentation control practices include installation of silt fencing, straw wattle, soils stabilization, revegetation, and runoff control to limit increases in sediment in storm water runoff (e.g., detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sand bag dikes).

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|--|---------------------------|---------------------------|
| 1. The City, SFPUC, and EBMUD shall incorporate BMP requirements in contract specifications. | 1. The City, SFPUC, and EBMUD review construction specifications. | 1. City | 1. Prior to construction. |
| 2. Contractor shall implement the BMPs. | 2. The City, SFPUC, and EBMUD document that appropriate BMPs are implemented during construction | 2. City | 2. During construction |

3.9 LAND USE AND PLANNING

Measure LU-1: This measure applies to all project components except SFPUC Improvements. The City of Hayward Public Works Department and EBMUD shall obtain necessary encroachment permits from affected jurisdictions for construction activities within public rights-of-way.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|---|---------------------------|---|
| 1. The City and EBMUD shall incorporate need for permit and compliance with encroachment permit requirements in contract specifications. | 1. The City and EBMUD review construction specifications. | 1. City | 1. Prior construction. |
| 2. Contractor shall implement permit conditions. | 2. The City and EBMUD document that permit conditions are implemented during construction | 2. City | 2. During construction and final inspection |

3.10 NOISE

Measure N-1: The following measures apply to all components and shall be implemented to minimize potential noise impacts during construction:

To reduce noise impacts due to construction, the City shall require that construction contractors muffle or control noise from construction equipment through implementation of the following measures:

- Equipment and trucks used for construction should utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, installation of sound blanket around the project site, wherever feasible and necessary). Construction vehicles should be properly maintained and equipped with exhaust mufflers that meet state standards;
- Impact tools (e.g., jack hammers and pavement breakers) used for construction should be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust should be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves should be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures should be used such as drilling rather than impact equipment whenever feasible; and
- Stationary noise sources should be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, they should be muffled to the extent feasible and enclosed within temporary sheds.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|--------------------------|
| 1. The City, SFPUC, and EBMUD shall incorporate requirements in contract specifications | 1. The City, SFPUC, and EBMUD review construction specifications. | 1. City | 1. Prior to construction |
| 2. The contractor implements recommendations. | 2. The City, SFPUC, and EBMUD document that measures are being implemented. | 2. City | 2. During construction |

Measure N-2: This measure applies to construction at the Newark Turnout (SFPUC improvements and Ball Valve A replacement). The City and SFPUC shall coordinate with the Humane Society Wildlife Rehabilitation Center to alert Rehabilitation Center staff of the construction dates for the few days of construction near the center. The Center’s staff could then monitor the rehabilitating animals during these construction days or move them from the site if necessary.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|--|---------------------------|--|
| 1. The City shall alert the Wildlife Rehabilitation Center of upcoming construction activities. | 1. The City retains record of communication in administrative files. | 1. City | 1. At least a week prior to construction |

Measure N-3: This measure applies to the Skywest Pump Station. The City shall design the pump station with noise attenuation such that external noise levels at the property line of the closest sensitive receptor would not exceed 65 or 70 DNL, as appropriate. After completion of the project and during testing of the pump station, the City shall conduct noise tests to ensure that this noise standard is met.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|----------------------------|
| 1. The City shall design pump station facility to meet noise compatibility standards 65 or 70 DNL, as appropriate. | 1. The City signs-off that the design is appropriate. | 1. City | 1. Prior to construction |
| 2. The City shall conduct noise testing to ensure that 70 DNL is met at the nearest sensitive receptor (La Quinta Inn). | 2. The City retains test results in the administrative files. | 2. City | 2. During initial testing. |

Measure N-4: This measure applies to operation of diesel-powered, portable pump at the proposed bypasses. EBMUD shall coordinate with adjacent residents regarding operation of the diesel-powered portable pumps during night-time hours. EBMUD could offer hotel stays to adjacent residents in cases where nighttime

operation exceeds three continuous nights due to an emergency, and where the noise level from the portable pumps exceeds 60 dBA at their properties on a continuous level (exterior) during night-time hours.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|---|---------------------------|---------------------|
| 1. EBMUD shall coordinate with immediate residents; EBMUD could offer hotel stays to adjacent residences if conditions above apply. | 1. EBMUD signs-off that coordination has occurred. If hotel options are given, EBMUD shall retain contract for hotel stays in administrative files. | 1. EBMUD | 1. During Operation |

3.11 RECREATION

Measure R-1: This measure applies to the proposed pipeline component. The City shall place signage in the vicinity of John F. Kennedy Memorial Park warning of ongoing construction activities along Golf Course Road and Hesperian Boulevard. The signage shall provide an estimated duration of construction. In addition, the City shall place construction tape or fencing around the construction zone to reduce safety hazards to those who use the park, especially children.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|--|---------------------------|---------------------------|
| 1. The City shall incorporate signage requirements for John F. Kennedy Memorial Park in contract specifications. | 1. The City reviews construction specifications. | 1. City | 1. Prior to construction. |
| 2. Contractor shall install signage. | 2. The City, SFPUC, and EBMUD document that appropriate BMPs are implemented during construction | 2. City | 2. During construction |

3.12 TRANSPORTATION / TRAFFIC

Measure T-1: This measure applies to the following components: proposed Skywest Pump Station, proposed pipeline, ball valve replacements, and EBMUD improvements. The City and EBMUD shall incorporate into contract specifications the following requirement: The contractor(s) shall prepare a traffic control plan(s) in accordance with professional traffic engineering standards to show specific methods for maintaining traffic flows on roadways directly affected by pipeline installation, ball valve replacements, and EBMUD improvements. Limitations and restrictions established in the Traffic Control Plan include, but are not limited to the following:

- The City shall restrict hours of construction along Hesperian Boulevard. Specifically, construction would be limited to 9:00 a.m. to 5:30 p.m. in the southbound lane and 9:00 a.m. to 3:00 p.m. on the northbound lane.
- The City shall restrict construction activities for the Skywest Boulevard / Golf Course Road portion of the pipeline installation to 7:30 a.m. to 4:30 p.m..
- The City shall restrict construction activities for the ball valve sites located in the middle of roadways or intersections to the hours established for construction on Hesperian Boulevard above.
- Contractors shall provide flagger-control along pipeline installation sites to manage traffic control and flows.
- Contractors shall limit the construction work zone in each block to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone.
- To minimize disruption of access to driveways to adjacent land uses, contractor(s) will be required to maintain steel trench plates at the construction sites to restore access across open trenches. Construction trenches in streets will not be left open after work hours.
- Construction work areas will be secured (i.e., fencing) such that the public is not endangered as a result of construction activities.
- Contractors shall post advanced warning of construction activities to allow motorists to select alternative routes in advance.
- The City shall notify emergency service providers in advance of construction activities for the pipeline component.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|--|---------------------------|--------------------------|
| 1. The City and EBMUD shall incorporate requirements to prepare and implement a traffic control plan in contract specifications | 1. The City and EBMUD review contract specifications | 1. City | 1. Prior to construction |
| 2. The contractor implements traffic control plan. | 2. The City and EBMUD sign-off that measures have been implemented.. | 2. City | 2. During construction |

Measure T-2: This measure applies to the proposed pipeline, ball valve replacement, and EBMUD improvements components to reduce potential safety hazards to bicyclists and pedestrians. The City and EBMUD shall install appropriate barriers or fencing around construction zones and put up signage showing detours to ensure the safety of bicyclists and pedestrians.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|---|--|---------------------------|--------------------------|
| 1. The City and EBMUD shall incorporate requirements to install barriers, fencing, and signage in contract specifications | 1. The City and EBMUD reviews contract specifications | 1. City | 1. Prior to construction |
| 2. The contractor implements requirements. | 2. The City signs-off that measures have been implemented. | 2. City | 2. During construction |

Measure T-3: This measure applies to the City's improvements along Hesperian Boulevard. The City shall coordinate with AC Transit, and incorporate into contract specifications the following requirements: The City shall incorporate a plan, as needed, for the temporary relocation of bus stops on Hesperian Boulevard.

| IMPLEMENTATION PROCEDURE | MONITORING AND REPORTING ACTIONS | MONITORING RESPONSIBILITY | MONITORING SCHEDULE |
|--|--|---------------------------|--------------------------|
| 1. The City shall coordinate with AC Transit and incorporate requirements to relocate bus stops in contract specifications | 1. The City reviews contract specifications | 1. City | 1. Prior to construction |
| 2. The contractor implements requirements. | 2. The City signs-off that measures have been implemented. | 2. City | 2. During construction |

SECTION 4.0

REPORT PREPARATION

4.1 REPORT AUTHORS

This report was prepared by Environmental Science Associates (ESA), under the direction of Henry Louie, City of Hayward. ESA staff involved include:

- Sue Chau
- Leslie Moulton
- Chris Rogers
- Paul Mitchell
- Paul Miller
- Dan Wormhoudt

In addition, Anne Flannery of Ibis Environmental provided support in the biological resources evaluation.

ADDENDUM TO THE SFPUC-COH-EBMUD WATER SYSTEM EMERGENCY INTERTIE PROJECT

1. BACKGROUND

The City of Hayward (City), acting as Lead Agency, and in coordination with San Francisco Public Utilities Commission (SFPUC), East Bay Municipal Utility District (EBMUD), and Alameda County Water District (ACWD), evaluated the potential effects associated with implementation of the Water System Emergency Intertie Project in an Initial Study / Mitigated Negative Declaration (SCH No. 2003022126, published February 26, 2003). The MND identified potential impacts that would occur as a result of construction or implementation of the project, and identified mitigation measures that would reduce potential impacts to less-than-significant levels. The City Council adopted the MND and Mitigation Monitoring and Reporting Program (MMRP), as well approved the Project on April 8, 2003. EBMUD and SFPUC, as Responsible Agencies under CEQA, took separate actions to adopt the MND / MMRP and approve the Project.

The adopted MND evaluated the construction of a pump station and approximately 1.5 miles of pipeline that would connect the EBMUD and SFPUC water systems in the event of an emergency such as natural disaster or outage associated with repairs. The project would be located within the three water service areas of EBMUD, Hayward, and ACWD, but primarily on the City of Hayward Executive Airport property in the City of Hayward.

The pump station ("Skywest" Pump Station) evaluated in the adopted MND would be located on an unoccupied parcel off of Skywest Drive adjacent to the existing La Quinta Inn and Home Depot. The pipeline analyzed in the adopted MND, connecting the Skywest Pump Station and the EBMUD and SFPUC systems, would be located along Skywest Drive and Hesperian Boulevard. The adopted MND also evaluated other minor improvements, including valve replacements and minor pipe and bypass installations.

Since approval of the Project, the City has determined that the parcel originally proposed for the pump station would be preserved for development of other uses. Therefore, an alternative site (herein referred to as "relocation site"), also located within the property boundaries of the Hayward Executive Airport, was selected for development of the proposed pump station. The relocation site is situated at the corner of Skywest Drive and Hesperian Boulevard.

2. CEQA PROCESS

The *CEQA Guidelines* (Sections 15162 and 15164) require that a lead agency prepare an addendum to a previously certified Negative Declaration if some changes or additions to the environmental evaluation of a project are necessary but none of the following occurs:

1. There are no substantial changes in the project which require major revisions to the Negative Declaration or a substantial increase in the severity of previously identified significant effects;

2. There are no substantial changes with respect to the circumstances under which the project is undertaken which require major revisions to the Negative Declaration; or
3. No new information of substantial importance, which could not have been known with the exercise of reasonable diligence at the time of Negative Declaration adoption, shows any of the following:
 - (i) the project will have one or more significant effects not discussed in the Negative Declaration,
 - (ii) the project will result in impacts substantially more adverse than those disclosed in the Negative Declaration,
 - (iii) mitigation measures or alternatives previously found not to be feasible will in fact be feasible and will substantially reduce one or more significant effects of the project, but the project proponent declines to adopt it, or
 - (iv) mitigation measures or alternatives that are considerably different from those analyzed in the EIR will substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt it.

This Addendum documents that the proposed change to Water System Emergency Intertie Project does not trigger any of the conditions described above.

In accordance with CEQA Guidelines Section 15164, an Addendum need not be circulated for public review but requires consideration by the decision-making body along with the adopted negative declaration prior to making a decision on the project. The Addendum should include a brief explanation of the decision not to prepare a subsequent Negative Declaration and the lead agency's required findings on the project.

3. DESCRIPTION OF SKYWEST PUMP STATION RELOCATION

The City of Hayward proposes the relocation of the Skywest Pump Station from the parcel located at the corner of Skywest Drive and West A Street (identified in the adopted MND) to a parcel located at the southwest corner of Skywest Drive and Hesperian Boulevard (see **Figure 1**). Both sites are located within the boundaries of the Hayward Executive Airport. The City has determined that a smaller size parcel would be more appropriate to maintain the development potential of the larger, original site. Although such a change is not mandatory, the City decided to relocate the Skywest Pump Station to preserve the parcel for future development opportunities.

The proposed pump station relocation site would be located on a vacant lot with non-native grasses, weeds, and several ornamental trees (see **Figure 2**). Four to five ornamental, non-protected trees would be removed as part of the project. The proposed pump station site, which would have approximately the same footprint (160 by 100 feet) and consist of a similar size pump building (approximately 100- by 40- by 18- feet high) and clearance for vehicle access, would generally be confined within the parcel. The pump station would maintain the same design as previously proposed (see page 1-9 of the adopted MND), with the exception of an additional



SOURCE: Environmental Science Associates

SFPUC-COH-EBMUD Water System Emergency Intertie Project Addendum / 202702 ■

Figure 1

Proposed Intertie Project-
Relocated Skywest Pump Station



SOURCE: Environmental Science Associates

SFPUC-COH-EBMUD Water System Emergency Intertie Project Addendum / 202702 ■

Figure 2
Photo of Relocation Site
(Facing Northwest)

entrance into the site. The site would be primarily accessed via Skywest Drive, with an emergency entrance from Hesperian Boulevard. Development of the site would not affect access into the warehouses via the adjoining paved road.

The construction and operation of the pump station would be the same as described in the adopted MND. Construction activities would require the same phases involving grading, excavation, structural erection, and back filling (described on page 1-19 of the adopted MND). The pump station would operate during maintenance or emergency events only, and would be exercised once a week to ensure that the facilities are in proper working order. Operations of the pump station are described on pages 1-16 through 1-18 of the adopted MND.

4. ANALYSIS OF POTENTIAL ENVIRONMENTAL EFFECTS

The adopted MND evaluated the following environmental issues: aesthetics; agricultural resources; air quality; biological resources; cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; mineral resources; noise; population and housing; public services; recreation; transportation/traffic; and utilities and service systems. These issues are re-evaluated in this Addendum for the proposed pump station relocation. This evaluation determines whether, with the relocation of the pump station, the Water System Emergency Intertie Project would result in any new significant impacts or substantially more severe impacts than identified in the adopted MND. The environmental checklist, starting on page 2-3 of the adopted MND, describes the criteria used in determining the significance of environmental impacts.

AESTHETICS

The adopted MND (pages 2-3 through 2-4) identifies potential lighting impacts, and temporary visual quality impacts from construction of the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site is surrounded by commercial and industrial uses, where there are no scenic vistas or scenic resources (i.e., scenic highway) in the vicinity. The relocation site is surrounded by airport uses to the south and west, a laboratory equipment rental office to the north, and the six-lane Hesperian Boulevard to the east (see **Figure 1**). No changes to the design and height of the facility are proposed. Therefore, the proposed modification would not result in new, significant impacts or increase the severity of existing impacts associated with aesthetics beyond those identified in the adopted MND. Landscaping to soften the industrial appearance of the pump station, as well as implementation of mitigation measures identified in the MND (page 2-4), would reduce aesthetics impacts from the proposed pump relocation to less-than-significant levels.

AGRICULTURAL RESOURCES

The adopted MND (page 2-5) does not identify any impacts to agricultural resources from the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site is situated in an urban setting, surrounded by commercial and industrial uses. No agricultural resources are located onsite. Therefore, the proposed modification would not result in new, significant impacts to agricultural resources.

AIR QUALITY

The adopted MND (pages 2-6 through 2-7) identifies potential impacts from direct air emissions through the operation of the emergency diesel-powered generator, and a temporary increase in air pollutant emissions during construction of the proposed Skywest Pump Station and pipeline component of the project. Like the pump station analyzed in the MND, the proposed relocation site is surrounded by commercial and industrial uses. Residences are located east of the relocation site, across six lanes of Hesperian Boulevard. Impacts to residences are evaluated in the MND for the pipeline component of the project, which is adjacent to the proposed relocation site. No operation changes are proposed as part of the modification. Therefore, the proposed modification would not result in new, significant impacts or increase the severity of existing impacts associated with air quality beyond those identified in the adopted MND. Implementation of mitigation measures identified in the MND (pages 2-7 through 2-8), would reduce air quality impacts from the proposed pump relocation to less-than-significant levels.

BIOLOGICAL RESOURCES

The adopted MND (pages 2-9 through 2-12) does not identify any potentially significant impacts to biological resources from the proposed Skywest Pump Station. The proposed pump station relocation site is located within an urban area, on a parcel covered by non-native grasses, weeds, and several ornamental trees (Japanese Zelkova). It is located nearly 1,000 feet south of Sulphur Creek. Like the pump station analyzed in the MND, no habitat supporting wetlands or special status species is located at the proposed relocation site. Four to five trees would be removed at the proposed relocation site. These trees are considered ornamental, and are not considered heritage or protected trees. Potential impacts to nesting birds associated with removal of trees would be avoided as construction activities would begin in January (outside of the nesting season). Therefore, the proposed modification would not result in new, significant impacts to biological resources.

CULTURAL RESOURCES

As indicated on page 2-13 of the adopted MND, no recorded archaeological resources are located along the pipeline corridor. Because Hayward Executive Airport is located within a designated "moderate" sensitivity zone for archaeological resources, the potential for encountering unknown cultural resources may occur. Like the pump station analyzed in the MND, the proposed relocation site is located within the Hayward Executive Airport, and adjacent to the pipeline corridor, for which a cultural resources search was conducted. Therefore, the proposed modification would not result in new, significant impacts or increase the severity of existing impacts associated with cultural resources beyond those identified in the adopted MND. Implementation of mitigation measures identified in the MND (page 2-14), would reduce cultural resources impacts from the proposed pump relocation to less-than-significant levels.

GEOLOGY AND SOILS

The adopted MND (pages 2-15 through 2-17) identifies potential impacts including soil erosion, unstable soils, and intense groundshaking from earthquakes from the proposed Skywest Pump

Station. Like the pump station analyzed in the MND, the proposed relocation site has the same topography, soil types and seismic hazards. Therefore, the proposed modification would not result in new, significant impacts or increase the severity of existing impacts associated with air quality beyond those identified in the adopted MND. Implementation of mitigation measures identified in the MND (pages 2-17 through 2-18), would reduce geology and soils impacts from the proposed pump relocation to less-than-significant levels.

HAZARDS AND HAZARDOUS MATERIALS

The adopted MND (pages 2-19 through 2-23) identifies potential impacts from the transport, use, storage, and disposal of hazardous materials, as well as the potential that site disturbance could expose hazardous materials from known or unrecorded spills from the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site would have the same potential for encountering hazardous material during construction, and the project would require the transport, use, storage, and disposal of hazardous materials. Therefore, the proposed modification would not result in new, significant impacts or increase the severity of existing impacts associated with air quality beyond those identified in the adopted MND. As described on page 2-21 of the adopted MND, a Phase I Environmental Assessment would be conducted prior to development of the Skywest Pump Station to assess the presence or absence of hazardous materials onsite. In addition, implementation of mitigation measures identified in the MND (pages 2-23 through 2-24), would reduce hazards and hazardous materials impacts from the proposed pump relocation to less-than-significant levels.

HYDROLOGY AND WATER QUALITY

The adopted MND (pages 2-25 through 2-27) identifies potential water quality impacts to Sulphur Creek from construction activities, as well as water quality degradation of downstream waterways through sedimentation into local storm drains from the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site is located near Sulphur Creek and would have the same potential for water quality degradation of downstream waterways from construction. Therefore, the proposed modification would not result in new, significant impacts or increase the severity of existing impacts associated with air quality beyond those identified in the adopted MND. Implementation of the mitigation measure identified in the MND (page 2-27), would reduce hydrology and water quality impacts from the proposed pump relocation to less-than-significant levels.

LAND USE AND PLANNING

The adopted MND (pages 2-28 through 2-29) does not identify any impacts to land use and planning resources from the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site is located within the Hayward Executive Airport property boundary, surrounded by commercial and industrial uses. The proposed relocation site is currently undeveloped and is not planned for development in the future. It is not located within a critical, designated zone (i.e., runway protection zone, inner safety zone, inner turning zone, outer safety zone, sideline safety zone, traffic pattern zone). No changes to the height of the facility are proposed. The City determined that usage of the smaller, proposed relocation site would increase

the development potential of the larger, original pump station site. As such, relocation of the proposed pump station would not result in land use conflicts or incompatibility issues. Therefore, no new significant impact would result from the proposed modification.

MINERAL RESOURCES

The adopted MND (page 2-30) does not identify any impacts to mineral resources from the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site is situated in an urban setting, surrounded by commercial and industrial uses. Therefore, the proposed modification would not result in new, significant impacts to mineral resources.

NOISE

The adopted MND (pages 2-31 through 2-34) identifies potential noise impacts associated with construction and operation of the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site would have potential noise impacts from construction and operation of the pump station. Sensitive receptors are located east of the relocation site, across six lanes of Hesperian Boulevard. Implementation of a residential rated noise attenuator on the pump facility would ensure that noise levels would not be exceeded at sensitive receptors. Therefore, the proposed modification would not result in new, significant impacts or increase the severity of existing impacts associated with noise beyond those identified in the adopted MND. Implementation of mitigation measures identified in the MND (pages 2-34 through 2-35), would reduce noise impacts from the proposed pump relocation to less-than-significant levels.

POPULATION AND HOUSING

The adopted MND (page 2-36) does not identify any impacts to population and housing from the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site would not result in growth inducement or secondary effects of growth. Therefore, the proposed modification would not result in new, significant impacts to population and housing.

PUBLIC SERVICES

The adopted MND (page 2-37) does not identify any impacts to public services from the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site is a vacant parcel, surrounded by commercial and industrial uses. The proposed modification does not include elements that would result in the alteration of government facilities, nor would it result in the need for or creation of increased public services. Therefore, the proposed modification would not result in new, significant impacts to public services resources.

RECREATION

The adopted MND (page 2-37 through 2-38) identifies potential impacts from the proposed pipelines along Golf Course Road. The proposed relocation site, approximately 3,400 feet from Golf Course Road, is a vacant parcel surrounded by commercial and industrial uses.

Construction of the proposed pump station at the relocation site would have no effect on existing or future recreational facilities. Therefore, the proposed modification would not result in new, significant impacts to recreation resources.

TRANSPORTATION / TRAFFIC

The adopted MND (pages 2-39 through 2-44) identifies potential traffic impacts associated with construction and operation of the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site would have traffic impacts during construction. Construction-related equipment and trucks for the relocation site would also be stored within the empty lots along Skywest Drive. Therefore, the proposed modification would not result in new, significant impacts or increase the severity of existing impacts associated with transportation and traffic beyond those identified in the adopted MND. Implementation of the mitigation measure identified in the MND (pages 2-44 through 2-45), would reduce transportation and traffic impacts from the proposed pump relocation to less-than-significant levels.

UTILITIES AND SERVICE SYSTEMS

The adopted MND (page 2-46 through 2-47) does not identify any significant impacts to utilities and service systems from the proposed Skywest Pump Station. Like the pump station analyzed in the MND, the proposed relocation site would not have significant impacts to utilities and service systems. Therefore, the proposed modification would not result in new, significant impacts to utilities and service systems resources.

5. CONCLUSIONS

The proposed modifications to the Water System Emergency Intertie Project would result in impacts similar to those attributable to the originally proposed project, and therefore would require implementation of the mitigation measures presented in the MND (provided below). This Addendum does not change the conclusions of the MND and MMRP that was adopted by the City Council in April 2003: **Attachment A** to this document presents mitigation measures from the adopted MND that apply to, and will be carried out as part of, the proposed modifications to the Water System Emergency Intertie Project.

Based on the above analysis and discussion, no significant revisions to adopted MND are needed because: 1) no new significant impacts or substantially more severe impacts would result from the proposed relocation of the proposed Skywest Pump Station, 2) there have been no changes in circumstances in the project area that would result in new significant environmental impacts or substantially more severe impacts, and 3) no new information has come to light that would indicate the potential for new significant impacts or substantially more severe impacts than were discussed in the MND. Therefore, no further evaluation is required, and no or Subsequent Negative Declaration is needed pursuant to State CEQA Guidelines Sections 15162 and 15164.

Attachment A Mitigation Measures

AESTHETICS

Measure AES-1 This measure applies to all project components. The City of Hayward or its contractors shall restore disturbed areas to their pre-project conditions, such that short-term construction disturbance does not result in long-term visual impacts.

Measure AES-2: This measure applies to the Skywest Pump Station. The City, or its contractors, shall ensure that all permanent exterior lighting at the Skywest Pump Station is directed downward and oriented away from sensitive uses to ensure that diffuse light does not affect surrounding land uses.

Other Measure: Landscaping shall be planted in accordance with the City's Design Guidelines, and would soften the industrial appearance of the pump station.

AIR QUALITY

Measure AQ-1: This measure applies to the Skywest Pump Station. The City shall acquire relevant permits from the BAAQMD associated with the use of a diesel-powered generator. Compliance with the permit conditions (including implementation of Best Available Control Technology (BACT)) would ensure that pollutants emitted from operation of the generator would meet emissions standards and thus would reduce potential air quality impacts to less-than-significant levels. Examples of these conditions include, but are not limited to: constraints on the use of the generator, implementation of BAAQMD approved sources tests to verify compliance with emissions standards, and preparation of monthly reporting materials to be made available to BAAQMD upon request.

Measure AQ-2: The list of measures below is recommended by BAAQMD as feasible control measures to reduce construction dust emissions. The construction contractor shall implement dust control, which includes but are not limited to, the following elements:

- Water all active construction areas daily;
- Discontinue construction grading activity in wind conditions that cause excessive neighborhood dust problems;
- Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer) in accordance with Section 23114 of the California Vehicle Code during transit to and from the site;
- Pave, apply water or (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites;
- Sweep daily (preferably with water sweepers) all paved access roads, parking areas and staging areas at construction sites;

- Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets; and
- Designate a person or persons to oversee the implementation of a comprehensive dust control program and to increase watering, as necessary.

CULTURAL RESOURCES

Measure CR-1: The following measure shall be implemented to minimize potential adverse impacts to unknown cultural resources during construction and applies to all project components:

If cultural resources are encountered during construction of the project, the contractor shall avoid altering the materials and discontinue earthwork within 100 feet of the find. At this time, the contractor must contact a qualified archaeologist, one certified by the Registry of Professional Archeologists (RPA), to evaluate the situation. Any identified archaeological resources shall be recorded by the archaeologist on form DPR 422 (archaeological sites) and/or DPR 523 (historic properties) or similar forms. Project personnel shall not collect cultural resources. Procedures for stopping construction in the event that cultural resources are exposed shall be part of the project plans and specifications. In anticipation of discovering cultural deposits, procedures shall be in place so that the contractor can move on to another phase of work, thus allowing sufficient time to evaluate the nature and significance of the find and implement appropriate management procedures.

Measure CR-2: The following measure shall be implemented in the event that human remains are unearthed during construction and applies to all project components:

In the event that prehistoric human remains are encountered, there shall be no further excavation or disturbance of the site or any nearby areas reasonably suspected to overlie adjacent human remains until the County coroner makes a determination. If the coroner determines that the remains are Native American, then the Native American Heritage Commission in Sacramento shall be contacted within 24 hours, along with the Most Likely Descendant(s) of the deceased Native American. The dignified treatment or disposition of Native American burial remains and artifacts shall be agreed upon by the City and the appropriate Native Americans in advance of construction (as provided by Public Resources Code Section 5097.98) and shall be written into construction specifications.

GEOLOGY AND SOILS

Measure GEO-1: This measure is applicable to the Skywest Pump Station. Proposed facilities would be designed in accordance with the 2001 California Building Code (based on 1997 Uniform Building Code) requirements for seismic activity or more stringent local building code provisions.

Measure GEO-2: This measure is applicable to the Skywest Pump Station and Proposed Pipeline. An analysis of expansive and liquefiable soils shall be conducted as part of the geotechnical investigation for the proposed Skywest Pump Station and proposed pipeline. The investigation shall be conducted by a licensed geotechnical engineer. The study shall provide recommendations applicable to foundation design, earthwork, and site preparation prior to or

during the project design phase. Recommendations shall address site specific and adverse soil conditions associated with unstable soils that could affect development of the project. Measures to reduce potential impacts associated with expansive or liquefiable soils include, but are not limited to, the following:

- Removal of the unstable soil, and placement and compaction of select engineered fill for the building pad and foundation support in accordance with ASTM Test Method D 1557; and/or
- Lime treatment of the native expansive clay soils;
- Mixture of the unstable soil with coarse material; or
- Incorporation of a rigid, reinforced concrete slab design.

HAZARDS AND HAZARDOUS MATERIALS

Measure HM-1: This measure applies to the Skywest Pump Station if 55 gallons or more of diesel is stored onsite. The City shall prepare a HMBP for the Skywest Pump Station prior to its operation; the Plan shall specify the emergency response procedures identified below in the event of a chemical emergency. The City shall provide a copy of the HMBP to the City's Fire Department as part of the Hazardous Materials Program.

- A fire, spill, release or threatened release of hazardous materials or hazardous waste is immediately reported to the facility supervisor during normal working hours and during off hours. If emergency assistance is required, the initial observer or supervisor calls 911.
- The supervisor and/or on-site personnel will notify appropriate City staff or regulatory agencies and/or initiate site-specific response plans or procedures, as appropriate.
- Concurrent with notification, trained personnel or outside contractors will begin cleanup and/or containment of the spill or release as soon as it is safe to do so.
- Should evacuation be necessary, the facility supervisor or incident commander will direct personnel to evacuate the facility. Upon notification, all employees will immediately secure their area and proceed to the assembly area prescribed by the evacuation plan map.
- In the event of an earthquake, conflagration, flood or other major emergency, the evacuation and response plans will be invoked.
- In the event that an employee experiences a serious chemical exposure, illness, or injury, 911 is called and the victim will be transported to the nearest hospital or treated as determined by the paramedics responding to the call. For lesser exposures, any affected employee will be transported to a local medical facility in accordance with City procedures.

Measure HM-2: This measure applies to the Skywest Pump Station if 1,320 gallons of diesel is stored in aboveground storage tanks. The City shall retain a Registered Chemical Engineer to prepare a SPCC Plan in accordance with the guidelines contained in the United States Environmental Protection Agency's regulations on oil pollution prevention (40 CFR 112). This plan discusses procedures, methods, and equipment in place at the facility to prevent discharges

of petroleum from reaching navigable waters. A complete copy of the Plan shall be maintained on site.

Measure HM-3: This measure applies to all components. The following hazardous materials management, spill prevention, and spill response/cleanup measures shall be included in contractor specifications for all proposed facilities:

- A facility site plan, including delineation of hazardous material and hazardous waste storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas;
- Materials Safety Data Sheets for all chemicals used and stored at the construction site;
- Spill control and countermeasures, including employee spill prevention/response training;
- An inventory list of emergency equipment;
- Off-loading, safety, and handling procedures for each chemical;
- Notification and documentation procedures.

Measure HM-4: The following procedures shall be included in contractor specifications, in the event that contaminated soils are identified (either visually or through odor detection) during construction activities:

- Stop work in areas of contact;
- If necessary, call responsible agencies. Typically, the Alameda County Health Care Services Agency and the Department of Environmental Health, would be the responsible agency; the San Francisco Bay Regional Water Quality Control Board could be involved if the groundwater or surface water is contaminated, and the California Department of Toxic Substances Control could become involved if soils are contaminated;
- Fence off areas of contamination;
- Perform appropriate clean-up procedures; and
- All contaminated soils would be segregated, profiled, and disposed of appropriately off-site. Required disposal method will depend on the types and concentrations of chemicals identified in the soil. Any site investigations or remediations will be performed in accordance with applicable laws.

Other Measure: In accordance with the City's standard procedures, a Phase I Environmental Assessment shall be conducted prior to development of the Skywest Pump Station to assess the presence or absence of hazardous materials onsite.

HYDROLOGY AND WATER QUALITY

Measure WQ-1: This measure applies to all project components. Best Management Practices shall be implemented to minimize potential water quality impacts during construction.

The City, SFPUC, and EBMUD shall require contractors to implement Best Management Practices (BMPs) for construction activities as specified by the California Storm Water Best Management Practices Handbook (Stormwater Quality Task Force, 1993) and/or the Manual of Standards for Erosion and Sediment Control Measures (ABAG, 1995). The BMPs include measures guiding the management and operation of construction sites to control and minimize the potential contribution of pollutants to storm runoff from these areas. These measures address procedures for controlling erosion and sedimentation and managing all aspects of the construction process to ensure control of potential water pollution sources. Erosion and sedimentation control practices include installation of silt fencing, straw wattle, soils stabilization, revegetation, and runoff control to limit increases in sediment in storm water runoff (e.g., detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sand bag dikes).

NOISE

Measure N-1: The following measures apply to all components and shall be implemented to minimize potential noise impacts during construction:

To reduce noise impacts due to construction, the City shall require that construction contractors muffle or control noise from construction equipment through implementation of the following measures:

- Equipment and trucks used for construction should utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, installation of sound blanket around the project site, wherever feasible and necessary). Construction vehicles should be properly maintained and equipped with exhaust mufflers that meet state standards;
- Impact tools (e.g., jack hammers and pavement breakers) used for construction should be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust should be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves should be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures should be used such as drilling rather than impact equipment whenever feasible; and
- Stationary noise sources should be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, they should be muffled to the extent feasible and enclosed within temporary sheds.

Measure N-3: This measure applies to the Skywest Pump Station. The City shall design the pump station with noise attenuation such that external noise levels at the property line of the closest sensitive receptor would not exceed 65 or 70 DNL, as appropriate. After completion of the project and during testing of the pump station, the City shall conduct noise tests to ensure that this noise standard is met.

TRANSPORTATION / TRAFFIC

Measure T-1: This measure applies to the following components: proposed Skywest Pump Station, proposed pipeline, ball valve replacements, and EBMUD improvements. The City and EBMUD shall incorporate into contract specifications the following requirement: The contractor(s) shall prepare a traffic control plan(s) in accordance with professional traffic engineering standards to show specific methods for maintaining traffic flows on roadways directly affected by pipeline installation, ball valve replacements, and EBMUD improvements. Limitations and restrictions established in the Traffic Control Plan include, but are not limited to the following:

- The City shall restrict hours of construction along Hesperian Boulevard. Specifically, construction would be limited to 9:00 a.m. to 5:30 p.m. in the southbound lane and 9:00 a.m. to 3:00 p.m. on the northbound lane.
- The City shall restrict construction activities for the Skywest Drive / Golf Course Road portion of the pipeline installation to 7:30 a.m. to 4:30 p.m..
- The City shall restrict construction activities for the ball valve sites located in the middle of roadways or intersections to the hours established for construction on Hesperian Boulevard above.
- Contractors shall provide flagger-control along pipeline installation sites to manage traffic control and flows.
- Contractors shall limit the construction work zone in each block to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone.
- To minimize disruption of access to driveways to adjacent land uses, contractor(s) will be required to maintain steel trench plates at the construction sites to restore access across open trenches. Construction trenches in streets will not be left open after work hours.
- Construction work areas will be secured (i.e., fencing) such that the public is not endangered as a result of construction activities.
- Contractors shall post advanced warning of construction activities to allow motorists to select alternative routes in advance.
- The City shall notify emergency service providers in advance of construction activities for the pipeline component.

**EBMUD-Hayward-SFPUC Intertie
Second Amendment, JPA for Design and
Construction**

EXHIBIT C

**Proposition 50 Public Agency Grant
Funding Agreement No. 50060301**

RECEIVED

JUN 05 2006

**SAFE DRINKING
WATER OFFICE**

STATE OF CALIFORNIA

**THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES**

**FUNDING AGREEMENT
BETWEEN
THE STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
AND
EAST BAY MUNICIPAL UTILITY DISTRICT**

PROJECT NUMBER P50-0110005-001

**FOR A GRANT UNDER CHAPTER 3 OF THE WATER SECURITY, CLEAN DRINKING
WATER, COASTAL AND BEACH PROTECTION ACT OF 2002**

TABLE OF CONTENTS

| <u>Section</u> | <u>Page</u> |
|--|-------------|
| 1. Purpose of Funding | 1 |
| 2. Incorporation of Other Documents | 2 |
| 3. Project Cost..... | 2 |
| 4. Grant Amount..... | 2 |
| 5. Supplier's Cost and Matching Funds | 2 |
| 6. Competitive Bidding..... | 3 |
| 7. Requirements for Disbursement..... | 3 |
| 8. Special Terms and Conditions..... | 3 |
| 9. Operation and Maintenance of Project..... | 3 |
| 10. Project Officials and Notices..... | 4 |
| 11. Enforcement..... | 5 |
| 12. Miscellaneous Provisions | 5 |

EXHIBIT A
STANDARD CONDITIONS

| <u>Article</u> | <u>Page</u> |
|--|-------------|
| A- 1. Definitions..... | 7 |
| A- 2. Term of Agreement | 7 |
| A- 3. Basic Conditions Precedent | 7 |
| A- 4. Compliance with Laws, Regulations, and Permit Requirements | 8 |
| A- 5. Project Changes..... | 8 |

TABLE OF CONTENTS (continued)

| <u>Article</u> | <u>Page</u> |
|---|-------------|
| A- 6. Disbursements by State | 8 |
| (a) Claims | 8 |
| (b) Disbursement..... | 9 |
| (c) Rejection of Claims..... | 9 |
| (d) Correction of Claims | 9 |
| (e) Adjustments to Claims | 9 |
| (f) Final Claim and Disbursement..... | 10 |
| (g) Force Account..... | 10 |
| A- 7. Withholding of Grant Disbursements by State and Cancellation of Agreement..... | 11 |
| (a) Conditions for Withholding | 11 |
| (b) Withholding Entire Grant Amount | 11 |
| (c) Withholding Balance of Grant Amount..... | 11 |
| A- 8. Timing of Project | 11 |
| A- 9. Supplier's Contracts | 12 |
| A-10. Audit and Inspection of Books and Records..... | 12 |
| A-11. Remittance of Funds By Supplier..... | 12 |
| A-12. Accounting and Deposit of Grant Disbursements..... | 13 |
| (a) Separate Accounting of Grant Disbursements | 13 |
| (b) Disposition of Funds Disbursed | 13 |
| (c) Interim and Final Audits..... | 13 |
| A-13. Inspections of Project by State..... | 13 |
| A-14. Prohibition Against Disposal of Project Without State Permission | 14 |
| A-15. Nondiscrimination Clause..... | 14 |
| A-16. Workers' Compensation Clause..... | 15 |
| A-17. Successors and Assigns | 15 |
| A-18. State to be Held Harmless..... | 15 |
| A-19. Remedies Not Exclusive..... | 15 |

TABLE OF CONTENTS (continued)

| <u>Article</u> | <u>Page</u> |
|--|-------------|
| A-20. Amendments | 16 |
| A-21. Waiver of Rights | 16 |
| A-22. Dispute Clause | 16 |
| A-23. Performance and Assurances | 16 |
| A-24. Default Provisions..... | 16 |
| A-25. Drug-Free Workplace Certification | 17 |
| A-26. Conflict of Interest--Current and Former State Employees | 18 |
| (a) Current State Officers and Employees | 18 |
| (b) Former State Officers and Employees..... | 19 |
| A-27. Additional Insured..... | 19 |
| A-28. Prohibited Use of State Funds for Software | 20 |
| A-29 Labor Compliance..... | 20 |

**EXHIBIT B
SPECIAL TERMS AND CONDITIONS**

| <u>Article</u> | <u>Page</u> |
|----------------|-------------|
| B- 1. | 21 |

STATE OF CALIFORNIA

THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

FUNDING AGREEMENT
BETWEEN
STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
AND
EAST BAY MUNICIPAL UTILITY DISTRICT
PROJECT NUMBER P50-0110005-001

UNDER CHAPTER 3 OF THE WATER SECURITY, CLEAN DRINKING WATER,
COASTAL AND BEACH PROTECTION ACT OF 2002

THIS AGREEMENT, is entered into between the State of California Department of Water Resources, acting on behalf of the State of California Department of Health Services herein referred to as "State", and **East Bay Municipal Utility District**, a public agency, in the Counties of **Alameda and Contra Costa**, State of California, duly organized, existing, and acting pursuant to the laws thereof, herein referred to as "Supplier", which parties do hereby agree as follows:

SECTION 1. PURPOSE OF FUNDING

This Agreement provides funding in the form of a grant made by State to the Supplier under the provisions of the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, Division 26.5 of the Water Code, commencing with Section 79500, (herein referred to as the "Act".) The purpose of the funding is to assist in financing a project which will enable Supplier to enhance the protection and security of public water systems and drinking water supplies, herein referred to as the "Project". Funds may be used only for such eligible project costs as are approved by the Department of Health Services.

Supplier is solely responsible for the design, construction, operation, and maintenance of the Project; and for all persons or entities engaged in such work, including but not limited to contractors, subcontractors, suppliers, and providers of services. Review or approval of plans, specifications, bid documents or other construction documents by the State is solely for the purpose of proper administration of the funds by State and shall not be deemed to relieve or restrict Supplier's responsibility.

SECTION 2. INCORPORATION OF OTHER DOCUMENTS

This Agreement incorporates by this reference Exhibit A, "Standard Conditions"; Exhibit B, "Special Terms and Conditions"; Supplier's "Department of Health Services Proposition 50 Program Application for Funding"; project plans and specifications as submitted to and approved by the Department of Health Services; and any attachments to said documents.

Supplier accepts and agrees to comply with all terms, provisions, conditions, and commitments of this Agreement, including all incorporated documents and exhibits thereto, and to fulfill all assurances, declarations, representations, and statements made by Supplier in its application, documents, amendments, and communications filed in support of its request for funding, including but not limited to any and all plans and specifications submitted to and approved by the Department of Health Services.

SECTION 3. PROJECT COST

Supplier represents that the total cost of the Project is estimated to be **\$16,722,574** of which State agrees that **\$5,100,000** is the total Eligible Project Costs.

SECTION 4. GRANT AMOUNT

Subject to the availability of funds and in accordance with the terms of this Agreement, State will provide grant funding to Supplier in an amount not to exceed **\$2,550,000**, herein referred to as "Grant Amount".

SECTION 5. SUPPLIER'S COST AND MATCHING FUNDS

Supplier agrees to fund any project costs which are in excess of the Grant Amount set forth in Section 4 of this Agreement. Matching funds are incurred Eligible Project Costs paid, or to be paid, with non-State funds, herein referred to as "Matching Funds". Supplier must provide Matching Funds in an amount not less than the Grant Amount. Supplier's Cost for this Project, including Matching Funds, is estimated to be **\$14,172,574**, herein referred to as "Supplier's Cost". Each disbursement of grant funds is expressly conditioned upon Supplier's demonstration that it has incurred an equal amount of costs approved by State as Matching Funds.

SECTION 6. COMPETITIVE BIDDING

All construction contracts related in any way to the Project shall be let by competitive bid procedures which assure award of such contracts to the lowest responsible bidders. Supplier shall comply with all applicable state, or local ordinances for competitive bidding and all applicable labor laws.

Supplier shall not award a contract until a summary of bids and identification of the lowest responsible bidder are submitted to the Department of Health Services. A full explanation must be provided if Supplier is proposing to award a contract to anyone other than the lowest responsible bidder.

SECTION 7. REQUIREMENTS FOR DISBURSEMENT

By **August 1, 2006**, Supplier shall satisfy all conditions precedent to the disbursement of funds under this Agreement, including Basic Conditions Precedent as set forth in Article A-3 of the Standard Conditions. Failure by Supplier to satisfy said conditions and requirements by this date may, at the option of State, result in cancellation of this Agreement under Article A-7 of the Standard Conditions and/or declaration that Supplier is in default pursuant to Article A-24 of the Standard Conditions.

SECTION 8. SPECIAL TERMS AND CONDITIONS

Supplier shall satisfy the special terms and conditions set forth in Exhibit B. Failure by Supplier to timely satisfy the special terms and conditions may, at the option of State, result in cancellation of this Agreement under Article A-7 of the Standard Conditions, and/or declaration that Supplier is in default pursuant to Article A-24 of the Standard Conditions.

SECTION 9. OPERATION AND MAINTENANCE OF PROJECT

Upon project completion, and for a period of **20** years, which is the reasonably expected useful life of the Project, Supplier shall, as further consideration for this funding, commence and continue operation of the Project; cause the Project to be operated in an efficient and economical manner; provide for the making of all repairs, renewals, and replacements necessary for the effective operation of the Project; and cause the Project to be maintained in as good of condition as upon its construction, ordinary and reasonable wear and depreciation excepted. Failure by Supplier to operate and maintain the Project in accordance with this provision may, at the option of State, be considered a material breach of Agreement and may be treated as a default under Article A-24 of the Standard Conditions.

SECTION 10. PROJECT OFFICIALS AND NOTICES

State's Grant Administrator shall be the Chief, Division of Fiscal Services of the Department of Water Resources. All communications given to State's Grant Administrator shall be deemed given to State.

State's Grant Administrator shall be State's representative for administration of this Agreement, and shall have authority to make recommendations and findings with respect to each controversy arising under or in connection with this Agreement. All such recommendations and findings shall be communicated to the Chief, Division of Drinking Water and Environmental Management of the Department of Health Services, and disputes shall be resolved in accordance with Article A-22 of the Standard Conditions.

Supplier's Grant Administrator shall be its **General Manager**. Supplier's Grant Administrator shall be Supplier's representative for administration of this Agreement. All communications given to Supplier's Grant Administrator shall be deemed given to Supplier.

Either party may change its Grant Administrator upon written notice to the other party.

Notices required to be given in writing by Supplier under this Agreement shall be sent to:

State of California
Department of Water Resources
Safe Drinking Water Office
Attention: Program Manager
1416 Ninth Street, Room 804
Post Office Box 942836
Sacramento, California 94236-0001

Notices required to be given in writing by State under this Agreement shall be sent to:

General Manager
East Bay Municipal Utility District
375 Eleventh Street, MS 809
Oakland, CA 94607

A change of address for delivery of notice may be given by written notice to the other party.

All written notices that are required either expressly or by implication to be given by one party to the other under this Agreement shall be signed for State by its Grant Administrator and for Supplier by its Grant Administrator. Except as otherwise expressly required by this Agreement, all such notices shall be deemed to have been given if delivered personally or if enclosed in a properly addressed postage-prepaid envelope and deposited in a United States Post Office for delivery by registered or certified mail.

SECTION 11. ENFORCEMENT

Any enforcement action, arising out of or relating to this Agreement, may be initiated by the Department of Health Services or the Department of Water Resources or their authorized representatives.

SECTION 12. MISCELLANEOUS PROVISIONS

ATTORNEY FEES

In the event either party commences an action or proceeding concerning the subject matter of this Agreement, the prevailing party in such action or proceeding shall be entitled to recover reasonable attorney fees incurred therein.

SEVERABILITY

If any provision of this Agreement is held invalid or unenforceable by any court of final jurisdiction, it is the intent of the parties that all other provisions of this Agreement be construed to remain fully valid, enforceable, and binding on the parties.

GOVERNING LAW

This Agreement is governed by and shall be interpreted in accordance with the laws of the State of California.

CHILD SUPPORT COMPLIANCE ACT

Supplier acknowledges that it is the policy of this state that anyone who enters into a contract with a state agency shall recognize the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with Section 5200) of Part 5 of Division 9 of the Family Code. Supplier further acknowledges that to the best of its knowledge it is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the Employment Development Department.

Supplier hereby warrants and represents that it is a legal entity in good standing, and that it has the authority to enter into this Agreement.

Supplier shall notify State as promptly as feasible of any proposed change in Supplier's ownership, organization, legal form or service area.

VENUE

The parties agree that venue of any action between the parties arising out of this Agreement, including disputes that may arise following termination of the Agreement, shall be County of Sacramento, State of California.

DATE OF EXECUTION

Date of execution of this Agreement shall be the date of the latest in time execution by a party hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement:

Approved as to Legal Form
and Sufficiency:

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

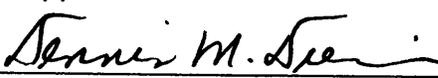
By 
for Chief Counsel Jac
Department of Water Resources

By 
for Chief PNB
Division of Fiscal Services
Sacramento, California

Date JUN 22 2006

Date 6-22-2006

East Bay Municipal Utility District
Supplier

By  
Signature

Dennis M. Diemer
Print Name

General Manager
Title

375 Eleventh Street, MS 809
Address

Oakland, California 94607
Address

Date 6/1/06

EXHIBIT A

STANDARD CONDITIONS

ARTICLE A-1. DEFINITIONS

Whenever in this Agreement the following terms are used, their meaning shall be as follows unless the context clearly requires otherwise:

Agreement--The Funding Agreement to which this Exhibit A "Standard Conditions" is appended.

Days--Calendar days unless otherwise expressly indicated.

Month--Calendar month unless otherwise expressly indicated.

Year--Calendar year unless otherwise expressly indicated.

Eligible Project Costs--Those project costs which are eligible for funding under the Act and applicable State law and implementing criteria.

Force Account--The use of Supplier's own employees or equipment on the Project.

Grant Amount--The total amount disbursed to Supplier under this Agreement.

Public Water System or Public Water Supply System--A system for the provision to the public of water for human consumption, as defined in Part 12, Chapter 4 (commencing with Section 116270), of Division 104 of the Health and Safety Code, as it may be amended.

ARTICLE A-2. TERM OF AGREEMENT

Subject to the provisions of Article A-7, this Agreement shall become effective on the date of its execution and shall remain in effect until the expiration of the period of time required for operation and maintenance of the Project, as set forth in Section 9 of this Agreement.

ARTICLE A-3. BASIC CONDITIONS PRECEDENT

State shall have no obligation to disburse funds under this Agreement unless and until:

(a) Supplier has provided satisfactory documentation of the action taken by its governing body authorizing it to enter into this Agreement, and designating a

representative to execute this Agreement and to sign a claim for disbursement of funds.

(b) Supplier has provided detailed information concerning the account established for deposit of funds received from State.

(c) Supplier has submitted an initial budget approved by the Department of Health Services on a form provided by the Department of Water Resources.

ARTICLE A-4. COMPLIANCE WITH LAWS, REGULATIONS, AND PERMIT REQUIREMENTS

Supplier shall at all times comply with, and require its contractors and subcontractors to comply with, all applicable federal and state laws, rules and regulations, permits, and all applicable local ordinances, including, but not limited to, environmental, labor, procurement and safety laws, rules, regulations, permits, and ordinances.

ARTICLE A-5. PROJECT CHANGES

The Project shall be constructed in accordance with the plans and specifications approved by Department of Health Services on **February 21, 2006**. Supplier shall not make any material change in the Project, or issue any change order to a contractor, without receiving prior written approval from State.

Supplier may request a one-time increase in the total funding provided in this Agreement. Such request shall be based upon the final accepted construction bids. Such request may be granted or denied at the sole discretion of State.

Supplier shall submit to State in writing any proposed changes to the Project budget including but not limited to transferring of funds between line item allotments. Supplier shall obtain written approval of such proposed changes from State before the proposed changes are adopted.

Supplier shall not use any funds from any contingency allotment without receiving prior written approval from State.

ARTICLE A-6. DISBURSEMENTS BY STATE

(a) Claims

Supplier shall request disbursement by submitting to State a claim(s) for incurred Eligible Project Costs. A claim for funds shall be submitted no more than once a month and shall include the following information:

(1) a statement with supporting documentation of Eligible Project Costs that have been incurred during the period identified in the particular claim, including, but not limited to construction, legal, engineering, and administrative fees associated with the Project;

(2) a statement, with supporting documentation, demonstrating that Matching Funds equal to the amount of the claim have been incurred.

Said claim shall be submitted in a form as required by State.

(b) Disbursements

Following the review and approval of a claim by State, it will disburse to Supplier an approved amount, subject to any retention requirements specified in Exhibit B, Special Requirements, and subject to the availability of funds. Any and all funds disbursed to Supplier under this Agreement, and any and all interest earned by Supplier on such funds, shall be used solely to pay Eligible Project Costs.

(c) Rejection of Claims

A claim may be rejected by State if:

(1) it is submitted without signature;

(2) it is submitted under signature of a person other than Supplier's duly authorized representative;

(3) Supplier fails to timely submit a final claim within the time period specified in Article A-6(f);

(4) Supplier fails to adequately demonstrate required Matching Funds.

State will notify Supplier of any claim so rejected, and the reasons therefore.

(d) Correction of Claims

A claim containing a mathematical error will be corrected by State, after telephone notification to Supplier, and will thereafter be treated as if submitted in the corrected amount. State will confirm correction of the error, to Supplier, in writing.

(e) Adjustments to Claims

If upon review of a claim State determines that any portion or portions of the costs claimed are ineligible to be funded under the Act, State law, implementing criteria, or the terms of this Agreement, the State will notify Supplier, by certified or registered mail, of its determination concerning Supplier's failure to adequately document costs as

Eligible Project Costs. Supplier may, within thirty (30) days of the date of receipt of such notice, submit additional documentation or evidence to cure such deficiency(ies). If Supplier does not submit additional information, or if State determines such additional information to be inadequate, State will adjust the pending claim by the amount of the ineligible cost(s).

Supplier may submit additional documentation or evidence, and resubmit any such rejected costs on a subsequent claim.

(f) Final Claim and Disbursement

Not later than six (6) months from the Project Completion Date, as set forth in Article A-8, Supplier shall submit a final claim. With the final claim, Supplier shall provide:

(1) A statement of full written disclosure of all sources and amounts of funds contributed to the Project;

(2) A certification by Supplier's Grant Administrator that the data disclosed is true and correct;

(3) Proof of a Recorded Notice of Completion;

(4) A fully executed "Contractor's Release" (DHS form 2352) acknowledging submission of the final claim. A copy of said form is attached hereto, as Attachment 1. "Supplier" shall be substituted for and in place of "Contractor" on the face of said form.

Should Supplier fail to make the full disclosure and certification required by parts 1 and 2 of this paragraph (f), or should State become aware through any means that Supplier did not disclose all funding sources for the project, the project may be referred to the Department of Finance for a full project audit.

(g) Force Account

Costs of construction or construction related activities performed by Force Account, if determined by State, in its sole discretion, to be Eligible Project Costs, may be used as Matching Funds, but are not eligible for grant funding under the terms of this Agreement.

Costs of engineering, legal, and administrative activities performed by Force Account, if determined by State, in its sole discretion, to be Eligible Project Costs, may be used as Matching Funds or may be eligible for grant funding pursuant to the terms of this Agreement.

When Supplier uses the services of its own employees, Supplier shall establish accounts and maintain records which reasonably document all employee hours and costs charged to the Project and the associated tasks performed by each employee.

ARTICLE A-7. WITHHOLDING OF GRANT DISBURSEMENTS BY STATE AND CANCELLATION OF AGREEMENT

(a) Conditions for Withholding

If State determines that the Project is not being carried out substantially in accordance with the provisions of this Agreement or that Supplier has failed in any other respect to comply with the terms and conditions of this Agreement, State may give written notice of such failure to comply. If Supplier does not cure any such failure to State's satisfaction within ten (10) calendar days of receipt of such notice, State may withhold from the Supplier all or any portion of the grant funding and take any other action that it deems necessary to protect its interests, including but not limited to declaring Supplier in default as set forth in Article A-24, or canceling this Agreement pursuant to Subpart (b) of this Article A-7.

(b) Withholding Entire Grant Amount

If State determines to withhold the entire Grant Amount from Supplier pursuant to Subpart (a) of this Article A-7, notice of such a determination shall constitute a notice of cancellation of this Agreement, and this Agreement shall no longer be binding on any party hereto. Said Notice of Cancellation shall be sent to Supplier by certified or registered mail, and shall be effective upon receipt.

(c) Withholding Balance of Grant Amount

When a portion of the grant amount has been disbursed to Supplier and State determines to withhold funding, State will notify Supplier in writing, via certified or registered mail, that State is withholding the balance of the funding from Supplier, pursuant to Subpart (a) of this Article A-7. In such event, Supplier will be deemed to be in default and subject to the provisions of Article A-24.

ARTICLE A-8. TIMING OF PROJECT

When the Project is complete, Supplier shall certify to the Department of Health Services that the Project is complete in accordance with the approved plans and specifications and ready for final inspection by the Department of Health Services. The date of such certification by Supplier shall be the Project Completion Date for purposes of this Agreement.

Supplier agrees to proceed expeditiously, and shall meet a Project Completion Date of not later than **June 30, 2007**. Supplier's failure to meet said Project Completion Date may, at the option of State, be considered a material breach of agreement and

may be treated as a default under Article A-24. The facility shall not be placed into operation until the Department of Health Services has conducted a final inspection and notifies Supplier in writing that the Project is complete.

ARTICLE A-9. SUPPLIER'S CONTRACTS

Supplier shall be solely responsible for resolution of any and all disputes arising out of or related to Supplier's construction and contracts for construction of the Project, including but not limited to bid disputes and payment disputes with Supplier's contractors and sub-contractors and shall provide appropriate releases (as set forth in California Civil Code Title 15) as may be requested by the State.

ARTICLE A-10. AUDIT AND INSPECTION OF BOOKS AND RECORDS

(a) Upon execution of this Agreement and until 3 years following final disbursement under this Agreement, pursuant to Government Code Section 8546.7, the parties shall be subject to the examination and audit by State or any agent thereof, and the State Auditor, with respect to all matters connected with the performance of this Agreement, including, but not limited to, the cost of administering this Agreement. If any litigation, claim, negotiation, audit or other action is commenced before the expiration of said three (3) year period, all records must be retained until such action is resolved, or until the end of said three (3) year period whichever shall later occur. All records of Supplier relating in any way to funding received pursuant to this Agreement shall be preserved for this purpose.

(b) During regular office hours, each of the parties hereto and their duly authorized representatives shall have the right to inspect and to make copies of any books, records, or reports of either party pertaining to this agreement or matters related hereto. Each of the parties hereto shall maintain and shall make available at all times for such inspection accurate records of all its costs, disbursements, and receipts with respect to its activities under this Agreement. Failure or refusal by Supplier to comply with this provision shall be considered a substantial failure to comply with this Agreement, State may declare Supplier in default as set forth in Article A-24, withhold disbursements to Supplier, or take any other action it deems necessary to protect its interests. The provisions of this subsection (b) shall be effective until expiration of the time period provided in subsection (a) of this Article A-10.

ARTICLE A-11. REMITTANCE OF FUNDS BY SUPPLIER

Within thirty (30) days following the date of final disbursement of funds, Supplier shall remit to State any funds that were disbursed under this Agreement and were not utilized to pay Eligible Project Costs. Such funds will not be included in the Grant Amount.

ARTICLE A-12. ACCOUNTING AND DEPOSIT OF GRANT DISBURSEMENTS

(a) Separate Accounting of Grant Disbursements

Supplier shall account for the funds disbursed pursuant to this Agreement separately from all other Supplier's funds. Supplier shall maintain accounting procedures that are in accordance with Generally Accepted Accounting Principles. Supplier shall keep complete and accurate records of all receipts, disbursements, and interest earned on such funds.

Supplier shall require its agents, contractors and subcontractors to maintain books, records, and other documents pertinent to their work in accordance with Generally Accepted Accounting Principles. Such records shall be subject to inspection by State at any and all reasonable times.

(b) Disposition of Funds Disbursed

In addition to specific requirements set forth in this Agreement, all funds disbursed pursuant to this Agreement shall be deposited, administered, and accounted for pursuant to all provisions of law applicable to Supplier.

(c) Interim and Final Audits

In addition to the provisions of Article A-10, at any time following execution of this Agreement and until completion of the Project, or final disbursement whichever shall occur last, State reserves the right to conduct an audit of Supplier's disposition of all funds disbursed under this Agreement. After completion of the Project, State may require Supplier to conduct a final audit, at Supplier's expense, such audit to be conducted by and a report prepared by an independent Certified Public Accountant.

Failure or refusal by Supplier to comply with these provisions shall be considered a substantial breach of this Agreement.

ARTICLE A-13. INSPECTIONS OF PROJECT BY STATE

State shall have the right but not the duty to inspect the work being performed on the Project at any and all reasonable times during the term of this Agreement. This right shall extend to any subcontracts, and Supplier shall include provisions ensuring such access in all its contracts or subcontracts related to the Project.

ARTICLE A-14. PROHIBITION AGAINST DISPOSAL OF PROJECT WITHOUT STATE PERMISSION

During the term of this Agreement Supplier shall not sell, abandon, lease, transfer, exchange, mortgage, hypothecate, or encumber in any manner whatsoever all or any portion of any real or other property necessarily connected or used in

conjunction with the Project, or with Supplier's service of domestic water, without prior written consent of State.

ARTICLE A-15. NONDISCRIMINATION CLAUSE

During the performance of this Agreement, Supplier, its contractors and subcontractors, shall not deny the Agreement's benefits to any person on the basis of religion, color, ethnic group identification, sex, age, physical or mental disability, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, mental disability, medical condition, marital status, age, or sex. Supplier, its contractors and subcontractors shall ensure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

Supplier, its contractors and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.), the regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.), the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Government Code, Sections 11135-11139.5) and the regulations or standards adopted by the awarding State Agency to implement such article.

By signing this Agreement, Supplier assures State that it shall comply with the requirements of the Americans with Disabilities Act (ADA) of 1990, (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA; the Civil Rights Act of 1964, as amended, 42 U.S.C. 2000d (1988) et seq.; Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. 794 (1989); Federal Water Pollution Control Act Amendments of 1972, Pub.L. No. 92-500, 86 Stat 816; and the Age Discrimination Act of 1975, as amended, 42 U.S.C. 6102 (1994); together with all applicable regulations and guidelines adopted to implement same. Said group of laws and requirements are collectively referred to in this Agreement as the "anti-discrimination laws".

Supplier agrees to collect and maintain information to show compliance with the "anti-discrimination laws" including a list of discrimination complaints, reports of any compliance reviews conducted by other agencies descriptions of any pending discrimination-based lawsuits and data on the racial, ethnic, national origin, sex and handicap characteristics of the population it serves.

Supplier, its contractors and subcontractors shall give written notice of their obligations under this Article to labor organizations with which they have a collective bargaining or other agreement.

Supplier's signature on this Agreement shall constitute a certification under penalty of perjury under the laws of the State of California that Supplier has, unless exempted, complied with the nondiscrimination program requirements of Government Code, Section 12990, and Title 2, California Code of Regulations, Section 8103.

Supplier shall include the nondiscrimination and compliance provisions of this Article A-15 in all contracts and subcontracts to perform work on the Project.

ARTICLE A-16. WORKERS' COMPENSATION CLAUSE

Supplier affirms that it is aware of the provisions of Section 3700 of the California Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and Supplier affirms that it will comply with such provisions before commencing performance of work under this Agreement and will make its contractors and subcontractors aware of this provision.

ARTICLE A-17. SUCCESSORS AND ASSIGNS

This Agreement and all of its provisions shall inure to the benefit of, apply to, and bind the heirs, successors and assigns of the parties hereto. No assignment or transfer of this Agreement or any part hereof by Supplier shall be valid unless and until it is approved by State and made subject to such reasonable terms and conditions as State may impose.

ARTICLE A-18. STATE TO BE HELD HARMLESS

Supplier shall indemnify, hold harmless, protect and defend State and its officers, employees, agents and representatives from any loss, suit, action or claim brought for, or on account of any violation of law, ordinance, rule, or regulation, or any injury, damage, or loss, including death, caused by acts or omissions of Supplier, its employees, contractors, or agents; or in any way arising from, or related to the Project.

ARTICLE A-19. REMEDIES NOT EXCLUSIVE

The use by either party of any remedy specified herein for the enforcement of this Agreement is not exclusive, and shall not deprive the party using such remedy of, or limit the application of, any other remedy provided by law.

ARTICLE A-20. AMENDMENTS

This Agreement may be amended only by mutual written agreement signed by the parties hereto. Requests by Supplier for amendments must be in writing stating the amendment request and the reason for the request.

ARTICLE A-21. WAIVER OF RIGHTS

It is the intention of the parties hereto that from time to time either party may waive any of its rights under this Agreement unless contrary to law. Any waiver by either party hereto of rights arising in connection with this Agreement shall not be deemed to be a waiver with respect to any other rights or matters.

ARTICLE A-22. DISPUTE CLAUSE

Any dispute that Supplier may have regarding the performance of this Agreement including, but not limited to, claims for additional disbursements of funds or extension of time, shall be submitted to State's Grant Administrator identified in Section 10 of this Agreement. State's Grant Administrator may make findings and recommendations and transmit a copy of the claim and any such findings and recommendations to the Department of Health Services, Chief, Division of Drinking Water and Environmental Management, who shall make a decision on such dispute which decision shall be in writing and transmitted to Supplier by certified or registered mail. Said decision shall be final and conclusive.

ARTICLE A-23. PERFORMANCE AND ASSURANCES

Supplier agrees to faithfully and expeditiously perform or cause to be performed all Project work as described in the final plans and specifications as submitted to and approved by Department of Health Services, and to apply funds received only to Eligible Project Costs and to operate and maintain the Project in accordance with applicable provisions of the law.

ARTICLE A-24. DEFAULT PROVISIONS

(a) Supplier will be in default under this Agreement if any of the following occur:

- (1) Supplier's failure to make any remittances required by this Agreement;
- (2) Supplier's substantial breach of this Agreement, or any supplement or amendment to it;
- (3) Supplier's making of any false warranty, representation, or statement with respect to this Agreement or the Project;
- (4) Dissolution or cessation of operations by Supplier, termination of Supplier's existence, insolvency of Supplier, or filing of a voluntary or involuntary bankruptcy petition by or on behalf of Supplier; and/or
- (5) Supplier' failure to provide required Matching Funds.

(b) When an event of default occurs, State may give Supplier notice of default. Supplier shall have ten (10) calendar days from the date of such notice to cure

the default. If Supplier fails to timely cure the default to the satisfaction of State, then State may do any or all of the following:

- (1) Declare that any and all amounts disbursed to Supplier under the terms of this Agreement shall be deemed an obligation of Supplier and due and payable to State;
- (2) Declare Supplier's obligations immediately due and payable, with or without demand or notice to Supplier, which Supplier expressly waives;
- (3) Terminate any obligation of State to make further disbursements to Supplier under this Agreement;
- (4) Perform any of Supplier's obligations under this Agreement for Supplier's account; and/or
- (5) Take any other action it deems necessary to protect its interests.

(c) Supplier agrees that any remedy provided in this Agreement is in addition to and not in derogation of any other legal or equitable remedy available to State as a result of a breach of agreement by Supplier, whether such breach occurs before or after completion of the Project.

(d) No waiver by State of any breach or default will be a waiver of any other breach or default.

ARTICLE A-25. DRUG-FREE WORKPLACE CERTIFICATION

By signing this Agreement, Supplier hereby certifies under penalty of perjury under the laws of the State of California that Supplier will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

(a) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.

(b) Establish a Drug-Free Awareness program to inform employees about all of the following:

- (1) The dangers of drug abuse in the workplace;
- (2) The person's or organization's policy of maintaining a drug-free workplace;

(3) Any available counseling, rehabilitation and employee assistance programs;

(4) Penalties that may be imposed upon employees for drug abuse violations.

(c) Every employee who works on the Project:

(1) Shall be issued a copy of Supplier's drug-free policy statement;

(2) Shall agree to abide by terms of Supplier's statement as a condition of employment on the Project.

This Agreement may be subject to suspension of payments or termination, or both, and Supplier may be subject to debarment if State determines that: (1) Supplier has made a false certification, or (2) Supplier has violated the certification by failing to carry out the requirements of this Article A-25.

ARTICLE A-26. CONFLICT OF INTEREST--CURRENT AND FORMER STATE EMPLOYEES

(a) Current State Officers and Employees:

(1) Supplier shall not utilize in the performance of this Agreement any state officer or employee in the state civil service or other appointed state official unless the employment, activity, or enterprise is required as a condition of the officer or employee's regular state employment. Employee in the state civil service is defined to be any person legally holding a permanent or intermittent position in the state civil service.

(2) If any state officer or employee is utilized or employed in the performance of this Agreement, Supplier shall first obtain written verification from State that the employment, activity, or enterprise is required as a condition of the officer's, employee's, or official's regular state employment and shall keep said verification on file for three (3) years after the termination of this Agreement.

(3) Supplier may not accept occasional work from any currently employed state officer, employee, or official.

(4) If Supplier accepts volunteer work from any currently employed state officer, employee, or official, Supplier may not reimburse, or otherwise pay or compensate, such person for expenses incurred, including, without limitation, travel expenses, per diem, or the like, in connection with volunteer work on behalf of Supplier.

(5) Supplier shall not employ any state officers, employees, or officials who are on paid or unpaid leave of absence from their regular state employment.

(6) Supplier or anyone having a financial interest in the Agreement may not become a state officer, employee, or official during the term of this Agreement. Supplier shall notify each of its employees, and any other person having a financial interest in this Agreement that it is unlawful under the Public Contract Code for such person to become a state officer, employee, or official during the term of this Agreement unless any relationship with the Supplier giving rise to a financial interest, as an employee or otherwise, is first terminated.

(7) Occasional or one-time reimbursement of a state employee's travel expenses is not acceptable.

(b) Former State Officers and Employees:

(1) Supplier shall not utilize in the performance of this Agreement any formerly employed person of any state agency or department that was employed under the state civil service, or otherwise appointed to serve in the State Government, if that person was engaged in any negotiations, transactions, planning, arrangement, or any part of the decision making process relevant to the Agreement while employed in any capacity by any state agency or department. This prohibition shall apply for a two (2) year period beginning on the date the person left state employment.

(2) Supplier shall not utilize within twelve (12) months from the date of separation of services, a former employee of the contracting state agency or department if that former employee was employed in a policy making position in the same general subject area as the proposed Agreement within the twelve (12) month period prior to the employee leaving state service.

ARTICLE A-27. ADDITIONAL INSURED

Supplier agrees that for any policy of general liability insurance concerning the construction of the Project, it will cause, and will require its contractors and subcontractors to cause, a certificate of insurance to be issued showing State, its officers, agents, employees, and servants as additional insureds; and shall provide State with a copy of all such certificates prior to the commencement of construction of the Project.

ARTICLE A-28. PROHIBITED USE OF STATE FUNDS FOR SOFTWARE

Supplier certifies that it has appropriate systems and controls in place to ensure that state funds will not be used in the performance of this Agreement for the acquisition, operation or maintenance of computer software in violation of copyright laws.

ARTICLE A-29 LABOR COMPLIANCE

Supplier shall comply with Labor Code section 1771.8 regarding Labor Compliance Programs. Supplier's failure or refusal to comply with this requirement shall be considered a substantial breach of this Agreement.

EXHIBIT B

SPECIAL TERMS AND CONDITIONS

ARTICLE B-1.

1. Supplier shall notify the Department of Health Services, San Francisco District Office when construction is completed.
2. Supplier and its project partners shall implement the mitigation and monitoring plan identified in the Mitigated Negative Declaration prepared for the project.
3. Subsequent to execution of this Agreement, Supplier may request a **one-time** increase in funding. Such request must be **based upon competitive bids** and shall be submitted to Department of Health Services. Approval of such request may be granted or denied at the sole discretion of the State, and is subject to availability of funds.
4. Notwithstanding any other term or condition of this Agreement, Supplier may be reimbursed only for such Eligible Project Costs consisting of eligible construction expenses incurred on or after February 24, 2006, the date of Supplier's Letter of Commitment, and eligible preliminary expenses incurred after March 5, 2005.
5. Notwithstanding any other term or condition of this Agreement, Supplier may use only Eligible Project Costs incurred after October 28, 2003 to satisfy Matching Fund requirements.
6. Supplier represents that pursuant to that certain agreement titled "Joint Exercise of Powers Agreement between City and County of San Francisco Public Utilities Commission, East Bay Municipal Utility District and City of Hayward to Pursue the Design Services and Construction for an Emergency/Maintenance Water System Intertie Project" dated April 2, 2003 ("JPA for Construction"), City of Hayward is directly responsible for the execution, management, and final acceptance of the construction contract(s) for the Project; that the Joint Powers Agreement for Construction provides for the award of construction contract(s) by competitive bid; that construction of the Project has commenced; and further that, to the best of its knowledge, all construction contracts related to the Project were let by competitive bid procedures. In reliance upon and in consideration of Supplier's representation, State agrees to waive the requirements of the second paragraph of Section 6 of this Agreement.
7. State shall have no obligation to disburse funds under this Agreement unless and until Supplier provides evidence that the parties to that certain agreement titled "Joint Exercise of Powers Agreement between City and County of San Francisco

Public Utilities Commission, East Bay Municipal Utility District, and City of Hayward for Long Term Operation and Maintenance of the Emergency/Maintenance Water System Intertie Project”, dated April 2, 2003 (“JPA for Operation and Maintenance”) have executed an amendment to said agreement to provide that, unless otherwise approved in advance by State, the operation and maintenance of the Project shall continue for a period of not less than 20 years.

8. State shall have no obligation to disburse funds under this Agreement unless and until Supplier provides evidence that the parties to the “JPA for Construction” and the “JPA for Operation and Maintenance” have executed amendments to said agreements assuring that State will have access to any and all books, records, and reports related or pertaining to the Project, including but not limited to records of costs, disbursements invoices and receipts, for a period of not less than 3 years following final disbursement of funds to Supplier under this Agreement. The amendments shall further provide that in the event any litigation, claim, negotiation, audit or other action is commenced concerning the Project or this Agreement, the time period for retention of books, records and reports shall extend until such time as any such litigation, claim, negotiation, audit or other action is resolved.
9. Supplier represents that pursuant to the “JPA for Construction”, it is obligated to pay fifty percent (50%) of the total cost of the Project.

ORIGINAL

FIRST AMENDED JOINT EXERCISE OF POWERS AGREEMENT

BETWEEN
CITY AND COUNTY OF SAN FRANCISCO PUBLIC UTILITIES COMMISSION,
EAST BAY MUNICIPAL UTILITY DISTRICT,
AND
CITY OF HAYWARD

FOR LONG TERM OPERATION AND MAINTENANCE OF THE
EMERGENCY/MAINTENANCE WATER SYSTEM INTERTIE PROJECT

July 10, 2007

1 FIRST AMENDED JOINT EXERCISE OF POWERS AGREEMENT

2
3 BETWEEN

4 CITY AND COUNTY OF SAN FRANCISCO PUBLIC UTILITIES COMMISSION,
5 EAST BAY MUNICIPAL UTILITY DISTRICT,

6 AND

7 CITY OF HAYWARD

8
9 FOR LONG TERM OPERATION AND MAINTENANCE OF THE
10 EMERGENCY/MAINTENANCE WATER SYSTEM INTERTIE PROJECT

11
12 THIS FIRST AMENDED JOINT EXERCISE OF POWERS AGREEMENT
13 (“Agreement”) made in the State of California on this 15th day of August 2007, is by and
14 between the City and County of San Francisco, a municipal corporation, acting by and through its
15 Public Utilities Commission (“SFPUC”), the East Bay Municipal Utility District, a local public
16 agency of the State of California (“EBMUD”), and the City of Hayward (“Hayward”), a charter
17 city and a municipal corporation in the State of California and governed by its City Council,
18 referred to collectively herein as the “Parties” and singularly as a “Party.”

19
20 RECITALS:

- 21
- 22 1. WHEREAS, the Joint Exercise of Powers Act, Govt. C. Secs. 6500 et seq., authorizes
23 intergovernmental agreements without regard to each agency's geographical district; and
24
 - 25 2. WHEREAS, SFPUC owns and operates water supply system facilities that provide treated,
26 potable water to wholesale and retail customers in San Francisco, San Mateo, Santa Clara
27 and Alameda Counties; and
28
 - 29 3. WHEREAS, EBMUD owns and operates water supply system facilities that provide
30 treated, potable water to retail customers in Alameda and Contra Costa Counties; and
31
 - 32 4. WHEREAS, Hayward owns and operates water supply system facilities that provide
33 treated, potable water to retail customers within Hayward and portions of Alameda County,
34 and whose water supply is purchased from SFPUC and delivered through an existing
35 connection with SFPUC facilities; and
36
 - 37 5. WHEREAS, the Parties deem it to be in the public interest and to their mutual benefit to
38 provide interconnections between their respective water supply system facilities subject to a
39 sharing of costs and pursuant to all terms and conditions of this Agreement; and
40
 - 41 6. WHEREAS, Hayward has completed and approved a mitigated negative declaration for
42 the proposed Water System Intertie Project which includes measures that reduce
43 environmental impacts to less than significant levels; and
44

- 1 7. WHEREAS, the Intertie will allow treated, potable water to be supplied between the Parties
2 during an emergency or planned critical work on facilities that would otherwise be difficult
3 to remove from service without the availability of an alternate water source; and
4
- 5 8. WHEREAS, the Parties have exchanged sufficient information about their respective water
6 supply systems, including current operations and long term improvements, to give
7 reasonable assurance of the ability to deliver treated, potable water in the event of an
8 emergency or during planned critical work; and
9
- 10 9. WHEREAS, construction of the Intertie facilities, pursuant to the Joint Exercise of Powers
11 Agreement, as amended, between City and County of San Francisco Public Utilities
12 Commission, East Bay Municipal Utility District and City of Hayward to Pursue Design
13 Services and Construction for an Emergency/Maintenance Water System Intertie Project, is
14 near completion and testing of the installed facilities is anticipated to be completed in
15 calendar year 2007; and
16
- 17 10. WHEREAS, water deliveries through the Intertie will be subject to mutual agreement and
18 the discretion of SFPUC, EBMUD, and the City of Hayward; and
19
- 20 11. WHEREAS, this Agreement between the Parties is for the long term operation and
21 maintenance of the Intertie; and
22
- 23 12. WHEREAS, on April 2, 2003, the Parties entered into a Joint Exercise of Powers
24 Agreement for Long Term Operation and Maintenance of the Emergency/Maintenance
25 Water System Intertie Project (the "April 2003 JPA for O&M of the Intertie Facilities");
26 and
27

28 NOW, THEREFORE, in consideration of the promises herein contained, the Parties agree
29 as follows:

30
31 1. PURPOSE

32
33 The purpose of this Agreement is to define the obligations and responsibilities of each Party,
34 define cost share allocations and ownership of facilities between SFPUC and EBMUD, and govern
35 the operation and maintenance of the Intertie. This Agreement replaces, in its entirety, the April
36 2003 JPA for O&M of the Intertie Facilities. This Agreement also provides for operation and
37 maintenance of the Intertie for at least 20 years.
38

39 2. DEFINITIONS

40
41 "Annual Meeting": A yearly meeting of the Parties to discuss operation, maintenance, repair
42 or improvement of the Intertie, the annual reconciliation for water deliveries, expenses relative to
43 approved budgets, budgets for the forthcoming fiscal year (which begins on July 1 of each year),
44 and any other pertinent matter.

1 “Emergency”: (1) Actual or imminent failure of facilities, such as major pipelines,
2 treatment plants, or pumping stations; or (2) Major disruptions in water supply caused by natural
3 conditions or manmade disasters; provided, however, that drought conditions shall not constitute an
4 Emergency under this Agreement.

5 “Hazardous Material”: Material that, because of its quantity, concentration or physical or
6 chemical characteristics, is at any time now or hereafter deemed by any federal, state or local
7 governmental authority to pose a present or potential hazard to public health, welfare or the
8 environment. "Hazardous Material" includes, without limitation, any material or substance
9 defined as a "hazardous substance, pollutant or contaminant" pursuant to the Comprehensive
10 Environmental Response, Compensation and Liability Act of 1980, as amended, 42 USC
11 Sections 9601 et seq., or pursuant to Section 25316 of the California Health & Safety Code; a
12 "hazardous waste" listed pursuant to Section 25140 of the California Health & Safety Code; any
13 asbestos and asbestos containing materials whether or not such materials are part of the Permit
14 Area or are naturally occurring substances in the Permit Area, and any petroleum, including,
15 without limitation, crude oil or any fraction thereof, natural gas or natural gas liquids.

16 “Intertie” or “Water System Intertie Project”: Those facilities comprised of approximately
17 8,000 feet of 36-inch diameter pipe between EBMUD's existing 42” pipeline at Hesperian
18 Boulevard and Bartlett Avenue and Hayward's existing 33” pipeline at Hesperian Boulevard and
19 West Winton Avenue, a 30 million-gallon-per-day (“mgd”) capacity pump station (the Skywest
20 Pump Station), flowmeters, water quality sample taps, and miscellaneous appurtenances
21 necessary to deliver and monitor the quantity and quality of treated, potable water delivered from
22 the Intertie to the respective Parties. The facilities are shown in Attachment 1.

23 “Intertie Operator”: The Party designated in this Agreement as having responsibility for
24 Operation and Maintenance of the Intertie facilities.

25 “Maintain” or “Maintenance”: Work necessary to allow the Intertie to be utilized for its
26 intended purposes, including, but not limited to, pump lubrication and testing; meter calibration;
27 pipeline painting and repair; periodic exercising of the Intertie when judged necessary by the
28 Intertie Operator to verify its ability to function as intended; normal inspections, repairs,
29 replacements, and valve exercising; non-management costs incurred by the Intertie Operator to
30 administer this Agreement, including maintenance of records, preparation of delivery schedules,
31 and preparation of billings. “Maintenance” shall not include capital improvements of the Intertie
32 that cost in excess of \$250,000. Capital improvements in excess of \$250,000 are subject to
33 subsequent agreements between the parties.

34 “Operate” or “Operation”: Use of the Intertie to move water supply in either direction in an
35 amount and at a rate previously agreed to in writing by the Parties.

36 “Planned Critical Work”: Work scheduled to be performed by a Party on its separate water
37 supply facilities that, because of the length of time needed to complete such work, would otherwise
38 be difficult to perform without the availability of an alternative water source. Planned Critical Work
39 shall only be performed after any necessary environmental review and permitting of the Planned
40 Critical Work project is completed.

41 “Recipient”: The Party receiving Emergency or Planned Critical Work water under this
42 Agreement.

43 “Reimbursement Water”: Water delivered by any Party through the Intertie to any other
44 Party to reimburse water received previously during an Emergency or Planned Critical Work.

1 Reimbursement Water shall be provided in an amount equal to the amount of water previously
2 received by the Recipient.

3 “Separate Facilities”: Non-Intertie water supply facilities that are solely owned, operated
4 and maintained by a Party to this Agreement.

5
6 3. OWNERSHIP OF THE INTERTIE

7
8 All physical works of the Intertie shall be jointly owned, in equal shares, by SFPUC and EBMUD.
9 Right of way for the Intertie shall be secured in the name of Hayward. Skywest Pump Station shall
10 situate on land owned by the Hayward Executive Airport and shall be jointly leased to SFPUC and
11 EBMUD.

12
13 4. OPERATION OF THE INTERTIE

- 14
15 a) Hayward shall be the Intertie Operator.
- 16
17 b) Other than during initial testing or Maintenance, the Intertie shall only be operated to
18 deliver water supply during an Emergency or Planned Critical Work, or to provide
19 Reimbursement Water. Except in response to an Emergency, the Intertie shall be
20 jointly operated only pursuant to the prior written agreement of the Parties. All
21 requests from Hayward for water deliveries through the Intertie shall be through
22 SFPUC. Only SFPUC and EBMUD may operate the intertie valves connected to their
23 respective Separate Facilities. The Parties shall coordinate operations of their Separate
24 Facilities with the operation of the Intertie. Water supplied through the Intertie shall be
25 measured by an accurate meter.
- 26
27 c) A Party shall provide as much advance notice as possible to the other Parties of a request
28 to operate the Intertie. SFPUC and EBMUD shall make a best faith effort to provide
29 water supply during an Emergency or Planned Critical Work; however, neither SFPUC
30 nor EBMUD guarantees or warrants that they will be able to respond in full or in part to
31 such a request for water. No liability to each other or to any third party is assumed or is
32 to be derived from this Agreement in consequence of failure to supply water during an
33 Emergency or Planned Critical Work.
- 34
35 d) The Parties shall provide each other with a name and contact information including a
36 pager number of a person who shall have authority to make and/or grant requests to
37 operate the Intertie during an Emergency. The requesting Party shall forward a written
38 request to the other Parties for Emergency supply as soon as practicable, and the Party
39 from whom water is requested shall forward its written determination of whether it is
40 able to and will provide the requested emergency water as soon as practicable upon
41 receipt of the written request for Emergency supply.
- 42
43 e) The Parties shall schedule operation of the Intertie for “Reimbursement Water” during
44 the Annual Meeting or, at the request of a Party, at a date and time different from the
45 Annual Meeting.

- 1
2 f) Requests to operate the Intertie for Planned Critical Work shall be directed in writing to
3 the General Manager, SFPUC; General Manager, EBMUD; and the City Manager, City
4 of Hayward. The Intertie shall not be operated for Planned Critical Work until (i) the
5 Party that has been requested to provide the water determines that it will have water
6 available to meet the request; (ii) any necessary environmental review and permitting of
7 the Planned Critical Work project is completed; and (iii) the Parties approve a written
8 plan, including, at a minimum, the amount and rate of water to be delivered, delivery
9 schedules, and relevant operating criteria. Upon receipt of a written request for water
10 supply for Planned Critical Work, the noticed Parties shall expeditiously review the
11 proposed schedule and, after consultation with the other Parties, may make such
12 modifications as are necessary to ensure that the amounts, times and rates of release will
13 be consistent with the noticed Parties' overall delivery ability and planned operations. A
14 noticed Party may subsequently revise the delivery schedule if necessary to not
15 unreasonably impact its own water deliveries, facilities or operations provided immediate
16 notice is given to the other Parties. The respective Parties will be responsible for any
17 adverse impacts to their own customers that may result from the water received through
18 the Intertie.
19
20 g) The Parties shall cause Operation and Maintenance of the Intertie to begin pursuant to
21 the terms and conditions of this Agreement upon certification of completion of
22 construction of the Intertie.
23

24 5. MAINTENANCE, REPLACEMENT AND REPAIR OF THE INTERTIE
25

- 26 a) As Intertie Operator, Hayward shall have responsibility for necessary Maintenance.
27
28 b) SFPUC and EBMUD shall each maintain, at their own cost, their respective Separate
29 Facilities.
30
31 c) Any Party may repair or replace any of the physical works of the Intertie with the written
32 agreement of the other Parties.
33
34 d) The Parties shall establish and agree upon, during the Annual Meeting, an annual plan
35 and budget for Maintenance and capital improvements. EBMUD and SFPUC shall,
36 together, issue work orders to Hayward for all elements of the approved annual
37 Maintenance plan.
38
39 e) The Parties shall provide for the making of all repairs, renewals and replacements
40 necessary for continued efficient and economical Operation of the Intertie over a planned
41 operating period of at least twenty (20) years from the date of its certification of
42 completion of construction, and cause the Intertie to be Maintained in a condition as good
43 as existed upon its date of certification of completion of construction, ordinary wear and
44 tear and depreciation excepted. The standards for Maintenance shall be consistent with

1 the reliability requirements for Intertie facilities given the purposes of operation described
2 in Section 4 of this Agreement.

3
4 6. WATER QUALITY TESTING AND MAINTENANCE

5
6 Any Party may, at any time, request the Intertie Operator to perform tests, and the Intertie
7 Operator shall perform tests as requested, at the expense of the requesting Party, of water quality
8 at the Intertie facilities via sampling taps and/or on-line SCADA systems. The Intertie Operator
9 shall have the responsibility for maintaining the water quality in the Intertie by routine flushing,
10 circulation, and/or chemical addition as appropriate, to avoid stagnant water.

11
12 7. REASONABLE CARE

13
14 Each Party shall exercise reasonable care in the performance of its obligations and rights under
15 this Agreement to ensure that another Party's facilities and operations are not impaired or
16 damaged.

17
18 8. HAZARDOUS MATERIAL

19
20 No Party shall cause any Hazardous Material to be brought upon, kept, used, stored, generated or
21 disposed of in, on or about the Intertie, or transported to or from the Intertie, except for fuel,
22 lubricants, and materials needed for operation of the pumps, standby generators, and for general
23 maintenance. A Party shall immediately notify the other Parties upon learning of, or having
24 reason to believe that, a release of Hazardous Material has occurred in, on or about the Intertie.
25 Each Party shall further comply with all laws requiring notice of such releases or threatened
26 releases to governmental agencies, and shall take all action necessary to mitigate the release or
27 minimize the spread of contamination. In the event that a Party or its Agents or Invitees cause a
28 release of Hazardous Material, that Party shall, without cost to the other Parties and in
29 accordance with all laws and regulations, return the Intertie to the condition immediately prior to
30 the release. In connection therewith, the Party causing the release of Hazardous Material shall
31 afford the other Parties a full opportunity to participate in any discussion with governmental
32 agencies regarding any settlement agreement, cleanup or abatement agreement, consent decree or
33 other compromise proceeding involving Hazardous Material. The term "release" or "threatened
34 release" when used with respect to Hazardous Material shall include any actual or imminent
35 spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping,
36 leaching, dumping, or disposing in, on, under or about the Intertie.

37
38 9. PROTECTION OF A PARTY'S SEPARATE FACILITIES

39
40 If any occurrence or conditions during operation or maintenance of the Intertie threaten the
41 physical integrity or operational capability of a Party's Separate Facilities, upon notification to the
42 other Parties the affected Party may stop operation or maintenance of the Intertie and/or take any
43 action that the affected Party determines to be necessary to protect its own Separate Facilities.
44 Any Party may remove part of the Intertie, if required, for emergency repair of its Separate

1 Facilities provided that such affected Intertie facilities are restored as soon as possible by the
2 removing Party.

3
4
5 10. RESPONSIBILITY FOR DAMAGES TO FACILITIES
6

- 7 a) If damages occur to Intertie facilities and/or to Hayward's 42-inch and 33-inch mains
8 in Hesperian Boulevard during operation of the Intertie under this Agreement, then
9 responsibility to pay for any necessary repairs of said damaged facilities shall be as
10 follows:
- 11 i) If damages occur when the Intertie is being operated within the Operating
12 Standards (said Operating Standards to be agreed upon in writing by the Parties
13 subsequent to execution of this Agreement as part of the design of the Intertie),
14 then responsibility to pay for any necessary repairs to said damaged facilities shall
15 be allocated 50% to San Francisco and 50% to EBMUD.
- 16 ii) If damages occur when the Intertie is being maintained and/or is being operated
17 beyond the Operating Standards, then responsibility to pay for any necessary
18 repairs to said damaged facilities shall be allocated to the Party responsible for
19 nonstandard operations.
- 20
21 b) If damages occur to Separate Facilities (other than Hayward's 42-inch and 33-inch
22 mains) during operation of the Intertie under this Agreement, then responsibility to
23 pay for any necessary repairs to said damaged Separate Facilities shall be as follows:
- 24 i) If damages occur when the Intertie is being operated within the Operating
25 Standards, then responsibility to pay for any necessary repairs to said damaged
26 Separate Facilities shall be allocated to the owner of said damaged Separate
27 Facilities.
- 28 ii) If damages occur when the Intertie is being maintained and/or is operated beyond
29 the Operating Standards, then responsibility to pay for any necessary repairs to
30 said damaged Separate Facilities shall be allocated to the Party responsible for
31 nonstandard operations.

32
33 11. MAINTENANCE AND REPAIRS OF SEPARATE FACILITIES
34

35 Any Party may perform or contract for work on its own right of way in regard to its own Separate
36 Facilities. Other Parties shall cooperate with such work, conduct their operations in such a
37 manner as not to cause any unnecessary delay or hindrance, and adjust and coordinate their work
38 so as to permit proper completion of all work in the area.

39
40 12. NOTICES
41

42 Unless otherwise specified in this Agreement, all notices shall be deemed to have been given if
43 delivered personally or if enclosed in a properly addressed and stamped envelope and deposited
44 with the US Postal Service for delivery by registered or certified mail. Unless and until notified

1 otherwise, in writing, all notices except as otherwise specified in this Agreement shall be
2 addressed to the appropriate Party at their addresses as shown below:

3
4 Manager of Regional Operations (Paul Mazza)
5 San Francisco Public Utilities Commission
6 1000 El Camino Real
7 PO Box 730
8 Millbrea, Ca 94030
9

10 Director of Operations and Maintenance (Michael Wallis)
11 East Bay Municipal Utility District
12 PO Box 24055
13 Oakland, CA 94623-1055
14

15 Public Works Director (Robert Bauman)
16 City of Hayward
17 777 B Street
18 Hayward, CA 94541-5007
19

20 13. COST OF MAINTENANCE AND OPERATION OF INTERTIE
21

- 22 a) Maintenance Costs: Unless specifically otherwise identified in this Agreement or as
23 specified in subsequent agreements between the Parties, all costs associated with
24 Maintenance of the Intertie and the incremental operating costs associated with
25 Hesperian Pump Station and the Decoto Pump Station for Maintenance of the Intertie,
26 shall be allocated 50% to SFPUC and 50% to EBMUD. This cost allocation will be
27 re-evaluated every five years and will be adjusted at those times based on the relative
28 operation of the Intertie for delivery of water during the then most recent five years.
29 SFPUC and EBMUD shall so share in Maintenance costs reasonably incurred that are
30 properly attributable to the work authorized under this Agreement.
31
- 32 b) Operating Costs: All labor, utilities, fuel, and other costs required to operate the
33 Intertie during an Emergency or Planned Critical Work incurred by the supplying
34 agency and the Intertie Operator shall be borne by the Recipient. All labor, utilities,
35 fuel, and other costs required to operate the Intertie during delivery of Reimbursement
36 Water incurred by the Recipient and the Intertie Operator shall be borne by the agency
37 supplying the Reimbursement Water. In the case of water supplied during Planned
38 Critical Work, the supplying agency shall be entitled, in accordance with Section 16
39 d) herein, to reimbursement of its full operating costs incurred to supply such water.
40

41 14. PAYMENTS FOR OPERATION AND MAINTENANCE OF INTERTIE
42

- 43 a) Maintenance: By May 15 of each year, Hayward shall bill SFPUC and EBMUD for
44 their share of the estimated annual Maintenance costs for the upcoming fiscal year,
45 which begins on July 1 of each year, for the joint facilities as defined in Section 13 a)

1 above. Such billing shall be consistent with the annual plan and budget agreed at the
2 prior Annual Meeting, as defined in Section 5 d), and shall include the supporting
3 accounting system documentation as appropriate and shall include sufficiently
4 detailed information to explain the types of Maintenance costs estimated to be
5 incurred during the upcoming fiscal year. SFPUC and EBMUD will deposit funds
6 with Hayward to cover these estimated expenses. Hayward shall deposit these funds
7 in an interest bearing account. During the course of a fiscal year, Hayward shall draw
8 upon said deposited funds to meet the costs incurred by Hayward in the Maintenance
9 of the Intertie. Hayward shall provide an end-of-year financial report within 30 days
10 after the close of the fiscal year, including a breakdown to explain sufficiently the
11 Maintenance costs incurred during the fiscal year. Any remaining funds shall be
12 carried over to the next year's Maintenance fund.
13

14 Hayward shall, within 15 days after the close of each fiscal quarter, submit a report to
15 SFPUC and EBMUD on the Maintenance tasks carried out in that quarter, using the
16 descriptions contained in work orders issued in accordance with Section 5 d),
17 containing the labor hours of Hayward personnel and contract personnel, and
18 describing any extraordinary expenditures incurred. Hayward shall not undertake,
19 without first getting written approval from EBMUD and SFPUC, any maintenance
20 work item in excess of \$5,000 that is not included in the annual plan and budget.
21

- 22 b) Operation of Intertie Facilities when SFPUC or Hayward are Recipients or are
23 providing Reimbursement water: Hayward shall invoice SFPUC for all of Hayward's
24 Intertie Operating costs incurred when SFPUC or Hayward are Recipients or are
25 providing Reimbursement water.
26
- 27 c) Operation of Intertie Facilities when EBMUD is the Recipient or is providing
28 Reimbursement Water: Hayward shall invoice EBMUD for all of Hayward's Intertie
29 Operating costs incurred when EBMUD is the Recipient or is providing
30 Reimbursement Water.
31
- 32 d) Operation of Hayward's facilities: Hayward shall invoice the Recipient for any
33 incremental operating costs for Hesperian Pump Station due to any such operations
34 required to deliver water to the Recipient.
35
- 36 e) Operation of Hayward's facilities due to Maintenance: Hayward shall invoice EBMUD
37 and SFPUC in equal shares for any incremental operating costs for Hesperian Pump
38 Station due to any such operations required in conjunction with Maintenance.
39
- 40 f) Water Supply: The Party supplying water may elect to receive payment for the water in
41 the manner described in Section 16 of this Agreement.
42
- 43 g) All invoices sent pursuant to this Section shall include supporting accounting system
44 documentation as appropriate and shall include sufficiently detailed information to

1 explain the specific Operation and/or Maintenance costs incurred. Parties shall provide
2 clarifications of any invoice to any other Party upon written request.
3

- 4 h) All payments for invoices sent pursuant to this Section shall be due within 30 days
5 after the date of the Party's or Parties' proper invoicing, or if a Party has requested
6 clarification of an invoice in writing, within 30 days of the Parties' written clarification
7 and acceptance by the Party invoiced.
8

9 15. WATER SUPPLIED THROUGH INTERTIE
10

11 Water supplied through the Intertie is for Emergencies or Planned Critical Work only. Neither
12 San Francisco nor EBMUD shall through operation of the Intertie become customers of the other.
13 Supply of water under this Agreement is not a dedication of a permanent supply to any Party or
14 any retail water provider; such supply is temporary and interruptible.
15

16 16. ANNUAL RECONCILIATION OF WATER SUPPLIED THROUGH THE INTERTIE
17

- 18 a) Reconciliation: SFPUC and EBMUD shall maintain accurate records of quantities of
19 water supplied and received through the Intertie. SFPUC and EBMUD shall reconcile
20 deliveries and receipts of water during any given year against any existing carryover
21 balance from the previous year during the Annual Meeting. However, a Party may call
22 a special meeting for reconciliation purposes at any time and the deliveries and
23 receipts of water reconciled at such meeting may include all amounts supplied and
24 received through the Intertie through the end of the month preceding the special
25 reconciliation meeting. A Party who holds a credit after reconciliation may (1) carry
26 the credit forward subject to future reconciliation; (2) request Reimbursement Water
27 under a schedule and in a manner agreed to by the Parties; or (3) request payment for
28 said water. Notwithstanding the foregoing, a Party who owes Reimbursement Water
29 may not carry such credit beyond five consecutive years without the agreement of the
30 Party who holds the credit. If the Party who holds the credit does not agree to carry
31 forward a credit beyond five years, then that Party who owes the Reimbursement
32 Water shall pay for the credit.
33
- 34 b) Rate for credit: The rate to be paid for the credit described in Sub-section 16 a) will be
35 the average of the then applicable SFPUC wholesale rate and the then applicable
36 EBMUD commercial rate.
37
- 38 c) Hayward's payments for water: Hayward shall pay SFPUC for all water deliveries,
39 whether from SFPUC or EBMUD, at the then applicable SFPUC wholesale rate.
40
- 41 d) Costs of supplying water during Planned Critical Work: Notwithstanding the rate
42 defined in Subsection 16 b) herein, to the extent EBMUD's operating costs to supply
43 water to a Recipient during Planned Critical Work exceeds the payments calculated
44 according to such rate, EBMUD may recover such excess costs from SFPUC provided
45 that it notifies SFPUC prior to delivery of such water of the excess costs it intends to

1 recover and provides its analysis showing the basis for recovery of such excess costs.
2 Recovery of such excess costs shall be accomplished in conjunction with the
3 reconciliation process described in Subsection 16 a) herein and according to the
4 invoicing and payment provisions described in Section 14 herein and may be
5 recovered from SFPUC even when EBMUD elects to receive Reimbursement Water.
6 Similarly, to the extent SFPUC's operating costs to supply water to EBMUD during
7 Planned Critical Work exceeds the payments calculated according to the rate defined
8 in Section 16 b), SFPUC may recover such excess costs from EBMUD provided that it
9 notifies EBMUD prior to delivery of such water of the excess costs it intends to
10 recover and provides its analysis showing the basis for recovery of such excess costs.
11 Recovery of such excess costs shall be accomplished in conjunction with the
12 reconciliation process described in Subsection 16 a) and according to the invoicing
13 and payment provisions described in Section 14 and may be recovered from EBMUD
14 even when the SFPUC elects to receive Reimbursement Water.

15 16 17. ANNUAL MEETING

17
18 The Parties shall hold an Annual Meeting by December 1 of each year at a mutually agreed site
19 between SFPUC, EBMUD, and Hayward. In the Annual Meeting, the Parties shall:

- 20 a) Agree upon an annual plan and budget for Maintenance and capital improvements.
- 21 b) Reconcile deliveries and receipts of water during any given year against any existing
- 22 carryover balance from the previous year.
- 23 c) Schedule operation of the Intertie for "Reimbursement Water."

24 25 18. FENCES AND GATES

26
27 Any fences and access gates to the Skywest Pump Station shall be kept in good repair by the
28 Intertie Operator. Such gates shall be kept closed and locked except when in actual use.

29 30 19. REMOVAL OF INTERTIE AND SITE RESTORATION

31
32 In the event of termination of this Agreement, removal of the Intertie, disposal of jointly-owned
33 equipment or real property, and site restoration shall be the subject of a separate agreement
34 between the Parties.

35 36 20. RIGHTS OF ACCESS

37
38 Subject to provision of prior written notice, each Party grants the other Parties access to any of the
39 Intertie Facilities.

40 41 21. LIABILITY, INDEMNITY AND HOLD HARMLESS

42
43 In performance of this Agreement, each Party, its agents, employees, and contractors shall act in
44 an independent capacity and not as officers, employees, or agents of any other Party. No Party

1 assumes any liability for the activities of another Party in performance of this Agreement. Each
2 Party is responsible in proportion to fault for all liability, including but not limited to personal
3 injury or property damage that may arise out of the Intertie physical works or rights exercised
4 pursuant to this Agreement or which may arise out of its own actions under this Agreement,
5 excepting only such injury, damage, or loss caused solely by the negligence or willful misconduct
6 of another Party, or its officers or employees. Each Party expressly agrees to defend, indemnify,
7 and hold harmless the other Parties and their Directors, officers, agents and employees from and
8 against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees,
9 arising out of or resulting from the first Party's, its associates, employees', subconsultants', or
10 other agents' negligent acts, errors or omissions, or willful misconduct, in the operation and/or
11 performance under this Agreement.

12 22. INSURANCE

13
14
15 During the term of this Agreement, the Parties shall either purchase insurance through an
16 insurance carrier or provide evidence of self-insurance to protect another Party from claims that
17 may arise from activities under this Agreement.

18
19 In the event that the insurance is purchased, the insuring Party shall insure the other Parties
20 against all claims and liability for which the insuring Party may be liable under this Agreement in
21 an amount not less than \$2,000,000. In the event that the insurance is purchased, such policy
22 shall not contain any provision against cross liability between named insured, but shall include a
23 45-day written notice provision for termination by the insurer of such policy. A certificate of
24 insurance in compliance with the provisions of this paragraph shall be delivered to the other
25 Parties upon execution of this Agreement. Such insurance coverage shall be in effect at all times
26 during the term of this Agreement, and the named insured will not be responsible for any
27 premiums or assessments on the policy. In the event such insurance coverage expires at any time
28 during the term of this Agreement, the insuring Party shall file with the named insured's State, at
29 least 45 days prior to such date of expiration, a new certificate of insurance evidencing coverage
30 as provided for herein. New certificates of insurance shall be subject to approval by the named
31 insured. Such approval shall be conclusively presumed in the absence of written objection
32 delivered within 30 days after the date of filing of said new certificate: Provided that such
33 certificate may provide for deductible coverage upon agreement of the parties hereto.

34
35 In the event a Party elects to self-insure, at the start of each fiscal year the Party shall budget
36 sufficient funds to bring the balance of its budget item to no less than \$2 million (\$2,000,000),
37 which may be used to satisfy any liabilities that the Party may incur under this Agreement, in
38 addition to the uses to which funds allocated to that budget item are customarily put in the normal
39 course of business. As evidence of compliance with this provision, the self-insuring Party shall
40 provide to the other Party annually, a letter of self-insurance certifying that adequate funds are
41 available to meet contractual obligations as provided under this section. If a Party does not elect
42 to provide self-insurance at the start of a fiscal year, it shall provide an insurance policy as
43 described above within 90 days.

1 Acceptance of insurance certificates or proof of self-insurance shall not relieve the Parties of any
2 of the insurance requirements, nor decrease the liability of the Parties. Each Party agrees to
3 provide copies of insurance policies, if requested.
4

5 23. MAINTENANCE AND INSPECTION OF BOOKS, RECORDS, AND REPORTS 6

7 The Intertie Operator shall maintain careful, accurate and complete records of all Intertie operation
8 and maintenance costs. During regular office hours, any Party or its duly authorized
9 representatives shall have the right to inspect and make copies of any books, records, and reports
10 pertaining to this Agreement or related matters. Each Party shall maintain and make available for
11 such inspection accurate records of all its costs, disbursements, and receipts with respect to its
12 activities under this Agreement. The Parties may audit any and all records and activities at any
13 time.
14

15 24. LEGAL REQUIREMENTS; RAKER ACT; MASTER WATERS SALES CONTRACT 16

17 In exercising its rights under this Agreement, each Party shall be responsible for complying with
18 all applicable laws and regulations and for securing any required consent, permit, or order. Upon
19 written request, a Party shall provide written proof that such consent, permit, or order was
20 properly obtained.
21

22 Each Party agrees not to sell any water provided by SFPUC to any private party for resale, and
23 further agrees not to sell any water from any source whatsoever to any private party for resale by
24 substituting water provided by SFPUC.
25

26 Each Party agrees not to sell any water provided by EBMUD to any private party for resale by
27 such private party to others, and further agrees not to sell any water from any source whatsoever
28 to any private party for resale to others by substituting therefor water provided by EBMUD,
29 without EBMUD's prior written approval.
30

31 SFPUC and Hayward are parties to the Settlement Agreement and Master Water Sales Contract
32 between the City and County of San Francisco and Certain Suburban Purchasers in San Mateo
33 County, Santa Clara County and Alameda County dated July 1, 1984. Unless specified herein or
34 in a separate written agreement, this Agreement is not intended to modify or alter the terms of the
35 Master Water Sales Contract or individual water supply agreements between SFPUC and
36 Hayward, or any rights or obligations existing thereunder.
37

38 25. ASSIGNMENT; SUCCESSORS AND ASSIGNS OBLIGATED 39

40 No assignment or transfer of this Agreement or any part hereof, rights hereunder, or interest
41 herein shall be valid unless and until the assignment or transfer is approved in writing by the other
42 Parties. This Agreement and all of its provisions shall apply to and bind the successors and
43 assigns of the Parties hereto.
44

1 26. UNCONTROLLABLE FORCES

2
3 If any Party is precluded in whole or in part from performing operation and maintenance activities
4 as a result of uncontrollable forces, all Parties are relieved from the obligations to the extent they
5 are reasonably unable to complete the obligations due to the uncontrollable force. Uncontrollable
6 forces shall include, but are not limited to, earthquakes, fires, floods and other natural disasters.
7 However, each Party shall be responsible for repaying any costs incurred on its behalf by another
8 Party before the occurrence of the uncontrollable force.

9
10 27. DISPUTES

11
12 Any disputes occurring under this Agreement shall first be reviewed and settled by the respective
13 general managers or city manager of the affected Parties. All payments must be made and
14 responsibilities undertaken pending resolution of disputes by the Parties. In the event that the
15 Parties cannot resolve such disputes between them, then, upon 100 days notice, the aggrieved Party
16 may seek judicial relief.

17
18 28. MODIFICATION; SEVERABILITY

19
20 This Agreement may not be modified, nor may compliance with any of its terms be waived,
21 except by written instrument executed and approved in the same manner as this Agreement. Any
22 modification of this Agreement shall preserve the commitment of the Parties, as contained in
23 Section 5 b) herein, to operate and maintain the Intertie facilities for a minimum period of 20
24 years. Should any provision(s) of this Agreement be stricken by judicial degree the Agreement shall
25 remain in force and effect, as to all other provisions.

26
27 29. TERMINATION OF THE AGREEMENT

- 28 a) Upon certification of completion of construction of the Intertie, the Parties shall cause it to
29 be operated for a minimum period of twenty (20) years, during which period this
30 Agreement shall not be terminated by any Party.
- 31 b) After the minimum period defined in Section 29 a), any Party may terminate this
32 Agreement upon giving the other Parties ninety (90) days prior written notice of
33 termination; provided, however, that each Party shall be obligated for its share of all
34 liabilities and expenses incurred prior to the effective date of such termination.
- 35 c) Section 3, Ownership of the Intertie, shall survive termination of this Agreement.

36
37 30. INTEGRATION

38
39 This Agreement represents the entire understanding of the Parties as to those matters contained
40 herein. No prior oral or written understanding shall be of any force or effect with respect to those
41 matters covered hereunder.

1 31. SIGNATURES

2

3 This Agreement may be executed in counterpart.

4

5 32. GOVERNING LAW

6

7 This Agreement and all matters relating to it shall be governed by the laws of the State of
8 California.

9

10 33. NONDISCRIMINATION

11

12 There shall be no discrimination against any person, or group of persons, on account of race,
13 color, religion, creed, national origin, ancestry, gender, age, marital status, disability, or sexual
14 orientation in the performance of this Agreement. No party to this Agreement shall establish or
15 permit any such practice(s) of discrimination with reference to the Agreement or any part thereof.

16 A party determined to be in violation of this section shall be deemed to be in material breach of
17 this Agreement.

18

1
2 IN WITNESS WHEREOF, the parties hereto have executed this Agreement to be effective
3 on the date first above written.
4

5 **SAN FRANCISCO PUBLIC UTILITIES COMMISSION**
6

7 Approved as to form:

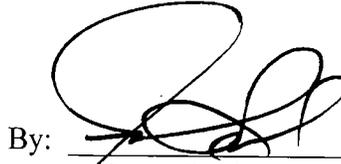
8 Dennis J. Herrera

9 City Attorney

10 

11 Donn Furman

12 Deputy City Attorney

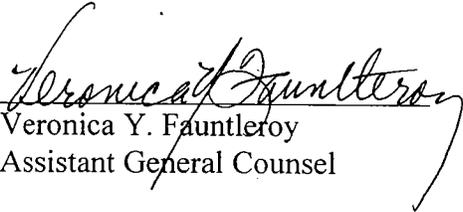
By: 

Susan Leal

General Manager

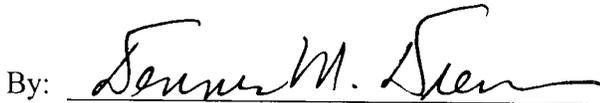
13
14
15
16 **EAST BAY MUNICIPAL UTILITY DISTRICT**
17

18 Approved as to form:

19 

20
21
22 Veronica Y. Fauntleroy

23 Assistant General Counsel

By: 

Dennis M. Diemer

General Manager

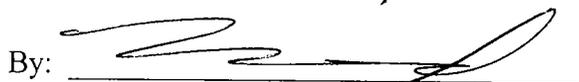
24
25
26 **CITY OF HAYWARD**
27

28 Approved as to form:

29 

30
31
32 Michael O'Toole

33 City Attorney

By: 

Frances David

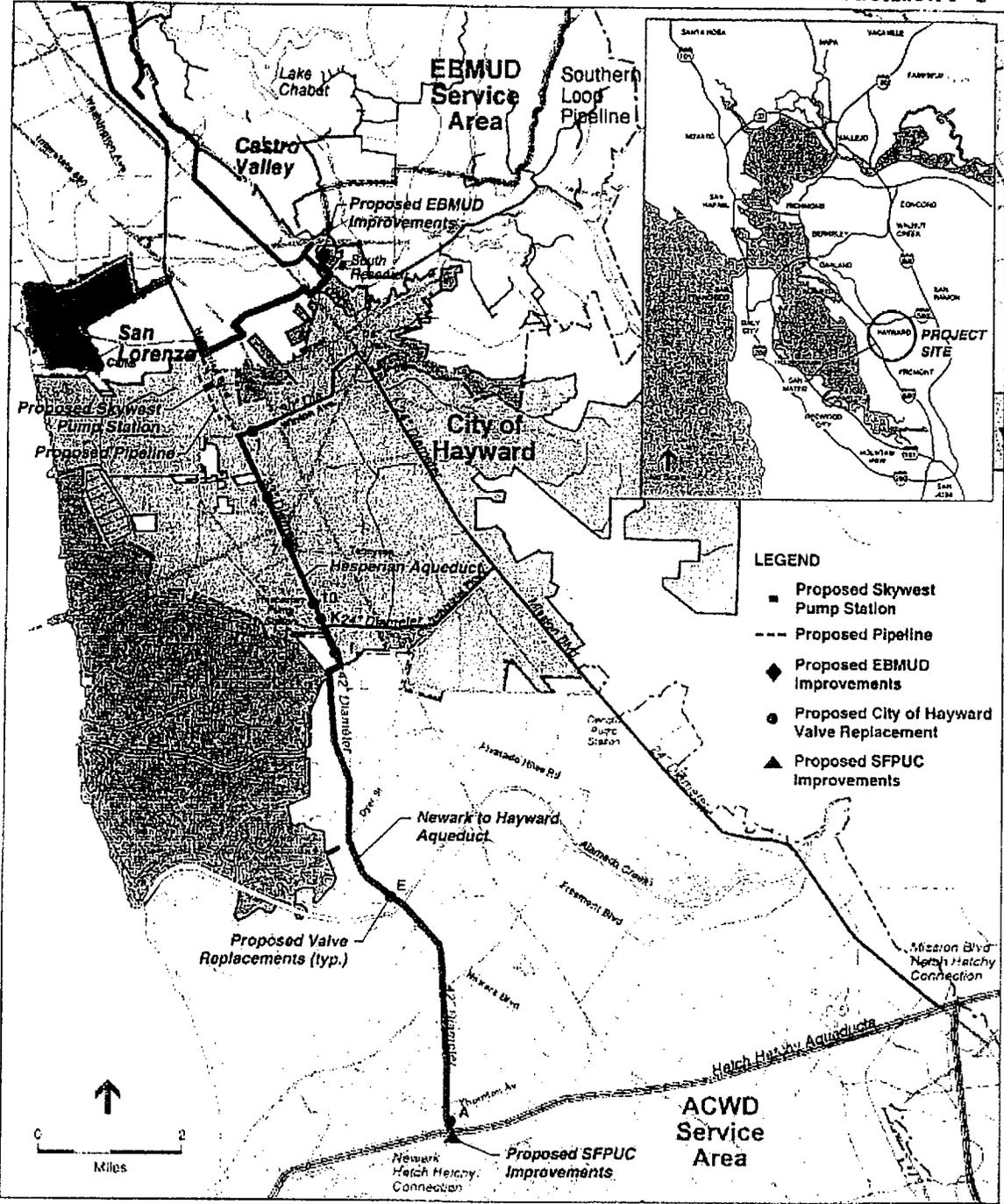
Acting City Manager

34
35 Attest:

36
37 

38 Angelina Reyes

39 City Clerk
40



SOURCE: City of Hayward

City of Hayward SFPUC-COH-EBMUD Inertie Project ISMND / 202702 ■

Figure 1
Project Location and Overview of Proposed Improvements



TECHNICAL MEMORANDUM #4A - APPROVALS AND
INSTITUTIONAL ARRANGEMENTS

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TECHNICAL MEMORANDUM #4A

APPROVALS AND INSTITUTIONAL ARRANGEMENTS

May 7, 2013, revised September 19, 2013

Section 1: Background

Task 4 requires BAWSCA (with EBMUD) to identify the agreements needed to use the Hayward Intertie. It also requires BAWSCA to identify the necessary agreements to distribute water to its member agencies. As the EBMUD Technical Memorandum (TM) #2 & #4 has identified the agreements and modifications necessary to use the Hayward Intertie, this memo focuses on necessary agreements and institutional arrangements within the San Francisco Regional Water System (SF RWS). Specifically, this memo identifies the agreements and institutional arrangements between BAWSCA, the City and County of San Francisco (CCSF), and the BAWSCA member agencies.¹ At this point in the pilot water transfer discussions, EBMUD's TM #2 & #4 assumes that BAWSCA will enter into a transfer agreement with EBMUD and a seller, but other alternative contractual arrangements are possible. For instance, BAWSCA might have an individual transfer agreement with the seller and execute a separate wheeling agreement with EBMUD, depending on the final purchase arrangement that is negotiated. A summary of all anticipated legal agreements is included as Section 4 of this memo.

Section 2: Summary of Agreements to Move Water through the San Francisco Regional Water System

Once the Pilot Water has moved through the EBMUD system and is poised to move through the Hayward Intertie into the SF RWS, the following agreements are required:

- (1) An amendment to the 2007 Hayward Intertie Operating Agreement between the Hayward Intertie signatories (CCSF, Hayward and EBMUD) to modify the Hayward Intertie to allow for transfers (as discussed by EBMUD in TM #2 & #4 and briefly discussed below);
- (2) BAWSCA agreement with CCSF addressing cost allocation, capacity and volume, and priority use of the Hayward Intertie;

¹ The San Francisco Public Utilities Commission ("SFPUC") is part of the City and County of San Francisco. The SFPUC manages the SF RWS that provides drinking water supply to the retail and wholesale water customers of San Francisco. The relationship between BAWSCA and the City and County of San Francisco is discussed in Section III, below.

- (3) BAWSCA agreement with its individual member agencies, if the Pilot Water were to be allocated to one or a subset of the member agencies. If the Pilot Water will be allocated to BAWSCA as a whole, BAWSCA must secure Board approval as it would for any such effort; and
- (4) BAWSCA agreement with Hayward addressing procedures for measuring incremental costs; reimbursement of such costs; accounting methodology for water deliveries to Hayward through the Intertie and reconciliation with SFPUC and transfer capacity, volume, and quality.

2.1 Hayward Intertie

EBMUD's TM #4 addresses the Hayward Intertie, and the agreement governing it. See p. 18, Section 2.5. The Hayward Intertie is physically located within the City of Hayward. On p. 20 of its TM #4, EBMUD discusses the current contractual arrangement governing the Hayward Intertie, and concludes that the parties to the Hayward Intertie Agreement - CCSF, EBMUD, and Hayward - would need to develop an amend the Intertie Agreement, both to conduct a one-year transfer and a long-term transfer since the original intent of the intertie was for conveyance of water during emergency conditions. The EBMUD TM #4 also concludes that the one-year pilot transfer may qualify for an exemption to the California Environmental Quality Act (CEQA). However, a new CEQA process would likely need to be undertaken to review the new long-term transfer and new Intertie Agreement. BAWSCA agrees with EBMUD's assessment.

2.2 Agreements and Institutional Arrangements with the City and County of San Francisco

BAWSCA represents the interests of 24 cities and water districts, and two private utilities, that purchase water wholesale from the SF RWS (collectively, the Wholesale Customers). These entities provide water to 1.7 million people, businesses, and community organizations in Alameda, Santa Clara and San Mateo counties.

In July of 2009, the CCSF and its Wholesale Customers entered into a new 25-year Water Supply Agreement (WSA), which is attached hereto as Exhibit A. The WSA provides for a detailed cost allocation methodology whereby all costs of the SF RWS are allocated to CCSF and the Wholesale Customers primarily based on proportionate annual water use. BAWSCA was the lead negotiator on behalf of the Wholesale Customers. BAWSCA has many duties delegated to it through the WSA, but it is not a party to the WSA. Therefore,

while there are some provisions of the WSA that may provide guidance relating to the pilot water transfer, ultimately, BAWSCA and the CCSF will require a separate cost allocation arrangement to manage new water introduced into the SF RWS by BAWSCA. Potential provisions of this cost allocation agreement are discussed below.

As CCSF representatives mentioned at the meeting with EBMUD and BAWSCA on April 16, 2013, the CCSF may wish to have an agreement with both EBMUD and BAWSCA relating to the pilot water transfer and any future long term transfers, or it may wish to have an agreement simply with BAWSCA relating to the pilot water transfer. A CCSF-EBMUD agreement may be unnecessary because BAWSCA itself would be taking title to the water, not CCSF, and CCSF's operational concerns should be addressed in the new or amended Hayward Intertie agreement. The arrangement between the agencies - SFPUC, COH, BAWSCA, and EBMUD, as it relates to use of the SF RWS for transfer water - will be discussed and evaluated as the pilot water transfer project progresses.

2.2.1 Background on Cost Allocation and Capacity

First, depending on the scope of the pilot water transfer plan and the scope of any long term transfer arrangement, the CCSF and BAWSCA will need to negotiate an agreement that governs the cost allocation for moving transferred water through unused capacity in the SF RWS. The WSA provides some guidance on this issue and the Water Code wheeling statutes also provide guidance for this negotiation.

The WSA's wheeling provision states the following:

Section 3.12 Wheeling of Water from Outside SFPUC System

Subject to the Wheeling Statute, the SFPUC will not deny use of Regional Water System unused capacity for wheeling when such capacity is available for wheeling purposes during periods when the SFPUC has declared a water shortage emergency under Water Code Section 350 if the following conditions are met:

- A. The transferor pays reasonable charges incurred by the SFPUC as a result of the wheeling, including capital, operation, maintenance, administrative and replacement costs (as such are defined in the Wheeling Statute).

- B. Wheeled water that is stored in the Regional Water System spills first.
- C. Wheeled water will not unreasonably: (1) impact fish and wildlife resources in Regional Water System reservoirs; (2) diminish the quality of water delivered for consumptive uses; or (3) increase the risk of exotic species impairing Regional Water System operations. The transferor may at its own expense provide for treatment to mitigate these effects.
- D. Priority will be given to wheeling by Wholesale Customers or BAWSCA over arrangements for third-party public entities.

Additionally, the Water Code's wheeling statutes require that neither the state nor any local agency deny a bona fide transferor of water access to unused capacity in conveyance facilities to wheel transferred water, if fair compensation is paid for the use of the facilities. The statute defines "fair compensation" as the reasonable charges incurred by the owner of the conveyance system. Water Code § 1811(c). In addition, the SF RWS facilities are sized such that surplus capacity exists over the projected water deliveries.

With this background, BAWSCA leadership discussed and obtained verbal agreement on a cost allocation method for moving transfer water through the SF RWS (Exhibit B, September 20, 2012 letter from Art Jensen, BAWSCA CEO and General Manager to Ed Harrington, then SFPUC General Manager "Areas of Agreement Related to Potential Pilot Water Transfer Between BAWSCA and EDMUD" (Pilot Transfer Letter)). BAWSCA anticipates that its agreement with the CCSF for the pilot water transfer will address the terms agreed upon in the Pilot Transfer Letter, discussed in more detail below.

2.2.2 CCSF and BAWSCA Verbal Agreements on Cost Allocation

BAWSCA and the CCSF have commenced negotiations on cost allocation related to transfers through the SF RWS. The verbal agreements documented in the Pilot Transfer Letter are as follows:

- The allocation of costs for moving water through the SF RWS for the pilot transfer will be consistent with other transfers previously conducted by SFPUC or proposed by SFPUC.

- All costs for moving the potential pilot transfer water through the SF RWS will be allocated proportionate to metered usage.
- To the extent that specific, legitimate incremental increased costs are incurred by SFPUC to accomplish the transfer of water (e.g. increased pumping in Hayward is necessary to move the transferred water into the SF RWS) those costs would be paid for by BAWSCA.
- With respect to the Hayward Intertie, to the extent that a portion of the existing intertie capacity is utilized for a transfer initiated by BAWSCA, BAWSCA recognizes that an emergency condition on either EBMUD's water system or the SF RWS would take priority over any BAWSCA transfer occurring at that time.

The third and fourth bullets above may be the subject of BAWSCA's agreement with Hayward or may be part of the new or amended Intertie Agreement. BAWSCA anticipates additional discussions will occur with CCSF and EBMUD as the pilot project progresses.

Section 3: Agreements and Institutional Arrangements Between BAWSCA and its Member Agencies

3.1 Agreements and Institutional Arrangements to Facilitate Use of the Pilot Transfer Water and Future Long Term Transfer Water

BAWSCA represents the interests of 26 Wholesale Customers of the SF RWS. The use of the transfer water (i.e., how and in what quantities the transfer water is allocated between BAWSCA's member agencies after acquired both during the pilot transfer, and in a long-term scenario) will be determined at the time of the execution of the pilot water transfer and according to the needs of the agencies. Potential scenarios include:

- BAWSCA obtaining the transfer water and BAWSCA allocating the transfer water among its 26 member agencies, as most agencies would experience a decrease in reliability during a drought;
- BAWSCA obtaining the transfer water and BAWSCA allocating it between agencies that have a demand for it and therefore entering into an agreement with a subset of agencies; and
- One or a group of BAWSCA member agencies themselves obtaining the transfer water and using the water as their own demand requires.

As to the pilot water transfer, BAWSCA anticipates that it will recommend that the Board purchase the water with funds from its operational budget or with funds obtained through a Water Management Charge. The BAWSCA member agencies support BAWSCA's budget through an annual assessment, which is based on historic water use, and a Water Management Charge, which may be levied by the Board on each member's SFPUC water use for specific purposes. See Exhibit A, WSA Section 3.06. As to any long-term transfer arrangement, the purchaser may be BAWSCA or may be individual member agencies or groups of agencies. At this time, there is no final decision on how the purchase would be structured or how costs and benefits would be allocated.

Specific agreements that are necessary to allocate water among the BAWSCA agencies include arrangements between BAWSCA and its member agencies relating to the quantity of the water acquired, how the water is allocated among member agencies, as well as arrangements between the member agencies themselves, depending on how the water is allocated.

3.2 City of Hayward

As described in BAWSCA's technical memoranda thus far in the Pilot Water Transfer Plan development process, the City of Hayward will receive the majority of the pilot transfer water and, from an operations standpoint, will be working directly with BAWSCA, CCSF, and EBMUD to facilitate the transfer. BAWSCA and Hayward have been working closely throughout the development of the Pilot Water Transfer Plan to understand Hayward's operational systems and needs.

BAWSCA's verbal agreements with Hayward to date are memorialized in the attached Exhibit C, a letter to Alex Ameri, the Director of Public Utilities and Environmental Services for the City of Hayward, from Nicole Sandkulla, BAWSCA's Water Resources Planning Manager, dated September 26, 2012, "Short-Term Water Transfer Pilot Plan with East Bay Municipal Utility District" (Hayward Letter). In the Hayward Letter, BAWSCA restated the agreements with Hayward regarding the parties' plan to work together to understand specific water quality concerns Hayward has relating to any transfers into the SF RWS. Since the time of the letter, Hayward and BAWSCA have also worked closely to understand Hayward's operational system. Information relating to Hayward's operations was included in BAWSCA TM #3A.

BAWSCA anticipates that it will have a separate agreement with Hayward relating to operational matters, including quality, capacity, and priority of use, and outlining

procedures for documentation of and reimbursement for incremental operational costs Hayward incurs to effectuate the transfer. In addition, in consultation with the CCSF, the parties must agree to water accounting and cost allocation procedures for water delivered to Hayward through the Hayward Intertie in lieu of regular deliveries from the SF RWS.

BAWSCA’s agreement with Hayward is in addition to the new or amended intertie agreement to be negotiated among Hayward, CCSF, and EBMUD, which is discussed in TM #2 & #4.

Section 4: Summary Overview of Necessary Agreements

In summary, BAWSCA understands the necessary agreements to effectuate a transfer are as follows.²

| AGREEMENT | RESPONSIBLE PARTIES |
|---|--|
| Purchase Agreement with Seller ³ | EBMUD & BAWSCA |
| Wheeling Agreement through EBMUD System | EBMUD & BAWSCA |
| Warren Act Contract and Potential Refill Agreement (See Footnote 2, above) | BOR, BAWSCA and EBMUD (Depending on preference of USBR) |
| Amendment to Intertie Agreement | EBMUD, CCSF & Hayward |
| BAWSCA/CCSF Cost Allocation Agreement | BAWSCA & CCSF |
| Internal Agreements and Arrangements to Distribute Water to BAWSCA Agencies | BAWSCA |
| BAWSCA/Hayward Reimbursement Agreement | BAWSCA & Hayward |

² BAWSCA notes that, depending on the seller of the transfer water, arrangements with the Bureau of Reclamation may also be necessary. A complete list of regulatory approvals necessary to accomplish the project is provided in EBMUD’s Technical Memorandum 2 & 4 at page 22, Table 2.

³ At present, it appears that BAWSCA will be the sole purchaser of the water, and will negotiate a wheeling arrangement with EBMUD.

LIST OF EXHIBITS:

- Exhibit A:** Water Supply Agreement between City and County of San Francisco and Wholesale Customers in Alameda, Santa Clara, and San Mateo Counties, July 2009 (WSA).
- Exhibit B:** September 20, 2012 letter from Art Jensen, BAWSCA CEO and General Manager to Ed Harrington, then SFPUC General Manager “Areas of Agreement Related to Potential Pilot Water Transfer between BAWSCA and EDMUD” (Pilot Transfer Letter).
- Exhibit C:** Letter to Alex Ameri, the Director of Public Utilities and Environmental Services for the City of Hayward, from Nicole Sandkulla, BAWSCA's Water Resources Planning Manager, dated September 26, 2012, “Short-Term Water Transfer Pilot Plan with East Bay Municipal Utility District.” (Hayward Letter).



September 20, 2012

Mr. Ed Harrington, General Manager
San Francisco Public Utilities Commission
525 Golden Gate Avenue
San Francisco, CA 94102

Subject: Areas of Agreement Related to the Potential Pilot Water Transfer Between BAWSCA and EBMUD

Dear Mr. Harrington,

Thank you for meeting with me last Friday to discuss BAWSCA's interest in a potential future pilot water transfer with East Bay Municipal Utility District (EBMUD) and specifically the allocation of costs for moving water through San Francisco's Regional Water System (RWS).

The following agreements related to the potential pilot water transfer being considered by BAWSCA were reached during our meeting:

- The allocation of costs for moving water through the RWS for the potential pilot transfer would be consistent with other transfers previously conducted by the SFPUC (e.g., the inter-agency emergency transfers with EBMUD and Santa Clara Valley Water District), or proposed by SFPUC (e.g., the potential 2 mgd transfer with Modesto Irrigation District).
- All costs for moving the potential pilot transfer water through the RWS would be allocated proportionate to metered usage.
- To the extent that specific, legitimate incremental increased costs are incurred by the SFPUC to accomplish the transfer of water (e.g., increased pumping in Hayward is necessary to move the transfer water into the RWS), those costs would be paid for by BAWSCA.
- Both the SFPUC and EBMUD water systems deliver high quality water. Past inter-agency emergency transfers between these two systems have proven the compatibility of the two water supplies such that water quality is not expected to be an issue with the potential pilot transfer being considered by BAWSCA.
- It is to the benefit to all users of the RWS that the existing priority of the regional intertie at Hayward for emergency purposes is maintained. To the extent that a portion of the existing intertie capacity is utilized for a transfer initiated by BAWSCA, BAWSCA recognizes that an emergency condition on either EBMUD's water system or the San Francisco RWS would take priority over any BAWSCA transfer occurring at that time.

This use of the current cost allocation method will ensure that San Francisco and its retail water customers will be kept whole financially and that wholesale customers pay only their fair share

Mr. Ed Harrington
September 20, 2012
Page 2 of 2

of the cost for using the RWS. If the SFPUC were to modify the wholesale water rate structure in the future, the SFPUC and BAWSCA may need to work together to create a separate financial arrangement in order to ensure that the principles outlined above continued to apply to future water transfers.

Some agencies or their customers are sensitive to changes in water quality, including changes experienced during the course of the SFPUC's normal operations. The City of Hayward has indicated a desire to work closely with BAWSCA during the planning process to study the potential water quality changes that may occur within its distribution system during a transfer situation.

Please let me know if further refinement is needed to clarify our areas of agreement.

Pending approval by the BAWSCA Board this week in moving forward with the development of the Short-Term Pilot Water Transfer Plan, Nicole Sandkulla will arrange a follow-up meeting with Steve Ritchie to further discuss the project including the schedule and expected outcome.

If you have any questions, please call me or Nicole Sandkulla. Your focus and energy last Friday on this topic was truly appreciated.

Sincerely,



Arthur R. Jensen
Chief Executive Officer

cc: H. Kelley, SFPUC
A. Coate, EBMUD
A. Schutte, Hanson Bridgett

BAWSCA

Bay Area Water Supply & Conservation Agency

September 26, 2012

Mr. Alex Ameri
Director, Public Utilities and Environmental Services
City of Hayward, Public Works Administration
777 "B" Street, 4th Floor
Hayward, CA 94541

SUBJECT: Short-Term Water Transfer Pilot Plan with East Bay Municipal Utility District

Dear Mr. Ameri,

As you know, on September 20, 2012 the BAWSCA Board of Directors authorized BAWSCA to develop a Short-Term Water Transfer Pilot Plan (Plan) with the East Bay Municipal Utility District (EBMUD). The development of this Plan will be BAWSCA's first step to assess the feasibility of executing a water transfer with EBMUD that would utilize the existing Hayward Intertie that connects the EBMUD water system to the San Francisco Regional Water System.

On August 14, 2012, we met with you to discuss BAWSCA's Long-Term Reliable Water Supply Strategy (Strategy) and the recommendations identified in the Strategy Phase II A Report. Specifically, we discussed our recommendation to develop the Plan, pending BAWSCA Board action. During our meeting, you raised concerns about the potential for water quality changes within Hayward's service area resulting from the delivery of water from EBMUD through the Hayward Intertie. At that time, I agreed that it would be beneficial to better understand the changes in water quality that occur in Hayward's service area during operation of the Hayward Intertie, specifically under the operation being considered as part of the Plan. To that end, I asked that you provide BAWSCA with a list of the water quality parameters of concern and a suggested water quality sampling protocol for inclusion in the Plan.

At our meeting you agreed that you would provide BAWSCA with the requested information. You also indicated that Hayward staff would perform the water quality sampling in the event that a water transfer between EBMUD and BAWSCA is executed in accordance with the Plan.

Given the schedule for the development of the Plan, please provide this information to me by October 31, 2012. I look forward to working with you and EBMUD to develop an agreed-upon water quality sampling protocol for inclusion in the Plan.

Thank you for your continued support for the Strategy and the development of the Plan. If you have any questions or any issue with providing your recommendations by the date above, please call me at 650-349-3000.

Sincerely,



Nicole M. Sandkulla, P. E.
Water Resources Planning Manager

cc: Director Mendall

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ATTACHMENT E

- Technical Memorandum #5 - Pilot Water Transfer Recommendations

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Technical Memorandum #5

Pilot Water Transfer Recommendations

May 2, 2013, revised September 19, 2013

Section 1: Introduction

The East Bay Municipal Utility District (EBMUD or “District”) and the Bay Area Water Supply and Conservation Agency (BAWSCA) are developing a Short-term Pilot Water Transfer Plan (Pilot Plan) to evaluate the feasibility of partnering on long-term water transfer projects to improve future water supply reliability for the respective agencies. EBMUD and BAWSCA have agreed that jointly conducting a one-year¹, pilot water transfer with a willing seller would provide important information needed to evaluate the costs and benefits of a long-term partnership.

In this TM:

1. Introduction
2. Pilot Transfer Conditions
3. Costs
4. Transfer Schedule

Technical Memorandum (TM) #5 builds on information developed in earlier TMs to describe the likely conditions for conducting the pilot water transfer, the estimated costs, and the schedule for activities before start of the actual transfer.

Section 2: Pilot Transfer Conditions

This section addresses when a pilot transfer would likely occur, the quantity of water that would be involved, and the duration of the pilot transfer. Recommended water quality monitoring during the pilot transfer is also described. These issues were discussed in TM #3 and TM #3A, but are summarized and in some cases elaborated below.

2.1 Pilot Timing

To reduce the cost of the pilot transfer, it should be conducted in a year when EBMUD is taking delivery of Sacramento River water. This way costs for startup and shutdown of the Gerber Pipeline, the Folsom South Canal Connection (FSCC) and Moraga Pumping Plant, and reconfiguration of the Mokelumne Aqueducts can be shared between EBMUD and BAWSCA in proportion to their use of each facility. Based on EBMUD’s Interim Drought Planning Guidelines, EBMUD expects to utilize the Freeport Project when its projected total system storage at the end of September is below 450 TAF. This projection is made starting as early as the preceding December and is updated biweekly until the final determination is made at the end of April. Three months are allocated to place the FSCC pumping plants in

¹ The term “one-year transfer” is an industry term referring to a short-term water transfer that is completed within a one-year time period.

service, fill pipelines, and reconfigure the Mokelumne Aqueducts. Therefore, in the first year of a drought, deliveries of Sacramento River water can begin in July.

The timing of the actual pilot transfer also depends on when the transfer water is made available. Water from Yuba County Water Agency (YCWA) and Placer County Water Agency (PCWA) likely will be timed based on release requirements for environmental benefits. EBMUD's work with YCWA indicates that most of the water offered for transfer to EBMUD will be available in September through December. PCWA transfer water could be used to enhance flow and reduce temperature in the lower American River. This will likely be during summer when water temperature is highest and in the fall when salmon come up the river to spawn. PCWA has tentatively identified July through December as the period when their transfer water would be released to the lower American River.

EBMUD has the flexibility to accommodate the pilot transfer water, provided it occurs when EBMUD is taking delivery of Sacramento River water. As discussed in TM #3, in the first year of the drought, EBMUD diversions at Freeport will begin no earlier than July. In subsequent dry years, EBMUD may start taking Freeport Project water earlier in the year. To supply water for the pilot transfer either the delivery rate of Freeport Project water to the Mokelumne Aqueducts can be increased or, more likely, the delivery period can be lengthened as necessary.

The preferred timing of the pilot transfer will need to be further reviewed with City of Hayward (COH), San Francisco Public Utilities Commission (SFPUC), BAWSCA and EBMUD operations staff.

2.2 Transfer Quantity

As discussed in Section 3 of this TM, the cost for the pilot test will be largely proportional to the volume of water involved. Therefore, the volume of water transferred during the pilot will likely be the minimum acceptable to the water sellers that justifies the effort required to process the transfer. For the purposes of the cost estimates in this TM, a transfer volume during the pilot of 1,000 acre-feet was assumed. Final total water volume, delivery rate and pilot duration will be determined by the affected transfer parties prior to the pilot transfer.

2.3 Delivery Rate

TM #3A described two feasible operational scenarios for use of the Hayward Intertie:

- EBMUD to the COH only, and
- EBMUD to COH and the San Francisco Regional Water System (SF RWS)

Delivery to COH only would be used to supply 100% of their demand, the preference of the COH to keep water quality consistent throughout their service area. To prevent water from entering or exiting the SF RWS during the test, the flow rate through the Hayward Intertie will have to be adjusted to match COH water demand. This adjustment might be required once a day or more often, depending on the ability of COH treated water storage to accommodate diurnal variation in demand. Future discussions with the COH should identify the diurnal change in their demand and the ability of their distribution storage to dampen that variation, and the ability of COH to bleed excess water into the SF RWS, if needed.

Delivery to COH and the SF RWS would be easier for EBMUD to operate because the flow rate through the Hayward Intertie could be left constant, but would require operation of the Hesperian Pump Station to convey water in excess of COH's needs to the SF RWS. This scenario would also ensure that water always flows through the pipeline connecting the COH system with the Newark Turnout from the SF RWS, thereby preventing water quality concerns caused by stagnant water.

Nominally, the average COH water demand is 15 million gallons per day (MGD), varying seasonally. The actual demand during the pilot water transfer would determine the minimum daily delivery through the Hayward Intertie. If transfer water is also introduced into the SF RWS, the flow rate through Hayward Intertie could be higher. Until EBMUD's South Reservoir² is returned to service, delivery rates greater than 20 MGD will need to be confirmed with hydraulic modeling. Based on the limitations of SkyWest Pump Station, the minimum transfer rate is approximately 9 MGD.

2.4 Pilot Transfer Duration

Combining the assumed transfer quantity, 1,000 AF, with an average delivery rate of 15 MGD, results in a test duration of 21.7 days. This duration can be shortened if the transfer quantity is reduced or if the delivery rate is increased. However, a minimum pilot transfer duration of one week is recommended to provide sufficient time for conditions to stabilize and to gather meaningful water quality data.

2.5 Water Quality Monitoring

An initial proposal from the COH for a water quality monitoring plan covering the pilot transfer and possibly a long-term transfer included the following elements:

² Outage of the South Reservoir will constrain the ability to flush in advance of a transfer.

- Twice-a-month sampling at 60 stations within the COH distribution system. The parameters to be measured have not been identified. It is not clear if this sampling is in addition to COH's current water quality monitoring program. For the short-duration pilot transfer, the frequency of sampling may need adjustment.
- Monitoring of turbidity and pH at the SkyWest Pump Station using the instrumentation installed at that facility. There is also instrumentation at this facility to measure free and total chlorine.
- Monitoring of total chlorine, monochloramine, free ammonia, and total ammonia at Hesperian Pump Station. Instrumentation for measuring these parameters are not installed at this facility. Manual sampling would need to be made during the pilot transfer.
- HPC and nitrite testing weekly in the COH's reservoirs and distribution system to verify that the quality of EBMUD water entering the COH system during the pilot test is not deteriorating. Baseline sampling should occur at least two weeks prior to the start of the pilot water transfer.

EBMUD routinely monitors water quality in the vicinity of the Hayward Intertie on a weekly basis. The closest sampling station, the Cherryland tap, is located just off the 42-inch-diameter main that is the primary supply for the Hayward Intertie, one mile upstream of the Intertie. Total chlorine, conductivity, pH, and total coliform are measured weekly at this location. This sampling will continue during the pilot transfer.

Section 3: Costs

This section contains estimates of the costs associated with the pilot water transfer. Most of the discussion is focused on unit costs. Total cost for the pilot water transfer is largely directly proportional to the volume of water wheeled. As discussed in the preceding section, at this point this volume has not been finalized.

3.1 Water Purchase Costs

The unit cost for purchase of the water delivered during the pilot transfer will depend on the price negotiated with the water seller. As discussed in TM #2, for the two most-promising sellers, Yuba County Water Agency and Placer County Water Agency, BAWSCA can expect to pay between \$75 and \$275 for each acre-foot of water transferred. Therefore, assuming a total transfer quantity of 1,000 AF purchased for the pilot transfer, the total water purchase costs would be \$75,000 to \$275,000. This cost does not include BAWSCA and EBMUD internal costs for negotiation of the water purchase nor administrative costs to obtain approvals to implement the transfer, such as a Warren Act contract with United States Bureau of Reclamation for use of the Folsom South Canal. The respective roles for

each party in these activities will be determined by BAWSCA and EBMUD prior to conducting the pilot water transfer.

3.2 Wheeling Costs

Estimated unit costs associated with conveying transfer water from the Sacramento River at Freeport to the Hayward Intertie and treating that water are listed in Table 1. The unit costs are broken down by facility and by type of cost. The notes in the last column of the tables summarize key assumptions. The following discussion elaborates on those assumptions, as warranted.

As discussed in TM #3, for the purposes of estimating costs it is assumed that all water delivered through the Hayward Intertie during the pilot transfer will be conveyed through the Freeport Regional Water Authority (FRWA) system and the Gerber Pipeline to the Folsom South Canal, along the canal, through the Folsom South Canal Connection to the Mokelumne Aqueducts, and then to the EBMUD service area. Until treatment and distribution improvements are necessary and in place, all Sacramento River water must be routed to Upper San Leandro (USL) Reservoir and San Pablo Reservoir for treatment at EBMUD's conventional treatment plants. Water delivered to the Hayward Intertie will come from USL Water Treatment Plant. Use of the Southern Loop Pipeline during the pilot transfer to introduce Mokelumne River water treated at the Walnut Creek Filtration Plant to the vicinity of the Hayward Intertie could change the quality of the water delivered through the intertie. However this would not change the incremental cost for treatment since all Sacramento River water must be treated at the conventional treatment plants.

The unit costs listed in Table 1 are in most cases only the variable component of the wheeling costs, i.e. the component that changes with the volume of water conveyed and treated. They do not include fixed costs, including operational labor, maintenance expenses, and repayment of capital costs. Given the short duration and single occurrence of the pilot transfer, associated fixed costs will likely be small compared to the variable costs.



Table 1. Estimated Unit Wheeling Costs for BAWSCA Pilot Transfer

| | Annual delivery, TAF | | | Annual cost \$ | Unit cost \$/AF | Comments and Assumptions |
|---|----------------------|-------------------|--------|-------------------|--------------------|--|
| | EBMUD | SCWA ¹ | BAWSCA | | | |
| | 35 | 17 | 1 | | | |
| Power (energy) | | | | 1,367,400 | 25.8 | Based on SMUD rate schedule GS-TOU1. 90 MGD rate for EBMUD & BASCWA. 25 MGD for SCWA |
| Power (capacity) | | | | 201,073 | 3.8 | Based on SMUD rate schedule GS-TOU1. 6 MW installed capacity |
| Operational labor | | | | 680,000 | 12.8 | Based on FRWA FY14 O&M Labor Budget |
| Maintenance fund | | | | 185,500 | 3.5 | \$3500/TAF per FRWA Operations Agreement |
| Chemicals | | | | 0 | 0.0 | Sodium hypochlorite for invasive species prevention (not currently needed) |
| Sediment disposal | | | | 15,900 | 0.3 | \$15/ton for hauling and disposal. 20 tons/TAF |
| Subtotal | | | | 2,449,873 | 46.2 | |
| Gerber Pipeline | 35 | 0 | 1 | | | |
| Startup & shutdown | | | | 29,952 | 0.8 | Pipeline fill/drain. 240 manhours at full cost. |
| Folsom South Canal | 35 | 0 | 1 | | | |
| Warren Act charge | | | | 17,330 | 17.3 | Cost of Service for conveyance, water marketing, and other costs per Warren Act 2013 Schedule W-1. This cost only applies to BAWSCA water. |
| SMUD treatment | | | | 360,000 | 10.0 | Actual O&M charge under discussion. Estimates range from \$2-\$12/AF |
| Subtotal | | | | 377,330 | 27.3 | |
| Clay Station Pumping Plant | 35 | 0 | 1 | | | |
| Power (energy) | | | | 950,400 | 26.4 | Based on SMUD rate schedule GS-TOU1 |
| Power (capacity) | | | | 168,073 | 4.7 | Based on SMUD rate schedule GS-TOU1. 5 MW installed capacity |
| Chemicals | | | | 0 | 0.0 | Sodium hypochlorite for invasive species prevention (not currently needed) |
| Startup & shutdown | | | | 127,228 | 3.5 | 2000 manhours at full cost, split with Camanche PP |
| Subtotal | | | | 1,245,701 | 34.6 | |
| Camanche Pumping Plant | 35 | 0 | 1 | | | |
| Power | | | | 1,314,000 | 36.5 | Based on PG&E rate schedule E20T. Includes energy & demand charges |
| Chemicals | | | | 86,400 | 2.4 | Lime for Mokelumne Aqueduct corrosion control |
| Startup & shutdown | | | | 127,228 | 3.5 | 2000 manhours at full cost, split with Clay Station PP |
| Subtotal | | | | 1,527,628 | 42.4 | |
| FSCC Pipeline | 35 | 0 | 1 | | | |
| Startup & shutdown | | | | 142,065 | 3.9 | Pipeline fill/drain. 3500 manhours at full cost |
| Mokelumne Aqueducts | 35 | 0 | 1 | | | |
| Chemicals | | | | 288,000 | 8.0 | pH control at Bixler. ~\$20K was spent on CO ₂ in 2011 during testing for 2,500 AF delivered |
| Reconfiguration | | | | 28,615 | 0.8 | Aqueduct system reconfiguration for DPH compliance. 230 manhours at full cost |
| Subtotal | | | | 316,615 | 8.8 | |
| Walnut Creek Pumping Plants ² | 35 | 0 | 1 | | | |
| Power | | | | 2,576,880 | 71.6 | Per Bay Area Regional Desalination Project evaluation. Based on PG&E rate schedule E20T. Includes energy & demand charges. No cost if aqueduct gravity capacity is sufficient to convey all water year of pilot. |
| Startup & shutdown | | | | 62,207 | 1.7 | 500 hours at full cost. No cost if aqueduct gravity capacity is sufficient to convey all water year of pilot. |
| Subtotal | | | | 2,639,087 | 73.3 | |
| Moraga Pumping Plant | 17.5 | 0 | 1 | | | |
| Power | | | | 490,065 | 26.5 | Assumed half of Freeport water routed to USL Reservoir Per Bay Area Regional Desalination Project evaluation. Based on PG&E rate schedule E19P. Includes energy & demand charges. |
| Startup & shutdown | | | | 15,552 | 0.8 | Assumed 25% of WC RWPP startup cost |
| Subtotal | | | | 505,617 | 27.3 | |
| USL Water Treatment Plant | 17.5 | 0 | 1 | | | |
| Power | | | | 530,293 | 28.7 | 2010 actual costs |
| Chemicals | | | | 1,108,795 | 59.9 | 2010 actual costs |
| Solids Handling | | | | 331,433 | 17.9 | 2010 actual costs |
| Subtotal | | | | 1,970,521 | 106.5 | |
| TOTAL | | | | | 298.0 | If pumping at Walnut Creek not required |
| | | | | | 371.3 | If pumping at Walnut Creek required |
| Notes: | | | | | | |
| 1. SCWA only shares use of the FRWA Intake and Joint Pipeline | | | | | | |
| 2. Modeling required to estimate volume of water that must be pumped at the Walnut Creek Pumping Plants | | | | | | |

Operational labor costs and the electrical capacity charge for the FRWA facilities are fixed costs included in Table 1 because they will be assessed by FRWA in accordance with the FRWA Operations Agreement. These fixed costs are converted to a unit cost by assuming that the pilot transfer will occur in the first year of a drought when, for the purposes of these estimates, it is assumed that EBMUD may be taking delivery of 35,000 AF of Sacramento River water for its own use and Sacramento County Water Agency (SCWA) diverts 17,000 AF. This volume is added to the 1,000 AF wheeled to the Hayward Intertie and the unit cost is determined by dividing the total fixed cost by the total volume of water EBMUD, SCWA and BAWSCA divert at the FRWA Intake. The same approach is used for converting the fixed electrical capacity charge for Clay Station Pumping Plant and the labor costs for startup and shutdown of EBMUD facilities to unit costs. These unit costs will be affected by the volumes of Sacramento River water that EBMUD, SCWA and BAWSCA actually divert during the year of the pilot (i.e. if the volumes are lower the associated unit cost will be higher). Also the allocation of fixed costs among EBMUD, SCWA and BAWSCA will change depending on their respective proportion of total volume received in any year.

The incremental cost for use of the Walnut Creek Raw Water Pumping Plants will depend on EBMUD customer demand during the year in which the pilot transfer is conducted. Pumping at Walnut Creek will be necessary whenever the total volume conveyed to the East Bay from the Mokelumne River and the Sacramento River over the course of the year requires more than the gravity flow rate of the Mokelumne Aqueducts. This flow rate is typically in the range of 185 to 190 MGD, depending on the water surface elevation in Pardee Reservoir. Currently EBMUD customer demands are at or below the value that reaches this threshold and they are expected to be somewhat lower than average during a declared drought when customer rationing is requested or mandated. Therefore, if the pilot transfer is conducted in the next three to five years, before EBMUD customer demand returns to planning levels, there is less chance that a cost will be incurred for use of the Walnut Creek pumps. If operation of these facilities is necessary during the year of the pilot transfer, the incremental cost for their use will be determined by modeling operation with and without BAWSCA transfer water.

As buildout of the EBMUD service area proceeds and customer demands increase, it is expected that pumping of the Mokelumne Aqueducts will be required in all years, including during droughts. This will likely affect the costs associated with a long-term water transfer to BAWSCA. Also, as discussed in TM #3, EBMUD expects to make treatment improvements in the future that will allow treatment of Sacramento River water at its inline filtration plants. This will reduce or even eliminate the need to pump into USL Reservoir and treat transfer water at USL Water Treatment Plant, which will lower costs for these activities. Offsetting

this will be higher than current unit costs for treatment at the inline filtration plants, but net costs for treatment of transfer water are expected to be reduced.

Cost estimates for operation of the Hayward Intertie, including use of SkyWest Pumping Plant, additional water quality sampling by the City of Hayward, and possible use of Hesperian Pumping Plant are not included in this draft TM. These values need to be provided by BAWSCA who have been coordinating with the City of Hayward and SFPUC. EBMUD staff labor associated with operation of the Hayward Intertie will depend on the amount of flow rate adjustment ultimately required. A constant delivery rate will require the least EBMUD operation but may require additional effort by COH and SFPUC staff.

Unit wheeling costs are summarized in Table 2.

Table 2. Summary of Estimated Unit Wheeling Costs for BAWSCA Pilot Transfer¹

| Facility | \$/AF | |
|---|------------------------|---|
| FRWA Intake and Joint Pipeline ² | 46 | |
| Gerber Pipeline ³ | 1 | |
| Folsom South Canal | 27 | |
| Clay Station Pumping Plant ^{3,4} | 35 | |
| Camanche Pumping Plant ³ | 42 | |
| FSCC Pipeline ³ | 4 | |
| Mokelumne Aqueducts | 9 | |
| Walnut Creek Pumping Plants ³ | 73 | If pumping at Walnut Creek required |
| Moraga Pumping Plant ³ | 27 | |
| USL Water Treatment Plant | 107 | |
| | <u>298⁵</u> | If pumping at Walnut Creek not required |
| | <u>371⁵</u> | If pumping at Walnut Creek required |

Notes:

1. Variable cost elements only, for conveyance and treatment from the Sacramento River to the Hayward Intertie. Does not include fixed costs such as operational labor, maintenance labor and supplies, and capital cost repayment, except at noted.
2. Includes operational labor and fixed electrical capacity costs charged by FRWA.
3. Includes fixed startup and shutdown costs
4. Includes fixed electrical capacity cost
5. Unit costs based on assumed volume and subject to change

3.3 Total Costs

Based on the unit costs described above, an estimate of the total cost for conducting the pilot water transfer can be compiled. A key factor in the total cost is the volume of water involved. As shown in Table 3, assuming 1,000 acre-feet of water are transferred, the total cost for the pilot water transfer would be from \$425,000 to \$750,000, not including the costs associated with operation of the Hayward Intertie. The range in the cost estimate is caused by the uncertainty about the ultimate purchase price for the water and whether or not

pumping of the Mokelumne Aqueducts would be required. This estimate does not include planning costs and administrative expenses for negotiating the water transfer and obtaining the necessary permits. Except as noted in the preceding section, this estimate does not include EBMUD operational labor and maintenance expenses. The magnitude of these costs is being evaluated as part of the Bay Area Regional Desalination Project and will be relayed when available. This estimate also does not include costs incurred by COH and SFPUC.

The costs presented in this TM represent best estimates at this time. Charges during the pilot water transfer will be based on actual incremental expenses. Determining the incremental costs likely will require modeling of operation with and without the pilot transfer.

Table 3. Estimated Total Cost for Pilot Transfer of 1,000 Acre-Feet of Water

| Component | Total Cost |
|---|---|
| Water Purchase | \$75,000 - \$275,000 ⁽¹⁾ |
| Administrative / Regulatory Costs | \$50,000 - \$100,000 ⁽²⁾ |
| Conveyance | |
| From Freeport to Mokelumne Aqueducts | \$155,000 |
| From Mokelumne Aqueducts to USL Reservoir | \$36,000 - \$109,000 |
| Treatment | \$107,000 |
| Hayward Intertie | To be determined ⁽³⁾ |
| Total | \$425,000 - \$750,000 ⁽⁴⁾ |

⁽¹⁾ Actual costs to purchase transfer would need to be negotiated with the seller and could range from \$75 - \$275/AF.

⁽²⁾ Administrative costs to conduct the pilot transfer could vary anywhere between \$50,000 - \$100,000 based on the level of effort required to obtain the necessary regulatory approvals. These costs could include costs to prepare CEQA – NEPA documents, perform environmental reviews, and Reclamation staff time to review and approve the Warren Act and SWCRB filing fees. Administrative costs do not include estimates for internal BAWSCA or EBMUD staff time to support the project.

⁽³⁾ These costs have been requested from COH.

⁽⁴⁾ Rounded to the nearest \$5,000.

Section 4: Transfer Schedule

In this section, the institutional and environmental approvals required to effect a short-term water transfer will be outlined and discussed. Considering the uncertainty with current state and federal environmental review process and without firm decision timelines for approval, general timeframes will be provided.

4.1 Pre-transfer Requirements

In order to utilize the SFPUC-Hayward-EBMUD intertie, there are several approvals or amendments required prior to applying for a short-term transfer.

In 2005, EBMUD's Board of Directors adopted "Principles for Unassigned Freeport Capacity". Unassigned EBMUD capacity means any capacity dedicated to EBMUD remaining in the FRWP facilities after meeting all EBMUD needs. Since all water transfer projects that involve buyer partners seeking to use EBMUD's unassigned Freeport capacity would need to be consistent with the Board approved principles, EBMUD may require BAWSCA and their accompanying member agency securing the purchase water to follow these principles.

The final concern addresses modifications required to use of the Hayward Intertie³: California Environmental Quality Act (CEQA) (long-term only); an operations plan; and an amendment to the 2007 Hayward Intertie Operating Agreement. Under the 2003 Hayward Intertie IS/MND, the project description limited the use of the intertie to "emergency purposes" and, for long-term transfers, additional environmental review may be required. For a short-term transfer, this is anticipated to be exempted from environmental review since, under Water Code Section 1725 *et seq.*, temporary changes to point of diversion or place or use can be considered and no major impacts are anticipated; additional environmental exemptions will also be explored and considered. Environmental and financial coordination for CEQA updates with Hayward and SFPUC would be required for long-term changes.

Another element is the development of an approved detailed interagency transfer day-to-day operations plan (including any water quality monitoring plan) between SFPUC, Hayward, and EBMUD. Considering that water was successfully conveyed from EBMUD through the Hayward intertie and absorbed into the City of Hayward's and SFPUC's service areas in July 2005 and December 2009 through January 2010, these experiences can be used to update the prior operational agreements.

Finally, an amendment to the existing 2007 Hayward Intertie Operating agreement would be required to allow for use of the intertie for transfer purposes since, as discussed above for the CEQA example, use is limited to "emergency purposes". The current operating agreement does not define drought conditions as emergencies. Both one-year and long-term transfers are affected.

³ Emergency use of the Hayward Intertie will supersede any transfer opportunities.

4.2 Estimated Water Schedules

As discussed in TM #2, the most promising short-term and long-term transfer opportunities appear to be with YCWA and PCWA. Schedule deliveries are subject to final negotiations.

For YCWA and under the terms of the existing Yuba Accord, the majority of transfers are anticipated to be water backed up in Lake Oroville because it cannot be pumped to the existing Yuba Accord buyers located south of the Delta during summer months. Hence, the schedule for conducting the pilot transfer would most likely occur in late fall or early spring.

Delivery schedule for PCWA-based transfers could potentially occur before an YCWA-based transfer. As noted in TM #2, Table 1 (Potential Sources of Supply for Pilot Water Transfer), the anticipated release schedule is July – December as this time frame allows PCWA to make releases to maximize power generation, maintain cooler river temperatures in the summer and increased fall releases to improve fishery migration.

4.3 Estimated Short-Term Pilot Project Schedule

As discussed in TM #3, Section 3.1 (Transfer Timing), current plans are that in the first year of a drought, EBMUD would begin to take delivery of CVP water from FRWP no earlier than October 1st. Since the short-term pilot transfer is anticipated to occur once FRWP is operating for the benefit of EBMUD, this will represent the earliest take date.

In developing the estimated short-term pilot project schedule, TM #4, Table 1 (Summary of Environmental Reviews, Approvals and Institutional Arrangements Needed to Transfer Water to BAWSCA) was utilized. As previously discussed, specific timeframes cannot be provided given the uncertainty in the time required to obtain regulatory approvals to implement the pilot project. An approximate schedule for the pilot project is shown on Table 4. A more detailed schedule can be prepared in the future once the seller for the pilot transfer water is identified.

For detailed descriptions for each category, please refer to TM #4, Section 2 (Environmental Review).

Table 4. Estimated Short-Term Pilot Project Schedule

| TASK | PRE-PILOT WATER TRANSFER | PILOT WATER TRANSFER | | | | | | | | | | | | |
|---|--------------------------|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| Hayward Intertie Agreements | | | | | | | | | | | | | | |
| Amendment to 2007 Hayward Operating Agreement (SFPUC - Hayward - EBMUD) | ~ 6-12 months * | | | | | | | | | | | | | |
| Day-to-Day Operations Plan (SFPUC - Hayward - EBMUD) | ~ 6-12 months * | | | | | | | | | | | | | |
| BAWSCA Agreements | | | | | | | | | | | | | | |
| Amendment to BAWSCA - SFPUC Cost Allocation Agreement | ~ 6-12 months * | | | | | | | | | | | | | |
| Internal Agreements to Distribute Water to BAWSCA Agencies | ~ 6-12 months * | | | | | | | | | | | | | |
| BAWSCA - Hayward Reimbursement Agreement | ~ 6-12 months * | | | | | | | | | | | | | |
| Other Institutional Arrangements | | | | | | | | | | | | | | |
| Water Purchase Agreement with Seller | | | | | | | | | | | | | | |
| EBMUD - BAWSCA Pilot Water Transfer Agreement | | | | | | | | | | | | | | |
| Initial USBR Consultation/Account Development | | | | | | | | | | | | | | |
| Board Approvals | | | | | | | | | | | | | | |
| Environmental Review (As Applicable) | | | | | | | | | | | | | | |
| CEQA | | | | | | | | | | | | | | |
| NEPA/ESA | | | | | | | | | | | | | | |
| Regulatory Agency Approvals (As Applicable) | | | | | | | | | | | | | | |
| SWRCB | | | | | | | | | | | | | | |
| USBR-Warren Act Contract | | | | | | | | | | | | | | |
| USRB-MFP Refill Agreement (if PCWA is Seller) | | | | | | | | | | | | | | |
| Pilot Water Transfer | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

* Efforts could run concurrently with development of other institutional arrangements, environmental reviews, and regulatory agency approvals that would need to be completed before the pilot water transfer could commence.