
Final Environmental Impact Report

**East Bay Municipal Utility District
Bayside Groundwater Project**

Prepared for
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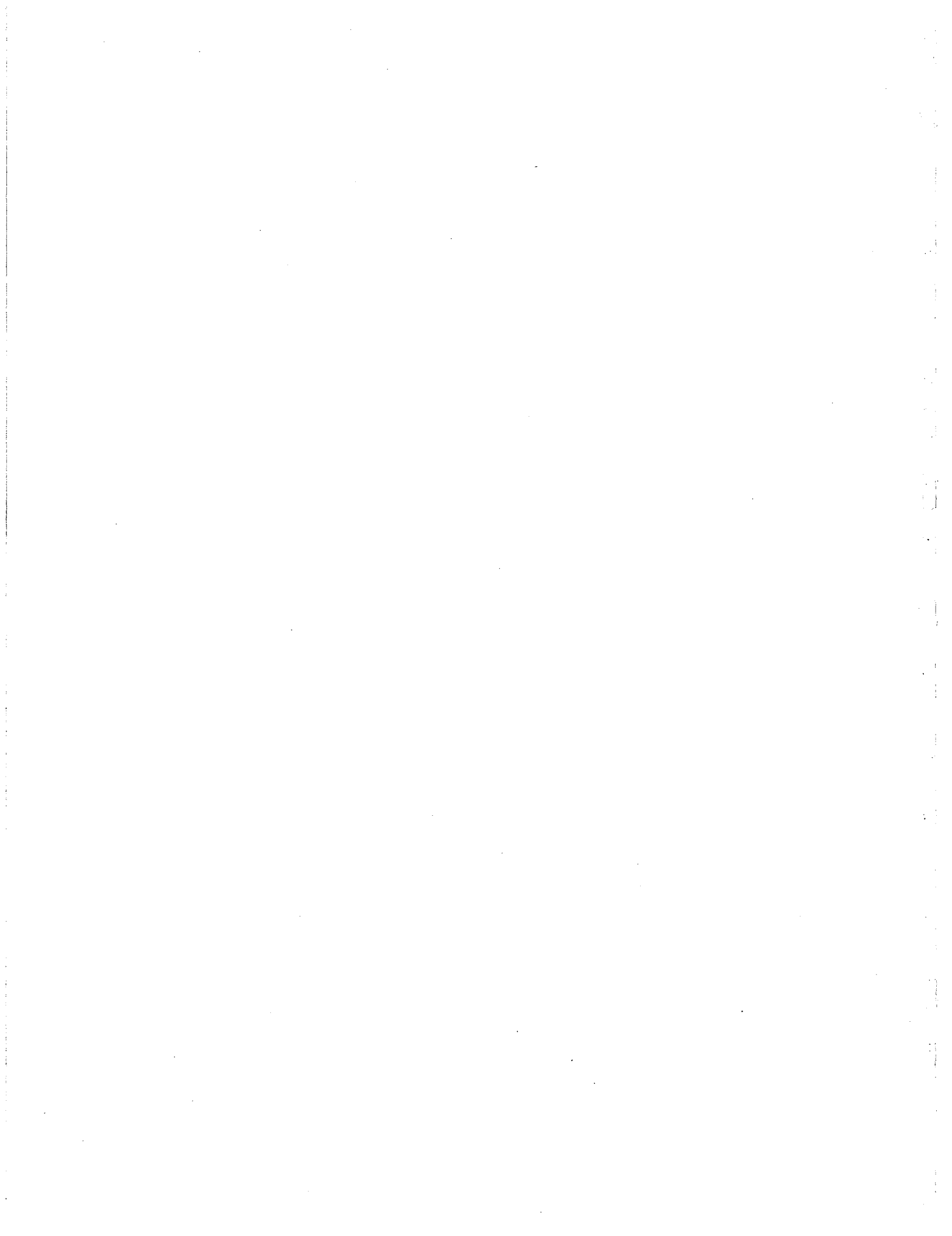
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- A Technical Memorandum: A Summary of Operating Aquifer Storage and Recovery Case Systems
- B Figure 13: Simulated Water Levels at Niles Cone Indicator Well.
- C Chloroform Health Risk Memorandum
- D Air Toxics Impact Analysis for San Lorenzo Air Stripper (revised)
- E EBMUD Board of Directors Planning Committee Agenda and Minutes (February 22, 2005 meeting)

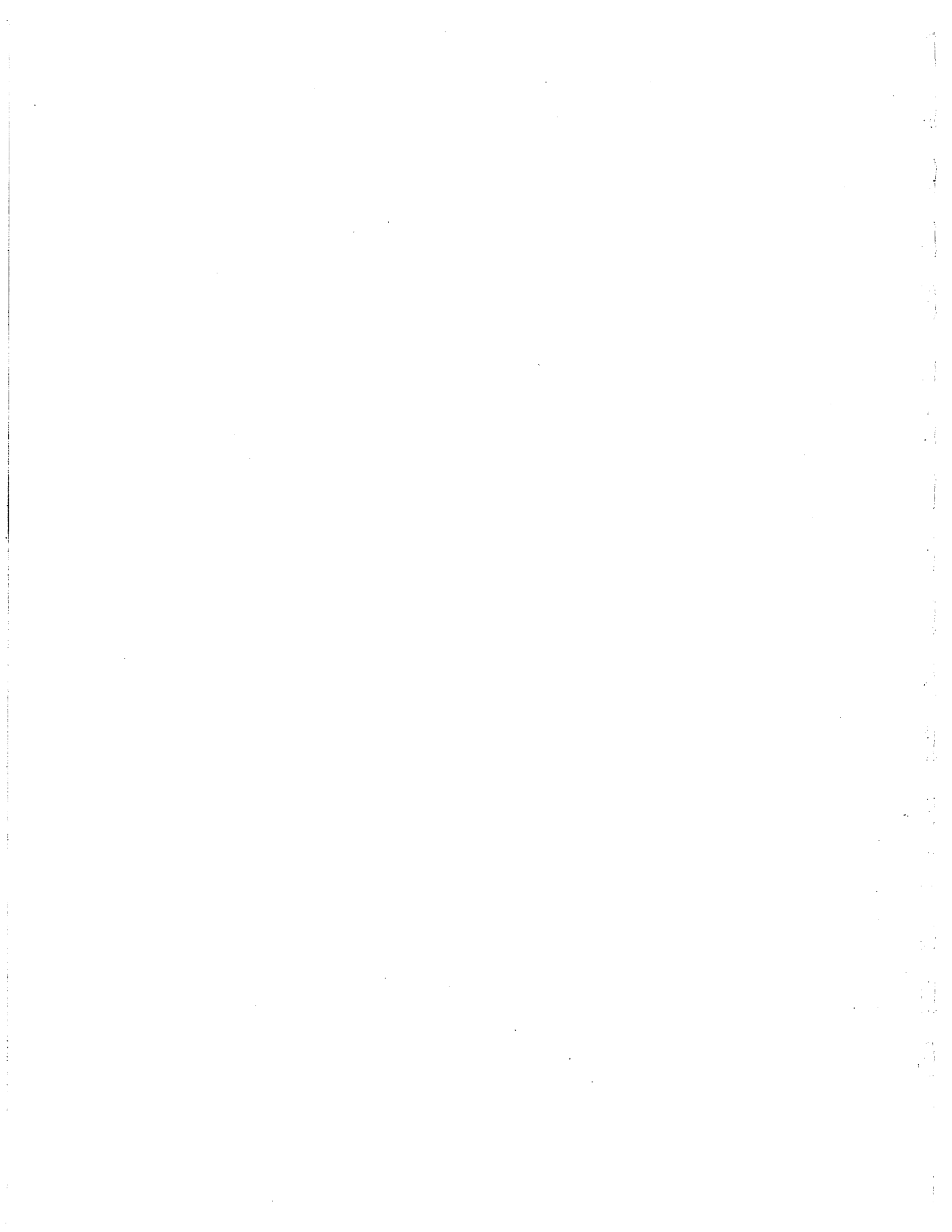


Acronyms & Abbreviations

µg/L	micrograms per liter
ABAG	Association of Bay Area Governments
ACEHS	Alameda County Environmental Health Services
ACFCD	Alameda County Flood Control Water Conservation District
ACWD	Alameda County Water District
AF	acre-feet
ASR	aquifer storage and recovery
AWWA	American Water Works Association
BAAQMD	Bay Area Air Quality Management District
bgs	below ground surface
Board	East Bay Municipal Utility District Board of Directors
BPMWN	Bayside Project Phase 1 Monitoring Well Network
C/B	cost/benefit
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CLG	Community Liaison Group
CPUC	California Public Utilities Commission
CWA	Clean Water Act
DBP	disinfection by-product
DEIR	Draft Environmental Impact Report
DHS	Department of Health Services
District, the	East Bay Municipal Utility District

DTSC	California Environmental Protection Agency Department of Toxic Substances Control
DWR	California Department of Water Resources
DWSAP	Drinking Water Source Assessment and Protection
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ERNS	Emergency Response Notification System
FRWP	Freeport Regional Water Project
FSC	Folsom South Canal
GAMA	Groundwater Ambient Monitoring and Assessment
LMRMP	Lower Mokelumne River Management Plan
mg/kg	milligrams per kilogram
mgd	million gallons per day
mg/L	milligrams per liter
msl	mean sea level
NCGWB	Niles Cone Ground Water Basin
NEBIGSM	Niles Cone and South East Bay Plain Integrated Groundwater and Surface Water Model
NPDES	National Pollutant Elimination Discharge System
OLSD	Oro Loma Sanitary District
pCi/L	picoCuries of radiation per liter of air
PEIS	Programmatic Environmental Impact Statement
Proposed Project	Bayside Groundwater Project
psig	per square inch gauge
PZ	pressure zone
ROD	record of decision
RWQCB	Regional Water Quality Control Board, San Francisco Bay Region
SAAQS	State Ambient Air Quality Standards
SCWA	Sacramento County Water Agency

SEBPB	South East Bay Plain Basin
SWRCB	State Water Resources Control Board
TAF	thousand acre-feet
THM	trihalomethane
U.S. EPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
USL	Upper San Leandro
UWMP	Urban Water Management Plan
WSMP	Water Supply Management Plan/Program
WTP	water treatment plant



1.0 Introduction

1.1 Purpose of the Final EIR

This Final Environmental Impact Report (EIR), together with the Draft EIR (DEIR) dated March 2005 (CH2M HILL 2005b), constitute the complete EIR for the East Bay Municipal Utility District's (EBMUD's) Bayside Groundwater Project (the Proposed Project). The purpose of this EIR is to analyze and disclose the effects of the Proposed Project on the physical environment, as required by the California Environmental Quality Act (CEQA). In addition to complying with CEQA requirements for approval of the Proposed Project by the EBMUD Board, the EIR will be used to support issuance of permits by agencies with jurisdiction over certain aspects of the project.

Please refer to the DEIR (CH2M HILL 2005b) for a detailed discussion of the Proposed Project and the environmental review process. The DEIR is available online at http://www.ebmud.com/water_&_environment/water_supply/current_projects/bayside_groundwater/default.htm.

EBMUD made the DEIR available for public review and comment for 60 days, from March 14, 2005 to May 13, 2005. The DEIR was distributed to responsible and trustee agencies and made available to members of the public at public libraries and on the internet. On March 14, 2005, EBMUD filed a Notice of Completion with the Governor's Office of Planning and Research, State Clearinghouse, indicating that the DEIR had been completed and was available for review.

The EBMUD Board of Directors (the Board) held an informational meeting in the project area on April 20, 2005 in San Leandro, California to receive comments on the DEIR. Written comment letters were accepted until the close of the review period on May 13, 2005. This Final EIR contains copies of the written and oral comments received on the DEIR, and EBMUD's responses to those comments pertaining to the contents of the DEIR.

The Board will exercise its independent judgment in reviewing this Final EIR for adequacy and consider it for certification pursuant to the requirements of Section 15090 of the CEQA Guidelines. If the EBMUD Board certifies the EIR, it will make findings under CEQA, and consider whether or not to approve the Proposed Project or an Alternative thereto. If the Board approves the project, EBMUD will file a Notice of Determination.

1.2 Report Organization of the Final EIR

1.2.1 Report Contents

This Final EIR is organized as follows:

- Section 1.0 Introduction
- Section 2.0 List of Commenters
- Section 3.0 Master Responses
- Section 4.0 Errata
- Section 5.0 Responses to Comments Received on DEIR
- Section 6.0 References

1.2.2 List of Commenters

Section 2.0 includes a complete list of state, regional and local agencies, organizations, and individual citizens that submitted comments on the DEIR.

1.2.3 Master Responses

About 325 individual comments, culled from 23 letters and the transcript of the public hearing, were received on the DEIR. Many of the commenters expressed similar concerns on the same issues. Thus, Master Responses were prepared in an effort to avoid redundancy in responses and to provide thorough and consistent responses to these common issues. The Master Responses are presented in Section 3.0.

The benefit of the Master Responses is that the clarifying information provided on a particular subject area can be found in one place and multiple cross-referencing between individual comments is avoided. A complete list of the Master Responses is found on the first page of Section 3.0.

1.2.4 Errata

Section 4.0 contains revisions to the DEIR. These are represented by redline/strikeout versions of the pages from the DEIR. Most of the errata represent minor modifications to text and figures made in response to comments received or as initiated by the preparers of the DEIR.

1.2.5 Comments and Individual Responses

Section 5.0, Responses to Comments Received on DEIR, contains a complete inventory of all comments received on the DEIR along with EBMUD's responses to those comments. The section is presented with each comment letter reproduced on the left-hand page and the corresponding response(s) on the facing right-hand page.

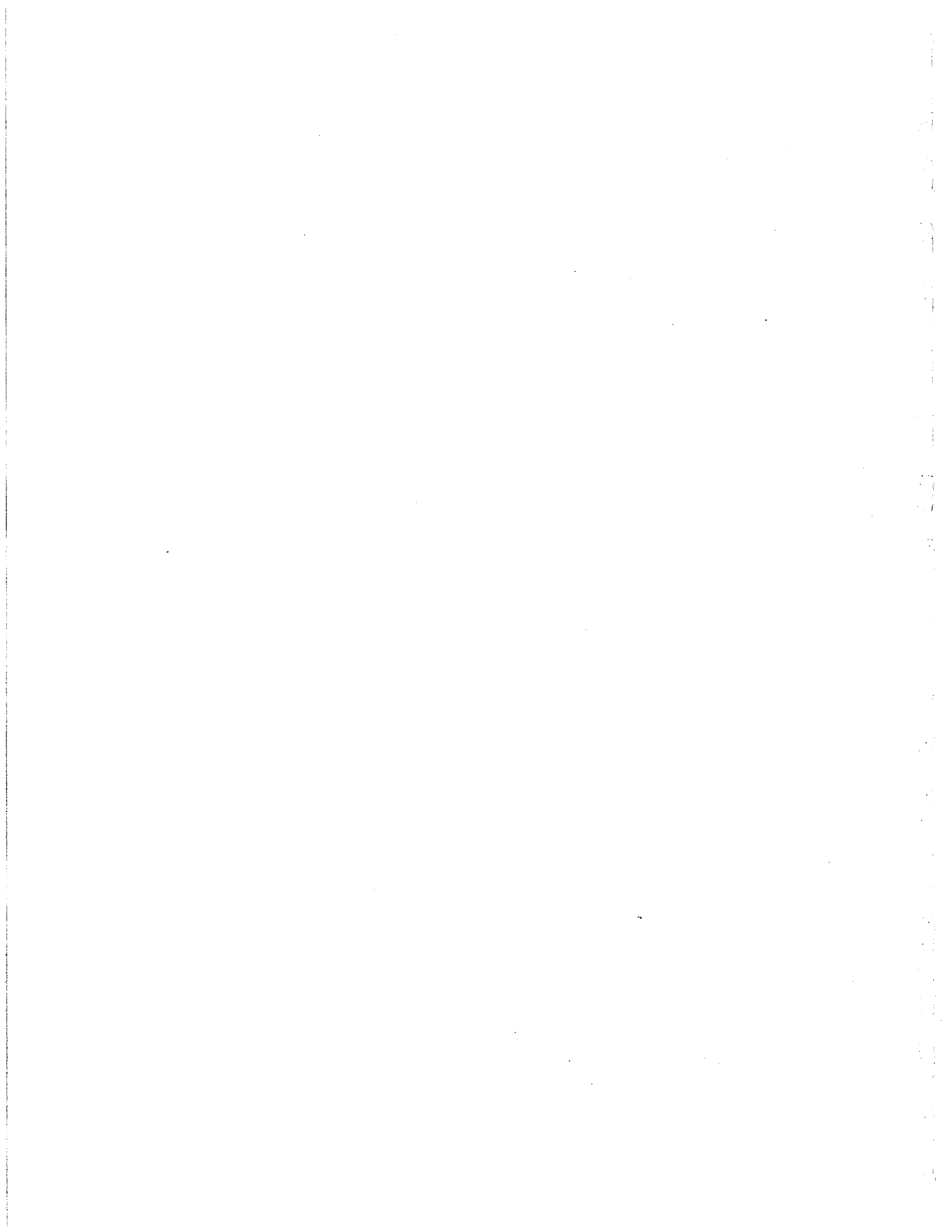
Each comment letter has been assigned a code based on the category to which a commenter belongs- agency, organization or citizen (see Section 2.0, List of Commenters, for further details regarding the commenter codes). Each specific comment is numbered sequentially within each letter; for example, the first letter received from a group or organization is designated letter G1, and the first three discrete comments within that letter are designated

comments G1-1, G1-2, and G1-3. The letter codes and comment numbers are indicated in the left side margin of each letter. Responses to each comment are labeled with the corresponding letter code and comment number on the facing right-hand page.

As described above, the Master Responses address many of the comments. Where appropriate, the response in Section 5.0 refers the reader to one or more topics in Section 3.0, Master Responses.

1.2.6 References

Section 6.0 presents the list of documents referenced in the preparation of this document.



2.0 List of Commenters

2.1 Written and Oral Comments and Responses

The organizations, groups, and individuals listed below have provided written and oral statements on the EBMUD Bayside Groundwater Project EIR. EBMUD received 24 comment letters as well as oral testimony from 20 individuals at the public hearing. Written statements were accepted through EBMUD from March 14, 2005 through May 13, 2005. Oral comments were received at the public hearing/Board meeting on April 20, 2005 in San Leandro, CA. A court reporter was present to take a verbatim transcript of the proceeding.

Each commenter was assigned a group code based on the group code prefixes presented in Table 2-1. This table can be used as a reference when reading Section 5.0, Responses to Comments on the DEIR. The group codes assigned to the various commenters are listed in the subsections below.

TABLE 2-1
Commenter Group Code Prefixes and Types

Group Code Prefix	Commenter Type
S	State Agency
L	Local Agency
G	Groups or Organizations
C	Interested Citizen

2.2 State Agency

One letter was submitted by a state agency:

- S1 – Governor’s Office of Planning and Research—State Clearinghouse and Planning Unit

2.3 Local Agencies

Six letters were submitted by local agencies:

- L1 – Alameda County Supervisor Alice Lai-Bitker, District 3
- L2 – City of San Leandro
- L3 – City of San Leandro
- L4 – City of San Leandro

- L5 - Alameda County Water District (ACWD)
- L6 - Bay Area Air Quality Management District (BAAQMD)

2.4 Groups or Organizations

Seven letters were submitted by groups or organizations:

- G1 - Heron Bay Task Force
- G2 - Heron Bay Task Force
- G3 - San Lorenzo Village Homes Association
- G4 - Heron Bay Task Force
- G5 - Heron Bay Homeowners Association (Berger & Hopkins)
- G6 - Heron Bay Homeowners Association (Berger & Hopkins)
- G7 - Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley)

2.5 Interested Citizens

Ten letters or other documents, including the public hearing transcript and set of speaker cards, were submitted by interested citizens:

- C1 - Christopher Malloy
- C2 - Gail Schino
- C3 - Ophelia Wray
- C4 - Edward Mejia Sarate
- C5 - Howard Kerr
- C6 - Public Hearing Transcript. The following individuals spoke at the public hearing held on April 20, 2005:
 - Wafau Aborushed
 - Charles Bass
 - Howard Beckman
 - Jack Chan
 - Sun-Hua Chao
 - Kac Weng Cheng
 - Tim Holmes
 - Frank Hsieh
 - Irene Ip
 - Patrick Ledesma
 - Benny Lee
 - Mike Mahoney
 - Christopher Malloy
 - Bryan McNulty
 - Ben Minton
 - Ming Ng
 - Fina Perez
 - Harold Perez
 - Shudony Zheng
 - Shelia Young
- C7 - Public Hearing Speaker Cards
- C8 - Howard Kerr
- C9 - Robert C. Hawkins
- C10 - Alfred Kwok

3.0 Master Responses

This section presents the Master Responses that address issues related to the Bayside Groundwater Project that were frequently raised by commenters. The Master Response topics are as follows:

- Master Response 1 – Subsidence
- Master Response 2 – Potential for Flowing Wells
- Master Response 3 – Monitoring Programs
- Master Response 4 – Liquefaction
- Master Response 5 – Groundwater Contamination
- Master Response 6 – Radon and Chloroform
- Master Response 7 – Project Phasing
- Master Response 8 – Project Objectives and Alternatives
- Master Response 9 – Need for Project
- Master Response 10 – Public Outreach and Notice, and DEIR Review
- Master Response 11 – Environmental Justice
- Master Response 12 – Comments on 2001 DEIR
- Master Response 13 – Additional Information Regarding ASR Projects

3.1 Master Response 1 – Subsidence

Commenters expressed concern over the potential for subsidence to result from Bayside project operations, and how potential subsidence-related impacts would be mitigated.

As discussed in the 2005 DEIR (CH2M HILL 2005b) on pages 3.1-54 and 3.1-55, there are two distinct types of land subsidence that occur when a well in a confined aquifer is pumped: elastic subsidence that is temporary and which reverses itself as water levels recover; and inelastic subsidence, which results in permanent lowering of the land surface even after pumping stops. Inelastic subsidence is not expected to occur in response to Phase 1 pumping because water level drawdown will be relatively small compared to historical low water levels. Elastic subsidence will be small for the same reason, and is calculated to be on the order of a quarter-inch at the Proposed Project site to about a tenth of an inch several miles away (CH2M HILL 2005c).

The amount of elastic subsidence is associated with the amount of drawdown and the elastic compressibility of the aquifer. The calculation of elastic subsidence was based on the amount of drawdown predicted by the Niles Cone and South East Bay Plain Integrated Groundwater and Surface Water Model (NEBIGSM) (CH2M HILL 2005a) and values of elastic compressibility measured by the USGS using 20 years of data from the San Joaquin Valley (Ireland et al. 1984). The San Joaquin area consists of unconsolidated alluvial deposits, as does the East Bay Plain aquifer system, and was extensively studied by the USGS due to subsidence issues. The U.S. Geological Survey (USGS) study determined a value called the elastic storage coefficient, which indicates specific storage (the elastic response of the aquifer for each foot of thickness). To arrive at the elastic subsidence potential of the project area during aquifer storage and recover (ASR) operations, this average elastic storage coefficient ($5e^{-6}$) was multiplied by 100 feet (the thickness of the Deep Aquifer) and by 40 feet (the maximum modeled drawdown near the well) to arrive at the value of 0.24 inches of elastic subsidence potential, or roughly $\frac{1}{4}$ inch. The value appears conservative when considering that the USGS has shown that parts of the Santa Clara Valley experience elastic deformation (subsidence and subsequent rebound) of as much as 1 inch due to seasonal changes in groundwater levels (USGS 2000). Annual groundwater pumping in the Santa Clara Valley is over 100 times greater than the Bayside Groundwater Project (SCVWD 2002).

Land subsidence should not be confused with differential settlement. Differential settlement is characterized by local changes in ground surface elevations often related to improperly compacted fill. It can cause structural damage such as cracks in sidewalks, foundations, and underground pipelines (Perloff 1975). In summary, subsidence is a regional effect related to groundwater levels, in contrast to differential settlement which is a localized effect related to compaction of fill materials near the ground surface. Therefore, EBMUD does not expect any impacts due to differential settlement, and, for the reasons stated above, expects impacts due to subsidence to be insignificant.

Phase 1 operation will be closely monitored to gain more accurate information on subsidence (see Master Response 3 – Monitoring Programs, and Mitigation Measure 3.1-6 in the DEIR). This will be done using a combination of wells to measure water level changes, a system of “extensometers” to measure associated minute changes in land surface elevations,

and surveying of select points. The accuracy of well-constructed extensometers is on the order of a thousandth of a foot (a fraction of a millimeter) (Riley 2003), well below the amount of ground surface change that can cause damage to structures.

As discussed in the 2005 DEIR in Section 3.1-6, Phase 1 of the Proposed Project will be implemented incrementally to allow close observation of the response of the groundwater basin and surrounding soils to project operations. Monitoring for subsidence will be conducted on a continuous basis throughout operation of the Proposed Project. This slow startup and ongoing monitoring will provide the ability for EBMUD to respond quickly should monitoring indicate that permanent subsidence is occurring at a level that could adversely affect overlying land uses. After project startup, extensometers will be monitored on a daily or more frequent basis and data will be continuously logged electronically. Collected data will be frequently reviewed to assess whether subsidence is occurring and whether it is elastic or inelastic. Inelastic subsidence would be evidenced at the millimeter/sub-millimeter level by changes in subsidence rates, indicating a shift from slower elastic subsidence to faster inelastic subsidence. In the unexpected event that inelastic subsidence is detected by the extensometers, it will be a very small amount near the Bayside Well No. 1, and EBMUD would implement corrective action, such as reducing pumping rates or ceasing extractions as described in Mitigation Measure 3.1-6 of the 2005 DEIR.

Subsidence effects for Phase 2 cannot be determined because the locations of Phase 2 facilities are unknown. In order to assess subsidence effects, it is necessary to know specific well locations because the potential for subsidence depends on the proximity of the proposed wells to each other (centralized wells likely would cause more drawdown than decentralized wells), local geologic conditions that could effect drawdown, and the historic low water levels in the area around the well. For these reasons, the analysis of subsidence in the 2001 Bayside DEIR does not apply to Phase 2.

3.2 Master Response 2 – Potential for Flowing Wells

Commenters expressed concern over the potential for wells to flow at the ground surface due to operation of the Bayside Project.

EBMUD has conducted detailed studies of the water level response of the local aquifer system to Phase 1 injection and extraction, including extensive groundwater model simulations. Results of model simulations conducted to date indicate that wells screened within the Deep Aquifer near the Bayside Project may experience water level rises that exceed the elevation of the ground surface. If these Deep Aquifer wells are not properly sealed at the surface, they could discharge water to the surface ("flow"). Results of model simulations indicate that the areas where these conditions might exist are limited primarily to areas adjacent to the well and mostly undeveloped areas currently used as salt evaporation ponds.

EBMUD has made an extensive inventory of wells in the area (Dockweiler 1912; Norfleet Consultants 1998)¹. This work indicates that the majority of wells in the area are shallow and are not perforated in the Deep Aquifer. These shallow wells are not susceptible to flowing conditions because they are vertically separated from the pressurized Deep Aquifer by hundreds of feet of clay materials (Luhdorff & Scalmanini Consulting Engineers 2003; Wrime, Inc. 2005). As shown on Figure 3.1-15 of the 2005 DEIR, modeled peak water levels in the shallow (Newark equivalent) aquifer will not change significantly during Phase 1 injection. Deep Aquifer wells in the area are associated with large industrial uses and historical municipal pumping. These wells are much more likely to be properly catalogued in local groundwater databases and less likely to be improperly abandoned.

Phase 1 mitigation measures for potential flowing wells (Mitigation Measures 3.1-3a through 3.1-3d) are described on pages 3.1-51 and 3.1-52 of the 2005 DEIR (CH2M HILL 2005b). Mitigation measures to minimize or avoid potential impacts associated with flowing wells include working with local property owners to properly destroy Deep Aquifer wells found to be abandoned or inactive, and installing pressure-resistant fittings on active Deep Aquifer wells to avoid overflow. As an added precaution, injection will be started in a gradual and deliberate manner so that water levels in the Deep Aquifer can be closely monitored to evaluate the extent and magnitude of draw-up. This will allow verification of the groundwater model and identification of any previously unknown wells. If a flowing well is found, and appears to be caused by operation of the Bayside project, injection will be stopped, thereby halting the flow so that the well can be modified or destroyed.

The potential for Phase 2 injection to create flowing well conditions cannot be determined at this time because the locations of any Phase 2 facilities are unknown. In order to assess the potential for flowing wells, it is necessary to know specific well locations because the potential for flowing wells depends on the proximity of the proposed wells to each other (centralized wells likely would cause more water level rise than decentralized wells), local geologic conditions that could effect water levels, and the ground surface elevation near the injection well (wells near sea level are more likely to flow than wells at higher elevations).

¹ The inventory included the Alameda County Flood Control District Well Database and the EBMUD Backflow Prevention System Database.

For these reasons, the analysis of potential flowing conditions in the 2001 Bayside DEIR does not apply to Phase 2.

3.3 Master Response 3 – Monitoring Programs

Commenters requested more information on the monitoring programs to be implemented for water quality, water levels and subsidence. This Master Response provides additional detail on the various components of the Phase 1 Monitoring Program.

Mitigation measures presented in the 2005 DEIR (CH2M HILL 2005b) include requirements for a number of monitoring programs, including:

- Mitigation Measures 3.1-3a through 3.1-3d for monitoring water levels and the potential for flowing wells
- Mitigation Measure 3.1-6 for monitoring subsidence
- Mitigation Measures 3.2-1a through 3.2-1c for monitoring water quality

3.3.1 Monitoring Objectives

The goals of the monitoring program are to make sure that the Phase 1 Project is operated safely and to assure the community that it is not causing permanent subsidence, overflowing wells, or contamination of the produced drinking water or native groundwater. The monitoring program also provides important information for developing a future Phase 2 project, if EBMUD proceeds with such a project. Specific objectives of the monitoring program include the following:

- To facilitate information-sharing; data will be shared with Alameda County Water District (ACWD), the City of Hayward, and the Bayside Groundwater Project Community Liaison Group (CLG) on a regular basis.
- To inform decision-making for EBMUD regarding operation of the Phase 1 project and evaluation of a potential Phase 2 project.
- To observe changes in water levels in the Southeast Bay Plain Basin (SEBPB) and the Niles Cone Groundwater Basin (NCGWB) due to injection and extraction operations.
- To confirm the understanding and characterization of the transition zone between the SEBPB and the NCGWB.
- To collect water level data to verify the accuracy of the Niles Cone and South East Bay Plain Integrated Groundwater and Surface Water Model (NEBIGSM) and to support future model calibration efforts.
- To establish a baseline pre-operation benchmark condition.
- To monitor water quality to confirm standards are met and that groundwater contamination does not threaten the water supply.

3.3.2 Design Criteria

The monitoring programs will establish a pre-operation benchmark for water levels, subsidence, and water quality. Continued monitoring during Phase 1 will allow determination of how Phase 2, if and when it is implemented, may affect these same

parameters. These data will also allow the accuracy of the existing groundwater model of the area to be confirmed and, if needed, refined. In order to design an effective monitoring network, the following criteria will be considered in the network design:

- **Hydrogeology:** consider local and regional hydrogeologic structures (layer systems and aquifer units).
- **Representativeness:** place monitoring wells at optimum locations that represent potentially important variations in hydrogeologic characteristics.
- **Groundwater Flow Model (NEBIGSM):** consider model parameters, boundary conditions, layers, hydraulic connectivity between layers, and calibration needs.
- **Accessibility:** select existing wells or locate new wells in the areas which are readily accessible.
- **Efficiency:** select the best number of wells to minimize redundancy and cost while maximizing coverage of the area and aquifers affected.

3.3.3 Bayside Project Phase 1 Monitoring Well Network (BPMWN)

As currently envisioned, the BPMWN will include a total of 26 monitoring wells, including 7 new individual wells. A total of 20 wells (10 deep wells, 4 intermediate wells and 6 shallow wells) are located in the SEBPB, and 6 wells (4 deep wells, 1 intermediate well and 1 shallow well) are located in the transition zone.

The new monitoring wells will be placed to observe water level variations in each of the main aquifer units. Water level and water quality data collected by ACWD in the NCGWB will also be included as a part of the Bayside Project's Phase 1 regional monitoring effort. All new wells will be installed in accordance with state and local well standards and regulations.

Monitoring methods and frequencies for the 26 wells in the monitoring network are shown in Table 3-1. The Phase 1 monitoring program will begin before the project start-up period, and will continue throughout project operation.

Following are summaries of plans for Phase 1 Bayside Project monitoring programs, including a description of key components. Plans will be completed after actual locations of new monitoring wells are identified and data collection and data sharing arrangements made. The final plan will be developed in coordination with ACWD, the City of Hayward, and the CLG.

Water Level Monitoring

About 18 of the monitoring wells will be instrumented with devices that automatically record water levels (commonly referred to as "pressure transducers"). The network is designed to monitor water level changes radially outward from the Bayside Project. At greater distances from the project, the density of the monitoring network decreases to reflect the more gradual change in drawdown further away from the Bayside well. This network will therefore efficiently collect data on groundwater level changes resulting from the project with an emphasis on data collection in areas where the changes will be the greatest. During the incremental start-up period for Phase 1, and during the first year of operation,

all pressure transducers will be set up to collect water level data at intervals ranging from every 10 minutes to every hour, with data downloaded quarterly to obtain additional seasonal water level data (see Table 3-1). Water levels in subsequent years will be monitored on an hourly basis. Water levels in wells without transducers will be measured manually on a quarterly basis.

TABLE 3-1
Water Level Monitoring Network

No.	Well ID	Well Name	Well Type & Location	Monitoring Method	Water Level Monitoring Frequency		
					Start-up	1st Year	Subsequent Years
1	MW-1	OW-1	SEBPB Deep Well	Transducer	10 min	30 min	Hourly
2	MW-2I	OW-2D	SEBPB Intermediate Well	Transducer ²	10 min	30 min	Hourly
3	MW-2S	OW-2S ¹	SEBPB Shallow Well	Transducer ²	10 min	30 min	Hourly
4	MW-3	OW-4	SEBPB Deep Well	Transducer	10 min	30 min	Hourly
5	MW-4	OW-5	SEBPB Deep Well	Manual	Quarterly	Quarterly	Quarterly
6	MW-5	Q	SEBPB Deep Well	Transducer	Hourly	Hourly	Hourly
7	MW-6	R	SEBPB Deep Well	Manual	Quarterly	Quarterly	Quarterly
8	MW-7	S ¹	SEBPB Deep Well	Transducer ²	Hourly	Hourly	Hourly
9	MW-8D	Davis St Well	SEBPB Deep Well	Manual	Quarterly	Quarterly	Quarterly
10	MW-9	Farmhouse Well ¹	SEBPB Deep Well	Transducer ²	Hourly	Hourly	Hourly
11	MW-10I ³	Stenzel Park-I	SEBPB Shallow Well	Transducer	Hourly	Hourly	Hourly
12	MW-10D ³	Stenzel Park-D	SEBPB Deep Well	Transducer	Hourly	Hourly	Hourly
13	MW-5S ³	Q - S	SEBPB Shallow Well	Transducer	Hourly	Hourly	Hourly
14	MW-5I ³	Q - I	SEBPB Intermediate Well	Transducer	Hourly	Hourly	Hourly
15	MW-9S ³	Farmhouse - S	SEBPB Shallow Well	Transducer	Hourly	Hourly	Hourly
16	MW-9I ³	Farmhouse - I	SEBPB Intermediate Well	Transducer	Hourly	Hourly	Hourly
17	MW-8S ³	Davis St	SEBPB Shallow Well	Manual	Quarterly	Quarterly	Quarterly
18	Well-BS	Well B Shallow ¹	Transition Zone Shallow Well	Transducer ²	Hourly	Hourly	Hourly
19	Well-BI	Well B Int.	Transition Zone Int. Well	Transducer	Hourly	Hourly	Hourly
20	Well-BD	Well B Deep ¹	Transition Zone Deep Well	Transducer	Hourly	Hourly	Hourly
21	Well-C	Well C ¹	Transition Zone Deep Well	Manual	Quarterly	Quarterly	Quarterly
22	Well-D	Well D2 ¹	Transition Zone Deep Well	Transducer ²	Hourly	Hourly	Hourly
23	Well-E	Well E ¹	Transition Zone Deep Well	Transducer ²	Hourly	Hourly	Hourly
24	ME	Mount Eden ¹	SEBPB Deep Well	Manual	Quarterly	Quarterly	Quarterly
25	MM	Metal Master	SEBPB Shallow Well	Manual	Quarterly	Quarterly	Quarterly
26	WP	Weekes Park	SEBPB Intermediate Well	Manual/ Transducer ²	Quarterly	Quarterly	Quarterly

Notes:

¹ Luhdorff & Scalmanini Aquifer Test Project Well

² Existing pressure transducer

³ Proposed new monitoring well

Source: EBMUD

The water levels in all the water level monitoring wells will be measured manually every quarter, except ACWD wells, which are monitored approximately twice a year. Wells outfitted with pressure transducers will also be monitored manually on a periodic basis to verify the pressure transducer data.

Monitoring for Subsidence

Subsidence monitoring will include monitoring water levels in a network of existing and new wells, installing an extensometer system to monitor changes in land surface elevation that are related to these water level changes, and surveying select points in the area. As described under Master Response 1 – Subsidence, the subsidence response of the system will be closely monitored to gain more accurate information on its potential magnitude and distribution.

Phase 1 of the Bayside Project will be implemented incrementally to allow close observation of how the system responds to pumping. Extensometer data will be logged electronically on a relatively frequent basis (on the order of hours) during project startup and will be checked daily during this time to assess how much elastic subsidence is occurring. Data will be reviewed to assess whether inelastic subsidence is occurring.

Water Quality Monitoring

Water quality monitoring will be conducted in accordance with state and federal regulatory requirements such as those under the jurisdiction of the California Department of Health Services (DHS) and the State Water Resources Control Board (SWRCB). EBMUD will conduct groundwater quality monitoring using the BPMWN as well as the Phase 1 Bayside Project Well Number 1. In addition, ACWD's water quality monitoring data will be incorporated.

State and federal agencies have been extensively monitoring and remediating the existing San Leandro plume (see Master Response 5 – Groundwater Contamination). Water quality data will be collected from three sentinel wells located from 0.6 to 1.3 miles from the Bayside well. During the Phase 1 start-up period, water quality samples will be collected semi-annually, and thereafter, annually. This sampling frequency is based on the typical groundwater flow rate in the basin, which is less than 100 feet per year in the Deep Aquifer.

3.3.4 Schedule

Phase 1 monitoring well site selection, acquisition of necessary easements, well drilling, instrumentation, and a reference elevation survey will follow EIR certification. Monitoring will begin in advance of Bayside Project Phase 1 extraction operations.

3.4 Master Response 4 – Liquefaction

Commenters expressed concern that the Proposed Project could increase the potential for liquefaction in the area.

3.4.1 Potential for Liquefaction

As noted on Page 3.5-9 of the 2005 DEIR (CH2M HILL 2005b), the Phase 1 site is located in a zone of potential liquefaction. Liquefaction occurs when loose, saturated, relatively clean non-cohesive (granular) soils lose strength when subjected to moderate to high-intensity ground shaking. Liquefaction is generally limited to the upper 50 feet of soil due to the high confining pressures in the subsurface below that depth; therefore, sands in the Deep Aquifer are not susceptible to liquefaction.

Phase 1 includes the injection of water into the Deep Aquifer, which is generally confined (i.e., separated from overlying aquifers by layers of clay which inhibit the movement of water vertically between aquifers) as described in Section 3.1.2.1 of the DEIR. Therefore, although increased water pressure in the Deep Aquifer could result in water flowing from deep wells, the water pressure in the shallow aquifer (the groundwater near the surface) will not change significantly. As described in Section 3.5.4 of the DEIR, groundwater modeling indicates that any rise in the shallow aquifer groundwater level as a result of injection into the Deep Aquifer would be less than two feet (maximum), and would occur in a limited area near the Hayward Fault. Observed historical water level data support the assumption that the Deep Aquifer is confined.

Based on the site geology described in Section 3.5.2.2 of the DEIR, the potentially liquefiable materials appear to be the layers of sand which may be present between approximately 10 and 80 feet below ground surface (bgs). Groundwater in the area of Phase 1 is currently near the ground surface (0.5 to 6.5 feet bgs). Because the potentially liquefiable sands are already saturated, and because Proposed Project operations would be confined to the Deep Aquifer that is hundreds of feet below this shallow sand layer, there would be no significant increase in liquefaction potential as a result of the Proposed Project.

3.4.2 Exposure of Project Facilities to Liquefaction Damage

As described in Section 3.5.5 of the DEIR, as part of standard design procedures, the proposed facilities would be designed to withstand the effects of strong ground shaking, including liquefaction. Performing geotechnical investigations and construction in accordance with appropriate seismic design criteria in the Uniform Building Code would reduce the potential ground shaking impact to less than significant.

3.5 Master Response 5 – Groundwater Contamination

Commenters expressed concern over the potential for existing groundwater contamination to affect the water supply from the Proposed Project.

As discussed in Section 3.7 of the 2005 DEIR (CH2M HILL 2005b), sites within the South East Bay Plain Basin (SEBPB) have been identified on which there have been releases of hazardous materials, primarily gasoline and other petroleum products; others have been identified on which there is the potential to release hazardous materials to local groundwater. These sites are categorized as follows:

- Locations with permitted hazardous materials uses
- Leaking underground storage tank sites
- Landfills
- Non-leaking underground storage tank sites that were open in 2000 (i.e., the regulatory case file was open and action was occurring at the site)
- Known regional groundwater contamination plumes identified by the San Francisco Bay Regional Water Quality Control Board (RWQCB).

The locations of these sites are shown on Figures 3.7-2 through 3.7-6 of the DEIR. The existing or potential contamination found on these sites did not result from activities associated with the Bayside Groundwater Project, and EBMUD is not responsible for cleanup of these sites. However, EBMUD is concerned with preventing further contamination of the groundwater resources. The District has completed an analysis of the potential for contaminants from these sites to impact water quality as a result of Phase 1 operations, and has identified mitigation measures to reduce the risk of chemical harm to this public water resource.

No significant impacts to groundwater supplies from contaminated sites are expected during Phase 1 for several reasons as described below; see also Section 3.2.6 of the DEIR.

- **Drawdown from Proposed Project pumping would not contaminate water supply.** As discussed under Phase 1 Potential Impact 3.1-3, pumping at an average rate of 1 million gallons per day (mgd) annually from the Deep Aquifer is predicted to result in a maximum drawdown of 1.5 feet in the Newark Aquifer equivalent of the SEBPB (the shallowest aquifer), located approximately 30 to 130 feet below ground surface (bgs) (see Figure 3.1-12 in the DEIR). This amount of drawdown would not substantially affect the overall groundwater direction and flow in this shallow aquifer (see Figure 3.1-15 of the DEIR), and therefore would not draw contaminants toward Phase 1 Bayside Well No. 1.
- **Contaminants move extremely slowly.** The total volume of water in the Deep Aquifer of the SEBPB is estimated by the NEBIGSM model to be 460,800 acre-feet (AF), compared to an annual dry-year Phase 1 project extraction volume of 1,121 AF. Because of this negligible volume and the clay layers between the shallow (Newark equivalent) aquifer and the deep zone, individual water molecules (and contaminants) may take thousands of years to migrate from the ground surface to the Deep Aquifer (Luhdorff &

Scalmanini 2003; Wrieme 2005). This is confirmed by age dating and groundwater modeling.

The age of the groundwater in the Deep Aquifer is a reliable indicator of the degree of separation between the shallower and deeper aquifer layers. The USGS determined that the 9,000 year age of the Deep Aquifer supply in the SEBPB is significantly older than that of the more recent shallow zone waters in the Newark Equivalent aquifer (USGS 2003). Groundwater modeling estimated a similar age of water at 8,750 years. The age difference between the aquifers indicates that the deep and shallow zones are firmly separated, and that there has been no measurable interaction between those aquifers during historic high pumping and stress periods when deep zone water levels reached historic lows.

The physical movement of contaminants through the clay layers separating the Newark Aquifer equivalent and the Deep Aquifer is extremely slow. Therefore, while the Deep Aquifer is recharged from surface sources, the process is far too slow (9,000 years) for contaminant migration to be a concern. Moreover, because of variations in aquifer material, hydraulic gradient, thickness, porosity and hydraulic conductivity, the flow path of contaminants is not a straight line. Their actual travel time is long enough to allow ample time for early detection through monitoring (see Master Response 3). Finally, the Bayside Phase 1 project proposes more injection over time than extraction, thereby eliminating any long-term net increase in vertical movement, however slow it may be.

- **Potential effects from the Phase 1 project on existing vertical conduits for contaminant migration would be minimal.** The physical movement of contaminants via existing vertical conduits from the shallow (Newark equivalent) aquifer to the Deep Aquifer is not anticipated because even after decades of high pumping rates that resulted in historic low water levels, there is no evidence of cross-contamination between aquifers (Woodward-Clyde 1993). The projected declines in water levels due to Phase 1 are much less than the historical conditions. The low risk of vertical migration is demonstrated by the Trailer Haven well (2399 E. 14th Street, San Leandro), a drinking water supply well situated directly in the San Leandro plume area and drawing its water from the Deep Aquifer below the plume. The well has been permitted by the Department of Health Services for domestic drinking water purposes, and no problems have been detected with contamination of the well water supply (Fugro West 1998; Fugro West 1999a). Further, as discussed in the 2005 DEIR, Mitigation Measure 3.2-1a would seal or retrofit wells that could act as vertical conduits, and sentinel wells (Mitigation Measure 3.2-1b) would provide early warning of contaminants before they reached the Bayside Well No. 1.
- **Mitigation measures would further reduce any potential effects.** To reduce the potential impacts from migration of pre-existing contaminants in shallow groundwater to a level of insignificance, Mitigation Measures 3.2-1a through 3.2-1c (see page 3.2-21 of the 2005 DEIR) would be implemented. The measures would require the following actions: identification and sealing or retrofitting of Deep Aquifer wells within 200 feet of known contaminant plumes, if they are potential conduits; annual analysis of groundwater samples to detect potential movement of contaminants into the Deep Aquifer; monitoring of groundwater quality in the Phase 1 production well; and

implementation of a wellhead protection program, which would include, for example, standard practices at the wellhead site to avoid contamination, training for maintenance staff, and securing (locking or similar) the wellhead facility. A sentinel well will be a part of the monitoring network to detect contaminants that may move toward the Phase 1 well before they could reach the Phase 1 well. Because contaminants move slowly in the Deep Aquifer, monitoring more than once a year is not required beyond the first year (EBMUD 2005c).

- **Contaminated sites are undergoing cleanup.** The California Department of Toxic Substances Control (DTSC) has been investigating the San Leandro Plume, the largest in the SEBPB, since the late 1980s. This plume is located at a depth between 20 and 70 feet below ground surface. DTSC has been treating groundwater and removing contaminated soil to remediate the plume. Remediation efforts have been very successful at reducing the risks to community health. Other state and federal agencies such as the U.S. Environmental Protection Agency (U.S. EPA), RWQCB, Alameda County Department of Environmental Health Hazardous Material Division, and the San Leandro Fire Department are also overseeing other sites in the area (EBMUD 2005d) It should be noted that in discussions with EBMUD, DTSC did not express concern over potential contamination of the water supply from the Proposed Project, and the agency did not comment on the DEIR.

Because of the low potential to affect contaminant migration and the implementation of these mitigation measures to detect and prevent migration of contaminants to the Deep Aquifer, the risk of spreading contaminants to the Deep Aquifer was found to be less than significant with the recommended mitigation measures.

3.6 Master Response 6 – Radon and Chloroform

Commenters had several questions and concerns about potential risks related to radon and chloroform; both are discussed below.

3.6.1 Radon

Several commenters expressed concern regarding the potential for radon in the groundwater to cause adverse health effects. Comments also reflected some confusion regarding the difference between potential risks from radon in the 2001 DEIR (EBMUD 2001a) and in the 2005 DEIR (CH2M HILL 2005b). This Master Response:

- Provides detail regarding the Radon in Drinking Water regulation proposed by the U.S. Environmental Protection Agency (U.S. EPA);
- Addresses its potential applicability to the Bayside Groundwater Project; and
- Discusses the anticipated levels of radon in water produced by the Proposed Project and exposure to radon by consumers.

Radon in Drinking Water – Proposed Regulation

According to the U.S. EPA (Technical Fact Sheet on the Proposed Radon in Drinking Water Rule; EPA 815-F-99-006; www.epa.gov/safewater/radon/fact10.pdf), radon is released to indoor air primarily from soil underneath the home, and to a lesser extent (1 to 2 percent) from drinking water. Recognizing that the majority of the radon in indoor air is contributed by releases from soil, U.S. EPA proposed a rule that encourages the public to fix indoor air problems and build homes that keep radon from entering.

In 1999, U.S. EPA proposed the Radon in Drinking Water Rule (Rule) which includes the following key components:

First Option: States can choose to develop enhanced state programs to address the health risks from radon in indoor air -- known as Multimedia Mitigation (MMM) programs -- while individual water systems reduce radon levels in drinking water to 4,000 pCi/L (picoCuries per liter, a standard unit of radiation) or lower. U.S. EPA is encouraging states to adopt this option because it is the most cost-effective way to achieve the greatest radon risk reduction. The goals of a MMM program are to increase awareness of radon issues, increase testing for radon, increase mitigation of existing problem homes, and promote radon resistant new construction. Elements of a program can include testing of homes as a part of a real estate transaction, building code changes for radon resistant construction, testing of schools, educational materials, hotlines, certification of home testers, certification of mitigators, etc.

Second Option: If a state chooses not to develop an MMM program, individual water systems in that state would be required to either reduce radon in their system's drinking water to 300 pCi/L or develop individual local MMM programs and reduce levels in drinking water to 4,000 pCi/L. Water systems already at or below 300 pCi/L standard would not be required to treat their water for radon.

The proposed regulation identifies four criteria that MMM program plans would be required to meet to be approved by U.S. EPA:

- Public involvement in the development of the MMM plan;
- Quantitative goals for reducing radon in existing and new homes;
- Strategies for achieving these quantitative goals; and
- A plan for tracking and reporting results.

(Source: <http://www.epa.gov/safewater/radon.html>)

Potential Applicability of Proposed Regulation to Bayside Project

The State Water Resources Control Board (SWRCB) is conducting the Groundwater Ambient Monitoring and Assessment (GAMA) Program which "is designed to help better understand and identify potential risks to groundwater resources" (<http://www.waterboards.ca.gov/gama/>). Groundwater is collected at select locations state-wide and analyzed for man-made and naturally occurring constituents such as radon. Twenty-one samples from wells in the North San Francisco Bay study area were analyzed for radon, and results indicated concentrations from 210 to 1,500 pCi/L (SWRCB, unpublished data). Radon concentrations measured in groundwater collected from the Bayside Project area ranged from 470 to 700 pCi/L; i.e., they were within the range detected in samples collected by the GAMA Program. In the preliminary draft GAMA Program report, the SWRCB has acknowledged the recommended maximum contaminant levels in the U.S. EPA-proposed radon rule, as described above.

The California Department of Health Services (DHS) has a program akin to the U.S. EPA-proposed MMM program in place, and it is anticipated that California will participate in an MMM program (Milea 2003). Under an MMM program, the promulgated radon standard, as currently anticipated, would be 4,000 pCi/L, which is higher than the estimated radon concentrations of 470 to 700 pCi/L in the recovered groundwater from the Bayside Project.

Currently, there is no formal standard to follow for radon, and the concentrations in the recovered groundwater are anticipated to be in compliance with the future standard considering that the State of California plans to participate in an MMM program. As stated in Section 3.2.2.5 of the 2005 DEIR, treatment options for radon will be identified if a radon standard is established that is below radon levels in recovered Bayside groundwater.

Potential Exposure to Radon

The U.S. EPA (EPA 815-F-99-006) states that "...water with radon levels no higher than 4,000 pCi/L...contributes about 0.4 pCi/L of radon to the air in your home." The U.S. EPA states that indoor air concentrations of radon of 4 pCi/L or higher warrant concern and anticipates that in most homes, radon levels can be reduced to 2 pCi/L. Based on pilot studies conducted by EBMUD, concentrations of radon in recovered groundwater upon implementation of the Phase 1 project are anticipated to be in the range of 470 to 700 pCi/L (see Section 3.2, Table 3.2-1 in the 2005 DEIR). This level is substantially lower than the level in water that the U.S. EPA notes as being a concern.

In addition, DHS has conducted radon indoor air studies for more than 13 years (http://www.crcpd.org/radon/State_Programs_Highlighted/Recap.htm). DHS's objective

is to reduce human exposure to radon in residential and school structures primarily through education and public awareness efforts. The primary goals of the program are to:

- Encourage people to test their homes and schools.
- Mitigate indoor air concentration of radon greater than or equal to 4 pCi/L when found in homes or schools. Retrofitting techniques to reduce indoor radon concentrations include the installation of suction pipes or similar devices under the home, home or room pressurization devices, natural ventilation, and heat recovery ventilators (<http://www.epa.gov/radon/pubs/consguid.html>). These techniques either reduce the radon entering the home (suction or pressurization) or increase the exchange of indoor air with outdoor air (ventilation).
- Build radon-resistant homes and schools in areas of high radon potential. Techniques incorporated into building construction to make them radon-resistant include creating gas permeable layers between the ground and the home's foundation, placing plastic sheets under the home, caulking and sealing concrete foundations, and installing vent pipes or electrical exhaust fans (<http://www.epa.gov/iaq/radon/construc.html>).

The Association of California Water Agencies conducted a survey (<http://www.acwa.com/issues/waterquality/radonsurvey.asp> [last updated on February 7, 2000]) of radon concentrations in public water systems in California. Results were obtained for 60 agencies throughout California and show that concentrations range from not detected to 10,000 pCi/L, with the majority of ranges (53 out of 60 agencies) not exceeding 2,000 pCi/L.

In summary, radon is a common groundwater constituent found in drinking water sources throughout California. Based on communications with the State Department of Health Services, it appears that the state will implement a multi-media mitigation program. Therefore, it is anticipated that the Bayside Project will meet the future radon standard for drinking water in California. Since the Bayside Project will meet the expected future standards, aeration treatment to remove radon and related air emissions are not proposed for Phase 1 and, unless Phase 2 wells are located in an area with radon concentrations that may exceed the future standard, aeration is not anticipated for Phase 2. The required treatment technologies for Phase 2 would be determined if and when a Phase 2 Project is proposed and well locations are identified.

3.6.2 Chloroform

Trihalomethanes (THMs) including chloroform are a disinfection by-product (DBP) formed when chlorine comes into contact with organic material present in the water supply.

The U.S. EPA has established a safe drinking water standard of 80 micrograms per liter ($\mu\text{g/L}$) for total THMs, a group of compounds including chloroform, bromoform, bromodichloromethane, and dibromochloromethane. This means that the total sum of all trihalomethanes in a sample should not exceed 80 $\mu\text{g/L}$ for safe drinking water. U.S. EPA has classified chloroform as a Group B2, probable human carcinogen.

Water that would be used for injection during Phase 1 is currently treated at either the Orinda Water Treatment Plant (WTP) or the Upper San Leandro WTP and has THM

concentrations ranging from 32 to 47 µg/L (Orinda WTP) or 17 to 45 µg/L (Upper San Leandro WTP), as shown on Table 3.2-1 of the 2005 DEIR. Water from these two treatment plants currently serve customers in the project area. Results of sampling during the 2001 pilot study indicate that chloroform is the most dominant THM compound present in the injected water as well as extracted groundwater. Water will NOT be rechlorinated prior to injection, and therefore, no additional THMs will form prior to injection. Sampling of THMs in extracted groundwater during aquifer storage and recovery (ASR) pilot testing indicates that concentrations of chloroform were stable during storage and that no additional THMs were formed after injection. THM concentrations in recovered groundwater are anticipated to ultimately be lower than in currently delivered water due to mixing of injected water with native groundwater and microbial degradation underground. The quality of extracted water will gradually change during the extraction cycle. Initially, the quality of the extracted water is very similar to that of the injected water. As extraction proceeds, the proportion of the native groundwater in the extracted water increases. This is shown in Figure 3.2-3 of the 2005 DEIR. Native groundwater and injected groundwater mix in the aquifer, thereby reducing the concentrations of THMs through time in the extracted water. In addition, it is expected that microbial degradation of the THMs will take place over time, permanently removing THMs.

Compared to current conditions, implementation of Phase 1 of the Proposed Project would result in THM concentrations in drinking water equal to or less than current concentrations, representing either no change or beneficial changes from current conditions and meeting drinking water standards. Additional analysis of stored water without extraction over time is not planned or required. Ongoing water quality monitoring will assure that EBMUD complies with all drinking water quality standards.

Chloroform emissions related to the 2001 project were associated with the aeration facility, which is no longer proposed as part of the Bayside Groundwater Project.

3.7 Master Response 7 – Project Phasing

Several commenters raised concerns that the environmental document for the Proposed Project has been improperly phased and “piecemealed.”

In 2001, EBMUD circulated a Draft EIR (EBMUD 2001a) that evaluated development of a multiple-well project in the San Lorenzo area with a capacity of up to 15 million gallons per day (mgd) (up to 15,000 acre-feet [AF] per year). That project was to be built in a single phase on one of four identified preferred potential sites, which included the Frito-Lay and McMillan properties. EBMUD received extensive comments on that DEIR. EBMUD carefully reviewed and considered those comments, and subsequently conducted additional studies in response, including studies of groundwater basin impacts, potential subsidence in the EBMUD service area related to pumping, and water quality. EBMUD also worked closely with other agencies to examine the potential effects of Bayside Project operation at a capacity of up to 15 mgd on groundwater resources in communities outside of its service area. As a result of its review of comments on the 2001 DEIR and its subsequent analysis, EBMUD decided to abandon the project reviewed in the 2001 DEIR, and to revise and downsize that prior project. Consequently, the DEIR on the original 2001 project was never finalized.

As revised and analyzed in the 2005 DEIR (CH2M HILL 2005b), the Bayside Project consists of two phases. Phase 1 is proposed for implementation and involves the use of an existing single well with an annual capacity of 1 mgd, and the construction of associated conveyance and treatment facilities adjacent to the well in the San Lorenzo area. Phase 2 is the potential future expansion of Bayside Project capacity to between 2 and 10 mgd. At this time, EBMUD does not know if it will pursue Phase 2, and if it does pursue it, precisely where Phase 2 facilities would be located or exactly what those facilities would be.

The phased approach to the Bayside Project was developed to enable EBMUD to gather information otherwise unavailable regarding the effects of injecting potable drinking water into the SEBPB for storage and later recovery during a drought. In particular, by operating Phase 1 for up to 1 year, irrespective of whether drought conditions prevail in the service area at that time, water level and ground surface elevation data will be collected to verify subsidence characteristics and to obtain water level data in the SEBPB and the NCGWB. This information is critical to any future decision by EBMUD to expand capacity to between 2 and 10 mgd as proposed in Phase 2, and if so, to guide EBMUD in developing Phase 2 design and operating features.

For example, as discussed in the 2005 DEIR, if the Phase 2 expansion is pursued in the future, its facilities may be located in the same general area of San Lorenzo where Phase 1 facilities are proposed to be located, but, alternatively, they may be located in portions of San Leandro or Oakland or in some combination of these locations; see Table ES-1 and Figure ES-1 in the 2005 DEIR. Further, the location of Phase 2 facilities will determine what specific facilities will be necessary for Phase 2. For example, if Phase 2 facilities are dispersed over a wide area, a central water treatment facility will not be necessary; see Section 4.6.1 of the 2005 DEIR.

To help inform future decisions on Phase 2, the 2005 DEIR explains that EBMUD proposes to monitor Phase 1 operations closely to determine, based on actual monitoring data from Phase 1 operations, whether to proceed with Phase 2 in the future. If EBMUD does proceed with Phase 2, that monitoring data will be used to guide EBMUD in determining precisely what facilities would be necessary, where they would be located, and what the ultimate size of those facilities would be in the 2-10 mgd range; see Section 2.4.2.1 in the DEIR. Finally, if EBMUD determines to implement Phase 2 in the future, EBMUD would at that time complete a subsequent EIR, thereby providing the public a full opportunity to review and comment on Phase 2. EBMUD cannot approve Phase 2 until it completes and certifies a subsequent EIR on Phase 2, as stated in Section ES.2.2 on page ES-2 of the DEIR. EBMUD's goal in selecting this approach to environmental review was to comply fully with the requirements of CEQA by (1) evaluating Phase 1 at a sufficient level of detail to provide for approval of Phase 1 only, (2) fully disclosing the potential that in the future EBMUD may propose a Phase 2, and (3) evaluating and disclosing the potential impacts associated with the implementation of Phase 2 to the extent possible, given the limited data available regarding Phase 2. Thus, EBMUD has complied with CEQA by providing detailed information regarding the impacts of Phase 1 presently proposed for approval, while using its best efforts to forecast the impacts of the potential future approval of Phase 2 without engaging in speculation (see CEQA Guidelines 15144 and 15145).

EBMUD has done such mixed EIRs before. (The Walnut Creek-San Ramon Valley Improvement Project EIR was such a mixed EIR.) EBMUD selected the approach to the 2005 Bayside DEIR to comply with CEQA's prohibition against "piecemealing." As explained in CEQA Guidelines section 15165, "*where an individual project is a necessary precedent for action on a larger project...an EIR must address itself to the scope of the larger project.*" Thus, CEQA allows an agency to prepare a mixed EIR where it knows enough to do project-level analysis of some near-term components of a project, but where it does not know enough to do such analysis on other project elements that might be built at some future date.

EBMUD has complied with CEQA by preparing the 2005 DEIR, which contains project-level analysis on Phase 1 elements which can be analyzed now, and broader-level analysis on the potential future Phase 2 elements. As explained above, EBMUD intends to use information obtained from Phase 1 operation to determine whether to proceed with Phase 2, and if so, to assist in the development of Phase 2 location(s) and facility(ies). If and when EBMUD later decides to proceed with Phase 2, a subsequent EIR will be prepared and subjected to public review and comment, EBMUD responses, and certification, with an opportunity for parties to challenge that subsequent documentation.

3.8 Master Response 8 – Project Objectives and Alternatives

Several commenters expressed concern that the 2005 DEIR (CH2M HILL 2005b) did not adequately address alternatives to the Bayside Groundwater Project and that the project objectives were so narrowly defined as to artificially limit the range of alternatives considered. This Master Response describes the reasons for selection of the Bayside Project objectives and provides clarification on the screening of alternatives.

3.8.1 Project Objectives

CEQA requires that the DEIR consider alternatives that could reasonably meet the objectives of the project (CEQA Guidelines Section 15126.6[a]). The 2005 DEIR includes an analysis of a reasonable range of alternatives to the Bayside Groundwater Project, and fully complies with the requirements of CEQA for that analysis. CEQA requires that the DEIR consider alternatives that could reasonably attain most of the objectives of the project (CEQA Guidelines Section 15126.6[a]).

Specific project objectives for the Bayside Groundwater Project were based on water planning objectives in the Water Supply Master Plan (EDAW 1993) and the Urban Water Management Plan (EBMUD 2001b). In 1995 the EBMUD Board of Directors authorized the Water Supply Action Plan to meet the need for a supplemental water supply by aggressively pursuing several water supply components concurrently. In October 1996 the Board added groundwater storage/conjunctive use in the East Bay area as an additional component of the Action Plan.

The project objectives for the Bayside Groundwater Project are stated in Section 2.3 of the 2005 DEIR and restated here for convenience.

- To reliably provide more water for customer use during drought periods than would be available from current water supplies alone;
- To make beneficial use of local water resources; and
- To provide water that complies with state and federal drinking water standards while maintaining or enhancing basin water quality.

Additional Bayside Project objectives are:

- To initiate EBMUD groundwater use within the Southeast Bay Plain Basin (SEBPPB) to prepare for both near-term (less than five years) and future drought conditions; and
- To collect data to inform decision-making regarding (1) whether it is appropriate to implement a Phase 2 larger-capacity facility, and if so, (2) how to design it.

Commenters questioned the validity of the “additional project objective” to prepare for near-term (less than five years) drought conditions because the failure to meet this objective resulted in the screening out of several alternatives. Development of a supplemental water supply in the next five years is critical to relieve a portion of the very severe rationing that EBMUD consumers would face in a multiple-year drought, should it occur. EBMUD projects that even with completion of the Freeport Regional Water Project and a number of

water recycling projects that are not yet approved, the District will have a remaining need for drought water supplies in 2010 that will continue to grow through 2020 and beyond (EBMUD 2005b).

- EBMUD experiences during recent droughts demonstrate that its water supply system is not sufficiently reliable to meet even current demands during drought without severe rationing. As demand increases beyond 2006 due to continued population growth (see page 1-6 of the 2005 DEIR), the amount of rationing that would be required in a drought increases. Even if target goals for conservation and recycling are met, if a 3-year drought occurs in the next five years, EBMUD does not have sufficient water supplies to avoid greater than 25 percent customer rationing (EBMUD 2000 and EBMUD 2005b).
- The likelihood of achieving even near-term conservation and recycling goals is uncertain. Conservation efforts rely on customer behavioral changes with respect to water usage, and can diminish over time. Water conservation is voluntary and focused on long-term efficient use of water, unlike rationing which may require short-term mandatory cutbacks for customers and can be enforceable.
- Permitting and property acquisition for the Freeport Regional Water Project (see Section 1.4.6 of the 2005 DEIR) are still in progress, and although construction is scheduled for completion in 2009, that date could be extended. Without Freeport and another project in place in the next five years, EBMUD customers would face very severe rationing in the event of a drought. Even with the Freeport Project in place, EBMUD will have remaining need for supplemental water supplies in 2010 (see EBMUD 2005b, Table 4-2). As discussed in Master Response 9, contractual constraints on the Freeport Regional Water Project limit the 3-year yield of that project to 165 TAF, leaving a 2-TAF need for water during a 3-year drought in 2020. The shortfall does not account for the possibility of longer droughts, the effects of climate change, or unexpected reductions in deliveries from the Freeport project resulting in an additional need for water.
- Other projects that would have uncertainty in their implementation (see discussion in Screening of Alternatives below) cannot be reliably counted on to meet additional supply needs within 5 years. EBMUD is obligated to provide a high level of reliability to its customers. For these reasons, EBMUD has determined that a key objective for this Proposed Project would be for it to be in place to provide drought relief within the next five years. Other projects not meeting this 5-year objective may still be pursued by EBMUD. For instance, EBMUD continues to pursue conservation and recycling efforts and regional desalination, and may also pursue development of groundwater projects in San Joaquin County and East Contra Costa County.

3.8.2 Screening of Alternatives

Several commenters requested clarification of the reasons for selection of the Bayside Groundwater Project as the proposed supplemental water supply project rather than other considered projects including the East Contra Costa County and San Ramon and Castro Valley groundwater storage projects, the Pipe Replacement Program, desalination, and additional conservation and reuse. An explanation specific to each of these projects follows below. A significant determinant for screening alternatives was project feasibility. In

general, if a project was deemed infeasible at this time, it was screened out as being unable to meet the objective of having the project operating in five years.

East Contra Costa County Groundwater Project

The East Contra Costa County Groundwater Project was carried forward as a project alternative in the 2005 DEIR. However, the Bayside Groundwater Project was considered preferable by EBMUD because it more fully met the project objectives. California Water Code Section 1220 prohibits the export of groundwater from this basin without a vote of the county overlying the groundwater basin. EBMUD has attempted to develop agreements with local agencies to pursue a groundwater project at this location but has been unsuccessful to date. Therefore, although EBMUD may continue to pursue agreements with local agencies and gain stakeholder support, the potential to secure such agreements and implement a project within five years is unrealistic.

Castro Valley Site and the San Ramon Sites

The Castro Valley site and the San Ramon sites were both investigated by EBMUD as potential locations for groundwater storage projects, as documented in the *Regional Hydrogeologic Investigation, Outer Basins* (CH2M HILL 2001a). This report evaluated the feasibility of utilizing groundwater basins located in the District's service area to help meet current and future water supply needs. The report concluded that the Castro Valley Basin should be omitted from further consideration because of low yield or storage potential and high susceptibility to groundwater contamination. The San Ramon Basin appears to offer potential for developing supplemental irrigation supplies (not drinking water supplies) in the shallow aquifer; however, deeper groundwater was found to be unsuitable for either irrigation or drinking water uses because of poor water quality. Therefore, these sites were considered less desirable than the Bayside area, and do not meet the Project objective of providing water that complies with state and federal drinking water standards.

Water Loss Prevention

EBMUD engages in a comprehensive suite of activities to reduce water losses in its distribution system, including (1) repair and replacement of meters (over 90 percent of system leaks occur at the meter); (2) a leak detection program, and (3) a pipe replacement program that helps ensure a sound distribution system. Leaks can occur at fittings, joints, and anywhere along the length of a pipeline. The EBMUD system consists of 3,800 miles of pipelines.

Typical causes of leaks include pipe material, rapid temperature change, corrosive soils around the pipe, soil movement, and accidental damage by equipment operating adjacent to the pipe. EBMUD receives approximately 20 calls per day reporting water main or service leaks. Typical response time to a reported leak is 1 to 2 hours. Initiation of actual repairs depends on (1) whether the leak is threatening life or property, (2) whether any customer is without water, and (3) the size of the leak and its potential to grow larger. EBMUD has found no relationship between the age of a pipe segment and its likelihood of leaking.

EBMUD has maintained a leak detection program since 1974. About 200 miles of pipeline are surveyed by the leak detection program each year, and about 150 leaks are found. Most of the leaks found are on service laterals. Over the life of the program, EBMUD has found

that fewer leaks are identified each year, and that the program is most effective in areas with poor soils and significant ground movement. EBMUD has also adopted a program of including cathodic protection (to retard corrosion) as part of new pipeline construction, and installing cathodic protection on pipelines during break repairs. The goal of EBMUD's Pipeline Replacement Program is to determine when pipe replacement is more cost-effective compared to continued maintenance. The District has developed an economic model that considers the leak history of a pipeline and calculates a cost/benefit (C/B) ratio. Replacements for the pipeline candidates with the highest C/B ratio and other considerations are then designed. Currently there is a candidate list of 16 miles of high priority pipelines for renewal, and a backlog of 44 miles of low priority candidates that are only cost-effective if installed at the same time as a high priority pipeline. EBMUD has seven crews that work in all sections of the District replacing pipe. The District's annual pipe break rate of 750 and 850 breaks per year has been fairly constant over the last 20 years, and is within industry norms. This result demonstrates that the corrosion protection practices and pipe replacement strategies are working.

Recently, the EBMUD Board of Directors directed staff to make a more aggressive effort to detect and repair leaks; however, even with the more aggressive effort, it is not practical or economical to identify and repair every leak in 3,800 miles of pipe. As described above, EBMUD routinely considers the costs and benefits associated with repairing individual leaks periodically vs. replacing entire mains, including all of the associated risks and benefits of the repair or replacement. Replacing all pipelines at once to eliminate all leaks would be impractical; the cost of such an effort would far exceed the benefit and would never achieve a completely leak-free system. As one leak is repaired, other leaks will occur as the ground shifts and other causes occur. In addition, the construction impacts to noise, air quality, traffic, and land use from replacing most of the pipeline system would be substantially greater than impacts from the Proposed Project. EBMUD therefore determined that pursuing a water loss prevention program would not meet the project objective of ensuring a reliable source of water for customer use during drought periods.

Bay Area Regional Desalination Project

As described in Section 7.3.2 of the 2005 DEIR, EBMUD is continuing to pursue development of a desalination project as part of a regional effort with other major water purveyors as partners. Implementation of the Bay Area Regional Desalination Project would require a lengthy public review process because of the number of agencies that would be involved with discretionary permit review and the as-yet unidentified concerns of the public. A Regional Desalination Project is not reasonably expected to occur before 2010 and therefore does not meet the project objective of being implemented in the next five years.

Increased Conservation and Recycling

Increased conservation and recycling beyond existing efforts was included as a project alternative in the 2005 DEIR, as described in DEIR Section 7.3.2. EBMUD currently leads the industry in innovation and funding for conservation and recycling efforts (\$30 million for water conservation funding over the next five years; \$14.8 million in 2004 for recycling). This alternative would increase those efforts. Because of the significant effort already underway, the next incremental increase is more difficult to obtain. Although EBMUD may pursue additional conservation and recycling beyond existing goals in the future, it is not

expected that conservation and recycling targets beyond those already in place could be achieved in the next five years, and thus this alternative would not meet the objectives of the project.

As described in Section 7.4.2 of the 2005 DEIR, the "Conservation and Recycling" alternative would likely avoid or incur fewer environmental impacts than the Proposed Project and the other alternatives. Therefore, Conservation and Recycling is the environmentally superior alternative. However, because this alternative could not be implemented in the near term and because of the implementation concerns described in Section 7.3.2.1 of the DEIR, this alternative was not selected to meet the needs of the project. Even if the other two alternatives, Regional Desalination and East Contra Costa Groundwater Development, could be achieved within five years, the Proposed Project has overall fewer impacts than these two projects (see Table 7-4 and Appendix C of the 2005 DEIR). Therefore, the Proposed Project would be selected from among the three as the environmentally superior project, consistent with CEQA.

As stated in the DEIR, the selection of the Bayside Groundwater Project does not preclude implementation of any of the other project alternatives. EBMUD is proceeding with the Freeport Regional Water Project, and as described above, continues to lead the industry in urban and industrial conservation and reuse. In addition, EBMUD is continuing to pursue development of desalination projects both as part of a regional effort with other major water purveyors as partners and for industrial reuse projects. Further, if EBMUD were able to forge agreements with local partners in the area of the East Contra Costa County Groundwater Project, that project could be developed as well. As described in Master Response 9 – Need for Project, EBMUD currently projects a shortfall of 20,000 acre-feet over the course of a 3-year drought, even with implementation of the Freeport Regional Water Project.

3.9 Master Response 9 – Need for Project

Several comments were received on the 2005 DEIR (CH2M HILL 2005b) that requested clarification of the justification for the need for a supplemental water supply during a drought, and how Phase 1 will help meet that need. This Master Response describes EBMUD's process for determining the need for water and also explains the link between the Bayside Groundwater Project, and the District's previous and other ongoing water supply planning efforts.

3.9.1 Determining the Need for Water

Table 3-2 below summarizes the District's determination for the need for a supplemental water supply during a projected drought. The scenario shown in this table represents the projected water demand, water conservation and recycling targets, available water supply, reductions from drought rationing, and remaining need for additional supply for the year 2020.

EBMUD uses the EBMUDSIM model to simulate the operation of Pardee and Camanche reservoirs and to estimate the water yield under various hydrologic and operating constraints.

The need for water and the available supply during drought shown in Table 3-2 for a 3-year drought were determined using EBMUDSIM with the following assumptions:

- EBMUD's Drought Planning Sequence is based on data from 1976, 1977, and 1978
- Total system storage is depleted by the end of the third year of the drought
- The diversions by Amador and Calaveras Counties upstream of Pardee Reservoir increase over time
- Releases are made to meet the requirements of senior downstream water right holders and fishery releases are made according to the Joint Settlement Agreement

EBMUD's Drought Planning Sequence represented in the table was developed as a tool to assess EBMUD's water supply system reliability based on EBMUD's experiences during recent drought events. While 1976-1977 was the worst drought on record, it is possible that a similar event could occur at some time in the future but without a very wet year like 1978 immediately following it. To plan for the possibility of such an event in the future, the District uses a 3-year "drought planning sequence" to assess water supply. The first and second years of this drought planning sequence were modeled using EBMUDSIM as having the same runoff as occurred in 1976 and 1977, respectively. The runoff in the third year was assumed to be the average of the two driest years on record (1976 and 1977). It was further assumed that such a severe drought would not continue beyond the third year of this sequence and all accessible storage would be depleted during the third drought year.

TABLE 3-2
Need For Water During 3-year Drought Planning Sequence

	TAF ¹	Notes
3-Year Normal Customer Demand	932	Based on projected 2020 demand of 277 million gallons per day (mgd) ² (EBMUD 2000a).
Demand Reduction through conservation	-114	Based on conservation target of 34 mgd as cited in UWMP, based on Water Conservation Master Plan 1999 Annual Report.
Demand Reduction through recycling	-47	Based on recycling target of 14 mgd as cited in UWMP.
Subtotal of Demand Reduction	-161	
Remaining 3-year Supply Need	771	
Estimated Available Yield from Reservoirs	-440	Based on estimated available yield during 3-year drought sequence. ³
Drought Shortage	331	
Drought Rationing	-146	Based on previous drought periods, rationing requires a ramp-up period to achieve maximum levels. This estimate assumes ramp-up to 25% in year 3; therefore, 3-year average is about 19%. ³
Remaining 3-Year Need for Water	185	Supplemental water supply need (USBR 2003)
Freeport 3-year Maximum Yield	165	Maximum available yield over 3-year drought (USBR 2003)
Remaining Need for Water During 3-Year Drought	20	
Phase 1 Bayside Groundwater Project	3.3	Phase 1 of Bayside Groundwater Project could supply 16% of remaining need for water during 3-year drought.

Notes:

¹ TAF = thousand acre-feet; one acre-foot is equal to 325,851 gallons.

² Demand from District-wide Update of Water Demand Projections, as cited in the Urban Water Management Plan (UWMP) (EBMUD 2001b).

³ Based on EBMUDSIM, the hydrologic simulation model of EBMUD's Mokelumne River and East Bay water supply system

These projections do not account for longer droughts, climate change, unexpected reductions in Freeport deliveries, or ability to ration 25% in addition to aggressive conservation and recycling.

All water volumes in Table 3-2 are shown in thousands of acre-feet (TAF) and represent cumulative amounts for the 3-year drought scenario. The table represents a simplified summary of the much more complex EBMUDSIM modeling used to determine the need for water. The 2020 3-year water demand of 932 TAF was developed and documented in the 2000 Urban Water Management Plan (UWMP) (EBMUD 2001b). Demand reduction through conservation and recycling programs is based on targets anticipated to be in place by 2020, also documented in the UWMP. The remaining 3-year supply need is 771 TAF, while the projected available water supply is 440 TAF, leaving a shortage of 331 TAF. Rationing during a drought requires a ramp-up period. Thus, with a maximum District-wide rationing

rate of 25 percent in any drought year, the 3-year average is estimated at 19 percent, for a total reduction of demand of 146 TAF. The remaining 3-year need for water is 185 TAF. Contractual constraints on the Freeport Regional Water Project limit the 3-year yield of that project to 165 TAF, leaving a projected 20-TAF need for water during a 3-year drought.

In order to achieve District-wide rationing of 25 percent in a severe drought, residential customers will be asked to ration up to 35 percent or more in order to lessen the economic effects that severe rationing would have on businesses and jobs in the area. As a whole, institutional and commercial customers would ration less than 25 percent.

The scenario shown in this table does not account for the possibility of longer droughts, the effects of climate change, or unexpected reductions in deliveries from the Freeport project, discussed in Section 3.9.3. It also does not address the possibility of failing to meet planned targets for recycling, conservation, or rationing to be implemented under the District's 1993 Water Supply Management Plan, discussed in Section 3.9.2.

Phase 1 of the Bayside Groundwater Project at 1 mgd (or 1,120 AF/year) would supply 3.3 TAF over the 3-year drought period, which would be a significant contribution to the remaining 20 TAF need for water. Phase 2 of the Bayside Groundwater Project at up to 10 mgd, in conjunction with full deliveries from the Freeport project, could potentially meet all of the needs for a supplemental water supply through 2020.

3.9.2 Water Supply Planning

This portion of the Master Response summarizes major efforts conducted by EBMUD to assess and plan for water supply needs in its service area and shows the relationship of the Bayside Groundwater Project to ongoing water supply planning activities. EBMUD is pursuing the Bayside Project to meet its need for water along with the Freeport Regional Water Project and other potential future projects. The District will improve reliability by meeting customer needs with a diverse water supply portfolio that provides increased water supply reliability.

East Bay Groundwater Program

In October 1996, the Board made refinements to the 1995 Action Plan (see Section 3.9.3). The Board also directed staff to study the feasibility of conjunctive-use storage within the District's service area as a dry-year water supply alternative. Conjunctive use is a general term referring to projects allowing surface water and groundwater to be managed in an efficient manner by using groundwater aquifers to serve as long-term storage. (See California Department of Water Resources' [DWR's] *California Water Plan Update 2005-Public Review Draft*, Chapter 4, "Conjunctive Management and Groundwater Storage" for more information on conjunctive use projects.) The District's studies included:

- Installation of a 650-foot-deep demonstration injection/extraction well and seven monitoring wells at the Bayside Phase 1 site described in the 2005 DEIR (identified in previous studies as the Oro Loma site), and injection/extraction cycle testing and water quality sampling to evaluate the feasibility of injection/extraction technology in the East Bay Plain.

- Exploratory drilling, monitoring well installation, pumping tests, and water quality sampling at six sites located in San Lorenzo, San Leandro, and Oakland.
- Hydrogeologic evaluations of groundwater resources in the Southeast Bay Plain Basin (SEBPB), Castro Valley, San Ramon Valley, Berkeley, Richmond/San Pablo, and Walnut Creek.
- Cooperative studies of the SEBPB with the Alameda County Flood Control and Water Conservation District, and the United States Geological Survey.
- Groundwater modeling to simulate groundwater flow in the SEBPB.
- A pilot test of groundwater treatment processes.

These studies determined that:

- Within the District service area, the area with the greatest potential for groundwater development is western San Lorenzo and San Leandro. This is based on favorable aquifer material properties, the relative thickness and continuousness of the aquifer, and the fact that it is overlain by a series of aquitards that help protect it from contamination. An aquitard is a geologic formation such as clay that impedes the flow of water.
- In western San Lorenzo and San Leandro, there is a deep, regionally extensive aquifer with sufficient capacity to develop a groundwater supplemental supply project.
- Injection/extraction wells utilizing the Deep Aquifer are technically feasible in the East Bay Plain.

In June 2000, the District's Board directed staff to initiate the technical and environmental analyses necessary to develop a conjunctive-use well field project in the South East Bay Plain Basin. The Bayside Groundwater Project is the outgrowth of that Board directive.

Urban Water Management Plan (UWMP) 2000

The UWMP (EBMUD 2001b) is required by the Urban Water Management Planning Act as part of the California Water Code and is updated at 5-year intervals. The UWMP describes water demand within the EBMUD service area, water supply sources, and existing and planned conservation/water recycling programs. The UWMP also describes the drought planning sequences described above and the anticipated levels of rationing that would be required under different dry year conditions.

Updated Water Supply Master Plan (WSMP)

In 1993, the District adopted the Updated WSMP, which assessed the District's water supply needs and challenges through 2020 (EDAW 1993). The purpose of the Updated WSMP was to identify and evaluate the actions and projects necessary to provide adequate protection and enhancement of the lower Mokelumne River fishery, as well as provide an adequate water supply for the District's customers through 2020.

The Updated WSMP incorporates five major components, including aggressive water conservation, reclamation and reuse programs, and a supplemental water supply project. Since adoption of the Updated WSMP and subsequent Action Plan (described below), the

District has implemented extensive water conservation and reclamation measures throughout its service area. These programs are assisting the District in meeting growing customer demands; however, as indicated in Table 3-2, significant water supply deficiencies are anticipated to occur during droughts. With strict conservation measures already in place during normal seasons, the District's options for reducing deficiencies during extended dry periods are limited.

The Updated WSMP included six alternative Composite Programs as a series of alternatives that involve demand-side management and facility construction to reduce deficiencies during drought periods (EDAW 1993). As adopted by the District Board, the Composite Program consists of five major components:

- Seismic strengthening of the Mokelumne aqueducts
- Aggressive water conservation program
- Wastewater reclamation and reuse program
- Lower Mokelumne River Management Plan (LMRMP)
- Supplemental water supply project

The aqueduct seismic strengthening, water conservation, water reclamation, and LMRMP components are in various stages of implementation. The supplemental water supply alternatives included groundwater storage and are described further below.

3.9.3 1995 WSMP Action Plan

On September 12, 1995, the District's Board adopted the WSMP Action Plan, which has guided development of a supplemental water supply since that time. The Board directed staff to take several actions towards developing four supplemental water supply projects, in addition to the District's efforts to secure supplemental water supplies discussed in Section 3.9.2 above. The brief discussions below provide an update on the status of the additional supplemental water supply projects.

Folsom South Canal Connection Project and Sacramento Joint project

The Folsom South Canal Connection Project and the Sacramento Joint Project were two separate projects to utilize EBMUD's water service contract with the United States Bureau of Reclamation (DEIR Section 1.4.6). Over time, the projects merged and changed into what is now called the Freeport Regional Water Project (FRWP). FRWP facilities include joint Sacramento County Water Agency (SCWA) and EBMUD facilities, and SCWA- and EBMUD-only facilities. Joint facilities include an intake on the Sacramento River near the community of Freeport and a pipeline to the Folsom South Canal (FSC). EBMUD-only facilities include a pipeline and pump stations to convey water from the southern end of the FSC to the existing EBMUD Mokelumne Aqueducts. Design work is in progress. Construction contracts will be considered for authorization and funding in 2007, with the goal of completing EBMUD-only and shared FRWP facilities by November 2009.

San Joaquin County Conjunctive Use

EBMUD began negotiating with San Joaquin County water interests for a groundwater banking and conjunctive-use program in 1992. However, county water interests have rejected EBMUD's proposals to develop projects of mutual benefit.

Additional barriers, including an October 1996 Groundwater Export Ordinance, have been erected that make program implementation more difficult. In June 2000, the San Joaquin County Board of Supervisors adopted amendments to the Export Ordinance that add additional restrictions and avenues of challenge to obtaining an export permit. Discussions with San Joaquin County water interests for conjunctive-use projects continue, but no formal project was under consideration at the time that this EIR was published.

Enlarge Pardee

In November 1995, the EBMUD Board of Directors confirmed enlargement of Pardee Reservoir as a backup option to the American River Joint Project. In May 1997, as substantial progress was made toward implementing the American River Joint Project (later to become the Freeport Regional Water Project when the venue shifted from the American to the Sacramento River), engineering and environmental work on the enlargement of Pardee Reservoir was suspended. Nothing in that decision precludes future resumption of activity toward implementing the Enlarge Pardee initiative, as EBMUD's future water needs continue to grow.

3.10 Master Response 10 – Public Outreach and Notice, and DEIR Review

Commenters indicated that adequate outreach efforts and access to the 2005 DEIR (CH2M HILL 2005b) were not provided, and that requests for an extended public review period for the DEIR were not met. This Master Response describes the public outreach efforts completed and the opportunities provided for comment on the DEIR.

EBMUD followed a multifaceted approach to informing the community about the Proposed Project and its environmental documentation. These efforts went well beyond the public noticing requirements of CEQA.

3.10.1 Community Liaison Group

At the community's request, EBMUD created a Community Liaison Group (CLG) in 2003 to provide a community-based communication forum on the project. The CLG serves as an important vehicle for the exchange of information on the Bayside Groundwater Project. The CLG is composed of elected officials and their representatives from communities in and near the Bayside Project area, as well as homeowners associations and other groups, and includes the Office of U.S. Representative Pete Stark, Office of State Senator Liz Figueroa, Office of Assembly Member John Klehs, Office of Alameda County Supervisor Alice Lai-Bitker, Office of the Mayor and City Council members for the City of San Leandro, Oro Loma Sanitary District, San Lorenzo Unified School District, San Leandro Chamber of Commerce, Heron Bay Homeowners Association, San Lorenzo Village Homes Association, and the San Leandro Industrial and Technology Roundtable.

The first CLG meeting was held in July 2003, and the group has met periodically since then. It continues to meet. The last meeting was held at the Marina Community Center in San Leandro on June 8, 2005, while another CLG meeting will take place in the fall of 2005 when this Final EIR is published. At the July 29, 2004 meeting, EBMUD informed the community representatives about its then-anticipated release of the new Bayside Draft EIR in November 2004 that would describe a smaller, phased project. Continued efforts to resolve issues about the project delayed release of the document for public comment until March 2005. Thus, the 2005 DEIR did not appear to the community as a surprise; it was instead preceded by months of advance notice and discussion through the CLG.

3.10.2 Notice of Availability of DEIR

CEQA requires a lead agency to provide public notice of the availability of a DEIR by at least one of three methods: mailing, posting, or publication at least once. In this case EBMUD provided extensive notice of the availability of the DEIR by mailing notices, publishing numerous notices in local newspapers, mailing copies of the complete DEIR, and by holding a public meeting in the project area, as detailed below.

To announce the availability of the DEIR and public comment period, EBMUD placed multiple postings of the notice with the ANG newspaper group, which includes the *Daily Review*, *Oakland Tribune*, *Tri-Valley Herald* and the *Alameda Times Star*. The notice included a brief project description, dates of the public comment period, date and location of the public

meeting, locations where copies of the DEIR were available for review, and whom to contact with comments or questions. These four newspapers printed the public notice on March 18, 19 and 20, 2005. The public notice also was posted in the *San Leandro Times* on March 17, 2005. These aforementioned postings were printed in English. To notify Cantonese-speaking residents, Chinese translations of the notice were also posted in *Sing Tao* and the *Chinese Times* on March 18, 19 and 20, 2005.

In addition, over 1,700 postcards were mailed to residents notifying them of the availability of the DEIR. The entire DEIR also was mailed to homeowners associations and public agencies in the area, and was available at local libraries. Further, consistent with CEQA, in March 2005 EBMUD filed with the State Clearinghouse a Notice of Completion & Environmental Document Transmittal for the 2005 Bayside DEIR.

Finally, on April 20, 2005 the EBMUD Board of Directors convened a special meeting in San Leandro to hear local comment on the Proposed Project. At that meeting, EBMUD arranged to make translators available for the benefit of Chinese-speaking attendees. Approximately 200 people attended the April 20, 2005 meeting. Ten people spoke to the translators with questions regarding the Proposed Project, and approximately 30 people were provided project fact sheets in Chinese.

3.10.3 Extended Comment Period

CEQA Guideline 15105 sets forth Draft EIR comment period requirements. It provides that for an EIR submitted to the State Clearinghouse, as the 2005 Bayside DEIR was, the review period shall be not less than 45 days nor longer than 60 days, except in unusual circumstances. The Bayside EIR comment period was originally established at 45 days, but in response to requests to lengthen the period, it was extended 15 additional days for a total comment period of 60 days. Thus, the comment period was consistent with the CEQA Guidelines.

The public outreach on the 2005 DEIR has been extensive. The CLG began meeting in 2003, well in advance of the release of the Bayside DEIR in March 2005. The CLG informed the community of the continuing development of the downsized project, while EBMUD's notice efforts on the DEIR went well beyond that required by CEQA. It appears the extensive notice was effective, as EBMUD received detailed and extensive comment letters from the public and approximately 200 people attended the April 20th special Board meeting.

3.11 Master Response 11 – Environmental Justice

Commenters raised Environmental Justice concerns, stating that some communities or neighborhoods would carry an undue burden due to the Proposed Project. Some comments specifically requested that environmental justice impacts be evaluated.

In April 1998, the U.S. EPA defined environmental justice as fair treatment, meaning that "no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial activities or the execution of federal, state, and local programs and policies."

In 1999 the State Public Resources Code was amended by bill SB115, which defined environmental justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies."

CEQA does not explicitly address environmental justice, nor does it require evaluation of environmental justice matters in an EIR. However, CEQA implicitly addresses environmental justice by requiring that a lead agency fully contemplate and disclose the foreseeable consequences of its actions, avoid unnecessary environmental risks, and discuss alternatives that avoid significant impacts. EBMUD has complied with all these requirements, and has gone beyond the minimum requirements for informing the community about the Proposed Project. See Master Response 10 – Public Outreach and Notice, and DEIR Review for details on EBMUD's efforts to provide outreach to the non-English-speaking residents of the project area.

The selection of the location for Phase 1 of the Bayside Project was based on technical factors, including the hydrogeology, water quality, and historic use conditions of the basin, as well as other technical, operational, environmental, jurisdictional, and reliability criteria described in the 2005 DEIR (CH2M HILL 2005b) in Section 7.0, Analysis of Alternatives. Further, all potentially significant environmental effects of Phase 1 of the Proposed Project are mitigated to a less than significant level; therefore, no undue burden is being placed on the communities located within the Phase 1 project area. Potential locations of facilities for Phase 2, if it is implemented in the future, have not yet been identified. The large area in which they could be located includes a range of communities; see Figure 2-1, Project Location Map, on page 2-3 of the DEIR. Therefore, the Proposed Project is consistent with EBMUD's Policy 71, Environmental Responsibility, which states that "no community in the District shall bear an inequitable environmental risk burden as a result of District facilities, operations, or practices."

As noted above, the information in the Bayside Project DEIR demonstrates no significant unmitigated environmental impact to the San Lorenzo/San Leandro communities near the project site, as all potentially significant environmental effects of Phase 1 of the Proposed Project are mitigated to a less than significant level. Moreover, while there currently are no major EBMUD water production facilities in the San Lorenzo/San Leandro area, other areas do have major EBMUD projects and major treatment facilities in their communities that

benefit all EBMUD customers, including those that live in the San Lorenzo/San Leandro area.

For example, recent major projects include: (1) the Southern Loop Pipeline Project (2002) – A \$37.5 million project consisting of 11 miles of 30 to 42-inch diameter pipeline running from San Ramon through Castro Valley, including 1.6 miles in San Ramon, 5.4 miles in Crow Canyon, and 3.9 miles through Castro Valley; (2) the Walnut Creek/San Ramon Improvement Project (ongoing), a \$130 million capacity improvement project including a 69-inch pipeline running 4.6 miles through downtown Walnut Creek and southward toward Danville, expansion of the Walnut Creek Water Treatment Plant with 20 million gallons of new water storage, and expansion of the Danville Pumping Plant; and (3) the Claremont Tunnel Seismic Upgrade Project (ongoing), a \$57 million project involving building a 1,600-foot long, 17-by-9-foot rectangular bypass tunnel through the East Bay Hills underneath hillside residential communities and upgrading 3.4 miles of the existing Claremont Tunnel from Orinda Water Treatment Plant under the Oakland hills and terminating in Berkeley.

The above three projects are orders of magnitude larger than the proposed Phase 1 Bayside Project (which involves a single existing well and only 600 feet pipeline), and they improve water system reliability for all EBMUD customers though the projects are located in the communities of Castro Valley, San Ramon, Danville, Walnut Creek, Orinda, Oakland, and Berkeley. In addition, EBMUD operates major water treatment facilities in Orinda, Walnut Creek, Oakland, El Sobrante, Lafayette, and El Cerrito. While the San Lorenzo/San Leandro area benefits from the above-referenced facilities in other communities, there are currently no major EBMUD water production facilities in the San Leandro/San Lorenzo area.

Currently, the constituent concentrations in drinking water delivered to EBMUD customers vary based on season and local reservoir source. Water delivered in the winter from reservoirs filled with recent runoff differs from water delivered in the summer. In addition, water treated at different water treatment plants and delivered through different systems would vary minimally when collected from different household taps and analyzed. However, all delivered water in the EBMUD system, including water produced from the Bayside Project, would meet drinking water standards, which are established to protect public health. Finally, U.S. Census data indicate that the areas surrounding the proposed Bayside Project are not economically disadvantaged (U.S. Census Bureau 2002).

In all, the proposed Bayside Project does not cause undue burden on, or result in a disproportionate share of negative consequences being borne by, communities in and around the Bayside Project area, and is consistent with EBMUD Policy 71, State Public Resources Code and SB115, and the U.S. EPA definition of environmental justice.

3.12 Master Response 12 – Comments on 2001 DEIR

Several commenters submitted, either directly or in reference, their comments on the 2001 DEIR and requested that these comments be addressed in the 2005 Final EIR.

In March 2001, EBMUD circulated the 2001 DEIR for the Bayside Groundwater Project (EBMUD 2001a). The 2001 DEIR evaluated the impacts of a 15 million gallon per day (mgd) project that included the development of multiple injection wells in the San Lorenzo area, a central treatment facility location, and a pipeline to connect the project to EBMUD's distribution system. Based on comments received on that DEIR, EBMUD conducted focused studies to reduce or eliminate potentially significant impacts. As discussed in Master Response 7 – Project Phasing, as a result of its review of comments received on the 2001 DEIR and its subsequent analysis, EBMUD decided to abandon the 15-mgd project reviewed in the 2001 DEIR, and to instead revise and downsize that prior project. Consequently, the DEIR on the original 2001 project was never finalized. EBMUD analyzed the revised and downsized Bayside Groundwater Project in a new DEIR (CH2M HILL 2005b). The 2005 DEIR was circulated in March 2005 for public comment, and this document responds to comments received on the 2005 DEIR.

Concerns that were expressed in comments provided on the 2001 DEIR were incorporated in the 2005 DEIR as follows:

- The project was significantly modified as a direct result of input from the community; for example, aeration was eliminated, and the Proposed Project is now smaller and phased;
- Data gathered during operation of Phase 1 of the Proposed Project will be evaluated to inform future determinations on whether and how to proceed with Phase 2, to further address concerns;
- Appendix B of the 2005 DEIR includes a table showing how the comments received in 2001 were addressed in the revised Bayside Project and 2005 DEIR; and
- Certain topics of concern raised in 2001 were repeated in comments on the 2005 DEIR and are addressed in this Final EIR.

Unless EBMUD proposes to adopt and certify a Final EIR for the project analyzed in the 2001 DEIR, EBMUD is under no obligation to prepare specific responses to comments received on the 2001 DEIR. As discussed above, EBMUD has abandoned the project analyzed in the 2001 DEIR, and has instead proposed the project analyzed in the 2005 DEIR. Therefore, formal responses to the 2001 DEIR comments have not been included in the response to comments for the 2005 DEIR.

3.13 Master Response 13 – Additional Information Regarding ASR Projects

3.13.1 ASR Background

The proposed Bayside Project is a type of conjunctive use project, technically termed an "aquifer storage and recovery" or ASR project. Conjunctive use is a general term referring to projects allowing surface water and groundwater to be managed in an efficient manner by using groundwater aquifers to serve as long-term storage. (See California Department of Water Resources' (DWR's) *California Water Plan Update 2005- Public Review Draft*, Chapter 4, "Conjunctive Management and Groundwater Storage" for more information on conjunctive use projects.) There are different methods of performing groundwater recharge as part of a conjunctive use project, including the use of wells to inject water into the subsurface (DWR 2005). That is the method proposed in the Bayside Groundwater Project.

As mentioned, the Bayside Project would be an ASR project. ASR projects typically involve using wells to inject and store water underground during times of surplus for later extraction and use during times of water shortage. EBMUD staff conducted an informal survey of ASR projects to determine where they were located in the United States. The survey was summarized in an April 7, 2005 Technical Memorandum entitled *A Summary of Operating Aquifer Storage and Recovery [ASR] Systems* (EBMUD 2005a) (see Attachment A).

EBMUD confirmed that ASR projects have been developed to address the water supply needs of water utilities and their customers throughout many regions of the United States, including California. ASR wells have been used as a means to store water since the late 1960s, so these types of projects are not new, untested technologies. The survey found that as water needs become more pressing, ASR projects are becoming more and more common. The survey identified over 60 active ASR operations in the United States, also noting that because the use of ASR technology is rapidly expanding it was likely that there are other ASR projects not included in the survey. (A map of these active sites was presented by EBMUD during the April 20, 2005 public hearing on the proposed Bayside Project.) Existing ASR projects are now in operation in California. The survey concluded that ASR projects are a tested and relied-upon method of water supply, particularly in the role of providing citizens with much-needed supplemental and/or drought supply.

As explained in Section 2.1 of the 2005 DEIR (CH2M HILL 2005b), the Bayside Project would involve the injection of potable drinking water into the South East Bay Plain Basin during wet years for storage and later recovery and use during a drought. Thus, the proposed Phase 1 Bayside Project would be one of many ASR projects in California utilizing a water storage methodology that has been successfully in use for decades.

3.13.2 The Bayside Project is Consistent with State Policy

DWR supports the concept of conjunctive use projects. In its draft *California Water Plan Update 2005* (DWR 2005), noted above, DWR lists "conjunctive management & groundwater storage" as the first of its Resource Management Strategies (Abstract, p.4). Consistent with the importance it gives conjunctive use projects, DWR has authorized a grant of \$2 million

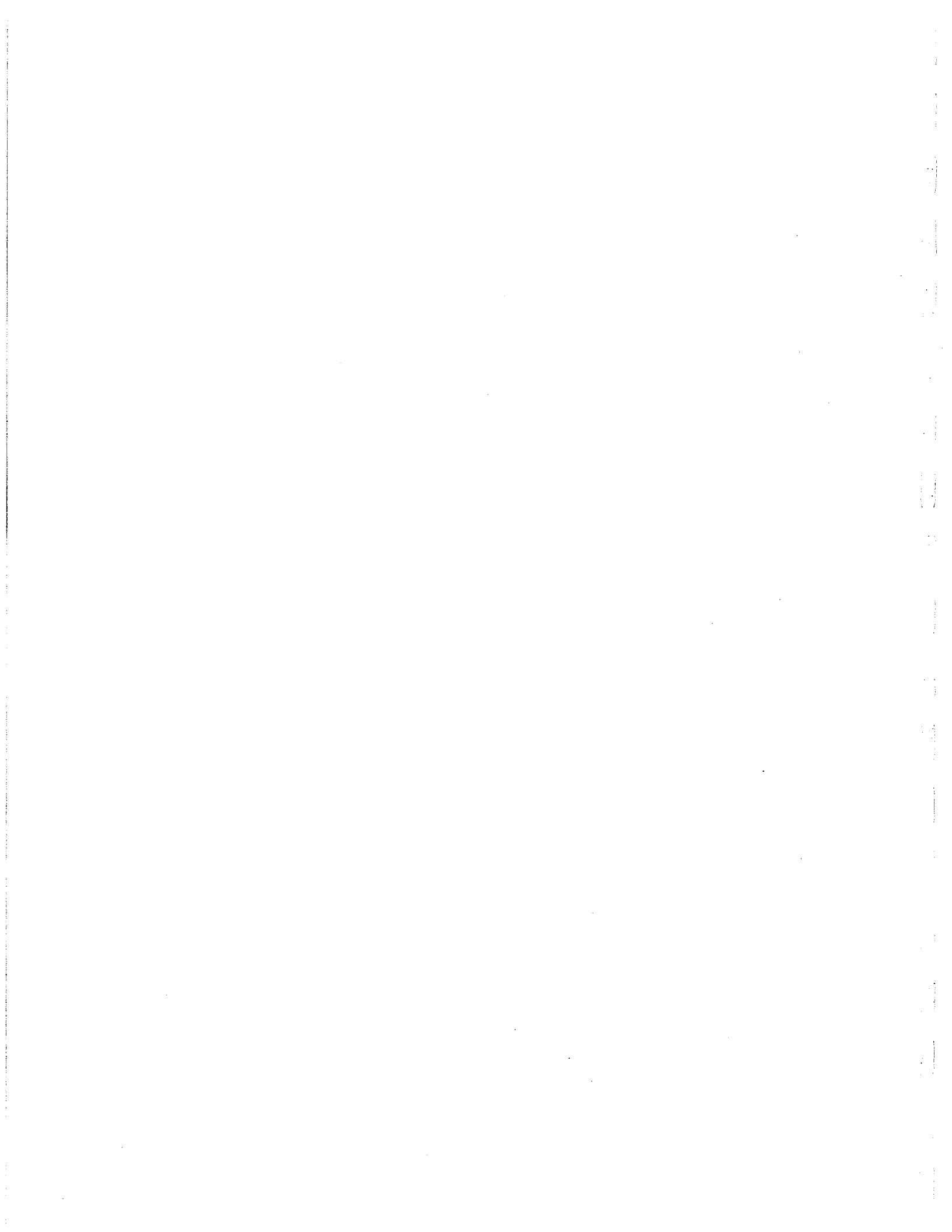
to EBMUD for Phase 1 of the Bayside Project. Thus, the proposed Bayside Project is consistent with statewide strategies for providing future water supplies.

3.13.3 Existing Groundwater Use

Using East Bay groundwater basins as a water storage and supply source is not a new concept. In fact, use of the basins occurs currently and has been ongoing for years. The South East Bay Plain Basin itself was a source of drinking water for East Bay residents early in the 20th century. Before Sierra snowmelt from the Mokelumne River was imported to the East Bay beginning in 1929, East Bay residents relied heavily on groundwater from local aquifers. The East Bay Water Company, which provided water to the East Bay in the 1920s, delivered up to 5 million gallons per day to customers using groundwater from a well field very near the proposed Bayside Project. Other area wells had another 10 mgd of capacity.

Over the past 40 years, groundwater has remained an important daily water supply within the region. This can be seen in the maps of current groundwater wells and the chart of historic groundwater pumping in the South East Bay Plain and Niles Cone Basins, presented by EBMUD during the April 20, 2005 public hearing on the proposed Bayside Project. It is also evident from the San Francisco Bay Area regional map presented by EBMUD at the June 8, 2005 Community Liaison Group meeting, which shows the numerous wells serving systems with more than 25 connections.

In the greater Bay Area, groundwater serves more than 900,000 people. For example, Alameda County Water District draws groundwater just south of Hayward and delivers it to an average of over 40,000 customers per day. Further, on average, Alameda County's Zone 7 Water Agency supplies groundwater to over 50,000 customers per day, while the Santa Clara Valley Water District supplies groundwater to more than 800,000 customers per day. Therefore, use of groundwater basins as a stable, reliable water supply is widespread in the Bay Area.



4.0 Errata

4.1 Introduction

The following corrections and/or clarifications have been made to the 2005 DEIR. These corrections include minor corrections made by the EIR authors to improve writing clarity, grammar, and consistency; corrections or clarifications requested by a specific response to comments; or staff-initiated text changes to update information presented in the DEIR. The text revisions are organized by the section and page number that appear in the DEIR. ~~Strikethrough~~-formatting presented in this section indicates text that has been deleted from the DEIR. New text that has been added in this Final EIR is presented in double underlined format. Text revisions are itemized in Section 4.2 below. Tables and Figures that have been revised have been replaced in their entirety for simplicity and are included in Section 4.3.

4.2 Text Revisions

The following text changes have been made to Section 1, page 1-14 of the DEIR:

1.7 Relationship to the CALFED Bay-Delta Program

The CALFED Programmatic Record of Decision (ROD) recognized the importance of effective groundwater management to meeting objectives for groundwater storage and conjunctive use.

The CALFED Bay-Delta Program Programmatic ROD was issued pursuant to a programmatic evaluation of a long-term plan to address Bay-Delta problems. The programmatic evaluation was conducted in the preparation of a Programmatic Environmental Impact Statement/Environmental Impact Report (PEIS/EIR). The PEIS/EIR was completed in July 2000, and the Programmatic ROD, including State certification, was issued in August 2000. Approval of the ROD/certification provided the general direction for implementation of CALFED's long-term plan.

To practicably achieve the CALFED mission, the ROD set forth a process to concurrently and comprehensively address problems of the Bay-Delta system within each of four resource categories: ecosystem quality, water quality, water supply reliability, and levee system integrity. Additional information about the CALFED long-term plan can be found in the CALFED ROD and PEIS/EIR at <http://calwater.ca.gov/>.

CALFED adopted a long-term plan that included measures to improve water management and restore ecological health in the Bay-Delta system. In the CALFED PEIS/EIR and ROD, the components of the long-term plan were set forth. The water storage component was described as follows:

Groundwater and surface water storage can be used to improve water supply reliability, provide water for the environment at times when it is needed most, provide flows timed to maintain water quality, and protect levees through coordinated operation with existing flood control reservoirs. Decisions to construct groundwater or surface water storage will be predicated on compliance with all environmental review and permitting requirements, and maintaining balanced implementation of all Program elements.

Subject to these conditions, new groundwater and surface water storage will be developed and constructed, together with aggressive implementation of water conservation, recycling, an improved water transfer market, and habitat restoration, as appropriate to meet CALFED Program goals. During Stage 1, through the water management strategy (including the Integrated Storage Investigation), CALFED will continue to evaluate surface water and groundwater storage, identify acceptable project-specific locations. (CALFED ROD, Section 2.1.3, page 22).

1.78 References – Introduction

The following text change has been made to Section 2.1 on page 2-1 of the DEIR:

The Bayside Groundwater Project involves the injection of potable drinking water into the South East Bay Plain Basin during wet years for storage and ~~later recovery~~ extraction and use during a drought. The project consists of two phases. Phase 1 is proposed for immediate implementation and involves the use of an existing well with an annual capacity of 1 mgd during a drought year, and the construction of associated conveyance and treatment facilities...

The following text change has been made to the second paragraph of Section 2.2 on page 2-1 of the DEIR:

...The well was drilled to a depth of 665 feet. Studies of the demonstration well's operation verified that potable water can be injected successfully into the Deep Aquifer and stored for ~~later recovery~~ extraction. Studies also demonstrated that...

The following text change has been made to the second paragraph of Section 2.4 on page 2-5 of the DEIR:

The project is designed to inject potable drinking water into the SEBPB during wet years for storage, and to ~~later recover~~ and use groundwater during a drought. Implementation of the project is planned in two phases:

The following text changes have been made to the "Extensometer and Monitoring Well System" subsection of Section 2.4.1 on page 2-6 of the DEIR:

Extensometer and Monitoring Well System

A key component of Phase 1 would be extensive monitoring to measure changes in water levels, water quality, and ground level elevations (subsidence). A deep precision-drilled extensometer ~~with instrumentation below ground at various levels~~ would be installed on EBMUD property just east of Phase 1 Bayside Well No. 1...

The following text changes have been made to the second paragraph of the Subsidence Monitoring subsection of Section 2.4.1.3 on page 2-16 of the DEIR:

The extensometer cluster would be installed with measuring points at multiple depths. ~~of about 300 feet, 500 feet, 650 feet, and 1,000 feet. This spacing approach~~ allows identification of subsidence with distinct units, possibly including: 1) the aquitard below the Deep Aquifer (depth range 650 to 1,000 feet below ground surface [bgs]), 2) the Deep Aquifer System itself (depth range 500 feet to 650 feet bgs), 3) the aquitards overlying the Deep Aquifer (300 to 500 feet bgs, and 4) the land surface (to 300 feet bgs).

The following text change has been made to Section 3.1.2.1, on page 3.1-2 of the DEIR:

...Figure 3.1-2 shows a generalized geologic cross-section of the two basins and indicates the relationship of the various layers of aquifers (water-bearing sediments) within the basins. A plan view of the region showing the location of the cross-section is included in Figure 3.1-2a.

The following text change has been made to Section 3.1.6, Mitigation Measure 3.1-6, on page 3.1-56 of the DEIR:

...The accuracy of well-constructed extensometers is on the order of a thousandth of a foot (a fraction of a millimeter), well below the amount of ground surface change that can cause damage to structures. ~~micrometers (.0001 millimeters).~~...

The following text change has been made to Section 3.2.6, Mitigation Measure 3.2-1a on page 3.2-21 of the DEIR:

Mitigation Measure 3.2-1a. Using information generated under Mitigation Measures 3.1-3a, b and c, work with parties responsible for contamination and owners of deep wells within 200 feet of known contaminant plumes that are potential conduits for contaminant migration to destroy those wells or retrofit them if they remain active.

The following text change has been made to Section 3.9.2.3, on page 3.9-3 of the DEIR:

... The closest residences are located approximately ~~2,100~~ 1,900 feet to east ~~of the north~~ of proposed facilities (~~east of the UPRR tracks~~ north of San Lorenzo Creek).

The following text changes have been made to Section 3.9.4, on page 3.9-9 of the DEIR:

... Operational noise increases would derive from a 200-horsepower (Hp) vertical turbine pump, motorized valves, and a transformer, ~~all proposed to be enclosed~~ at the Bayside Well No. 1 facility. The transformer would be surrounded by an 8-foot sound wall; the other equipment would be enclosed in a building. As indicated in Table 3.9-5, the combined noise level for the equipment is estimated at 47 ~~47~~ 48.8 dBA at 50 feet. Table 3.9-5 also indicates that Alameda County noise ordinance standards could be met at this well site, for both daytime and night hour ambient conditions, with the wellhead and transformer enclosed, as described in Section 2.4.1 of this DEIR.

The following text changes have been made to Section 3.9.5.1, on page 3.9-10 of the DEIR:

Phase 1 facilities would be located within the industrial area along the west end of Grant Avenue. Bayside Well No. 1 is located south of Grant Avenue; the closest residential receptors are located approximately ~~2,100~~ 1,900 feet to the east ~~of the north~~ (~~east of the UPRR tracks~~ north of San Lorenzo Creek). As shown in Table 3.9-7, maximum noise levels associated with facility construction would not exceed the speech interference criterion at the closest residential receptors. The ~~2,100~~ 1,900-foot setback distance of the closest residential receptors would be sufficient to also maintain noise levels at less than significant levels when compared to Alameda County noise ordinance standards. Therefore, construction-related noise impacts on the closest residential receptors would be less than significant.

4.3 Table and Figure Replacements to the DEIR

4.3.1 Revised Tables

The tables listed below have been revised from the versions contained in the 2005 DEIR. The revised tables completely replace those in the DEIR, and are presented on the following pages.

- **Table ES-2A:** Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1
- **Table ES-2B:** Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2
- **Table 2-2:** Required Permits for Phase 1
- **Table 3.2-1:** Comparative Water Quality Parameters from Water Treatment Plants and Recovered Groundwater
- **Table 3.9-5:** Estimated Maximum Operational Noise Levels at Nearby Receptors for Phase 1
- **Table 3.9-7:** Estimated Maximum Construction Noise Levels at Nearby Receptors
- **Table 7-2:** Fatal Flaw Screening of Water Supply Alternatives

TABLE ES-2A
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1

Environmental Resource	Potential Impact	Mitigation	Level of Significance
3.1 Groundwater Hydrology and Quality	<p>Phase 1 Potential Impact 3.1-1. Adverse change in native groundwater quality</p>	None required.	Less than significant
	<p>Phase 1 Potential Impact 3.1-2. Change in groundwater levels affecting ACWD operations in the NCGWB</p>	None required.	Less than significant
	<p>Phase 1 Potential Impact 3.1-3. Changes in groundwater level affecting users of the SEBPB</p>	<p>Mitigation Measure 3.1-3a. EBMUD will inventory existing wells within the areas of the SEBPB where groundwater modeling indicates that drawdown effects could be observed in response to Phase 1 extractions and water levels could rise above the ground surface in response to injections, including existing use, screened intervals, total depth, and depth of pump. This information will be compared to predicted drawdown and drawup at each well location, and key wells that could be affected by operation of Phase 1 of the project will be identified.</p> <p>Mitigation Measure 3.1-3b. EBMUD will regularly monitor water levels in key deep zone wells that could experience flowing conditions or be rendered inoperable in accordance with the water level monitoring program. For wells operating at the time the Bayside EIR is certified that are rendered inoperable because of predicted drawdown effects, EBMUD will provide modifications such as deepening of the well or pump to ensure that well operation is retained. Alternatively, an affected well owner within EBMUD's service area could be connected to the EBMUD system if the well cannot be appropriately modified.</p> <p>Mitigation Measure 3.1-3c. For abandoned or inactive wells located in areas where predicted water levels could be raised above the ground surface in response to injection, EBMUD will work with the property owners to properly destroy the wells in accordance with state standards.</p> <p>Mitigation Measure 3.1-3d. For active wells located in areas where water levels are anticipated to rise above ground surface during injection, prior to initiating injection EBMUD will retrofit wells that could be pressurized. EBMUD will regularly monitor water levels and conduct surface surveys for "flowing wells." Should monitoring and field observations indicate that a well is flowing due to injection during Phase 1, injection of water will be immediately decreased or stopped. EBMUD will enter into discussions with affected well owners to assess whether the wellheads could be modified to allow for pressurization. Injection rates will not be increased to levels that will produce well overflow again until such modifications are made to the affected wells, or until overflow conditions have stopped.</p>	Less than significant after mitigation

TABLE ES-2A
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1

Environmental Resource	Potential Impact	Mitigation	Level of Significance
	<p>Phase 1 Potential Impact 3.1-4. Changes in groundwater levels affecting operations of the City of Hayward emergency supply wells</p>	<p>Mitigation Measure 3.1-4a. EBMUD will provide up to \$50,000 of funding to the City of Hayward for the City to add additional emergency capacity to the City's well system or for the City to make other system improvements to mitigate impacts to that system resulting from Phase 1 of the project. EBMUD will also provide surplus water to Hayward through existing or planned emergency interties consistent with existing emergency intertie agreements.</p> <p>Mitigation Measure 3.1-4b. If water level rises in response to injection into the Deep Aquifer under the Hayward emergency supply wells inoperable due to pressurized conditions, EBMUD will retrofit the wellheads to allow for pressurization.</p>	<p>Less than significant after mitigation</p>
	<p>Phase 1 Potential Impact 3.1-5. Saltwater intrusion in the SEBPB and NCGWB and/or movement of pre-existing plumes of brackish water in the NCGWB</p>	<p>None required.</p>	<p>Less than significant</p>
	<p>Phase 1 Potential Impact 3.1-6. Permanent land subsidence resulting from exceeding historic low water levels</p>	<p>Mitigation Measure 3.1-6. Monitoring for subsidence will be conducted on a real-time continuous basis throughout operation of the project. Phase 1 of the project will be implemented incrementally initially to allow observations of the response of the groundwater system and surrounding soils to project operations. This slow startup and ongoing monitoring will provide the ability for EBMUD to respond quickly should monitoring indicate that permanent subsidence is occurring at a level that could adversely affect overlying land uses. The accuracy of well-constructed extensometers is on the order of a <u>thousandth of a foot (a fraction of a millimeter)</u>. <u>well below the amount of ground surface change that can cause damage to structures-micrometers (0.001 millimeters)</u>. After project startup, extensometers will be monitored on a daily or more frequent basis, and data continuously reviewed to assess whether subsidence is occurring and whether it is elastic or inelastic. If any inelastic subsidence is detected the accuracy of the extensometers is such that it will be a very small amount measurable near the Bayside Well No. 1, and EBMUD will implement corrective action, such as reducing pumping rates or ceasing extractions.</p>	<p>Less than significant after mitigation</p>

TABLE ES-2A
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1

Environmental Resource	Potential Impact	Mitigation	Level of Significance
3.2 Water Quality, Treatment, and Distribution	<p>Phase 1 Potential Impact 3.2-1. Potential drawing of contamination into the water supply through pumping</p>	<p>Mitigation Measure 3.2-1a. Using information generated under Mitigation Measures 3.1-3a, b and c, work with parties responsible for contamination and owners of deep wells within 200 feet of known contaminant plumes <u>that are potential conduits for contaminant migration</u> to destroy those wells or retrofit them if they remain active.</p>	Less than significant after mitigation
		<p>Mitigation Measure 3.2-1b. As part of the Bayside Groundwater Project monitoring program, annually collect and test water quality samples from multiple monitoring wells screened in specific aquifers for contaminants known to exist in the SEBPB aquifer. This will provide an early warning system in the event contaminants move into the Deep Aquifer.</p>	
		<p>Mitigation Measure 3.2-1c. Monitor water quality in the Phase 1 production well and implement a wellhead protection program as required by the Department of Health Services.</p>	
3.3 Surface Water Hydrology and Quality	<p>Phase 1 Potential Impact 3.3-1. Potential stormwater-related erosion, sedimentation, and transport of fuels, oils, or grease to surface waters</p>	<p>Mitigation Measure 3.3-1. Implement Best Management Practices (BMPs) designed to reduce contact between exposed soil and rainfall, minimize erosion of exposed soil, and minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, and adhesives) with stormwater. BMPs may include, but are not limited to, the use of silt fencing, straw wattles, and silt and sediment traps. Additional protective actions may include, but are not limited to, adjusting the Phase 1 layout and controlling access during construction. The area will be monitored after storm events to determine whether BMPs need to be adjusted to reduce erosion. If necessary, adjustments to BMPs will be implemented.</p>	Less than significant after mitigation
		<p>Mitigation Measures 3.3-2. Implement Mitigation Measures 3.7-1b (compliance with the District's Trench Spoils Field Management Practice Program), 3.7-1c (preparation of a disposal plan specifying the disposal method for soil), and 3.7-1d (preparation of a detailed discharged water control and disposal plan), as specified below in Section 3.7, Hazards.</p>	
3.4 Biological Resources	<p>Phase 1 Potential Impact 3.4-1. Transport of sediment into sensitive areas during construction</p>	<p>Mitigation Measure 3.4-1. Implement standard BMPs for erosion control during construction of the treatment facility. BMPs may include, but are not limited to, the use of silt fencing, straw wattles, and silt and sediment traps. If necessary, adjustments to BMPs will be implemented.</p>	Less than significant after mitigation

TABLE ES-2A
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1

Environmental Resource	Potential Impact	Mitigation	Level of Significance
	<p>Phase 1 Potential Impact 3.4-2. Accumulation of debris that subsidizes predatory animals</p>	<p>Mitigation Measure 3.4-2. EBMUD and its contractor will: (1) dispose of trash routinely and place stored items in bins, containers or other secured facilities to prevent their use as shelter by mammalian predators; (2) maintain locked trash barrels for discarded food items and containers and promptly remove litter, especially food wrappers, bottles, and containers; (3) remove planks and passages over water, and other means of temporary access nightly to prevent mammalian predation of ground nesting birds; and (4) remove all tools, surplus materials, scrap material, debris, and waste from the job site upon completion of construction.</p>	<p>Less than significant after mitigation</p>
<p>3.5 Geology, Soils, and Seismicity</p>	<p>Phase 1 Potential Impact 3.5-1: Earthquake damage to Phase 1 facilities</p>	<p>Mitigation Measure 3.5-1a. Identify the appropriate UBC design criteria for the Phase 1 facilities on the basis of the subsurface conditions at the site and ensure that the UBC design criteria are incorporated into the final design of the project.</p> <p>Mitigation Measure 3.5-1b: Update the EBMUD earthquake preparedness and emergency response program to include Phase 1 facilities.</p>	<p>Less than significant after mitigation</p>
<p>3.6 Air Quality</p>	<p>Phase 1 Potential Impact 3.6-1. Particulate and exhaust emissions generated from construction of Phase 1 facilities</p>	<p>Mitigation Measure 3.6-1. Construction activities must comply with the Basic Control Measures for dust emissions, as outlined in the BAAQMD CEQA Guidelines. These include: (1) water all active construction areas at least twice daily; (2) cover all trucks hauling soil, sand, and other loose debris or require all truckloads to maintain at least 2 feet of freeboard; (3) pave, apply water three times daily, or apply nontoxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites; (4) sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites, and (5) sweep streets daily (with water sweepers), if visible soil material is carried onto adjacent public streets.</p>	<p>Less than significant after mitigation</p>
<p>3.7 Hazards</p>	<p>Phase 1 Potential Impact 3.7-1. Possible exposure of construction workers and the public to pre-existing hazardous materials in the soil and groundwater during excavation and dewatering</p>	<p>Mitigation Measure 3.7-1a. Retain a qualified professional (e.g., a California Registered Environmental Assessor) to conduct a Phase I environmental site assessment of the Phase 1 area for conformance with standards adopted by the ASTM for Phase I Environmental Site Assessments. If the Phase I Environmental Site Assessment indicates that a release of hazardous materials could have affected soil or groundwater quality at the site, retain a qualified environmental professional to conduct a Phase II Environmental Site Assessment to assess the presence and extent of contamination at the site, in conformance with state and local guidelines and regulations. If the results of the subsurface investigation(s) indicate the presence of hazardous materials, alteration of facility design or site remediation may be required by the applicable state or local regulatory agencies. Final design of proposed facilities will comply with all regulatory requirements for facility design and site remediation.</p>	<p>Less than significant after mitigation</p>

TABLE ES-2A
 Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1

Environmental Resource	Potential Impact	Mitigation	Level of Significance
		<p>Mitigation Measure 3.7-1b. Comply with the requirements of the Trench Spoils Field Management Practices Program for all trenching activities. The requirements include an environmental assessment, a sampling program to evaluate the potential for hazardous materials to be encountered in soil and groundwater during construction, and evaluation of soil and groundwater analytical data to identify appropriate health and safety precautions as well as disposal requirements for soil and groundwater produced during trenching. The environmental assessment will be completed within three months of the time of construction to accurately estimate the conditions that could be expected during construction.</p>	
		<p>Mitigation Measure 3.7-1c. In compliance with the District Trench Spoils Program, prepare a plan specifying the disposal method for soil, the approved disposal site, and written documentation that the disposal site will accept the waste. Prepare and implement a site safety plan detailing measures to be taken to alleviate identified risks. The health and safety plan will identify the chemicals present, potential health and hazards, monitoring to be performed during site activities, soils-handling methods required to minimize the potential for exposure to harmful levels of the chemicals identified in the soil, appropriate personnel protective equipment, and emergency response procedures.</p>	
		<p>Mitigation Measure 3.7-1d. Prepare a detailed discharged water control and disposal plan detailing requirements for containment and discharge of rainwater and groundwater produced from excavations and use of wash water. The discharge plan shall include requirements for testing and disposal of such liquid. Comply with regulations of the RWQCB, CDFG, ACFCO, and other regulatory agencies having jurisdiction.</p>	
		<p>Mitigation Measure 3.7-1e. Develop a contingency plan for sampling and analysis of potential hazardous materials and for coordination with the appropriate regulatory agencies in the event that previously unidentified hazardous materials are encountered during construction. If hazardous materials are identified, modify the health and safety plan to include the new data, conduct sampling to assess the chemicals present, and identify appropriate disposal methods. Perform site investigations or remedial activities in accordance with applicable laws. Typically, the ACEHS would be the responsible agency in San Lorenzo. The RWQCB or DTSC or both could be involved if groundwater or surface water or soil is contaminated.</p>	

TABLE ES-2A
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1

Environmental Resource	Potential Impact	Mitigation	Level of Significance
3.8 Traffic and Transportation	<p>Phase 1 Potential Impact 3.7-2. Accidental release of water treatment chemicals during transport, handling, or storage</p>	<p>Mitigation Measure 3.7-2a. Construct chemical storage areas in accordance with the UFC. The UFC requires that chemical storage areas be constructed with secondary containment adequate to retain a release of the contents of the largest single tank or container plus a volume based on the design flow rate of the automatic fire-extinguishing system for the area. It also requires that incompatible chemicals (such as acids and bases) be physically separated.</p> <p>Mitigation Measure 3.7-2b. Prepare an HMBP for the Phase 1 facilities. The plan will discuss handling and storage, including containment, site layouts, and emergency response and notification procedures for a spill or release from the tanks, and will include site-specific emergency response procedures prepared in accordance with the District's program plan.</p>	Less than significant after mitigation
3.9 Noise	<p>Phase 1 Potential Impact 3.9-1. Construction of Phase 1 facilities resulting in temporary noise increases at nearby noise-sensitive residential receptors</p>	None required	No impact
3.10 Utilities	<p>Phase 1 Potential Impact 3.9-2. Potential disturbance of nesting birds by construction of Phase 1 facilities</p>	<p>Mitigation Measure 3.9-2. If construction work is to be conducted between mid-January and the end of June, conduct pre-construction nesting surveys to determine if species protected by the Migratory Bird Treaty Act are nesting in the vicinity of the work areas. If work is to occur during the clapper rail nesting or breeding period (approximately mid-January to mid-April), and if pre-construction surveys result in discovery of nesting activity, work shall be restricted to activities that do not have the potential to disturb breeding or nesting and that avoid generating percussive noise.</p>	Less than significant after mitigation
3.10 Utilities	None	None required	No impact

TABLE ES-2A
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1

Environmental Resource	Potential Impact	Mitigation	Level of Significance
3.11 Cultural Resources	Phase 1 Potential Impact 3.11-1. Unanticipated discovery of subsurface archaeological deposits	Mitigation Measure 3.11-1. Require through project specifications that if cultural resources such as chipped or ground stone, historic debris, building foundations, or human bone are inadvertently discovered during construction activities, the construction contractor should adhere to the following procedure: (1) Stop work immediately in that area within 100 feet of the discovery. (2) Retain a qualified archaeologist to assess the significance of the find and develop appropriate actions for preservation or relocation of the artifacts in consultation with such experts as the State Historic Preservation Office and Native American tribal interests if appropriate. (3) If human bone is discovered, the contractor will notify the county coroner in compliance with state law, and the EBMUD Office of Regulatory Compliance.	Less than significant after mitigation
5 Growth-Inducing Impacts	Phase 1 Potential Impact 5-1. Secondary effects of increased water supply reliability, which incidentally accommodates planned growth	Mitigation Measure 5-1. To assist local governments in mitigating the growth-related impacts of their land use decisions, the District will:	Less than significant after mitigation.
		<ul style="list-style-type: none"> Participate in efforts to improve regional planning in the Bay Area; 	
		<ul style="list-style-type: none"> Encourage local land use planning agencies to coordinate land use planning functions and provision of utility services; and 	
		<ul style="list-style-type: none"> Encourage cities and counties to adopt General Plans and zoning ordinances that favor high-density development and urban infill (which tends to minimize per-capita water use as well as costs and environmental impacts of water delivery systems); provide incentives for more housing near public transit; and adopt ordinances that conserve open space, protect wildlife habitat, and conserve energy and water resources. 	

TABLE ES-2B
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
4.1 Groundwater Hydrology and Quality	<p>Phase 2 Potential Impact 4.1-1: Adverse effect on native groundwater quality</p>	<p>Phase 2 would be required to comply with the Underground Injection Program and associated permit administered by the EPA. This program provides safeguards so that injection wells do not endanger current and future underground sources of drinking water. Prior to issuing the necessary permit, the EPA would review the proposed Phase 2 facilities to ensure that the injected fluids are contained within the target aquifer system and in conformance with federal drinking water standards.</p> <p>Potentially significant until the degree of impact and feasibility of mitigation are determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>
	<p>Phase 2 Potential Impact 4.1-2: Change in groundwater levels affecting ACWD operations in the NCGWB</p>	<p>If EBMUD decides to proceed with Phase 2, it would adopt design criteria and, if necessary, mitigation measures to ensure that groundwater is maintained in the Newark Aquifer of the NCGWB within a scientifically reasonable range, consistent with the approach used to evaluate Phase 1 impacts. The Phase 2 criteria and mitigation measures could include providing potable water to the ACWD distribution system or make-up or recharge water to the ACWD recharge facilities, changing pumping strategies, operating at a lower pumping rate, or stopping operations.</p> <p>Specific changes to NCGWB groundwater levels during Phase 2 implementation cannot be identified at this time. Based on presently available information, impacts related to NCGWB groundwater levels, if any, could be reduced to a less than significant level through Phase 2 design and operation requirements and mitigation measures, as discussed above. Until those design and operation requirements and mitigation measures are defined in a subsequent EIR for Phase 2, this impact is considered potentially significant.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>
	<p>Phase 2 Potential Impact 4.1-3: Changes in groundwater level affecting other users of the SEBPB</p>	<p>In connection with Phase 2 implementation, EBMUD would inventory existing wells that could be affected; implement a well-monitoring program; and implement, as necessary, mitigation measures to reduce the effects of water level changes in the SEBPB.</p> <p>Specific changes to SEBPB groundwater levels during Phase 2 implementation cannot be identified at this time. Based on presently available information, impacts related to SEBPB groundwater levels, if any, could be reduced to a less than significant level through Phase 2 design and operation requirements and the implementation of mitigation measures, as discussed above. Until those design and operation requirements and mitigation measures are defined in a subsequent EIR for Phase 2, this impact is considered potentially significant.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>

TABLE ES-2B
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
	<p>Phase 2 Potential Impact 4.1-4. Changes in groundwater level affecting operations of the City of Hayward emergency supply wells</p>	<p>EBMUD would conduct groundwater modeling to predict the effects of the Phase 2 groundwater pumping and injection and use this information to site production wells and design pumping and injection strategies to maintain water levels within an acceptable range. Should water level changes under any scenario be beyond the acceptable limits, EBMUD would implement appropriate measures, including providing additional water to the City of Hayward, retrofitting their wells, or installing a new well to maintain the capacity of the existing well field as specified below. In addition, EBMUD would retrofit the existing Hayward emergency supply wells should injection of water during Phase 2 cause pressurization that interferes with ongoing operation of the wells.</p> <p>Specific effects on the Hayward Emergency Supply wells during Phase 2 implementation cannot be identified at this time. Based on presently available information, any Phase 2 impacts on the Hayward Emergency Supply wells could be reduced to a less than significant level through design and operation requirements and the implementation of mitigation measures, as discussed above. Until those design and operation requirements and mitigation measures are defined in a subsequent EIR for Phase 2, this impact is considered potentially significant.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>
	<p>Phase 2 Potential Impact 4.1-5. Saltwater intrusion in the SEBPB and NCGWB and/or movement of pre-existing plumes of brackish water in the NCGWB</p>	<p>EBMUD would monitor water level and water quality responses in the SEBPB and NCGWB during actual Phase 2 operations; use the regional model to interpret the effects of Phase 2 operations on the SEBPB and NCGWB; verify the regional model using observed groundwater data; and implement mitigation measures to maintain NCGWB groundwater levels within acceptable limits, as described under Phase 2 Impact 4.1-2. EBMUD would implement mitigation measures such as altering pumping operations, decreasing pumping rates, expanding facilities to control saltwater intrusion, or providing recharge of water to the Newark Aquifer. The evaluation would consider the cumulative migration of the salt water plumes under both extraction and injection scenarios.</p> <p>Whether saltwater intrusion would occur in the SEBPB and NCGWB during Phase 2 implementation cannot be identified at this time. Based on currently available information, the potential impacts of saltwater intrusion could be reduced to a less than significant level through design and operation requirements and the implementation of mitigation measures, as discussed above. Until those design and operation requirements and mitigation measures are defined in a subsequent EIR for Phase 2, this impact is considered potentially significant.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>

TABLE ES-2B
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
	<p>Phase 2 Potential Impact 4.1-6. Land subsidence resulting from exceedance of historic low water levels during Phase 2</p>	<p>If necessary, shifting pumping between wells, pumping at reduced capacity if inelastic subsidence approached unacceptable limits, or stopping pumping altogether, could reduce any land subsidence impacts to a less than significant level.</p> <p>Whether land subsidence from exceedance of historic low water levels will occur during Phase 2 implementation cannot be identified at this time. Based on currently available information, the potential impacts could be reduced to a less than significant level through design and operation requirements and the implementation of mitigation measures, as discussed above. Until those design and operation requirements and mitigation measures are defined in a subsequent EIR for Phase 2, this impact is considered potentially significant.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>
<p>4.2 Water Quality, Treatment, and Distribution</p>	<p>Phase 2 Potential Impact 4.2-1. Potential drawing of contamination into the water supply through pumping</p>	<p>Whether operation of Phase 2 could result in contamination of the deep aquifer from existing contaminant plumes in the shallow <i>Newark Aquifer equivalent</i> zone cannot be determined at this time. Based on currently available information, the potential impacts, if any, could be reduced to a less than significant level through design and operation requirements and the continuation of implementations of Mitigation Measures 3.2-1a, b and c. Specific impacts and mitigations cannot be determined until the District determines whether or not to proceed with Phase 2 and, if so, determines Phase 2 locations. The impact is considered potentially significant until facility locations and feasibility of mitigation are determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>
	<p>Phase 2 Potential Impact 4.2-2. Pressure effects could reduce level of service in the water system</p>	<p>Specific impacts and mitigations cannot be determined until the District determines whether or not to proceed with Phase 2 and, if so, determines Phase 2 facility locations. The impact is considered potentially significant until facility locations and feasibility of mitigation are determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>
<p>4.3 Surface Water Hydrology and Quality</p>	<p>Phase 2 Potential Impact 4.3-1. Construction-related stormwater erosion, sedimentation, and transport of fuels, oils, or grease to surface waters</p>	<p>Mitigation Measure 4.3-1. Implement BMPs designed to reduce contact between exposed soil and rainfall; minimize erosion of exposed soil; and minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, and adhesives) with stormwater. If the area of disturbance is greater than one acre, Phase 2 activities will need to comply with the Construction General Permit, including implementation of a construction Stormwater Pollution Prevention Plan (SWPPP) that covers all areas to be disturbed by construction activities.</p>	<p>Less than significant after mitigation</p>

TABLE ES-2B
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
	<p>Phase 2 Potential Impact 4.3-2. Discharge of sediments and other pollutants to surface water from dewatering of excavations</p>	<p>Mitigation Measures 4.3-2. Implement Mitigation Measures 3.7-1b (compliance with the District's Trench Spoils Field Management Practice Program), 3.7-1c (preparation of a disposal plan specifying the disposal method for soil), and 3.7-1d (preparation of a detailed discharged water control and disposal plan), as specified in Section 3.7, Hazards.</p>	<p>Less than significant after mitigation</p>
	<p>Phase 2 Potential Impact 4.3-3. Adverse affect on water quality from discharges to the San Francisco Bay</p>	<p>Mitigation Measure 4.3-3. Comply with conditions in the existing ACFCWCD NPDES permit for stormwater discharges to San Francisco Bay.</p>	<p>Less than significant after mitigation</p>
	<p>Phase 2 Potential Impact 4.3-4. Increased stormwater runoff from new impervious surfaces</p>	<p>Mitigation Measure 4.3-4. Develop and implement stormwater control measures consistent with the requirements of the Alameda Countywide NPDES Municipal Stormwater Permit, and the <i>Draft Stormwater Management Plan</i> for the control of stormwater runoff. Stormwater control provisions will be included in the site design to reduce the flow, volume, and pollutant load in site runoff to the maximum extent practicable in accordance with the requirements of the permit. The District will coordinate with Alameda County in the development and implementation of appropriate stormwater control measures.</p>	<p>Less than significant after mitigation</p>
<p>4.4 Biological Resources</p>	<p>Phase 2 Potential Impact 4.4-1. Transport of sediment into sensitive areas</p>	<p>Potentially significant until facility locations and feasibility of mitigation are determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant Analysis in subsequent EIR required</p>
	<p>Phase 2 Potential Impact 4.4-2. Increased turbidity, changed water temperature, reduced levels of salinity, or introduced chlorine from discharge of water into surface waters</p>	<p>Potentially significant until facility locations and feasibility of mitigation would be determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant Analysis in subsequent EIR required</p>
	<p>Phase-2 Impact 4.4-3. Accumulation of debris that subsidizes predatory animals to the detriment of natural habitats near the project area</p>	<p>Potentially significant until facility locations and feasibility of mitigation are determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant Analysis in subsequent EIR required</p>

TABLE ES-2B
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
4.5 Geology, Soils, and Seismicity	Phase 2. Potential Impact 4.5-1: Earthquake damage to Phase 2 facilities	<p>Mitigation Measure 4.5-1a: Identify the appropriate UBC design criteria for the proposed facilities on the basis of the subsurface conditions at the site and ensure that the UBC design criteria are incorporated into the final design of the project.</p> <p>Mitigation Measure 4.5-1b: Update the EBMUD earthquake preparedness and emergency response program to include Phase 2 facilities.</p> <p>Potentially significant until feasibility/effectiveness of mitigation is determined in a subsequent EIR for Phase 2</p>	Potentially significant Analysis in subsequent EIR required
4.6 Air Quality	Phase 2 Potential Impact 4.6-1. Particulate and exhaust emissions generated from construction of proposed facilities	<p>Mitigation Measure 4.6-1. Construction activities must comply with applicable control measures for dust emissions, as outlined in the BAAQMD CEQA <i>Guidelines</i>. These include:</p> <p>Basic Control Measures (apply to all construction sites): (1) Water all active construction areas at least twice daily. (2) Cover all trucks hauling soil, sand, and other loose debris or require all truckloads to maintain at least 2 feet of freeboard. (3) Pave, apply water three times daily, or apply nontoxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. (4) Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. (5) Sweep streets daily (with water sweepers), if visible soil material is carried onto adjacent public streets.</p> <p>Enhanced Control Measures (apply to sites larger than 4 acres): (1) All Basic Control Measures listed above. (2) Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more). (3) Enclose, cover, water twice daily or apply (nontoxic) soil binders to exposed stockpiles (dirt, sand, etc.). (4) Limit traffic speeds on unpaved roads to 15 mph. (5) Install sandbags or other erosion control measures to prevent silt runoff to public roadways. (6) Replant vegetation in disturbed areas as quickly as possible.</p> <p>Optional Control Measure (apply to larger sites near sensitive receptors or for any other reason where additional emissions reductions are warranted): (1) Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site. (2) Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas. (3) Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph. (4) Limit the area subject to excavation, grading, and other construction activity at any one time.</p>	Potentially significant Analysis in subsequent EIR required
		Potentially significant until the feasibility and effectiveness of mitigation is determined in subsequent environmental documentation for Phase 2.	

TABLE ES-2B
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
4.7 Hazards	<p>Phase 2 Potential Impact 4.7-1. Exposure of construction workers and the public to pre-existing hazardous materials in the soil and groundwater during excavation and dewatering</p>	<p>Exposure to hazardous materials during construction of Phase 2 could be mitigated through a strategy similar to that specified for Phase 1: a Phase I Environmental Site Assessment for the well location and associated treatment facilities (with follow-up requirements for a Phase II Environmental Site Assessment and remediation, if required); compliance with the District's Trench Spoils Field Management Practice program for trenching activities; preparation of a materials disposal plan, including a health and safety plan; preparation of a discharge water control and disposal plan; and preparation of a contingency plan with procedures to be followed in the event that previously unidentified contamination is identified.</p>	Less than significant after mitigation
	<p>Phase 2 Potential Impact 4.7-2. Accidental release of water treatment chemicals</p>	<p>Potentially significant until feasibility/effectiveness of mitigation is determined in a subsequent EIR for Phase 2.</p>	Potentially significant Analysis in subsequent EIR required
4.8 Traffic and Transportation	<p>Phase 2 Potential Impact 4.8-1. Traffic delays during construction resulting from reduced number or width of travel lanes on roads</p>	<p>As part of a subsequent EIR for Phase 2, a detailed traffic study would identify location-specific impacts to the transportation system from construction and operation of Phase 2 project facilities, and outline additional mitigation measures to reduce those location specific affects to insignificance. This impact remains potentially significant until feasibility and effectiveness of mitigation is determined in a subsequent EIR for Phase 2.</p>	Potentially significant Analysis in subsequent EIR required
	<p>Phase 2 Potential Impact 4.8-2. Temporarily impeded access to adjacent land uses and streets</p>	<p>Potential mitigations would include notification to police, fire, and other emergency service providers of the timing, location, and duration of construction activities and the location of detours and lane closures. EBMUD would also consult with local agencies and community members to minimize disruption of auto traffic, bus service and pedestrian access to any sensitive land uses, such as schools, hospitals, and retirement homes, located along a proposed pipeline route.</p>	Potentially significant Analysis in subsequent EIR required
		<p>Potentially significant until feasibility/effectiveness of mitigation is determined in a subsequent EIR for Phase 2.</p>	

TABLE ES-2B
 Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
4.9 Noise	<p>Phase 2 Potential Impact 4.9-1. Temporary noise increases at nearby noise-sensitive receptors from construction activities</p>	<p>Mitigation Measure 4.9-1. Potential mitigation could include the following measures to minimize construction noise impacts:</p> <ul style="list-style-type: none"> • Locate construction staging areas away from any nearby sensitive receptors to the extent feasible. • In noise-sensitive work areas, fit equipment with best practically available noise control technology (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds). • Use hydraulically or electrically powered impact equipment (e.g., jack hammers, pavement breakers, and rock drills) for project construction wherever possible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. Fit pneumatically powered tools with a muffler on the compressed-air exhaust unit. Use external jackets on the tools where feasible. • Designate a specific EBMUD point of contact with authority to investigate and resolve construction-related noise complaints. • If any project facilities are located near sensitive biological habitat, avoid high noise impact construction activities during critical periods such as the breeding season of sensitive species. <p>Potentially significant until feasibility/effectiveness of mitigation is determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>
	<p>Phase 2 Potential Impact 4.9-2. Increase in ambient noise from operation of proposed facilities</p>	<p>Mitigation Measure 4.9-2. As part of a subsequent EIR for Phase 2, a detailed noise study will be conducted to identify potential noise-sensitive receptors, estimate potential increases in ambient noise levels from operation of project facilities, and outline mitigation measures, as necessary, to comply with applicable noise ordinance standards.</p> <p>Potentially significant until feasibility/effectiveness of mitigation is determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>

TABLE ES-2B
Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
4.10 Utilities	<p>Phase 2 Potential Impact 4.10-1. Relocation of utility lines.</p>	<p>Mitigation Measure 4.10-1. In cooperation with local utility service providers, locate all underground utilities in advance of excavation. Notify owners of underground utilities in the area of proposed pipe installation of the nature, extent, and duration of construction activities. Coordinate design efforts with other service agencies to avoid disruption of existing utility lines. If relocation of existing utility lines is required, coordinate with the appropriate service agency to determine relocation requirements and to identify options to avoid or minimize service outages.</p> <p>Use hand tools as necessary to avoid damage to buried utility lines and appurtenances.</p> <p>If planned utility service outages are necessary, provide advance notice to affected utility customers.</p> <p>Whether Phase 2 will affect utilities cannot be identified at this time. However, based on presently available information, the potential impacts, if any, could be reduced to a less than significant level through the implementation of the mitigation measure discussed above.</p>	<p>Less than significant</p> <p>Analysis in subsequent EIR required</p>
4.11 Cultural Resources	<p>Phase 2 Potential Impact 4.11-1. Impacts on pre-historic or historic cultural resources</p> <p>Phase 2 Potential Impact 4.11-2. Unanticipated discovery of subsurface archaeological deposits</p>	<p>Potentially significant until potential for impact and feasibility of appropriate mitigation is determined in a subsequent EIR for Phase 2.</p> <p>Implementation of Mitigation Measure 3.11-1 may reduce the level of potential impacts.</p> <p>The impact of Phase 2 associated with the unanticipated discovery of subsurface archaeological deposits cannot be identified until the location of Phase 2 facilities is known. However, to the extent that any impacts may occur, they may be reduced to a less than significant level through the implementation of the mitigation measure discussed above.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p> <p>Less than significant</p> <p>Analysis in subsequent EIR required</p>
4.12 Land Use	<p>None identified. Impact conclusions regarding compatibility with existing land uses and policies cannot be made until Phase 2 facility locations are determined.</p>	<p>None identified. Potentially significant until potential for impact and feasibility of appropriate mitigation is determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>

TABLE ES-2B
 Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2

Environmental Resource	Potential Impact	Mitigation	Level of Significance
<p>4.13 Visual and Aesthetic Resources</p>	<p>Impact conclusions regarding significance of visual and aesthetic impacts of Phase 2 facilities cannot be made until Phase 2 facilities are designed and located.</p>	<p>To reduce the visual effects of construction activity, EBMUD standard practice for construction crews and contractors requires the following: a) maintain construction sites and all stored items in a neat and orderly condition; b) dispose of refuse as often as necessary so that at no time will there be any unsightly accumulation of rubbish; c) sweep the street in the work area; and d) remove scrap material, debris, and waste from the job site.</p> <p>Whether impacts to visual and aesthetic resources would occur as a result of Phase 2 cannot be determined at this time and are therefore considered potentially significant until impact analysis and feasibility of appropriate mitigation is determined in a subsequent EIR for Phase 2.</p>	<p>Potentially significant</p> <p>Analysis in subsequent EIR required</p>
<p>5 Growth-Inducing Impacts</p>	<p><u>Phase 2 Potential Impact 5-1. Secondary effects of increased water supply reliability, which incidentally accommodates planned growth</u></p>	<p><u>Mitigation Measure 5-1. To assist local governments in mitigating the growth-related impacts of their land use decisions, the District will:</u></p> <ul style="list-style-type: none"> • <u>Participate in efforts to improve regional planning in the Bay Area;</u> • <u>Encourage local land use planning agencies to coordinate land use planning functions and provision of utility services; and</u> • <u>Encourage cities and counties to adopt General Plans and zoning ordinances that favor high-density development and urban infill (which tends to minimize per-capita water use as well as costs and environmental impacts of water delivery systems); provide incentives for more housing near public transit; and adopt ordinances that conserve open space, protect wildlife habitat, and conserve energy and water resources.</u> 	<p><u>Less than significant after mitigation.</u></p>

TABLE 2-2
Required Permits for Phase 1

Permit	Administering Agency	Description
Federal Jurisdiction		
Safe Drinking Water Act Section 1421 Underground Injection Permit	U.S. Environmental Protection Agency	Addresses quality of injected water and flow rates.
State Jurisdiction		
Public Water System Permit	California Department of Health Services	Addresses approval of a new potable water source added to a public water system.
Drinking Water Source Assessment and Protection Program compliance	California Department of Health Services	Addresses area around a drinking water source through which contaminants might move and reach the drinking water supply. Also includes an inventory of activities that might lead to the release of microbiological or chemical contaminants within the delineated area.
<u>Waiver for Waste Discharge Requirements</u>	<u>Regional Water Quality Control Board</u>	<u>Section 13269 of the Water Code authorizes the RWQCB to waive WDRs for a specific discharge or for a specific type of discharge where such a waiver is not against the public interest.</u>
Local Jurisdiction		
Alameda County Clean Water Program – National Pollutant Discharge Elimination System (NPDES) compliance review	Alameda County Department of Public Works	Addresses discharge of filter backwash and well backflush water to storm drain system.
Sanitary Sewer Discharge Permit	OLSD	Addresses filter backwash discharge to the sanitary sewer.
Encroachment permit	Alameda County Department of Public Works	Addresses connection to distribution pipeline within public street right-of-way.

TABLE 3.2-1
Comparative Water Quality Parameters from Water Treatment Plants and Recovered Groundwater

Parameter	Maximum Contaminant Level	Orinda WTP ^b	USL WTP ^b	Native GW ^{c,e,g}	Recovered GW ^{d,f,g}
Turbidity (NTU)	5.0 ^a	0.06	0.10	0.19	0.21 – 0.23
Total Organic Carbon, ppm	NS	1.5	3.3	2	0.6 – 2.5
Total Dissolved Solids (TDS), ppm	500 ^a (recommended)	41	210	440-520	85 – 240
Chloride, ppm	250 ^a (recommended)	4.4	15	64	9 – 52
Manganese, ppb	50 ^a	ND	ND-23	129-320	7 – 116
Iron, ppb	300 ^a	ND	ND	56	8-130
Arsenic, ppb	10	ND	ND	1.3– 2.1	<7 ^f
Radon, pCi/L	NS	NM	NM	800	470 – 700
Uranium, ppb	30	ND	ND	<1	0.1 - 2
Gross Alpha, pCi/L	15	ND	ND	1	0.6 - 3
Gross Beta, pCi/L	50	ND	ND	1	NM
Radium 226/228, pCi/L	5	NM	NM	NM	0.1
Trihalomethanes, ppb	80	32 – 47	17 – 45	ND – 0.45	19 – 45
Haloacetic Acids, ppb	60	13 – 18	7– 24	1	1 – 4
Alkalinity, bicarbonate, ppm	NA	20.2	114	210	44 – 170
pH	NA	8.9 – 9.5	8.6 – 9.0	7.8	7.6 – 8.1
Hardness, ppm	NA	15 – 30	95 – 130	110 – 170	31 – 82
Sulfate, ppm	250 ^a (recommended)	1.5	39	48	13 – 39
Aluminum, ppb	200 ^a	ND	ND – 126	ND – 10	9.2 – 70.6

Notes:

GW = groundwater

NA = not applicable

ND = not detected

NM = not measured

NS = no standard

NTU = nephelometric turbidity units

pCi/L = picoCuries per liter

ppb = parts per billion

ppm = parts per million

^a Secondary standard (aesthetic, not health based)^b ~~2000~~ 2004 data^c Bayside Well No. 1 (screened between 520 and 650 feet below ground level)^d Bayside Well No. 1 injection/extraction pilot test

^e Values shown for native groundwater and recovered groundwater are for untreated water. Under the proposed project, water delivered to customers would be treated to reduce concentrations of manganese. Levels of iron and arsenic would also be reduced during treatment. pH would be increased during treatment to match current levels in EBMUD's distribution system. Levels of other constituents listed would not be expected to change during treatment.

^f Arsenic concentrations in recovered groundwater were below the level of detection (7 ppb) for the analytical method used. Actual concentrations were likely similar to those shown for the injection water and native groundwater.

^g The source of these data is EBMUD.

TABLE 3.9-5
Estimated Maximum Operational Noise Levels at Nearby Receptors for Phase 1

Maximum Noise Source	Reference Hourly L_{eq} in dBA at 50 feet ^a	Minimum Distance	Distance Adjustment ^b	Adjusted L_{eq} in dBA	Applicable Noise Standard ^c	Exceeds Standard?
Pump and Transformer (<u>partially</u> enclosed)	47.3 <u>48.8</u>	2,400 <u>1,900</u>	-22 <u>33</u>	16	Day: 58 Night: 48	No No

Notes:

Estimates are for the proposed Phase 1 Bayside Well No. 1, where the closest residential receptors are ~~2,400~~ 1,900 feet to the east north.

- ^a Pump reference noise levels at well facility assume simultaneous operation of one 200-Hp vertical turbine pump (72 dBA) and one PG&E transformer (52 dBA). The combined noise level would be 72.1 dBA if the well pump is above ground and the transformer is not enclosed. If pumps and transformers are enclosed, the combined noise level would be 47 dBA (25 dBA lower than the combined unenclosed noise level). The L_{eq} reference noise levels assume simultaneous operation of one 200-Hp submersible vertical turbine pump (47 dBA) and one PG&E transformer (36 dBA) (Bruce and Moritz 1997). If pumps are enclosed and the transformer is partially enclosed (walls but no roof), it is estimated that pump noise would still be 47 dBA but transformer noise would be slightly higher at 44 dBA. The combined reference noise level under these conditions would be 48.8 dBA. To evaluate worst-case conditions, this analysis assumes the above-listed equipment would operate simultaneously 24 hours per day and all equipment would be located at the project boundary closest to the receptor. It also assumes that no reduction is applied to any intervening development that interrupts the line of sight between the noise source and receptors. Estimated noise levels are based on a reference noise level of 69 dBA (L_{eq}) for a 1,800-rpm, 100-Hp pump. This level was adjusted for the proposed Hp rating of proposed pumps to establish an average pump noise level (L_{eq}) as follows: $L_{eq1} = L_{eqR} + K * \log_2 (HP_1/HP_R)$; (HP_1/HP_R) are the horsepower ratings of the candidate and reference pumps, and K is a pump constant. Pump and transformer noise levels were obtained from Bruce and Moritz 1997.
- ^b The distances represent the minimum distance between the receptor and the closest facility construction location. Noise levels at more distant residences along referenced streets would be lower because noise levels decrease about 6 dBA for every doubling of distance from a point source (such as the proposed water facilities).
- ^c The applicable noise standard is from the Alameda County Noise Ordinance for residential, school, church, or hospital receiving land uses. However, because the measured ambient noise level is higher than the standard, the standard has been adjusted to be equal to the measured day and night L_{eq} noise levels. The adjusted night standard is 5 dBA less than the night standard to adjust for simple tone noises such as noise generated by a transformer.

TABLE 3.9-7
Estimated Maximum Construction Noise Levels at Nearby Receptors

Maximum Noise Source	Reference Hourly L_{eq} in dBA at 50 feet ^a	Actual Distance	Distance Adjustment ^b	Adjusted L_{eq} in dBA	Exterior Speech Interference Criterion in dBA	Exceeds Criterion	Reduction Due to Controls ^c	L_{eq} with Controls	Exceeds Criterion
Earthmoving Equipment	85	2,400	-3433	6152	70	No	Not required	NA	NA
		1,900							
Trucks	91	2,400	-3433	6758	70	No	Not required	NA	NA
		1,900							
Materials Handling	85	2,400	-3433	6152	70	No	Not required	NA	NA
		1,900							
Drilling/Stationary Equipment	80	2,400	-3430	4650	70	No	Not required	NA	NA
		1,500				60 ^d	No	Not required	NA
Impact Equipment	87	2,400	-3433	6354	70	No	Not required	NA	NA
		1,900							

Notes:

Noise generation is assumed to be at the proposed Phase 1 Bayside Well No. 1 and pipeline location; the closest residential receptors are assumed to be 2,400 1,900 feet to the east north.

- ^a Reference noise levels represent the highest noise level by equipment type (without controls) listed in Table 3.9-6 at 50 feet.
- ^b The distance represents the minimum distance between the receptor and the closest facility construction location. Noise levels at more distant residences along referenced streets would be lower because noise levels decrease about 6 dBA for every doubling of distance from a point source (such as construction equipment).
- ^c Noise control reductions represent the difference between the highest noise levels listed in Table 3.9-6 with controls versus without controls.
- ^d Since drilling is proposed to occur 24 hours per day for extensometer construction, estimated noise levels under drilling/stationary equipment at the closest receptors are compared to the established speech and sleep interference criteria of 70 and 60 dBA, respectively. Assuming windows remain closed, interior noise levels would be 25 dBA lower, yielding interior thresholds of 45 to 50 dBA (L_{eq}) for speech interference and 35 dBA (L_{eq}) for sleep interference, well below the established significance criteria.

TABLE 7-2
Fatal Flaw Screening of Water Supply Alternatives

Category	Water Supply Alternative	Fatal Flaw Criteria				
		DS1. Augment supplies to meet 2020 demands	DS2. Supply can be in place for use during droughts	WQ1. Meets all proposed & existing water quality standards	S1. Can be imple- mented in less than 5 years	LJ1. Complies with permit and license conditions
Conservation	Increased conservation, next increment	Y	Y	Y	Y	Y
Pipe Replacement	Accelerate Pipe Replacement Program	N	N	Y	N	Y
Reclamation	Local Non-potable reuse (8 to 37 mgd)	Y	Unk.	Y	Unk.	Unk.
	Export Reuse B2- Northern San Joaquin County	N	N	N	N/A	N/A
	Export Reuse B5 Pump to Stockton Groundwater Recharge	N	N	N	N/A	N/A
Desalination	EBMUD Delta Desalination	N	N	Y	N	N
	Bay Area Regional Desalination	Y	Y	Y	Unk.	Unk.
Groundwater Storage	San Lorenzo (Bayside Project)	Y	Y	Y	Y	Y
	Walnut Creek/Concord/Ygnacio/Clayton	N	N	Unk.	N	N
	San Ramon/Castro Valley	N	Unk.-N	Unk.-N	Unk.	Unk.
	Richmond	N	N	Unk.	N/A	N
	Berkeley	N	N	Unk.	N/A	N
	Central Valley Region (East Central San Joaquin area)	Y	Y	Y	N	N
	Central Valley Region (South Sacramento County Area)	Y	Y	Y	N	N/A
	East Contra Costa County (Bixler)	Y	Y	Y	Unk.	N/A
	Zone 7	Y	Y	Y	N	N/A
New Supply	Enlarge Pardee Reservoir	Y	Y	Y	N	N
	New Reservoirs	Unk.	Unk.	Unk.	N	N
	PG&E Mokelumne River System Acquisition	Unk.	N	Y	N	N
	Increase capacity of Freeport project	Y	N	Y	N	N
	Water Transfers	Y	Y	N/A	N	N/A

Unk. = Unknown at this time; N/A = not applicable

4.3.2 Revised Figures

The figures listed below have been revised from the versions contained in the 2005 DEIR (or, in the case of new Figure 3.12a, added). The revised figures completely replace those in the DEIR, and are presented on the following pages.

- **Figure 1-2:** Upper San Leandro Reservoir Production
- **Figure 3.1-4:** Groundwater Contours (ft msl) Newark and Equivalent Aquifer (1990-1998 Average)
- **Figure 3.1-7:** Historic Water Levels—SEBPB and NCGWB
- **Figure 3.1-2a:** Cross-Section Location (new figure)



Figure 1-2. Upper San Leandro Reservoir Production

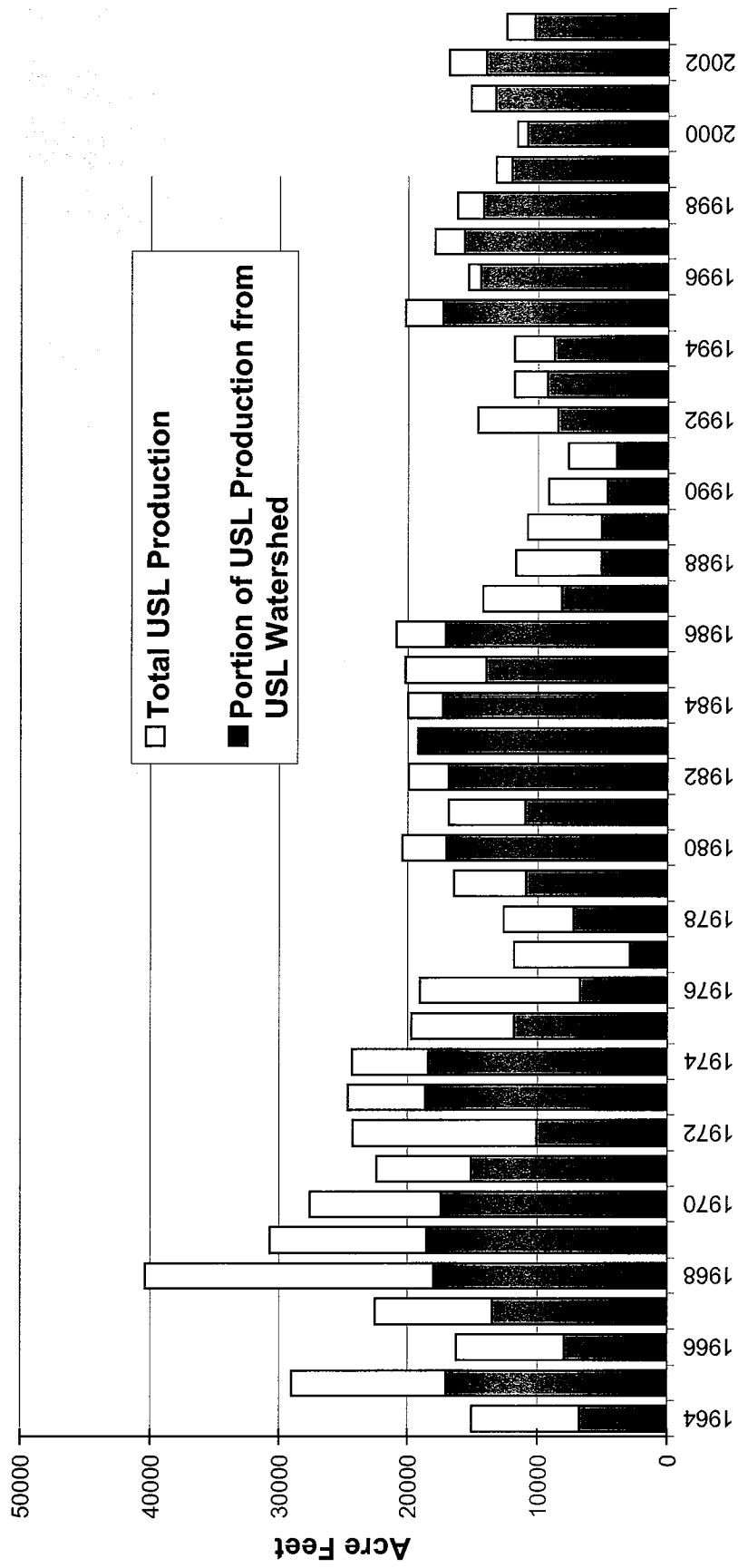
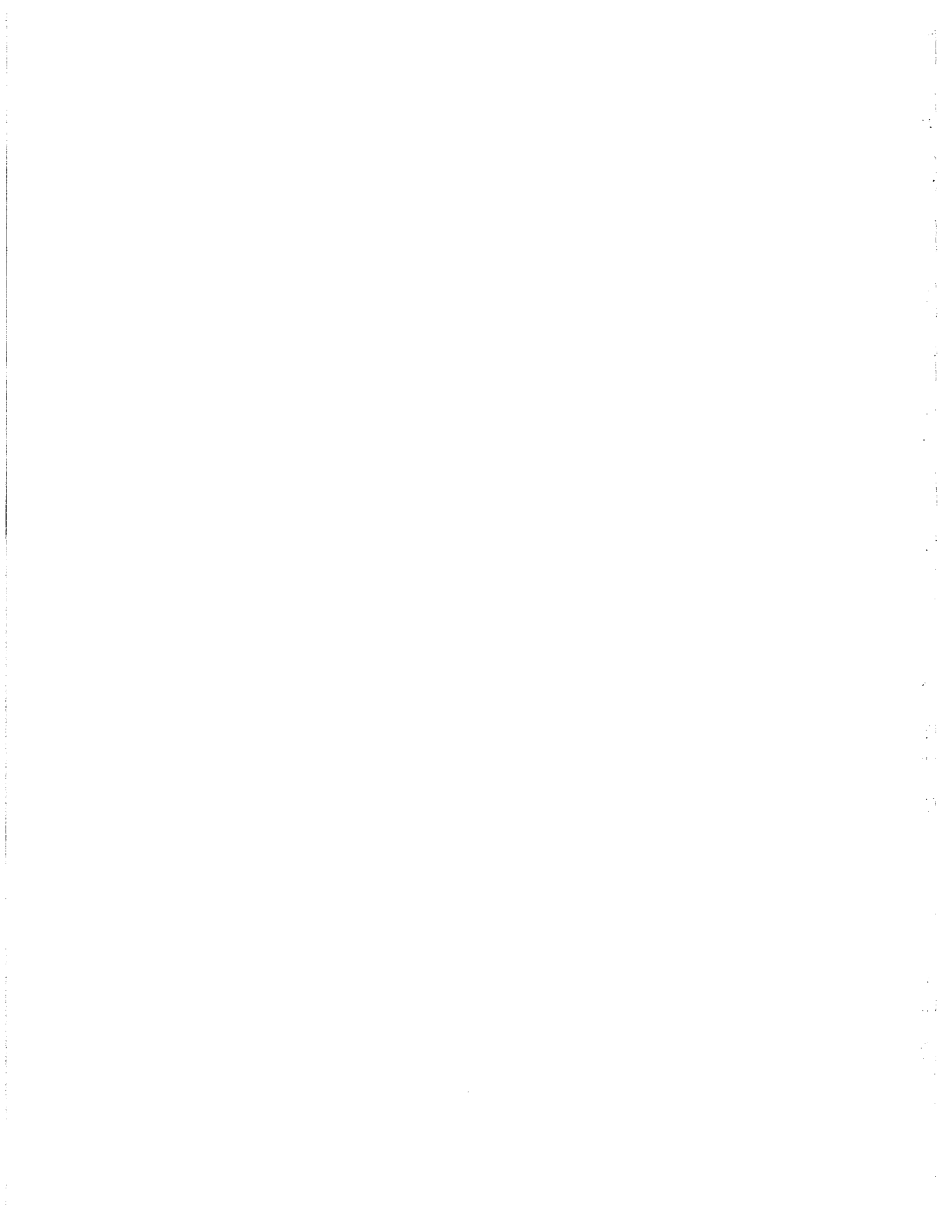
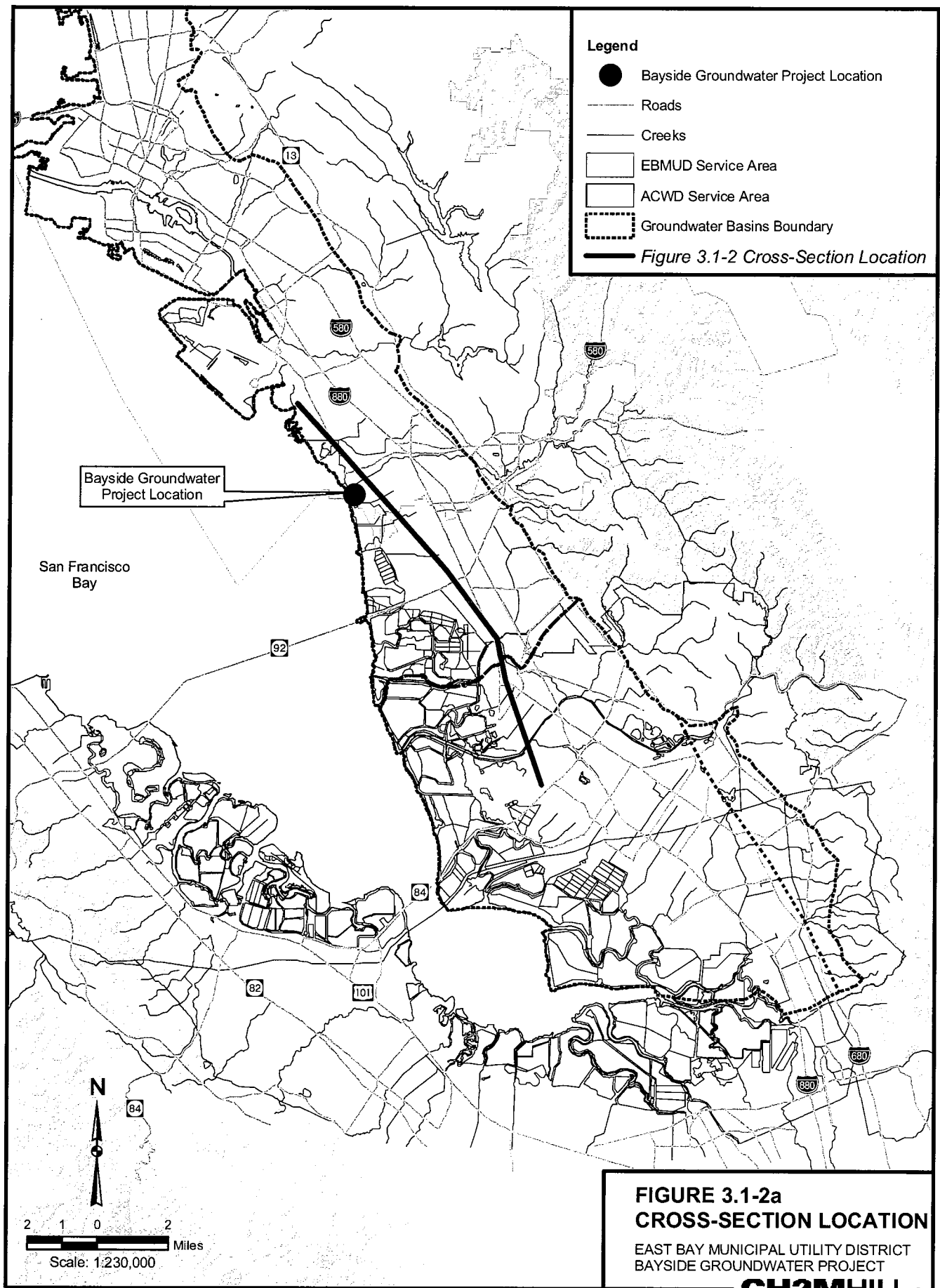


FIGURE 1-2
UPPER SAN LEANDRO
RESERVOIR PRODUCTION
 EAST BAY MUNICIPAL UTILITY DISTRICT
 BAYSIDE GROUNDWATER PROJECT
 DRAFT EIR



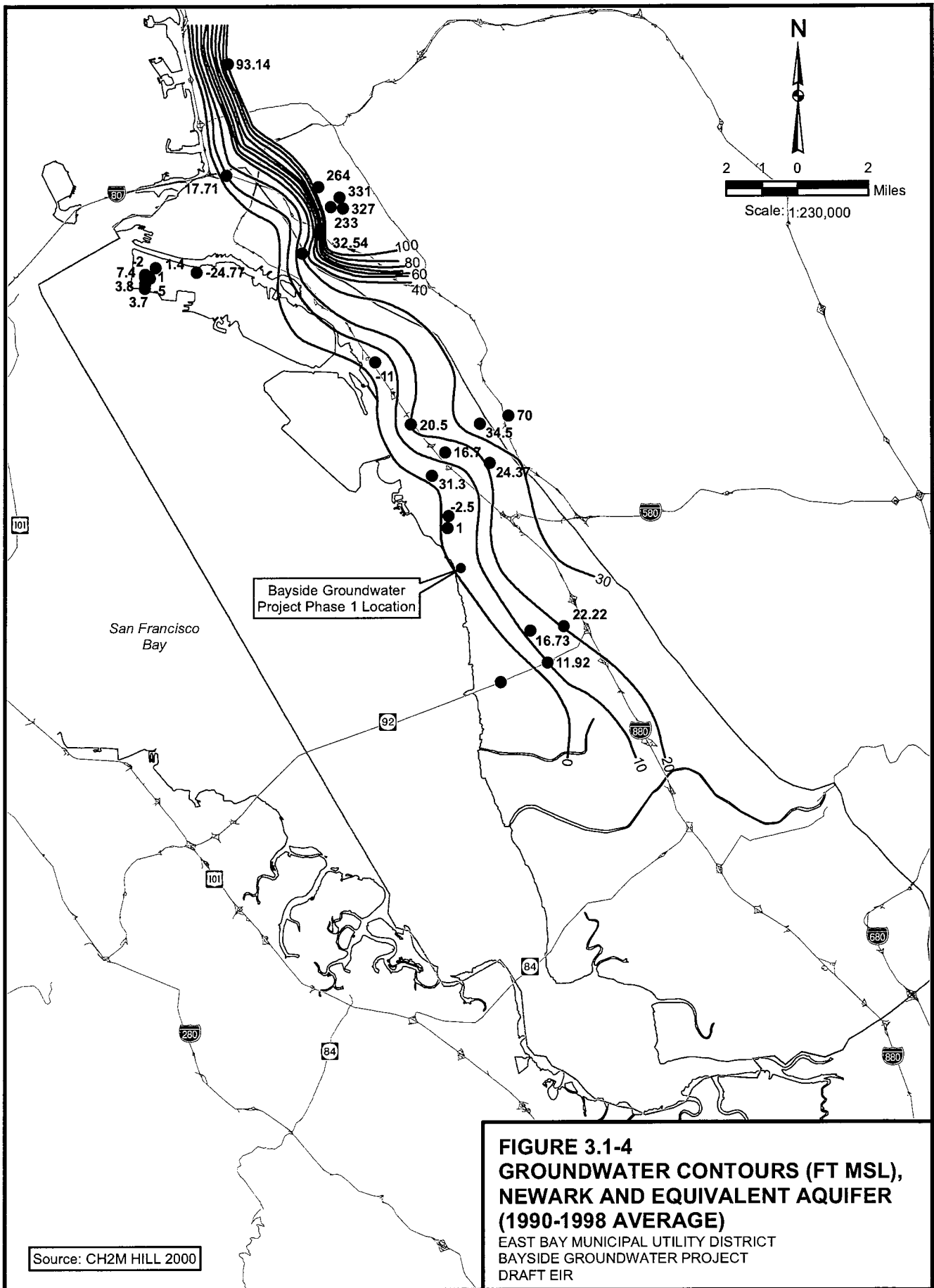


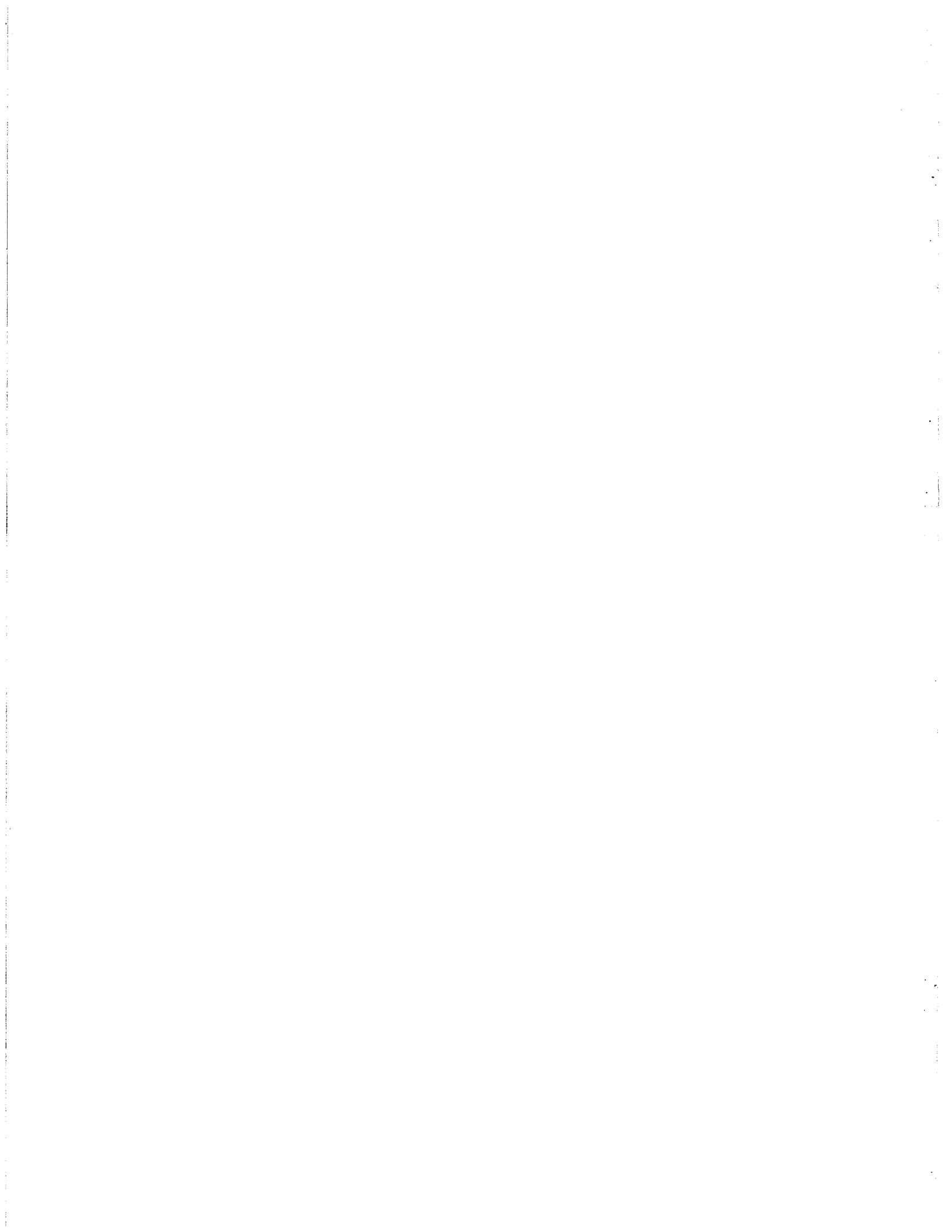
Legend

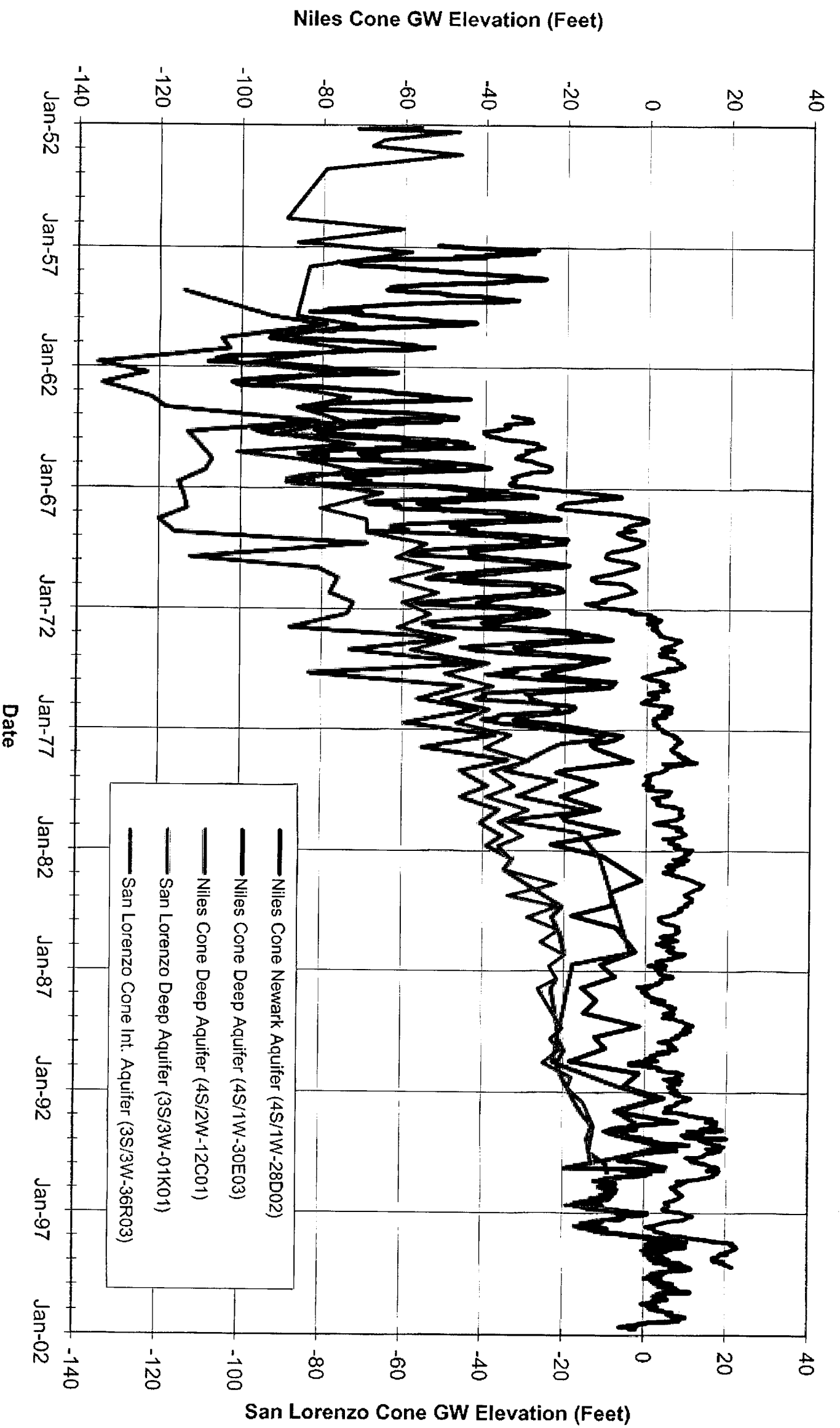
- Bayside Groundwater Project Location
- Roads
- Creeks
- EBMUD Service Area
- ACWD Service Area
- ⋯ Groundwater Basins Boundary
- Figure 3.1-2 Cross-Section Location

FIGURE 3.1-2a
CROSS-SECTION LOCATION
 EAST BAY MUNICIPAL UTILITY DISTRICT
 BAYSIDE GROUNDWATER PROJECT

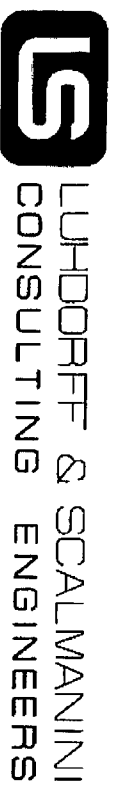








CAD FILE: G:/Projects/Alameda County Water District/01-1-080/Figures/Figure 19.dwg CFG FILE: LSCE2500.PCP_MRG DATE: 10-15-02 9:02am



Source: EBMUD 2003
 Reference: Ludorf & Scalmanini, Aquifer Test Project: South East Bay
 Plain and Niles Cone Ground-Water Basins, April 2003.

FIGURE 3.1-7
HISTORIC WATER LEVELS
SEBPA AND NCGWB

EAST BAY MUNICIPAL UTILITY DISTRICT
 BAYSIDE GROUNDWATER PROJECT
 DRAFT EIR

5.0 Responses to Comments Received on DEIR

The following pages present reproductions of all comments received on the 2005 Draft EIR during the public review and comment phase of the Proposed Project (including letters and emails received by EBMUD and transcripts of comments provided orally at the public hearing), as well as EBMUD's responses to those comments. The section is presented with each comment letter reproduced on the left-hand page and the corresponding response(s) on the facing right-hand page.

As previously described in Section 1.3.5, Comments and Individual Responses, each comment letter has been assigned a code based on the category to which a commenter belongs— agency, organization or citizen (see Section 2.0, List of Commenters, for further details regarding the commenter codes). The letter codes and comment numbers are indicated in the left side margin of each letter. Responses to each comment are labeled with the corresponding letter code and comment number on the facing right-hand page.

Many of the comments have been responded to in the Master Responses. Where appropriate, response entries in this section refer the reader to the applicable Master Response in Section 3.0, Master Responses.

Responses are organized by subsection as follows:

- 5.1 Comments and Responses for State Agencies
- 5.2 Comments and Responses for Local Agencies
- 5.3 Comments and Responses for Groups and Organizations
- 5.4 Comments and Responses for Citizens

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5.1 Comments and Responses for State Agencies

Letter S1. State Clearinghouse. 5-4

Letter S1. State Clearinghouse.



Arnold
Schwarzenegger
Governor

STATE OF CALIFORNIA

Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Sean Walsh
Director

April 28, 2005

Mike Tognolini
East Bay Municipal Utility District, MS 407
375 11th Street, MS #407
Oakland, CA 94607

Subject: Bayside Groundwater Project
SCH#: 2000092044

Dear Mike Tognolini:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on April 27, 2005, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

S1-1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 8044 SACRAMENTO, CALIFORNIA 95812-8044
TEL (916) 445-0613 FAX (916) 323-8018 www.opr.ca.gov

Response to Comment S1-1

Comment noted.

Letter S1. State Clearinghouse.

Page 2

DOCUMENT REVIEW REPORT
State Clearinghouse Data Base

SCH#	2000092044		
Project Title	Bayside Groundwater Project		
Lead Agency	East Bay Municipal Utility District		
Type	EIR Draft EIR		
Description	The Bayside Groundwater Project involves the injection of local runoff and water conserved in the Mokelumne River in wet years into the SEBPB for later recovery and use during a drought. Phase 1 of the project would be implemented immediately to provide (a) annual capacity up to 1 mgd, and (b) information to determine whether to proceed with Phase 2, and if so, to guide EBMUD in developing the Phase 2 design and operation features.		
Lead Agency Contact			
Name	Mike Tognolini		
Agency	East Bay Municipal Utility District, MS 407		
Phone	510-287-0125	Fax	
email			
Address	375 11th Street, MS #407		
City	Oakland	State	CA Zip 94607
Project Location:			
County	Alameda		
City	San Leandro		
Region			
Cross Streets	Grant Avenue and Phil Drive		
Parcel No.			
Township	Range	Section	Base
Proximity to:			
Highways			
Airports			
Railways			
Waterways			
Schools			
Land Use	Public Utility		
Project Issues	Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Noise; Toxic/Hazardous; Water Quality; Water Supply; Growth Inducing		
Reviewing Agencies	Resources Agency; Department of Fish and Game, Region 3; Department of Conservation; Department of Parks and Recreation; Department of Water Resources; San Francisco Bay Conservation and Development Commission; California Highway Patrol; Caltrans, District 4; Native American Heritage Commission; Regional Water Quality Control Board, Region 2; State Water Resources Control Board, Clean Water Program		
Date Received	03/14/2005	Start of Review	03/14/2005 End of Review 04/27/2005

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter S1. State Clearinghouse.

Page 3

Notice of Completion & Environmental Document Transmittal

Appendix C

For U.S. Mail: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814
 Project Title: **Bayside Groundwater Project**

SCH# 2000092044

Lead Agency: East Bay Municipal Utility District Contact Person: Mike Tognolini
 Street Address: 375 11th Street, MS #407 Phone: 510-287-0125
 City: Oakland Zip: 94607 County: Alameda

Project Location:
 County: Alameda City/Nearest Community: San Lorenzo
 Cross Streets: Grant Avenue / Phil Drive Zip Code: _____
 Assessor's Parcel No.: _____ Section: _____ Twp. _____ Range: _____ Base: _____
 Within 2 miles: State Hwy#: _____ Waterways: _____
 Airports: _____ Railways: _____ Schools: _____

Document Type:
CEQA: NOP Draft EIR Supplement to EIR Subsequent EIR Other:
NEPA: NOI EA Draft EIS FONSI
Other: Joint Document Final Document Other:

Local Action Type:
 General Plan Update Master Plan Use Permit Coastal Permit
 General Plan Amendment Planned Unit Development Land Division (Subdivision, etc.) Other
 General Plan Element Site Plan Annexation
 Community Plan Rezone Redevelopment
 Specific Plan Prezone

Development Type:
 Residential: Units _____ Acres _____ Water Facilities: Type Well MGD 1
 Office: Sq.ft. _____ Acres _____ Employees _____ Transportation: Type _____
 Commercial: Sq.ft. _____ Acres _____ Employees _____ Mining: Mineral _____
 Industrial: Sq.ft. _____ Acres _____ Employees _____ Power: Type MW
 Educational _____ Waste Treatment: Type MGD
 Recreational _____ Hazardous Waste: Type _____
 Total Acres: (approx.) _____ Other: _____

Project Issues That May Have A Significant Or Potentially Significant Impact:
 Aesthetic/Visual Economic/Jobs Public Services/Facilities Traffic/Circulation
 Agricultural Land Fiscal Recreation/Parks Vegetation
 Air Quality Flood Plain/Flooding Schools/Universities Water Quality
 Archeological/Historical Forest Land/Fire Hazard Septic Systems Water Supply/Groundwater
 Biological Resources Geologic/Seismic Sewer Capacity Wetland/Riparian
 Coastal Zone Minerals Soil Erosion/ Growth Inducement
 Drainage/Absorption Noise Compaction/Grading Land Use
 Population/Housing Balance Solid Waste Cumulative Effects
 Toxic/Hazardous Other

Present Land Use/Zoning/General Plan Designation: Public Utility
Project Description: (please use a separate page if necessary)

NOTE: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice or Preparation or previous draft document) please fill in.

Revised 2004

Letter S1. State Clearinghouse.

Page 4

**Notice of Completion & Environmental Document Transmittal
Project Description****Bayside Groundwater Project**

The project is slated to put drinking water into the Deep Aquifer of the South East Bay Plain Basin during wet years for storage so it will be available later in the event of a drought. Implementation of the project is planned in two phases, reviewed in the draft Environmental Impact Report. Phase 1 is a 1 million gallon per day (mgd) annual capacity project using a single existing demonstration well in the San Lorenzo area. The site is on the list of sites enumerated under Government Code Section 65962.5. A treatment facility at the well head will house both storage and dispensing equipment for chemicals required for treatment. Phase 1 will include precise monitoring equipment to measure ground movement in the project area. EBMUD will also use the network of small-diameter monitoring wells already in the Phase 1 area and the monitoring system to collect water level and ground surface elevation data during Phase 1 operation to verify subsidence characteristics.

Phase 2 of the project is the potential future expansion of groundwater facilities to an annual capacity of 2 to 10 mgd. The DEIR addresses a variety of significant environmental issues related to the project. They include groundwater hydrology, water quality, surface water quality, biological resources, geology, air quality, hazards, noise and cultural resources. All potentially significant impacts identified in the EIR will be mitigated. Phase 1 is proposed for immediate implementation. At this time EBMUD does not know whether it will pursue Phase 2, or if it does pursue it, exactly what Phase 2 facilities will be necessary, where those facilities will be located, or what the ultimate size of those future facilities will be, other than somewhere in the range of 2-10 mgd average annual capacity. EBMUD intends to use the information gathered from Phase 1 operations to determine the feasibility of Phase 2 and inform its future determinations on whether and how to proceed with Phase 2. If EBMUD determines to pursue Phase 2, EBMUD will at that time complete a subsequent EIR.

Letter S1. State Clearinghouse.

Page 5

Reviewing Agencies Checklist
continued

Appendix C

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below.

<input checked="" type="checkbox"/>	Air Resources Board	<input type="checkbox"/>	Office of Emergency Services
<input type="checkbox"/>	Boating & Waterways, Department of	<input type="checkbox"/>	Office of Historic Preservation
<input type="checkbox"/>	California Highway Patrol	<input type="checkbox"/>	Parks & Recreation
<input checked="" type="checkbox"/>	Caltrans District #4	<input type="checkbox"/>	Pesticide Regulation, Department of
<input type="checkbox"/>	Caltrans Division of Aeronautics	<input type="checkbox"/>	Public Utilities Commission
<input type="checkbox"/>	Caltrans Planning	<input type="checkbox"/>	Reclamation Board
<input type="checkbox"/>	Coachella Valley Mountains Conservancy	<input checked="" type="checkbox"/>	Regional WQCB# SPBR
<input type="checkbox"/>	Coastal Commission	<input checked="" type="checkbox"/>	Resources Agency
<input type="checkbox"/>	Colorado River Board	<input checked="" type="checkbox"/>	S.F. Bay Conservation & Development Commission
<input checked="" type="checkbox"/>	Conservation, Department of	<input type="checkbox"/>	San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy
<input type="checkbox"/>	Corrections, Department of	<input type="checkbox"/>	San Joaquin River Conservancy
<input type="checkbox"/>	Delta Protection Commission	<input type="checkbox"/>	Santa Monica Mountains Conservancy
<input type="checkbox"/>	Education, Department of	<input type="checkbox"/>	State Lands Commission
<input type="checkbox"/>	Office of Public School Construction	<input type="checkbox"/>	SWRCB: Clean Water Grants
<input checked="" type="checkbox"/>	Energy Commission	<input checked="" type="checkbox"/>	SWRCB: Water Quality
<input checked="" type="checkbox"/>	Fish & Game Region #3	<input checked="" type="checkbox"/>	SWRCB: Water Rights
<input type="checkbox"/>	Food & Agriculture, Department of	<input checked="" type="checkbox"/>	Tahoe Regional Planning Agency
<input type="checkbox"/>	Forestry & Fire Protection	<input type="checkbox"/>	Toxic Substances Control, Department of
<input checked="" type="checkbox"/>	General Services, Department of	<input checked="" type="checkbox"/>	Water Resources, Department of
<input checked="" type="checkbox"/>	Health Services, Department of	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	Housing & Community Development	<input type="checkbox"/>	
<input type="checkbox"/>	Integrated Waste Management Board	<input checked="" type="checkbox"/>	Other: Coastal Conservancy
<input checked="" type="checkbox"/>	Native American Heritage Commission	<input type="checkbox"/>	Other:

Local Public Review Period (to be filled in by lead agency)
Starting Date: March 14, 2005Ending Date: April 28, 2005Lead Agency (Complete if applicable): EBMED

Applicant: _____

Consulting Firm: _____

Address: _____

Address: 375 11th Street, MS#407

City/State/Zip: _____

City/State/Zip: Oakland, CA 94607

Phone: _____

Contact: Michael TognoliniPhone: (510) 287-0125Signature of Lead Agency Representative Date: 3/10/05

Authority cited: Sections 21083 and 21087, Public Resources Code. Reference: Section 21161, Public Resources Code.

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5.2 Comments and Responses for Local Agencies

5.2	Comments and Responses for Local Agencies	5-11
	Letter L1. Alameda County Supervisor Alice Lai-Bitker.	5-12
	Letter L2. City of San Leandro.	5-18
	Letter L3. City of San Leandro.	5-20
	Letter L4. City of San Leandro.	5-22
	Letter L5. Alameda County Water District.	5-32
	Letter L6. Bay Area Air Quality Management District.....	5-120

Letter L1. Alameda County Supervisor Alice Lai-Bitker.



Alice Lai-Bitker, SUPERVISOR, THIRD DISTRICT
ALAMEDA COUNTY BOARD OF SUPERVISORS

COMMITTEES:

Health, Chair
Social Services
Unincorporated Services

May 6, 2005

William Patterson
President, EBMUD Board of Directors
375 11th Street, MS 407
Oakland, CA 94607

Dear Mr. Patterson:

I appreciate the opportunity to comment on the Draft EIR for the Bayside Groundwater Project. EBMUD should be commended for its extensive public outreach efforts including the establishment of the Community Liaison Group and holding a board meeting in San Leandro last week.

L1-1

I continue to be disappointed that the Board did not agree to my request last year and many community requests for a 120-day public comment period on the Draft EIR. For a document that contains many technical issues and for a project that has been contentious, it would have been considerate for the Board to extend the public comment period. I hope the board will review their earlier decision.

My comments and questions on the draft EIR include:

L1-2

- EBMUD staff should widely publicize the other California water agencies that are operating Aquifer Storage & Recovery (ASR) projects. That would allow the community to see how these other projects are dealing with the issues raise by this project

L1-3

- The Draft EIR states that the East Contra Costa County Groundwater site would work as an ASR project. EBMUD should continue to explore this alternative because a project in a more rural area may encounter less feedback regarding residential related concerns.

L1-4

- If the project is started, water extracted should be monitored by water quality and taste. The Draft EIR does not list how often water extracted will be tested. Large variation in taste from normal EBMUD supply will surely bring widespread complaints from local residents.

L1-5

- The Community Liaison Group should be continued. All data collected by the District, especially information on settlement, should be shared with the group and the community at large.

L1-6

- The Draft EIR contains information about San Lorenzo area potential underground contamination. The Draft EIR should also include information on

OAKLAND OFFICE: 1221 OAK ST., ROOM 536, OAKLAND, CA 94612 • (510) 272-6693 • FAX (510) 268-8004
DISTRICT OFFICE: 15903 HESPERIAN BLVD., SAN LORENZO, CA 94560 • (510) 278-0367 • FAX (510) 278-0467
www.acgov.org/lai-bitker

Response to Comment L1-1

See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Response to Comment L1-2

See Master Response 13 – Additional Information Regarding ASR Projects and the ASR technical memorandum (Attachment A).

Response to Comment L1-3

See Master Response 8 – Project Objectives and Alternatives.

Response to Comment L1-4

See Master Response 3 – Monitoring Program. EBMUD does not expect large variations in taste in the extracted and treated groundwater.

Response to Comment L1-5

EBMUD intends to continue working closely with the Community Liaison Group (CLG) through start-up and operations of Phase 1 (if approved). EBMUD has also committed to providing the CLG with monitoring results from Phase 1 including data from the extensometer (ground surface) and groundwater monitoring (of both water quality and water levels). EBMUD will continue to involve the CLG in the EIR process for Phase 2 if Phase 2 is pursued, as well as in any future discussions on the design and operation of Phase 2. CLG representatives are responsible for communicating with their respective constituencies. EBMUD will also provide information to the wider community through periodic fact sheet updates and through the Bayside Groundwater Project website.

Response to Comment L1-6

See Master Response 5 – Groundwater Contamination. For the reasons discussed in Master Response 5, project activities are not expected to affect unknown contamination from the former Trojan Powder Works.

Letter L1. Alameda County Supervisor Alice Lai-Bitker.

Page 2

L1-6

how the injection of groundwater will affect San Leandro industrial sites including the former Trojan Powder Works.

L1-7


- On page 2-21, where construction activities are discussed, the extensometer cluster would require 24 hour drilling operations. The EIR fails to mention how long this construction would last.

L1-8

- I understand that EBMUD will be monitoring for settlement/subsidence and it is my understanding that if subsidence/settlement occur, then EBMUD will stop the project in it's entirety. In addition to this, I would like to see EBMUD be proactive by setting up a fund to compensate residents of homes that are damaged by settlement/subsidence directly related to the implementation of proposed project.

I trust that EBMUD will take the time to fully answer all questions from the community before making a decision on this project.

Sincerely,


ALICE LAI-BITKER
Supervisor, District 3

Response to Comment L1-7

Drilling of each extensometer in the cluster will take approximately 1 week of 24-hour drilling, though the extensometers may be drilled simultaneously. Overall construction activities for the extensometer cluster will last approximately 2 to 3 months.

Response to Comment L1-8

See Master Response 1 – Subsidence.

Several comments submitted on the DEIR addressed insurance or special funds to address damage claims. While EBMUD recognizes these concerns, it should be emphasized that EBMUD internal procedures and methods regarding insurance coverage and claim evaluation are not subject to the California Environmental Quality Act (CEQA). As described in the DEIR, the risk of damage to property from subsidence is less than significant with mitigation (Mitigation Measure 3.1-6). Notwithstanding these facts, and to address the concerns about insurance coverage and the claim evaluation process, EBMUD provides the following background information regarding the nature of its insurance policies and its standard claims process that EBMUD would employ to facilitate the intake, evaluation, and resolution of any claim.

EBMUD's standard claims process provides for reimbursement of reasonable costs to repair damage to property that results from negligent activity on the part of the District.

In the event that a person wishes to file a claim, he or she would contact the Bayside Groundwater Project Manager by phone or e-mail. The Project Manager contact information will be posted on EBMUD's website, www.ebmud.com, and will be available prior to the start of construction and operation. The Project Manager will provide an EBMUD form and written procedures for the claimant to follow. The form should be returned with supporting documentation from the claimant (e.g., photographs, videos, measurements, description of damage) and the date and time that the incident occurred. All claims should be filed as soon as possible after the incident.

EBMUD cannot compensate claimed damages without first assessing the incident and determining responsibility. The suggested approach, for EBMUD to compensate homeowners via a special fund, is inconsistent with EBMUD procedures for evaluating claims, EBMUD's responsibilities as a public agency for managing its funds, and our system of jurisprudence with respect to proving causation. The existing claims process is fair and adequate, and a special fund is not needed or warranted.

For complex claims not related to the contractor, the claim would immediately be assigned to a third-party claims adjuster. The third-party adjuster would review the claim, engage appropriate experts to analyze the claim, establish the amount of damage or cost, and prepare a response. If liable, EBMUD would settle the claim. The liaison would remain the contact for the claimant and would facilitate the process.

The above description is intended solely to provide information concerning how EBMUD intends to handle claims that may arise. It is not intended to change, modify or alter EBMUD's legal responsibilities. Similarly, the claim process described above is not intended

to change, modify or alter any legal responsibilities a claimant may have to submit a claim within the time established by law.

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Letter L2. City of San Leandro.

City of San Leandro
Civic Center, 835 E. 14th Street
San Leandro, California 94577



Office of the Mayor 510-577-3356
Fax 510-577-3340

April 12, 2005

Ms. Angela Knight
East Bay Municipal Utility District
375 11th Street, MS 407
Oakland, California 94607

Re: Request for Extension of the Comment Period on the EBMUD Bayside Groundwater Storage Project New Draft Environmental Impact Report

Dear Ms. Knight:

Respectfully, the City of San Leandro requests that the comment period for the new Draft Environmental Impact Report on the EBMUD Bayside Groundwater Storage Project be extended by 120 days.

L2-1

We have heard concerns from the community regarding the project and residents have asked for more time to review and comment on this lengthy technical document. City staff would appreciate additional review and comment time as well.

Please extend the comment period on the new Draft EIR for 120 days to allow adequate time for everyone to respond. Also, please notify the City of San Leandro in writing by April 25, 2005 of your decision regarding our request for the 120-day extension.

Thank you for your consideration of this important matter.

Sincerely,

Shelia Young
Mayor

cc: City Council
EBMUD Board Member Frank Mellon
EBMUD Board Member Doug Linney

Response to Comment L2-1

See paragraph entitled "Extended Comment Period" in Master Response 10 – Public Outreach and Notice, and DEIR Review.

Letter L4. City of San Leandro.

City of San Leandro
Civic Center, 835 E. 14th Street
San Leandro, California 94577



Office of the City Manager 510-577-3351
FAX 510-577-3340

May 9, 2005

RECEIVED
MAY 10 2005
WATER SUPPLY IMPROVEMENTS

Ms. Angela Knight
East Bay Municipal Utilities District
Water Supply Improvement Division
375 Eleventh Street - MS 407
Oakland, CA 94609-4240

RE: Comments on the Bayside Groundwater Project DEIR

Dear Ms. Knight:

We would like to thank the East Bay Municipal Utilities District (EBMUD) Board of Directors for extending the public comments period for the Draft Environmental Impact Report of the Bayside Groundwater Project. The extension provided the City and the public the opportunity to review the project in detail. The City of San Leandro is very concerned about the impacts the project will have on its infrastructure and its citizens. The following comments highlight those concerns:

- L4-1 [1. We would like to see the Public Meeting Minutes where the Directors discussed and approved the Project Objectives. These objectives are still too narrow to develop a reasonable range of alternatives. (page ES-2, 2-2, and Notice of Preparation)
- L4-2 [2. Although the potential impacts of Phase 2 are included in the analysis, the analysis is incomplete as noted by the DEIR and, therefore, the entirety of the analysis on this Phase 2 should be removed from this document.
- L4-3 [3. We would like to see more data to support Sec. 1.4.4 and Figure 1-2. The years 1995-2005 are not shown. Thirty of the last 40 years of data are used to prove that USL runoff would be sufficient to inject into the deep aquifer. It would be more appropriate to use 20 of the last 20 years, which appears much less than the 15,000 A.F. noted by the report.
- L4-4 [4. Section 2.4.1.3 Phase 1 Monitoring Program describes an area wide monitoring program that is to occur on a regular basis. Please describe "regular basis" and how the area wide monitoring program relates to the extensometer field monitoring program. Please describe if and how a correlation between the extensometer field and the area wide monitoring will be

Response to Comment L4-1

See Master Response 8 – Project Objectives and Alternatives. The EBMUD Board Planning Committee Agenda and Minutes from the February 22, 2005 meeting, where the Bayside Groundwater Project was discussed, are included as Attachment E to this document.

Response to Comment L4-2

The inclusion of a qualitative discussion of Phase 2 impacts is intended to provide full disclosure about the potential future Phase 2 project, as explained in Master Response 7 – Project Phasing.

Response to Comment L4-3

Figure 1-2 has been revised to show the 40-year period from 1964 to 2003 and can be found in Section 4.0 of this Final EIR. The purpose of the figure is to demonstrate that an examination of the historical hydrology provides a strong indication that in the future, sufficient runoff will be available to provide water for injection for the Bayside Groundwater Project.

Response to Comment L4-4

See Master Response 3 – Monitoring Programs. The extensometer cluster will be placed near Bayside Well No. 1 because this area would have the most potential for subsidence. Extensometers are very accurate, on the order of a thousandth of a foot (a fraction of a millimeter), well below the amount that can cause damage to structures. Extensometer data adjacent to Bayside Well No. 1 will be used in conjunction with regional survey data over a broader area. The extent of this area will consist of several survey points within the area of modeled water level drawdowns of about 15 feet or more. Surveying of the area will be performed at least several times a year during the initial years of the project. This general approach to subsidence monitoring, using extensometers in conjunction with survey points, is in place in other areas, including Santa Clara Valley, the Central Valley, and Phoenix, Arizona.

Letter L4. City of San Leandro.

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- L4-4 established. Please also provide examples or related references that substantiate the use of an extensometer field as a means to monitor area wide subsidence.
- L4-5 5. A review of Figure 3.1-2 indicates variations of the Franciscan Bedrock elevation. Please explain whether these variations will have any impact on the potential for differential settlement and the ability of a localized extensometer field to accurately indicate such settlement.
- L4-6 6. Please indicate EBMUD's position on repairs to structures and facilities if operation of the project causes settlement damage. Please indicate whether EBMUD is willing to provide restitution to owners of property damaged due to subsidence as a result of the operation of the Bayside Groundwater Project.
- L4-7 7. Section 3.1.6, page 3.1-44, notes that the impact from drawup in the NCGWB is less than significant and does not require mitigation because the area of the piezometric head of the Deep aquifer that is above ground surface is similar to the No Project Condition. Our review of the figures indicates an approximately 20% expansion in the area subject to drawup. This is not less than significant and therefore warrants mitigation. Please specify an appropriate mitigation.
- L4-8 8. Section 3.2.2.4, page 3.2-10, indicates that a detailed Drinking Water Source Assessment and Protection (DWSAP) Program assessment has not been completed. Please explain why a detailed DWSAP Program assessment for the project has not been completed to assure viability of the project.
- L4-9 9. Mitigation Measure 3.2-1.b indicates that water quality samples and tests from multiple monitoring wells will occur on an annual basis. Please explain why it is believed that only annual testing is sufficient to provide an early warning system in the event contaminants move into the Deep aquifer.
- L4-10 10. DEIR Section 3.10, Phase 1 Utilities, indicates that the basis for analysis of the section is "addresses potential impacts to utilities from construction and operation of Phase 1." Therefore, it is erroneous to conclude that the "No Project Alternative" could have a "Greater Impact" on Public Services and Utilities than the proposed project, since this alternative would not include any construction or operation of facilities beyond those that are existing. In addition, there is no analysis in the DEIR to support the "Greater Impact" statement, only suppositions. (Page 7-23 indicates that the cause of great impact on Public Services and Utilities would derive from severe water rationing that would impact the ability of service providers and utilities to meet customer demand.) This should be changed to "No Impact."
- L4-11 11. The City believes there are viable alternatives, such as conservation or the Freeport Regional Water Project, which could provide additional supply and have not been fully analyzed in the DEIR. Therefore, we believe the DEIR is insufficient in consideration of alternatives.

Response to Comment L4-5

Figure 3.1-2 in the 2005 DEIR indicates that Franciscan bedrock has been intersected in two locations, both at an elevation of about -800 feet mean sea level (msl). The relief of this unit appears to be quite low in the area and is not expected to pose a risk of differential subsidence. Therefore, the proposed extensometer system will adequately monitor subsidence. See also Master Response 1 – Subsidence.

Response to Comment L4-6

See Master Response 1 – Subsidence and response to comment L1-8.

Response to Comment L4-7

The total area where water levels in the Deep Aquifer are projected to exceed the ground surface with Phase 1 is greater than the same area under the No Project condition, as shown in Figures 3.1-16 and 3.1-17 in the DEIR. However, this area includes portions of both the Southeast Bay Plain Basin (SEBPB) and the Niles Cone Groundwater Basin (NCGWB). The boundary between the basins is outlined in a red dashed line on the figures. In the SEBPB, the figures indicate that there are new areas potentially subject to flowing wells and mitigation measures are described for the SEBPB in the DEIR (Mitigation Measures 3.1-3a through d) to reduce potential impacts to a less than significant level. In the NCGWB, the difference in the shaded “potential flowing” area for the project versus the No Project condition is minor and is located on former salt evaporation ponds, meaning that Phase 1 is not likely to cause flowing wells in the NCGWB. The impact in the NCGWB is considered to be less than significant based on the significance criteria described in Section 3.1.4.1 of the DEIR, and no mitigation is required.

Response to Comment L4-8

EBMUD will submit a Drinking Water Source Assessment and Protection (DWSAP) Program document for Phase 1 of the Bayside Groundwater Project to the California Department of Health Services for a water supply permit for use of groundwater as a new source of supply. As is standard, the assessment and application will be submitted after certification of the EIR and approval of the project by the EBMUD Board of Directors.

Response to Comment L4-9

See Master Response 3 – Monitoring Programs, and Master Response 5 – Groundwater Contamination.

Response to Comment L4-10

As described in Section 3.10.5 of the DEIR, construction and operation of Phase 1 would result in minor impacts to landfill capacity, electrical service, sewer service, and the storm drain system that can easily be accommodated with existing infrastructure. All impacts to Public Services and Utilities from the Proposed Project are less than significant. However, as described on page 7-23, severe water rationing under the No Project alternative would impact the ability of service providers and utilities to meet customer demands. This would

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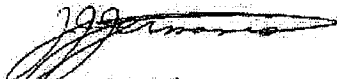
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- L4-12
12. The DEIR contains no discussion or impact evaluation of either short- or long-term effects on the deep aquifer from the introduction of Endocrine Disrupter Compounds (EDCs) from injecting potable water into the aquifer as part of Phase 1. Section 4.2.2 states that for Phase 2 the level of disinfectant by-products (DBPs) in withdrawn water is expected to be lower than that input due to mixing and dilution with the uncontaminated deep aquifer. This statement supports the theory that EDCs, and the subset of DBPs, through this mixing could be spread and contaminate this pristine 9,000-year-old aquifer.
- L4-13
13. Please note that CEQA Section 15088 (b) requires that a "lead agency shall provide a written proposed response to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report." In order to allow staff the maximum amount of time to review responses prior to action being taken on the DEIR at the public hearing, we request that responses to our specific comments be either faxed or emailed to City Principal Engineer Keith Cooke at (510) 577-3294 or kcooke@ci.san-leandro.ca.us in the timeframe established by the CEQA Guidelines.

Thank you for consideration of these important points.

If you have any questions about the above comments, please feel free to call Mr. Cooke at (510) 577-3439.

Very truly yours,


John J. Jermanis
City Manager

cc: City Council
Community Development Director Hanson Hom
Environmental Protection Specialist John Camp
Planning Manager Debbie Pollart
Principal Engineer Keith Cooke

Response to Comment L5-1

Comment noted.

Response to Comment L5-2

See Master Response 7 – Project Phasing.

Response to Comment L5-3

See responses to comments L5-25 through L5-28.

Response to Comment L5-4

See response to comment L5-29.

Letter L5. Alameda County Water District.

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- L5-5 [3. The Phase 1 Monitoring/Modeling Program is inadequate to determine actual Project impacts and effectiveness of mitigation measures;
- L5-6 [4. The Phase 1 Impact Assessment incorrectly classifies impacts to ACWD and the Niles Cone groundwater basin as "Less than Significant" and lacks the appropriate mitigation measures;
- L5-7 [5. The inclusion of Phase 2 Analysis is inappropriate in the DEIR;
- L5-8 [6. The Commitment for Phase 2 Project EIR is inadequate;
- L5-9 [7. The Phase 2 Impact Assessment of Niles Cone groundwater basin and ACWD water supply impact is inadequate; and
- L5-10 [8. The DEIR Summary of ACWD's 2001 DEIR comments is inadequate.

Each of these items is discussed in greater detail below.

ACWD Background

L5-11 [Alameda County Water District ("ACWD") delivers drinking water to a population of over 320,000 residents in the cities of Newark, Fremont and Union City. ACWD was formed in 1913 for the purpose of protecting underground water in the Niles Cone groundwater basin and conserving the waters of the Alameda Creek watershed. The formation of ACWD was largely in response to a water shortage that occurred as a result of outside entities' exporting local groundwater to the cities of Oakland and San Francisco. Historical over-pumping of the Niles Cone groundwater basin and adjacent groundwater basins resulted in significant seawater intrusion, contaminating much of the aquifer system. Since our inception, ACWD has worked diligently to protect and restore this critical, but vulnerable, resource. The Niles Cone groundwater basin currently provides up to 50% of the water supplies in the ACWD service area. Understandably, protection of this vital resource continues to be of utmost importance to ACWD.

Summary of Project History and Project Understanding

L5-12 [In 2001 EBMUD released a Draft Environmental Impact Report ("2001 DEIR") that stated that EBMUD planned to develop a new well field (7 to 10 wells) in the City of San Leandro and the unincorporated area of San Lorenzo. This well field would tap the deeper aquifer system in what is referred to as the South East Bay Plain groundwater basin. This well field would provide a dry year supply of up to 15 million gallons per day (10,000 to 15,000 acre-feet per year) to the EBMUD service area. The 2001 DEIR presented two operating alternatives: an injection/extraction alternative (utilizing aquifer storage and recovery wells); and an extraction-only alternative (groundwater extraction without recharging the groundwater system). According to the 2001 DEIR, the preferred operating alternative was the injection/extraction alternative.

Response to Comment L5-5

See response to comment L5-30.

Response to Comment L5-6

See response to comment L5-29, L5-30, and L5-31.

Response to Comment L5-7

See Master Response 7 – Project Phasing.

Response to Comment L5-8

See Master Response 7 – Project Phasing.

Response to Comment L5-9

See response to comment L5-33.

Response to Comment L5-10

See Master Response 12 – Comments on 2001 DEIR.

Response to Comment L5-11

Comment noted.

Response to Comment L5-12

The maximum dry-year extraction will be 1121 AF/yr, and will generally occur over the warm-weather months.

Letter L5. Alameda County Water District.

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Substantial concerns were expressed by ACWD, the City of Hayward and others prior to and during the public review of the 2001 DEIR (see Attachment A, ACWD's Comment Letter on the 2001 DEIR). As a result of those concerns, EBMUD worked cooperatively with ACWD and Hayward from 2001 through 2004 to further evaluate the proposed project (see description below of technical studies completed to date). Rather than finalize or re-circulate the 2001 DEIR, EBMUD has chosen to develop and circulate a new Draft EIR for the proposed project ("2005 DEIR" or "DEIR"). As described in the 2005 DEIR, EBMUD is proposing a two phased approach to develop the Bayside Groundwater Project. Under Phase 1, an existing EBMUD well will be utilized to provide a maximum annual dry year water supply of 1,100 acre-feet. This well will have a capacity of 2 million gallons per day (mgd), but extraction will be limited to 6 months per year, resulting in an extraction amount of no more than 1,100 acre-feet per year. The Phase 1 operations will also include injection of 1 mgd at this well when EBMUD's water supplies in the Mokelumne and local watershed are sufficient to allow for injection of excess water.

The 2005 DEIR also includes a Phase 2 Bayside Project that will allow for an expansion of the extraction capacity of the project up to 10 mgd. As stated in the DEIR, EBMUD plans to use information gained during the Phase 1 start-up operations to further evaluate the potential for a Phase 2 expansion. The DEIR acknowledges that currently the Phase 2 component is uncertain in terms of location of the facilities, their capacities and operations. As such, the DEIR states that in the event that EBMUD chooses to move forward with a Phase 2 Bayside Project, a new DEIR will be developed and circulated to address potential impacts of the expanded project.

Summary of Niles Cone Groundwater Basin Operations and ACWD Concerns Regarding Project Impacts

ACWD's concerns with the proposed Project relate to potential impacts to the adjacent Niles Cone groundwater basin, underlying ACWD's service area. Groundwater from the Niles Cone groundwater basin is one of three primary sources of supply for ACWD, along with imported water supplies from the State Water Project (SWP) and San Francisco's Hetch-Hetchy system. ACWD replenishes the groundwater basin at our groundwater recharge facilities with local runoff supplemented by imported SWP supplies. ACWD recovers this stored water for potable use at our production wells. Recharge water not only ensures an adequate supply for our production wells but also maintains flow gradients necessary to prevent a recurrence of seawater intrusion, keep brackish groundwater away from our well fields, and flush existing brackish water from the groundwater basin. ACWD manages the Niles Cone groundwater basin such that groundwater elevations in the upper aquifer (Newark Aquifer) are typically maintained between 10 feet and 20 feet above mean-sea-level (msl) under normal hydrologic conditions. During dry years the groundwater elevations may be lowered below 10 feet msl. However, because of concerns about seawater intrusion from the adjacent San Francisco Bay, the minimum operating groundwater elevation in the Newark Aquifer is approximately 3 feet msl. Based on a maximum operating range of between 3 feet and 20 feet msl, the maximum usable storage in the Niles Cone groundwater basin is limited to approximately 17,000 acre-feet (1 foot of groundwater in the Newark Aquifer equates to approximately 1,000 acre-feet of usable storage in the groundwater basin).

Response to Comment L5-13

According to base condition modeling using the Niles Cone and South East Bay Plain Integrated Groundwater and Surface Water Model (NEBIGSM) (CH2M HILL 2005a) and as indicated on Attachment B to this Final EIR, Newark Aquifer water levels may decline as far as 5 feet below mean sea level under No Project conditions.

Letter L5. Alameda County Water District.

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L5-14

Because of the proven hydraulic connection between the Niles Cone and the South East Bay Plain groundwater basins, ACWD has long been concerned about potential water supply and water quality impacts to ACWD and the Niles Cone groundwater basin that may occur as a result of the proposed Bayside Project.

Examples of potential long-term impacts to the Niles Cone groundwater basin include:

L5-15

- Saltwater Intrusion: The Niles Cone groundwater basin is in direct hydraulic connection with San Francisco Bay. Under historical conditions, a significant amount of contamination of the aquifers occurred due to saltwater intrusion. ACWD has long managed the groundwater basin to prevent additional saltwater intrusion, and to reverse these impacts through ACWD's Aquifer Reclamation Program and groundwater recharge program. Groundwater extraction at the Bayside Project may cause a decline in Niles Cone groundwater levels to below sea-level, potentially inducing renewed saltwater intrusion.

L5-16

- Brackish Groundwater Movement: Large pockets of trapped brackish groundwater currently exist in all of the major aquifers in the Niles Cone groundwater basin. ACWD operates the groundwater basin to ensure that this trapped brackish water does not migrate toward ACWD's well fields, and to reclaim contaminated portions of the aquifers through the Aquifer Reclamation Program. Groundwater extraction (or injection) activities by the Project may change groundwater levels and gradients in the Niles Cone groundwater basin, thereby resulting in the lateral or vertical (i.e. from one aquifer to another) movement of the brackish groundwater.

Examples of potential impacts to ACWD operations include:

L5-17

- Loss of ACWD Water Supplies: Groundwater extraction at the Bayside Project may result in a decline in groundwater levels in the Niles Cone groundwater basin, resulting in a direct loss of ACWD's water supplies. For example, a decline in groundwater levels may compel ACWD to reduce groundwater pumping at either our Mowry Wellfield or Aquifer Reclamation Program wells in order to: (1) prevent seawater intrusion; (2) prevent the spreading of existing plumes of trapped brackish groundwater; and/or (3) maintain target groundwater levels in the Niles Cone in order to ensure adequate supplies for subsequent years.

L5-18

- Overflow/Artesian Conditions: ACWD currently operates the Niles Cone groundwater basin to ensure that the basin is not recharged beyond its capacity to store water. Over-filling of the basin as a result of the Bayside Project's injection activities may result in (1) water supply losses through groundwater "overflows" to Alameda Creek and/or excessive groundwater outflows to San Francisco Bay and/or (2) artesian conditions in local wells or springs and possible damage to overlying properties.

L5-19

- Increased Pumping Costs, Energy Use and Loss of Production Capacity: Groundwater level declines within the Niles Cone groundwater basin that occur as a

Response to Comment L5-14

See Master Response 3 – Monitoring Program, Master Response 5 – Groundwater Contamination, and Sections 3.1 and 3.2 of the DEIR.

Response to Comment L5-15

See Phase 1 Potential Impact 3.1-5 of the DEIR. Phase 1 of the project is not expected to cause seawater intrusion or to interfere with progress to reverse seawater intrusion in the NCGWB, and could repel/shrink brackish water plumes, a beneficial effect on saltwater intrusion.

Response to Comment L5-16

As described in Phase 1 Potential Impact 3.1-2 in the DEIR and as shown on Attachment B to this Final EIR, Phase 1 is not expected to have a significant impact on water levels in the NCGWB. In addition, as described in Phase 1 Potential Impact 3.1-5, Phase 1 of the project would not cause seawater intrusion or interfere with progress to reverse seawater intrusion in the NCGWB, and could repel/shrink brackish water plumes, a beneficial effect.

Response to Comment L5-17

As described in Phase 1 Potential Impact 3.1-2 in the DEIR, Phase 1 is not expected to have a significant impact on water levels in the NCGWB or on Alameda County Water District (ACWD) operations. In addition, as described in Phase 1 Potential Impact 3.1-5, Phase 1 of the project would not cause new seawater intrusion or interfere with progress to reverse seawater intrusion in the NCGWB, and could repel/shrink brackish water plumes, a beneficial effect. The monitoring program, as described in Master Response 3 – Monitoring Programs, will include monitoring of water quality and water levels, which will assure that any saltwater intrusion, though not anticipated from the project, would be detected.

Response to Comment L5-18

As described in Phase 1 Potential Impact 3.1-2 in the DEIR, the area over the NCGWB where the piezometric head of the Deep Aquifer is above ground surface is similar to No Project conditions. The small additional area where the piezometric head is above ground surface in the NCGWB is located on former salt evaporation ponds. Potential effects from overflow/artesian conditions are less than significant; see also response to comment L4-7 and Master Response 2 – Potential for Flowing Wells.

Response to Comment L5-19

As described in response to comment L5-17, no significant effects to groundwater levels in the NCGWB or to ACWD operations will occur from Phase 1 of the project. Model results indicate that for over 50 percent of the time, water levels would be higher in the Newark Aquifer as a consequence of Phase 1. Therefore, increased groundwater pumping costs and energy use, as well as a loss in well output, are not expected to occur.

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L5-19

result of the Bayside Project will result in increased groundwater pumping costs for ACWD as well as increasing our demand for electric energy needed to power the pumps, and a potential loss in well output due to increased lift requirements.

Summary of Technical Studies Completed Since Release of the 2001 Draft EIR

As part of ACWD's review of the 2001 Draft EIR, substantial concerns were expressed by ACWD regarding the adequacy of the technical evaluation of potential impacts on the Niles Cone groundwater basin and ACWD water supplies. A key comment made by ACWD on the 2001 Draft EIR was that, in order to comply with CEQA for the Bayside Project, EBMUD should conduct additional technical studies to evaluate these potential impacts. Specifically, ACWD indicated that the technical studies should include:

L5-20

- A hydrogeologic assessment of the boundary between Niles Cone and South East Bay Plain groundwater basins;
- Aquifer pump tests to further characterize the nature of this boundary;
- Development and utilization of a regional groundwater model covering both the Niles Cone and South East Bay Plain groundwater basins; and
- Evaluation of potential impacts on ACWD and the Niles Cone under a range of hydrologic and Project operating conditions.

From 2001 through 2004, EBMUD worked cooperatively with ACWD and the City of Hayward to conduct technical studies to address these concerns. The following studies were completed under the oversight of a Technical Review Committee consisting of ACWD, EBMUD and City of Hayward staff:

L5-21

Hydrogeologic assessment and aquifer pump test project (2002-2003): In April 2003, Luhdorff and Scalmanini Consulting Engineers completed a hydrogeologic assessment and aquifer pump tests in the boundary area between the South East Bay Plain and Niles Cone groundwater basins. A key conclusion from the hydrogeologic assessment was that there appeared to be a "transition zone" within which the deep aquifers in both groundwater basins converged. The subsequent aquifer pump tests confirmed that there is a "definite hydraulic connection" between the deep aquifers in the South East Bay Plain and Niles Cone groundwater basin. Specifically, pumping test wells in the South East Bay Plain groundwater basin resulted in groundwater level declines in the adjacent Niles Cone groundwater basin.

L5-22

Development of a regional groundwater model (2003-2004): Based on the results of the hydrogeologic assessment and aquifer pump tests, EBMUD and ACWD worked together to develop a single, regional groundwater model that covered the Niles Cone and South East Bay Plain groundwater basins and the inter-connection between these basins. In order to develop this model, the consulting firms of WRIME and CH2M Hill were retained to expand ACWD's existing groundwater model of the Niles Cone groundwater basin into the South East Bay Plain groundwater basin. This new, expanded groundwater model is based on the integrated

Response to Comment L5-20

Comment noted.

Response to Comment L5-21

Comment noted. The aquifer test did demonstrate a hydraulic connection between the SEBPB and the NCGWB. However, the degree of this connection is not clear, and some impediment to flow between the two basins may exist.

Response to Comment L5-22

As described in the response to comments L5-29 and L5-30 below, the NEBIGSM model is sufficiently accurate to determine impacts of the Phase 1 Bayside Groundwater Project on the NCGWB. ACWD and EBMUD worked cooperatively to develop this tool specifically to analyze impacts of the Bayside Groundwater Project on the NCGWB and the model has been accepted and used by ACWD. Model results indicate no significant impact on the NCGWB due to changes in groundwater levels from Phase 1 (CH2M HILL 2005a).

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Groundwater Surface Model (IGSM) code and is called the Niles-East Bay Plain Integrated Groundwater Surface Water Model (NEBIGSM). The NEBIGSM is capable of simulating groundwater flow and groundwater levels in all of the major aquifers in both groundwater basins. Key input data to the model include aquifer thicknesses and hydraulic characteristics, land and water use, rainfall, groundwater pumping and artificial recharge. Based on these and other input data, the model simulates groundwater recharge, groundwater flow, and groundwater levels throughout the groundwater basins. Although much of the data needed to develop the regional groundwater model in the South East Bay Plain Basin was not readily available (i.e. information on aquifer characteristics, historical groundwater pumping, etc.), the study team used the best available information and engineering judgment to estimate missing information. In addition, through a model calibration process, input data to the model was further refined in order to match historically measured groundwater elevations from 1964-2000 with model-simulated groundwater elevations.

A key limitation of the NEBIGSM is that, because there has not been a significant pumping stress on the groundwater basin in the Bayside project area within the model calibration period (1964-2000) and that there are significant data gaps in the South East Bay Plain groundwater basin, it is not presently possible to verify the accuracy of the model in simulating the proposed extraction/injection operations of the Bayside Project. ACWD has recognized that the NEBIGSM, in its current state, is a valuable tool for estimating potential groundwater impacts of the proposed smaller Bayside Project (Phase I - 1 mgd), but that the model may not be entirely accurate and will require updating and re-calibration as more information is learned from the Phase I project operations.

L5-22

L5-23

Evaluation of 5 mgd and 10 mgd Bayside Groundwater Project Effects and Mitigation (2003-2004): The Technical Review Committee and its consultants used the NEBIGSM to conduct a preliminary evaluation of the potential impacts of the Bayside Project on the Niles Cone groundwater basin and ACWD's water supplies. The focus of these technical analyses was on two Bayside Project scenarios: 5 mgd extraction scenario and 10 mgd extraction scenario. Both of these scenarios were based on "conjunctive use" operations whereby EBMUD would also inject water in wet years. The modeling analyses was based on 1922-2000 historical hydrologic conditions superimposed with projected future water supply operations in both the Niles Cone and South East Bay Plain groundwater basins. The results of this preliminary evaluation indicated that either Bayside Project scenario (5 mgd or 10 mgd) would have significant impacts on ACWD's water supplies and the Niles Cone groundwater basin. For example, under the 5 mgd scenario, the modeling analyses indicated that the Bayside Project would result in a decline in groundwater levels of 3.7 feet in the Newark Aquifer in the Niles Cone groundwater basin. Under the 10-mgd scenario a peak groundwater level decline of 7.7 feet was estimated. Based on operating levels of 3 to 20 feet mean-sea-level in the Newark Aquifer, these impacts would result in a 22% and a 45% loss in local groundwater supplies available to ACWD in dry years under the 5 mgd and 10 mgd Bayside Project scenarios, respectively. These impacts would occur during drought conditions when the local groundwater supply is most critical to ACWD.

Utilizing the NEBIGSM, EBMUD and its consultant (CH2M Hill) also conducted preliminary analyses of mitigation measures. This mitigation analysis indicated that EBMUD would have to provide ACWD with a new, supplemental water supply during the dry years when the ACWD's

Response to Comment L5-23

The 5-mgd and 10-mgd projects evaluated in 2003-2004 are not the same project as currently proposed in the 2005 DEIR. These projects were not carried forward, and the potentially significant effects described in the comment therefore do not apply to the current project or the contents of the 2005 DEIR.

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groundwater supplies would be impacted by the Bayside Project. In order to prevent a significant impact, ACWD indicated that mitigation should include providing sufficient water supplies to ACWD such that there would be no resultant groundwater declines in the Newark Aquifer in the Niles Cone groundwater basin. To meet this criterion, an annual modeling analysis would be required to determine the amount of mitigation water needed under the specific hydrologic conditions occurring in that year.

As an alternative, EBMUD requested that ACWD consider receiving a uniform quantity of dry year mitigation water. The modeling analyses indicated that under this alternative approach, ACWD would receive adequate dry year supplies, as estimated within the range of accuracy for the groundwater model. ACWD concurred with this request, with the proviso that the model-simulated cumulative drawdown impact does not exceed one-half foot (0.5 feet) in any given year, and that this model-simulated drawdown does not last for greater than 12 consecutive months. With this proviso, the modeling analyses indicated that EBMUD would need to provide ACWD with up to 1.6 mgd and 3.2 mgd of new, supplemental dry year supplies to mitigate for the drawdown impacts of a 5 mgd and 10 mgd Bayside Project, respectively. It should be noted that these analyses were preliminary. After completion of the draft analyses, ACWD provided significant comments to EBMUD and CH2M Hill on the methodology and results presented in the draft memorandum, "Bayside Groundwater Project-Evaluation of Project Effects and Mitigation Measures" (CH2M Hill, January 22, 2004). However, to our knowledge these analyses and memorandum were never finalized. Rather, EBMUD chose to move forward with a smaller (Phase 1 - 1 mgd) Bayside Project while still considering a larger project (Phase 2 - up to 10 mgd) for implementation at a later date.

ACWD Comments on the 2005 Bayside Project DEIR

1. The Phase 1 and Phase 2 project descriptions do not adequately describe the proposed Project: CEQA Guidelines require that a project description include the precise location of the project, a clearly written statement of objectives and a "general description of the project's technical, economic and environmental characteristics." CEQA Guidelines § 15124. "An accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity." *McQueen v. Board of Directors of the Mid-Peninsula Regional Open Space District*, (6th Dist. 1988) 202 Cal. App. 3d 1136, 1143; *see also County of Inyo v. City of Los Angeles* (3rd Dist. 1977), 71 Cal. App. 3d 185, 192-93 (holding that "A curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the "no project" alternative) and weigh other alternatives in the balance.")

As described below, the DEIR does not adequately describe the proposed project. EBMUD should revise the project description to fully describe the proposed Phase 1 and Phase 2 Bayside Project, as noted below, or simply delete Phase 2 from the document.

- A. Extraction Capacity is inconsistently described. The DEIR is inconsistent in how the Phase 1 Bayside Project extraction capacity is characterized. In some cases, the

Response to Comment L5-24

As suggested by the comment, the project evaluated in the draft memorandum was not carried forward, and the memorandum does not apply to the current project.

Response to Comment L5-25

The extraction capacity is clearly described on page 2-15 of the DEIR. To alleviate any confusion regarding the Phase 1 and potential Phase 2 extraction capacity, the following clarification is provided. In extraction years, the Phase 1 project would be operated at an extraction rate up to 2-mgd for approximately 6 months in a year to supplement EBMUD's waster supply needs. The Phase 1 Bayside Well No. 1 would produce an annual yield of 1 mgd, which equals 1,121 acre-feet (AF) per year. Extraction would be limited to 1,121 AF per year. Similarly, Phase 2, if implemented, would not exceed an average annual capacity of up to 10 mgd; details of Phase 2 operation have not yet been determined.

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capacity is characterized as "average 1 mgd" (Table ES-1) and in other cases the project capacity is described with the statement that the "average annual extraction would not exceed 1 mgd," suggesting that the average capacity would not exceed 1 mgd over a long-term period (i.e., multiple years). The latter description could be interpreted to mean that the extraction could exceed 1 mgd (1,100 acre-feet) in any given year, as long as the average annual extraction did not exceed 1 mgd over the long-term.

The DEIR should be very clear and consistent throughout the document in describing the Phase 1 project capacity as having a maximum annual extraction capacity of no greater than 1 mgd (1,100 acre-feet). Similarly, the DEIR should correctly characterize the Phase 2 project description. The DEIR describes the Phase 2 project as having an "average" capacity of up to 10 mgd. This should be clarified to state that the maximum annual extraction capacity of the Phase 2 project will be no greater than 10 mgd.

- L5-25
- B. The injection component of the project is improperly characterized in the project description. The DEIR project description states that, "The Bayside Groundwater Project involves the injection of local runoff and water conserved in the Mokelumne River in wet years into the SEBPD for later recovery and use during a drought." This implies that the Bayside Project would be a groundwater banking project whereby water is "banked" in the groundwater basin prior to being extracted for use in dry years. Actually, the project operations has no such requirement that water be banked prior to extraction, nor is there a requirement that a long-term balance be maintained such that the amount of "injected" water be equal to the amount of extracted water. In fact, the extraction component of the project may become operational before any water is injected. As such, the project description should be modified to correctly and completely describe the project operations.
- L5-26
- C. The project description misrepresents the uses of the Phase 1 yield. The project description implies that the Phase 1 project would provide up to 1 mgd of new, dry year supplies to EBMUD customers. However, as described in Section 1.4.4 (Mokelumne River Water Supply), 20% of the Bayside Project's yield "will result in a corresponding reduction in Mokelumne water import during droughts..." under a "gainsharing" provision in EBMUD's Mokelumne River FERC hydropower license. This means that 20% of the Bayside Project yield will effectively support Mokelumne River fisheries in lieu of providing dry year supply for EBMUD customers. The project description should be very clear on this point.
- L5-27
- D. The conditions triggering the extraction and injection components of the project are not clearly specified. The DEIR's description of the extraction and injection operations is not adequate to determine when these operations may occur. On page 2-15 "Sustained Operation" the DEIR states that, "During dry years, EBMUD would recover both injected water and native groundwater...". However, no other description of what constitutes a "dry year" is provided in the text. In Table 2-1, under "Operational Parameters," it is stated that, "Drought Supply - May initiate operation when October reservoir storage is projected to decline below 500,000 AF". Neither of these
- L5-28

Response to Comment L5-26

The Phase 1 Project is not a groundwater banking project. As described on page 2-15 of the DEIR, Phase 1 operations involve the extraction of injected water and native groundwater for use during droughts. However, based on past hydrologic conditions, the Phase 1 project is expected to inject approximately 30 percent more water than is extracted (CH2M HILL 2005a).

Response to Comment L5-27

To alleviate any confusion regarding the quantity of water that will be made available during drought conditions by operation of Phase 1 of the Bayside Groundwater Project, the following clarification is provided. Phase 1 will provide up to 1 mgd of dry year supply for use by EBMUD. As stated in Section 1.4.4 of the DEIR, 20 percent of that yield would result in a corresponding reduction in water imported from the Mokelumne River during drought conditions (up to 20,000 AF per drought for all EBMUD supplemental water supply projects) and the remaining 80 percent will go to increased water availability and water service reliability during droughts. This measure will help protect Mokelumne fisheries during a drought, and is part of the active, cooperative management of the Mokelumne River Basin. The provision to support Mokelumne River fisheries is already incorporated into the calculation of EBMUD's need for water described in Master Response 9 – Need for Project.

Response to Comment L5-28

For project purposes, a dry (drought) year is determined when EBMUD October reservoir storage is projected to decline below 500,000 AF, as stated in Table 2-1 of the 2005 DEIR. EBMUD makes the dry year determination in April of each year (EBMUD 2001b). Thirty percent of years, on average, are dry years. EBMUD expects that most extraction will occur during warm weather months and will not exceed 1,121 acre-feet per year; see Section 2.4.1.2 of the DEIR. Extraction would only occur in dry years.

Similarly, conditions under which injection would occur include sufficient runoff in the local watershed or sufficient conserved Mokelumne River water and active flood releases on the Mokelumne River. The quantity of water injected will not exceed local runoff into the Upper San Leandro Reservoir in any given year. EBMUD measures the local runoff continuously throughout the rainy season.

Due to operational uncertainties, EBMUD cannot predict the minimum amount of water that will be injected, but based on historic hydrologic conditions, EBMUD anticipates that injection will occur in approximately 40 percent of years (see Section 2.4.1.2 of the DEIR) and that injection volumes will be approximately 30 percent greater than extraction volumes on average (CH2M HILL 2005a).

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descriptions is sufficient to determine when actual extractions would occur. The DEIR should provide more specifics on what conditions will trigger extraction at the Bayside Project, and at what frequency EBMUD anticipates these conditions to occur.

Similarly, the description of the injection component of the operation is not adequate to determine when these operations would occur. The DEIR states that conditions in which injection would take place include "1) active flood releases on the Mokelumne River, and 2) sufficient runoff in the local watershed." (page 2-15) However, the DEIR does not provide definitions of what constitutes "active flood releases" on the Mokelumne nor what constitutes "sufficient runoff" in the local watershed. The DEIR should provide more detailed descriptions of these conditions, and specifically, how EBMUD proposes to determine if these conditions are met, and what guarantees will be in place that commit EBMUD to injection at the Bayside Project when these conditions are met.

L5-28

L5-29

2. The Significance Criteria do not adequately address drawdown impacts in the Niles Cone groundwater basin and associated ACWD water supply losses. CEQA requires that an EIR consider and discuss all significant environmental impacts of the project. Pub. Resources Code §§ 21100, et seq., CEQA Guidelines §§ 15126 and 15126.2. As lead agency, EBMUD is "encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect . . ." CEQA Guidelines § 15064.7(a).

Although ACWD appreciates EBMUD's desire to improve the dry year reliability for its service area, this improvement in dry year reliability should not be made at the expense of ACWD's dry year groundwater supplies. As such, it has long been the position of ACWD that the Bayside Project should not result in the drawdown of the Newark Aquifer in the Niles Cone groundwater basin. The description of what constitutes a significant impact (Section 3.1.4.1) should specifically state that any groundwater level decline in the Newark Aquifer in the Niles Cone groundwater basin would result in a significant impact to ACWD.

ACWD has long managed the Niles Cone groundwater basin to maintain groundwater levels in the Newark Aquifer above sea-level. This is required to prevent seawater intrusion from the adjacent San Francisco Bay and to provide for annual and dry year water supplies. Through ACWD's long-term management of this groundwater basin and through groundwater modeling, a relationship between usable groundwater storage and Newark groundwater levels has been developed, in which every foot of decline in Newark Aquifer levels equates to a water supply loss of approximately 1,000 acre-feet.

Because of the importance of the Niles Cone groundwater supplies for meeting ACWD's dry year needs, the 2005 DEIR should state that any drawdown in the Newark Aquifer levels in dry year conditions is a significant impact and EBMUD must provide mitigation to ACWD to address this impact. For the purpose of modeling of impacts and developing and analyzing mitigation measures only, and in recognition of the limitations of the model's accuracy, ACWD has stated that a model-simulated cumulative drawdown of no greater than 0.5 feet in

Response to Comment L5-29

The significance criteria identified in the DEIR in Section 3.1.4.1 regarding potential impacts to groundwater levels are:

- Substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level
- Interferes with the operation of other existing wells in the SEBPB or NCGWB
- Results in loss of storage in the aquifer that necessitates changes to ACWD operations and thereby interferes with control of saltwater intrusion by decreasing the amount of salt flushed to the Bay from the Newark Aquifer; increases the downward transport of salts from the Newark Aquifer to the Centerville and Fremont Aquifers, and ultimately to the Deep Aquifer; or enhances the lateral spreading of an existing chloride plume in the NCGWB

Consistent with CEQA Guidelines Section 15064.7, each of these significance criteria includes identifiable quantitative, qualitative or performance levels of a particular environmental effect. It should be noted that the significance criteria were developed in coordination with ACWD. Thresholds of significance are established in order to determine at what point a change in the environment (an environmental effect) becomes significant. The Guidelines do not direct agencies to determine that any change in the environment, regardless of the degree of change, is significant.

Figure 13 from *Technical Memorandum, Bayside 1-MGD Groundwater Project – Evaluation of Project Effects* (CH2M HILL 2005a) (attached to this Final EIR and referenced in Section 3.1 of the 2005 DEIR) demonstrates the lack of significant impact on ACWD operations or supplies. While ACWD basin management results in nearly 20 feet of seasonal fluctuation in water levels in the Newark Aquifer of the NCGWB, the Phase 1 project results in no appreciable change when compared to the no project alternative. The figure further indicates that ACWD may maintain full operation and management of its basin with no reduction in its dry year water supply even when Phase 1 operation causes drawdown in the NCGWB to last for more than 12 months. Similarly, modeling indicates that the significance criteria are met with a maximum 79-year drawdown of 0.7 feet (CH2M HILL 2005a).

Use of groundwater modeling as reflected in the *Technical Memorandum, Bayside 1-MGD Groundwater Project – Evaluation of Project Effects* (CH2M HILL 2005a) to determine the potential significance of Phase 1 impacts is consistent with CEQA. CEQA Guidelines 15064(f) states that "the decision as to whether a project may have one or more significant effects shall be based on substantial evidence." As described in CEQA Guidelines Section 15064(f)(5), "substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." The numeric groundwater flow model for the SEBPB and the NCGWB was developed cooperatively by EBMUD, ACWD, and the City of Hayward; see Section 3.1.1 of the DEIR. The model was developed for the express purposes of managing the NCGWB and assessing impacts of the Bayside Groundwater Project. Groundwater experts developed the model, which was based on data collected by all three agencies as well as data from the pilot test of injection/extraction and groundwater

treatment performed with the existing well (see Sections 3.2.3.2 and 3.2.3.3 of the DEIR for details on the pilot test). At ACWD's request, EBMUD agreed to use the model as the impact assessment tool for the project. ACWD has already been using the model to manage the NCGWB, evaluating effects of its own management scenarios. The model has been calibrated against historic conditions and is adequate to determine Bayside Groundwater Project impacts.

As described in the DEIR for Potential Phase 1 Impact 3.1-2, impacts from changes in groundwater levels affecting ACWD operations in the NCGWB are less than significant, and no mitigation is required. Likewise, as described in Potential Phase 1 Impact 3.1-5, impacts from potential saltwater intrusion and/or movement of pre-existing plumes of brackish water in the NCGWB are less than significant, and no mitigation is necessary. Extensive monitoring of the Phase 1 project will be performed, and development of the monitoring program will be done in coordination with ACWD. See Master Response 3 – Monitoring Programs for more information.

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the Newark Aquifer would be acceptable to use as a significance criterion. In addition this model-simulated drawdown should not last for more than 12 consecutive months. This significance criterion should apply to both the Phase 1 proposed project and any future Phase 2 Bayside Project.

L5-29

3. The Phase 1 Monitoring/Modeling Program is Inadequate to Determine Actual Project Impacts and Effectiveness of Mitigation Measures. Due to the impacts of the Bayside Project on the Niles Cone, a comprehensive monitoring program is required to assess actual effects/impacts of the Bayside Groundwater Project over the life of the Project. Monitoring should include the following major elements: 1) regular periodic collection of water level data throughout the Niles Cone and South East Bay Plain groundwater basins, 2) regular periodic collection of groundwater quality data in the Niles Cone groundwater basin, and 3) groundwater flow modeling. Groundwater modeling of updated historical conditions should be performed each year to distinguish Bayside Project impacts from other phenomena that may have affected measured water levels in the Niles Cone groundwater basin since startup of Bayside Project operations. Hence, modeling should be considered an element of the Monitoring Program. The model will also be needed to simulate future conditions under Phase 2 operations if EBMUD determines to proceed with a Phase 2 project. Future use of the model to re-predict future Phase 1 impacts will also be required if the model requires recalibration.

L5-30

Achievement of these objectives requires verification that the groundwater flow model is sufficiently accurate under actual Bayside Project operations over the short and long-term. Annual verification would confirm model accuracy or would trigger the need to recalibrate/improve the model, thereby providing the process by which confidence replaces uncertainty in the model over time. This verification should be achieved by a comparison of model-simulated results of the updated historical period and the model under Bayside Project operations. In order for the model to be reliable, it should demonstrate accuracy in simulating groundwater piezometric heads (water levels) in the South East Bay Plain groundwater basin (from which the stresses would emanate) as well as in the Niles Cone groundwater basin. Hence, a sufficient network of monitoring wells, and a program for reasonably frequent measurements of water levels in these wells, are required in both the South East Bay Plain and Niles Cone groundwater basins. In addition to providing the means to assess accuracy, such water level data over time, under actual Bayside Project operations, would also provide the knowledge base for recalibrating the model.

Water quality should also be monitored in the Niles Cone to ensure that the Project is not causing, or contributing to, unexpected water quality impacts, such as migration of salts in abandoned wells, or mobilization of a brackish water plume. Such impacts could be evidenced by unusual or unexpected water quality trends in individual wells or water quality patterns given by plume maps. Potentially, a solute transport model could be employed in the future to aid in interpretation of water quality data.

The DEIR pledges monitoring, model verification, and cooperation with the City of Hayward and ACWD in performing this work and sharing data. The DEIR also pledges to recalibrate the model at least one time between Phase 1 and Phase 2. However, the DEIR is too vaguely

Response to Comment L5-30

See Master Response 3 – Monitoring Programs and Master Response 7 – Project Phasing.

As described in Section 2.4.1.3 and Mitigation Measures 3.1-3a-d, 3.1-6, and 3.2-1a through c of the 2005 DEIR, Phase 1 of the project includes a comprehensive monitoring program for subsidence in the Phase 1 project area, water level effects in the NCGWB and SEBPB, and water quality in the SEBPB. As suggested in the comment, EBMUD will incorporate data collected by ACWD as a part of its water level and water quality monitoring programs into the Bayside Groundwater Project monitoring program. Data collected during Phase 1 operation will be used for additional groundwater modeling and evaluation of potential Phase 2 operations. As described in Master Response 3 – Monitoring Programs, and Section 3.3.2 – Design Criteria of the 2005 DEIR, EBMUD will coordinate with ACWD in integrating the monitoring programs.

A Mitigation Monitoring and Reporting Program (MMRP), consistent with the requirements of Public Resources Code 21081.6(a) and CEQA Guidelines 15091(d) and 15097, will be reviewed by the EBMUD Board of Directors at the time of certification and adoption of the EIR findings. The MMRP will contain information such as key procedures, responsibilities and schedule. As described in Master Response 3 – Monitoring Programs, water quality and water level monitoring will ensure that Phase 1 project operations do not cause any significant impacts.

Field measurement of water levels in the NCGWB will not accurately distinguish between the effects of the 1-mgd Phase 1 project 12 miles away and the over 20 mgd being pumped in the NCGWB by ACWD. A predictive tool such as the NEBIGSM is the best way to assess potential impacts of Phase 1 extraction operations.

The NEBIGSM model was developed jointly by EBMUD and ACWD for the express purposes of managing the NCGWB and assessing impacts of the Bayside Groundwater Project. Based on ACWD's request, EBMUD agreed to use the model as the impact assessment tool for the project. The NEBIGSM is adequate for determining Bayside Groundwater Project impacts in the NCGWB because it is already in use by the overlying groundwater management agency (ACWD) for analyzing impacts of its own management scenarios in the NCGWB. ACWD uses the model to predict water level fluctuations of as much as 20 feet in a single year caused by pumping in the NCGWB. In contrast, the 79-year maximum Newark aquifer drawdown due to the Phase 1 Bayside Groundwater Project is only 0.7 feet. Therefore, the model is accurate enough to predict impacts consistent with the accuracy ACWD requires to manage its basin. A commitment to annual model updates is not warranted because in many years, there will be little or no injection or extraction and therefore little new information to apply to the model. However, EBMUD will share monitoring data with ACWD so that ACWD may update the model as a part of its annual groundwater management planning efforts.

Frequency of model calibration will be determined based on the status of Phase 2 project development, available operational data (injection, extraction, etc.), and the monitoring data collected during the operation of Phase 1 in consultation with consultants, ACWD, and the City of Hayward. Since the model is sufficient for determining Phase 1 impacts,

recalibration is only necessary to incorporate Phase 1 data before modeling potential Phase 2 scenarios.

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worded on how these tasks are to be carried out, and lacks key procedures, schedule, and details of how the different elements of the monitoring program fit together. In addition, the level of effort pledged in the DEIR toward these tasks is insufficient. For example, in Section 2.4.1.2 (page 2-6 to 2-15), the DEIR pledges regional water level monitoring for the start-up period, but is vague on whether or not it would be also be carried out long-term. Also, the DEIR pledges model recalibration only once, sometime between Phase 1 and Phase 2. However, the model may need to be recalibrated more than once, depending on: (1) the results of an assessment of model accuracy under actual Bayside Project Phase 1 operations over the life of the Project and (2) new information developed on the groundwater basin by USGS or others.

Another deficiency in the monitoring program is that the network of monitoring wells in the SEBP is too sparse to meet future recalibration needs. Uncertainty in the current model calibration stems in part from limitations in available water level data over the calibration period of 1964-2000. Moreover, some of the wells that were used in the calibration may not exist today. ACWD has a robust water quality and water level monitoring program within the Niles Cone groundwater basin, and EBMUD should commit to utilizing monitoring data collected by ACWD as part of the overall monitoring of the Bayside Project. EBMUD should also focus most of its water level and quality data collection effort on the South East Bay Plain groundwater basin. Attachment B provides additional details on how the deficiencies in the DEIR's Monitoring Program could be addressed by EBMUD.

4. The Phase 1 Impact Assessment incorrectly classifies impacts to ACWD and the Niles Cone groundwater basin as "Less than Significant" and lacks the appropriate mitigation measures. In addition to identifying all significant impacts of a project, as a lead agency EBMUD also has a duty to provide measures that will avoid or mitigate all significant adverse environmental impacts that may occur as a result of the proposed project. CEQA Guidelines state that: "An EIR shall describe feasible measures which could minimize significant adverse impacts . . ." CEQA Guidelines § 15126.4(a)(1). "Mitigation" as defined under CEQA Guidelines § 15370, includes:

- Avoiding the impact altogether by not taking a certain action;
- Minimizing impacts by limiting the degree or magnitude of the action;
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations;
- Compensating for the impact by replacing or providing substitute resources or environments.

In evaluating the groundwater-related impacts to ACWD and the Niles Cone Groundwater Basin (Phase 1 Impact 3.1-2 and Phase 1 Impact 3.1-5), the DEIR relies solely on the results of groundwater modeling to determine the potential significance of the impacts. Based on this modeling, the DEIR concludes that there would be no significant impacts to Niles Cone groundwater basin or ACWD under the Phase 1 Project.

Response to Comment L5-31

See response to comment L5-29 and L5-30 and Master Response 3 - Monitoring Programs.

As described in the response to comments L5-29 and L5-30, the NEBIGSM model is sufficiently accurate to determine impacts of the Phase 1 Bayside Groundwater Project on the NCGWB. ACWD and EBMUD worked cooperatively to develop this tool specifically to analyze impacts of the Bayside Groundwater Project on the NCGWB and the model has been accepted and used by ACWD. Model results indicate no significant impact on the NCGWB due to changes in groundwater levels from Phase 1 (CH2M HILL 2005a).

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However, the DEIR should recognize that the model (NEBIGSM), as currently calibrated, may not be entirely accurate and may be under-predicting the actual impacts. The DEIR recognizes the potential inaccuracies in the model when it states that the model will be re-calibrated after the Phase 1 start-up operations are complete. Therefore, the DEIR should classify the potential groundwater-related impacts to ACWD and the Niles Cone (Impacts 3.1-2 and 3.1-5) as "potentially significant". Correspondingly, the DEIR should also include provisions for mitigation in the event that the actual impacts are greater than that currently predicted by the model.

The actual impacts should be determined through monitoring and by updating and re-calibrating the model to the most recent operational and hydrologic conditions. Specifically, in the event that, through groundwater monitoring and subsequent groundwater modeling, it is determined that the actual groundwater level declines in the Newark Aquifer exceed the significance criterion, as stated by ACWD in Comment No. 2 above, then EBMUD should commit to providing mitigation to ensure that this significance criterion is not exceeded. Similarly, EBMUD should commit to mitigate in the event that monitoring and/or modeling indicate that the Project has resulted in saltwater intrusion, long-term movement of brackish water plumes in the Niles Cone groundwater basin, vertical movement of salts or other contaminants between aquifers, and/or impacts related to artesian conditions during Bayside Project injection. Potential mitigation measures that should be included in the DEIR include the following:

- Potential mitigation measures for drawdown impacts that should be incorporated into the DEIR include: (1) reducing and/or terminating Phase 1 Project extraction and/or (2) providing ACWD with a new, supplemental dry year water supply.
- Potential mitigation measures for impacts related to artesian conditions due to Bayside injection include: (1) capping of artesian wells and (2) limiting injection rates to prevent other adverse impacts that may occur as a result of Bayside injection.
- Potential mitigation for the vertical movement of contaminated water between aquifer layers in the Niles Cone groundwater basin include: (1) identification and destruction of abandoned wells that may be allowing for cross-contamination between the aquifer layers and (2) reducing and/or terminating Phase 1 Project operations to prevent vertical migration of contaminants through leaky aquifers.
- Potential mitigation for the lateral movement of contaminated water within an aquifer includes reducing and/or terminating Bayside Project operations to prevent significant movements of the existing plumes. In addition, because groundwater modeling has shown that the Bayside Project injection operations are required to offset an increase in plume movement due to the Project's extraction operations, the DEIR needs to commit EBMUD to injection operations at the frequency and rate currently anticipated in the DEIR. In the event that EBMUD does not inject according to these plans, the extraction operations should be reduced correspondingly such that there will be no impact to the later movement of plumes in the Niles Cone groundwater basin.

L5-31

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L5-32

5. The inclusion of Phase 2 Analysis is inappropriate in the DEIR. The inclusion of the "Phase 2" analysis in the DEIR is inappropriate. EBMUD has stated that it is not certain when, or even whether, it will proceed with Phase 2 of the project. If it were to proceed, the scope could be as small as 2 mgd or as large as 10 mgd. (ES 2.2) It is even unknown where the project will be located, what facilities would be required and how it would be operated. (ES 2.4) Furthermore, EBMUD has indicated that it does not intend to expand the 1 mgd project in the immediate future. Given the uncertainty about whether Phase 2 will ever come to pass, and if so, its timing, size and location, it is neither legally necessary nor appropriate for EBMUD to prepare an expanded EIR for this uncertain future project.

In similar circumstances, courts have upheld EIRs focused on the impacts of the immediate project, and have not required detailed discussion of possible (but uncertain) future expansions. See, e.g., *Lake County Energy Council v. County of Lake* (1977) 70 Cal. App. 3d 851; *No. Oil, Inc. v. City of Los Angeles* (1987) 196 Cal. App. 3d 223. This is particularly the case where the initial EIR does address the impacts of a possible future project in general terms under the "cumulative impacts" section and where a subsequent project-specific EIR will be prepared before any expansion actually occurs. (See, e.g., *Big Rock Mesas v. Board of Supervisors* (1977) 73 Cal. App. 3d 218; *Del Mar Terrace Conservancy v. San Diego* (1992) 10 Cal. App. 4th 712.) EBMUD can satisfy both of those conditions by limiting its project-specific EIR to the 1 mgd project.

However, rather than addressing potential Phase 2 impacts in the Cumulative Impacts section, EBMUD has instead decided to address uncertain impacts on groundwater quality, levels and saltwater intrusion, among other impacts, even though there is no data on which to base the discussion of impacts. (Section 4.0) Not surprisingly, the discussion is vague and does not include any details on the proposed monitoring program nor the methodology for evaluating impacts that would require mitigation. Furthermore, the DEIR discusses the possibility of mitigation measures, but, due to lack of information and analysis, is unable to define an "adverse impact," or provide any details about the form of mitigation that EBMUD will commit to. The CEQA guidelines provide that "If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." See CEQA Guidelines § 15145. Based on the uncertainty and speculative nature of Phase 2, EBMUD should not include an analysis of Phase 2 in this DEIR.

6. The Commitment for Phase 2 Project EIR is inadequate: Despite the minimal analysis of Phase 2 in the DEIR, EBMUD must unequivocally commit to preparation of a comprehensive project-specific EIR on the entirety of the Phase 2 project, including all impacts, alternatives analysis and mitigation, in the event it decides to proceed with Phase 2. Since Phase 2 extraction at levels as high as 10 mgd could be achieved with minimal additional construction, pipeline or infrastructure, ACWD is concerned that EBMUD will not engage in a full project-specific EIR analysis for a Phase 2 and may be tempted to limit the scope of a future EIR. However, the impacts of Phase 2 could be vastly different than those created by the currently proposed 1 mgd project and the cursory analysis of impacts in this DEIR is insufficient to comply with CEQA. Furthermore, in the event the current

Response to Comment L5-32

See Master Response 7 – Project Phasing. An EIR for operational changes to Phase 1 would only be required if substantial changes are proposed that will require major revisions to the previous EIR because of the involvement of new significant environmental effects or a substantial increase in the severity of previously identified effects (CEQA Guidelines Section 15162([a])).

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groundwater model predictions for Phase 1 impacts to ACWD and Niles Cone groundwater basin prove to be incorrect, the impacts of a Phase 2 project must be analyzed with an updated model and included in a subsequent EIR. Therefore, if EBMUD decides to proceed with a Phase 2 project, it is essential that, at that time, EBMUD complete a project-specific EIR that adequately analyzes the impacts of the specific injection and extraction program on Niles Cone groundwater basin and ACWD.

In addition to providing a complete Phase 2 EIR for any new facilities and their operations, a Phase 2 EIR should also be prepared for any operational changes of Phase 1 facilities even if no new Phase 2 facilities are constructed. Specifically, a Phase 2 EIR will be needed to account for groundwater and water supply-related impacts to ACWD and the Niles Cone groundwater basin should EBMUD choose to expand extraction operations at the Phase 1 facilities beyond the 1-mgd annual extraction limit and/or change injection operations from what is described in the Final EIR (see Comment No. 1 above regarding project description).

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7. The Phase 2 Impact Assessment of Niles Cone Groundwater Basin and ACWD Water Supply Impact is Inadequate:

- A. The Phase 2 impact assessment, commitment to monitoring and analysis is inadequate. CEQA requires that an EIR consider and discuss all significant environmental impacts of the project. Pub. Resources Code §§ 21100, et seq., CEQA Guidelines §§ 15126 and 15126.2. "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project . . . CEQA Guidelines § 15382; see also *Galeta Union School District v. Regents of University of California* (2nd Dist. 1995) 37 Cal. App. 4th 1025, 1030-31.

The DEIR's description of Phase 2 impacts does not meet these CEQA requirements for identifying and classifying impacts to ACWD and the NCGWB. The DEIR (1) fails to adequately identify and describe potential impacts to ACWD and the NCGWB from Phase 2, presumably because EBMUD simply has not completed sufficient analysis to understand Phase 2 operation; and (2) the DEIR does not properly classify the significance of the potential Phase 2 impacts that are identified. See *Stanislaus Natural Heritage Project v. County of Stanislaus* (5th Dist. 1996) 48 Cal. App. 4th 182. A decision to augment environmental review through future EIRs "does not excuse a governmental entity from complying with CEQA's mandate to prepare, or cause to be prepared, an environmental impact report on any project that may have a significant effect on the environment, with that report to include a detailed statement setting forth '[all] significant effects on the environment of the proposed project.'" *Stanislaus* at 197, citing Pub. Resources Code § 21100. Even if future environmental analysis is planned to take place, and additional mitigation measures might be adopted, deferring a comprehensive analysis of the impacts of Phase 2 simply does not comply with CEQA's requirements to analyze impacts. See *Stanislaus* at pp. 199-200. Furthermore, since the impacts are not fully analyzed and their potential significance is not classified, there are no performance measures to apply to any measures designed to mitigate the potential impacts. Specific deficiencies in the Phase 2 impact assessment include the following:

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As described in Section 2.4.2.1 of the DEIR, at this time, EBMUD does not know whether it will pursue Phase 2 or, if it does pursue it, exactly what Phase 2 facilities would be necessary; where those facilities would be located; or what the ultimate size of those facilities would be. EBMUD plans to use information gained from the operation of Phase 1 to help inform its future determinations on whether and how to proceed with Phase 2. As a result, the description of the facilities and the impact analysis for Phase 2 in the DEIR are qualitative only; a detailed impact analysis is not possible at this time. As a result, the DEIR concludes that Phase 2 impacts are considered at this time to be "potentially significant" to native groundwater quality (4.1-1), groundwater levels affecting ACWD operations in the NCGWB (4.1-2), and saltwater intrusion in the SEBPB and NCGWB and/or movement of pre-existing plumes of brackish water in the NCGWB (4.1-5). If in the future EBMUD determines that Phase 2 facilities are desirable and feasible, it will prepare a subsequent EIR on Phase 2 at that time, which would include detailed impact analysis, mitigation measures as necessary, and a monitoring or reporting program. Because a proposal has not been made to approve Phase 2, CEQA does not require that mitigation measures for the potential future development of Phase 2 be defined or adopted at this time. As a result, even if more detailed measures were proposed in the DEIR, there is no mechanism to ensure the enforceability of the measures as required by CEQA (CEQA Guideline Section 15126.4[a][2] and CEQA Section 21081.6[b]). Also see Master Response 7 – Project Phasing and the response to comment L5-29.

Data collected during Phase 1 will be used to develop the tools necessary to analyze impacts of a Phase 2 project such as a new or refined groundwater model, if necessary. EBMUD does not assume that there is a linear relationship between Phase 1 and Phase 2 impacts. Rather, it will use standard scientific practices to determine impacts.

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- Potential impact 4.1-1 identifies the potential adverse effect on groundwater quality. The DEIR states that data from Phase 1 will be used to analyze this impact; however, the DEIR does not contain a detailed monitoring program or a description of the level of significance (except that it is potentially significant). In fact, Table ES-1 indicates that all Phase 2 monitoring is unknown at this time. Furthermore, the reliance on Phase 1 data for future Phase 2 impact evaluation does not take into account the fact that Phase 2 impacts may not have a linear relationship to Phase 1 impacts.
- Potential impact 4.1-2 states that extraction could affect ACWD operations through declines and increases in water levels in the NCGWB. However, no effort has been made to estimate the level of decline or increase or to set specific limits on a change in the level of the aquifer. For example, an increase in levels could significantly impact ACWD's own recharge operations or salinity management program. Even though EBMUD describes its future commitment to mitigation to maintain groundwater in the Newark aquifer within a "scientifically reasonable range," this commitment is inadequate since this term is not a recognized standard nor sufficiently definitive for ACWD or EBMUD to determine whether or not mitigation is adequate. Rather, EBMUD should commit to mitigation such that the maximum drawdown criterion of 0.5 feet (to be used for monitoring and modeling only) for the Newark Aquifer is not exceeded. See Comment No. 2 above for discussion on significance criteria for Niles Cone drawdown impacts and the associated ACWD water supply losses.
- Potential impact 4.1-5, EBMUD does not include any detailed information about how Phase 2 injection and extraction could directly impact saltwater intrusion or the movement of existing saltwater plumes in the aquifer. The potential impacts are unclear and the suggested monitoring plans and mitigation measures are vague. There are no levels of significance, performance measures, standards or plans for effectively avoiding or mitigating impacts. In short, EBMUD has not committed to anything certain in terms of evaluation, monitoring, or mitigation concerning Phase 2.

Prior to any determination to proceed with Phase 2, EBMUD should review the information gathered from Phase 1 and conduct groundwater modeling to predict the effects of increased groundwater extraction and injection on the Niles Cone groundwater basin and ACWD under the combined Phase 1 and Phase 2 operational scenarios. Similar to the Phase 1 project analyses, the review of information and groundwater modeling should be conducted in close coordination with ACWD. This information should be used to (a) determine the feasibility of proceeding with Phase 2, (b) identify the best location for additional production wells, and (c) design extraction, injection and mitigation strategies to maintain groundwater levels in the Newark Aquifer of the NCGWB.

- B. The formulation of detailed mitigation measures is inadequate: CEQA Guidelines require that lead agencies formulate detailed mitigation measures. "Where several measures are

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available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. For example, even when an approved project is general in nature, such as in the case of the proposed Phase 2 project, a lead agency must develop and approve whatever mitigation measures are feasible to lessen or avoid the project's impacts. See *Citizens for Quality Growth v. City of Mount Shasta* (3rd Dist. 1988) 198 Cal. App. 3d 433, 442 (stating that "passing references to the mitigation measures are insufficient to constitute a finding [adopting the measures]").

Formulation of a mitigation measure may only be deferred if (i) the adopted mitigation measure will commit the lead agency to a performance standard and (ii) the measure will prohibit changes to the environment unless the standard is satisfied. CEQA Guidelines § 15126.4 (a)(1)(B). In addition, if a mitigation measure would itself cause other additional significant effects on the environment, those effects must be discussed as well. CEQA Guidelines § 15126.4(a)(1)(D). Even though formulation of mitigation measures may be deferred through use of performance measures, a mitigation measure is not adequate if it is based on a requirement that the lead agency adopt mitigation measures recommended in a future study. See *Sundstrom v. County of Mendocino* (1st Dist. 1988) 202 Cal. App. 3d 296. In fact, the court has stated that when "devising more specific mitigation measures early in the planning process is impractical, 'the agency can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval. Where future action to carry a project forward is contingent on devising means to satisfy such criteria, the agency should be able to rely on its commitment as evidence that significant impacts will in fact be mitigated.'" *Rio Vista Farm Bureau Center v. County of Solano*, (1st Dist. 1992) 5 Cal. App. 4th 351, 377 citing *Sacramento Old City Association v. City Council of Sacramento* (3rd Dist. 1991) 229 Cal. App. 3d 1011, 1029.

However, regarding the Phase 2 analysis in the DEIR, the impacts described in Section 4.0 of the DEIR are vague and ill-defined and the proposed "mitigation measures" are not actually measures or commitments on the part of EBMUD at all; they are simply suggestions. Therefore, the proposed mitigation measures fail to meet the above criteria for formulating detailed mitigation measures because: (1) the description of the method for determining impacts is overly vague (i.e. no details are provided on the proposed monitoring program); (2) the description of what constitutes an "adverse impact" is not provided; (3) the mitigation measures do not specify what actions EBMUD will take to mitigate for these adverse impacts, but rather state merely that the District will take some unspecified future actions; and (4) the proposed mitigation measures are flawed because they do not specify performance measures. "[I]n the absence of overriding circumstances, the CEQA process demands that mitigation measures timely be set forth, that environmental information be complete and relevant, and that environmental decisions be made in an accountable arena." *Gentry v. City of Murrieta* (4th Dist. 1995) 36 Cal. App. 4th 1359, 1393-1394. The incomplete Phase 2 analysis included in the DEIR simply does not meet CEQA standards.

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If EBMUD decides to proceed with Phase 2, it should adopt operating and design criteria, and mitigation measures, to ensure that groundwater level impacts in the Newark Aquifer of the Niles Cone groundwater basin do not exceed the threshold criterion identified by ACWD (see Comment No. 2 above). Maintaining groundwater level changes within this range is necessary to ensure that there are no significant adverse impacts to ACWD and Niles Cone groundwater basin including: (1) no significant adverse impacts to ACWD water supplies in the Niles Cone groundwater basin; (2) no significant adverse impacts to groundwater quality in the Niles Cone groundwater basin as a result of seawater intrusion and/or movement (vertical or lateral) of existing plumes of brackish groundwater; (3) no significant adverse impacts to ACWD's ability to flush salts from the Niles Cone groundwater basin by providing groundwater outflows; and (4) no significant adverse impacts as a result of higher groundwater levels during injection operations. The operating and design criteria and mitigation measures could include providing potable water to ACWD's distribution system or recharge water to the ACWD groundwater recharge facilities, changing the Project's pumping/injection strategies (operating at a lower pumping and/or injection rate), or stopping operations altogether. The specific mitigation measures identified by ACWD for Phase 1 impacts (see Comment No. 4) should also be incorporated as potential Phase 2 mitigation measures.

- C. The DEIR fails to provide adequate Phase 2 enforcement measures for mitigation and monitoring. CEQA Guidelines also state that: "Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments." CEQA Guidelines § 15126.4(a)(2); see also Pub. Resources Code § 21081.6(b). "The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation." Pub. Res. Code § 21081.6(a)(1).

However, Section 4.0 of the DEIR fails to provide any enforcement measures since the mitigation measures for Phase 2 are not fully developed. The DEIR offers no conditions, agreements or other legally-binding instruments which will ensure that the mitigation measures will actually be carried out.

As discussed in Comment No. 2 above, ACWD proposes that EBMUD commit, for monitoring and modeling purposes, to a maximum model-simulated drawdown of 0.5 feet over a 12 month period for both the Phase 1 and Phase 2 Projects. The DEIR should also recognize that the groundwater model, even with updated calibration for Phase 1, might under-predict impacts, particularly for an expanded Phase 2. Therefore, the DEIR should include provisions for additional mitigation in the event that actual impacts are greater than predicted by the model. Actual impacts should be determined by evaluating, monitoring, updating and recalibrating the model to most recent operational hydrologic conditions. Finally, EBMUD should commit to a detailed monitoring program, in consultation with ACWD, to analyze the impacts of Phase 2 operations.

8. The DEIR Summary of ACWD's 2001 DEIR comments is inadequate. ACWD provided detailed comments on the 2001 Draft Environmental Impact Report for the Proposed Bayside

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Response to Comment L5-34

See Master Response 12 – Comments on 2001 DEIR.

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Groundwater Project in a letter to EBMUD dated August 3, 2001 (see Attachment A for a copy of ACWD's 2001 comment letter). CEQA Guidelines § 15088(b) requires that the lead agency's "written response [to comments] shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the Lead Agency's position is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted. There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice."

EBMUD's response to ACWD's comments on the 2001 DEIR is inadequate in light of the CEQA guidelines. (ES 7 and Appendix B) Appendix B to the DEIR, which summarizes comments on the 2001 DEIR, simply directs the reader to various sections of the DEIR in which comments were purportedly addressed. Although the project has changed, and EBMUD has issued a new DEIR, the CEQA regulations concerning a lead agency's response to comments on a DEIR is still applicable and EBMUD should provide substantive responses to ACWD's 2001 comments.

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Conclusion

ACWD hopes to continue to work cooperatively with EBMUD to allow EBMUD's water supply reliability goals to be achieved while ensuring that ACWD's interests in protecting its water resources are met. However, because of the incomplete and inadequate nature of the 2005 DEIR, we believe that it will require substantial revisions and additions to adequately address ACWD concerns and to meet CEQA's requirements. In summary, EBMUD should address the comments provided in this letter, including:

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- The discussion of Phase 2 should be removed from the 2005 DEIR. Until the scope, location, necessary facilities and operating criteria are developed, Phase 2 is simply too speculative a project to be analyzed under CEQA. And, since so many details about Phase 2 are unknown, the impact assessment and formulation of mitigation measures is inadequate to comply with CEQA requirements.
- The significance criteria related to drawdown impacts in the Niles Cone groundwater basin is inadequate and should be revised. Simply put, EBMUD should not develop a new dry year water supply for itself at the expense of ACWD's existing local dry year water supplies. Any Bayside Project drawdown in the Newark Aquifer in the Niles Cone groundwater basin should be classified as a significant water supply impact to ACWD and should be fully mitigated by EBMUD. Please see Comment No. 2 above for the related modeling criteria for Newark Aquifer drawdown impacts.

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Comment noted. The bulleted items are addressed above for Comments L5-29 through L5-33.

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- The DEIR improperly relies entirely upon the NEBIGSM groundwater model to conclude that there are no significant Phase 1 impacts to ACWD operations or Niles Cone groundwater basin, even when the DEIR recognizes that the model may not be entirely accurate and will need re-calibration after Phase 1 start-up activities. Rather, the DEIR should classify these impacts as "potentially significant" and commit to mitigation in the event that future modeling and monitoring indicate that these impacts have been under-predicted by the current version of the model.
- The Phase 1 Monitoring/Modeling Program as described in the DEIR is inadequate to determine actual project impacts and effectiveness of mitigation measures. EBMUD must commit to ongoing monitoring and a rigorous program of model updating and recalibration to adequately determine the true impacts to ACWD and the Niles Cone groundwater basin.

We appreciate the efforts EBMUD has made to work with ACWD on the Bayside Project and look forward to continue working with EBMUD to ensure that the concerns expressed in this letter will be addressed in the Final EIR.

Sincerely,



Paul A. Piraino
General Manager

Attachments

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Attachment A – ACWD Comment Letter on 2001 Bayside Project Draft EIR

Response to Comment L5-36

See Master Response 12 – Comments on 2001 DEIR.

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August 3, 2001

East Bay Municipal Utility District
Attn: Angela Knight (MS 305)
375 Eleventh Street
Oakland, CA 94607-4240

Dear Ms. Knight:

Subject: Draft Environmental Impact Report for the Proposed Bayside Groundwater Project

This letter and its attachments provide Alameda County Water District's (ACWD's) comments on the Draft Environmental Impact Report (DEIR) for the proposed Bayside Groundwater Project (Project). This letter summarizes ACWD's concerns regarding (1) potential impacts on ACWD operations and on the Niles Cone groundwater basin that may occur as a result of the proposed Project and (2) the adequacy of the DEIR. The following attachments provide additional detail:

- Attachment 1: Adequacy of description of regional environmental setting
- Attachment 2: Adequacy of impact identification and assessment
- Attachment 3: Adequacy of technical analysis
- Attachment 4: Adequacy of mitigation measures
- Attachment 5: Adequacy of Project alternatives

ACWD Background

Alameda County Water District ("ACWD") delivers drinking water to a population of over 320,000 residents in the cities of Newark, Fremont and Union City. ACWD was formed in 1913 for the purpose of protecting underground water in the Niles Cone groundwater basin and conserving the waters of the Alameda Creek watershed. The formation of ACWD was largely in response to a water shortage that occurred as a result of outside entities exporting local groundwater to the cities of Oakland and San Francisco. Historical over-pumping of the Niles Cone groundwater basin and adjacent groundwater basins resulted in significant seawater intrusion, contaminating much of the aquifer system. Since our inception, ACWD has worked diligently to restore and protect this vital but vulnerable resource, and will continue to do so in the future.

Summary of Project Understanding

The DEIR states that EBMUD plans to develop a new well field (7 to 10 wells) in the City of San Leandro and the unincorporated area of San Lorenzo. This well field will tap the deeper aquifer

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system in what is referred to as the South East Bay Plain basin. This well field will provide a dry year supply of up to 15 million of gallons per day (10,000 to 15,000 acre-feet per year) to the EBMUD service area. The DEIR presents two operating alternatives: an injection/extraction alternative (utilizing aquifer storage and recovery wells); and an extraction-only alternative (groundwater extraction without recharging the groundwater system). According to the DEIR, the preferred operating alternative is the injection/extraction alternative.

Summary of ACWD Concerns Regarding Project Impacts

ACWD's concerns with the proposed Project relate to potential impacts to the adjacent Niles Cone groundwater basin, underlying ACWD's service area. Because the Niles Cone groundwater basin is hydraulically connected with the South East Bay Plain basin, ACWD is deeply concerned about potential water supply and water quality impacts (including seawater intrusion) to the Niles Cone groundwater basin. Groundwater from the Niles Cone groundwater basin is one of three primary sources of supply for ACWD, along with imported water supplies from the State Water Project (SWP) and San Francisco's Hetch-Hetchy system. ACWD replenishes the groundwater basin at our groundwater recharge facilities with local runoff supplemented by imported SWP supplies. ACWD recovers this stored water for potable use at our adjacent well fields. Recharge water not only ensures an adequate supply for our production wells but also maintains flow gradients necessary both to prevent a recurrence of seawater intrusion and to flush existing brackish water from the groundwater basin.

As stated in ACWD's previous letters (May 14, 1997 comments on EBMUD's Groundwater Injection/Extraction Pilot Project; October 16, 2000 comments on EBMUD's Notice of Preparation of an Environmental Impact Report for the Bayside Groundwater Project; and December 20, 2000 preliminary comments on EBMUD's proposed Bayside Groundwater Project), EBMUD's staff and consultant agree that the deep aquifer system to be tapped by the Project is in direct hydraulic connection with the deep aquifer system in the Niles Cone groundwater basin. The DEIR confirms this stating, "Current data suggest that only the Deep Aquifer is hydraulically continuous between the SEBPB [South East Bay Plain basin] and NCGWB [Niles Cone groundwater basin]" (page 3.8-7).

In light of this hydraulic connection between the South East Bay Plain basin and the Niles Cone groundwater basin, ACWD's comments on the Notice of Preparation recommended specifically that the DEIR should address the potential impacts of EBMUD's Project on ACWD's operation of the Niles Cone groundwater basin and commit to measures to fully mitigate any impacts to ACWD. Examples of potential ACWD operational impacts and long-term impacts on the Niles Cone groundwater basin are described below. In addition, the attached schematic cross-sections provide conceptual illustrations of the inter-relationship between the Niles Cone and South East Bay Plain groundwater basins (Figure 1), and how both the Bayside Project operating alternatives may impact the Niles Cone groundwater basin (Figures 2 and 3).

Examples of potential long-term impacts to the Niles Cone groundwater basin include:

- **Saltwater Intrusion:** The Niles Cone groundwater basin is in direct hydraulic connection with San Francisco Bay. Under historical conditions, a significant amount of contamination of the aquifers occurred due to saltwater intrusion. ACWD has long

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managed the groundwater basin to prevent additional saltwater intrusion, and to reverse these impacts through ACWD's Aquifer Reclamation Program. Groundwater extraction at the Project may cause a decline in Niles Cone groundwater levels to below sea-level, potentially inducing renewed saltwater intrusion.

- **Brackish Groundwater Movement:** Large pockets of trapped brackish groundwater currently exist in all of the major aquifers in the Niles Cone groundwater basin. ACWD operates the groundwater basin to ensure that this trapped brackish water does not migrate near ACWD's well fields, and to reclaim contaminated portions of the aquifers through the Aquifer Reclamation Program. Groundwater extraction (or injection) activities by the Project may change groundwater levels and gradients in the Niles Cone groundwater basin, thereby resulting in the lateral or vertical (i.e. from one aquifer to another) movement of the brackish groundwater.

Examples of potential impacts to ACWD operations include:

- **Loss of ACWD Water Supplies:** Groundwater extraction at the Project may result in a decline in groundwater levels in the Niles Cone groundwater basin. This decline in groundwater levels may, in turn, compel ACWD to reduce groundwater pumping at either our Mowry Wellfield or Aquifer Reclamation Program wells in order to: (1) prevent seawater intrusion; (2) prevent the spreading of existing plumes of trapped brackish groundwater; and/or (3) maintain target groundwater levels in the Niles Cone in order to ensure adequate supplies for subsequent years.
- **Overflow/Artesian Conditions:** ACWD currently operates the Niles Cone groundwater basin to ensure that the basin is not recharged beyond its capacity to store water. Over-filling of the basin as a result of the Project's injection activities may result in (1) water supply losses through groundwater "overflows" to Alameda Creek and/or excessive groundwater outflows to San Francisco Bay and/or (2) artesian conditions in local wells or springs and damage to overlying properties.
- **Increased Pumping Costs and Energy Use:** Groundwater level declines within the Niles Cone groundwater basin that occur as a result of the Bayside Project will result in increased groundwater pumping costs for ACWD as well as increasing our demand for electric energy needed to power the pumps.

Summary of ACWD Comments on the DEIR

Based on our review of the DEIR and in light of potential impacts described above, we believe that the DEIR does not meet the requirements of the California Environmental Quality Act (CEQA) and is not legally adequate. The deficiencies are summarized below and addressed in more detail in the corresponding attachments.

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1. **The DEIR does not adequately describe the environmental conditions in the adjacent Niles Cone groundwater basin.** The DEIR recognizes that the South East Bay Plain groundwater basin is in direct connection with the Niles Cone groundwater basin. However, the DEIR fails to describe the Niles Cone groundwater basin and completely omits any description of ACWD operations in the Niles Cone groundwater basin. An understanding of the hydrogeology of the Niles Cone groundwater basin and ACWD's management of this resource is absolutely essential to address the potential impacts that may occur as a result of the Project. Attachment 1 provides a summary of the Niles Cone groundwater basin and ACWD groundwater operations. In addition, Attachment 1 also provides a summary of information indicating a high degree of hydraulic inter-connection between the Niles Cone and South East Bay Plain groundwater basins. In order to comply with CEQA standards regarding the description of the regional environmental setting and in order to adequately assess potential Project impacts to ACWD and the Niles Cone groundwater basin, the EIR must acknowledge and describe: (1) the adjacent Niles Cone groundwater basin and ACWD operations and (2) the previous studies and historical information which provide substantial evidence of a high degree of communication between Niles Cone groundwater basin and the SEBP groundwater basin.
2. **The DEIR fails to address impacts to ACWD operations and the Niles Cone groundwater basin that may occur as a result of the Project.** As discussed previously, potential operational impacts to ACWD include water supply losses, water quality impacts at our well fields, increased pumping costs, and overflow and artesian impacts due to over-filling of the aquifers. Potential long-term impacts include saltwater intrusion and movement of trapped, brackish water plumes. The DEIR fails to address any of these potential impacts which are discussed in detail in Attachment 2. Furthermore, the DEIR improperly characterizes the significance of impacts to the Niles Cone groundwater basin and fails to identify specific criteria used to evaluate their significance.

The DEIR also completely fails to consider the cumulative impacts of ACWD groundwater operations (pumping and recharge) and others who utilize the Niles Cone and South East Bay Plain groundwater basins as a water supply source. Other groundwater users include private well owners in the Niles Cone groundwater basin and the City of Hayward's emergency groundwater supply system. The analysis of cumulative impacts on ACWD operations and the Niles Cone groundwater basin is especially critical given that ACWD's current operation of the groundwater system is to maximize the use of local groundwater supplies in dry years (when our imported water supplies may be significantly cut back). It is during these dry periods that EBMUD also will likely be extracting groundwater from the proposed Bayside Project, thereby adding additional stresses on the Niles Cone groundwater basin. Potential cumulative impacts include groundwater level declines and subsequent ACWD water supply losses, saltwater intrusion, and movement of contaminants in the Niles Cone groundwater basin. Similarly, under current operating conditions, during wet periods ACWD maximizes the recharge into Niles Cone groundwater basin with local and imported State Water Project supplies. However, the amount of ACWD recharge is limited by the overall storage capacity of the Niles Cone groundwater basin. Based on information provided in the DEIR, it will be during the same wet periods that EBMUD will be injecting water into the Deep Aquifer. Because of the limited storage capacity of the Niles Cone groundwater basin, this additional injection of water by EBMUD may result in water

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supply losses due to excessive Niles Cone groundwater outflows to San Francisco Bay and potential artesian conditions with subsequent property damage. Therefore, the EIR should identify, evaluate and provide mitigation for these cumulative impacts, as required under CEQA.

3. **The technical analysis of impacts to Niles Cone groundwater basin provided in the DEIR is incomplete and inadequate.** As discussed in Attachment 3, the DEIR relies on a "reconnaissance level" groundwater model to analyze potential groundwater impacts in the Niles Cone groundwater basin. However, this model is not capable of adequately evaluating potential impacts in the Niles Cone because (1) the model does not extend south into the Niles Cone groundwater basin, but rather relies on an artificial "boundary condition" which is not capable of adequately simulating potential impacts to the Niles Cone groundwater basin and (2) the model is based on overly broad assumptions regarding the hydrologic and hydrogeologic conditions which make it inadequate for determining impacts due to the pumping and injection stresses which the Project would create.

In addition, in the groundwater modeling report referenced in the DEIR, EBMUD's consultant (CH2M Hill) identifies the boundary condition between the Niles Cone and South East Bay Plain groundwater basins as an area for improvement. The report states that, "if the District [EBMUD] decides to better define the characteristics of this boundary, then local water level and water construction data should be collected and select pumping tests performed. If the boundary appears to be hydraulically continuous with the SEBP, then the District [EBMUD] should consider extending the model into the NCGWB [Niles Cone groundwater basin]. Subsequent model simulation should be able to more accurately define potential impacts of the District's [EBMUD's] proposed Bayside Project on water levels and water quality in the NCGWB [Niles Cone groundwater basin]."

We agree with CH2M Hill's recognition of the inadequacies of the model on which the DEIR relies and with the suggested approach for conducting the technical studies and developing the analytical tools necessary to assess these potential impacts. Unfortunately, EBMUD chose not to perform a complete technical analysis for the DEIR, and rather has relied on a groundwater model which is not capable of addressing impacts to ACWD operations or to the Niles Cone groundwater basin.

4. **The DEIR fails to provide feasible and reasonable mitigation for impacts to ACWD operations and the Niles Cone groundwater basin.** In order to mitigate groundwater related impacts to the Niles Cone groundwater basin resulting from extraction operations of the proposed Bayside Project, the DEIR suggests the following proposed mitigation measure (Measure 3.8-8, page 3.8-25):

"The District will implement a Deep Aquifer water-level monitoring program that will include the boundary between the NCGWB [Niles Cone groundwater basin] and the SEBPB [South East Bay Plain basin]. Resulting water-level data will be used to assess impacts on gradient magnitude and direction near this boundary. Flux values will be estimated based on historical pumpage from the SEBPB to assess the significance of future impacts relative to past impacts. If adverse impacts are detected, the District will take appropriate

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actions to limit them to the groundwater basin and/or local groundwater users."

The proposed mitigation measure fails to meet the CEQA Guidelines criteria for formulating detailed mitigation measures because: (1) the description of the method for determining impacts is overly vague (i.e. no details are provided on the proposed monitoring program and the methodology for the estimation of flux values); (2) the description of what constitutes an "adverse impact" is not provided; (3) it does not specify what actions EBMUD will take to mitigate for these adverse impacts, but merely states that the District will take some unspecified "appropriate" actions; and (4) the measure addresses only impacts due to increased fluxes across the Niles Cone groundwater basin and ignores other potential impacts to ACWD and the Niles Cone groundwater basin, including groundwater level declines, seawater intrusion, movement of contaminants, and impacts to ACWD's water supplies.

In addition, the DEIR fails to provide the necessary enforcement measures to ensure that Mitigation Measure 3.8-8 will be implemented. The DEIR offers no conditions, agreements or other legally-binding instruments which will ensure that the mitigation measure is actually carried out. Please see Attachment 4 for ACWD's recommendations for a more specific mitigation program.

5. The DEIR does not adequately develop and evaluate Project alternatives. The DEIR does not consider an appropriate range of alternatives to the proposed Project, as required by CEQA Guidelines. Rather it is limited to a relatively narrow range of alternatives, all of which are very minor variations of the proposed Project, and all of which are located within the boundary area of the Project as defined in the DEIR. As discussed in the Attachments, there are many other alternatives to the Project potentially available to EBMUD, some of which may be environmentally superior to those considered in the DEIR. Alternatives that should be described and evaluated in the EIR include: (1) EBMUD's proposed Freeport Regional Diversion Project; (2) alternative locations for the Project's wells (i.e. sites located further north in the SEBP may have less of an impact on the Niles Cone groundwater basin as would spreading the wells out over a larger geographic area within the SEBP); (3) a smaller project; (4) desalination (with brackish groundwater or Bay water as the source water); (5) dry year water purchases/transfers; and (6) off-site groundwater storage programs in the Central Valley or other areas within the EBMUD service area. As is the case with the proposed Project, these other potential dry year supply alternatives can be configured to meet a portion of EBMUD's dry year needs.

In order for EBMUD to adequately meet CEQA Guidelines, EBMUD must take the following steps prior to finalization of the EIR:

- A. Conduct the technical investigations necessary to adequately evaluate the potential Project impacts to ACWD and the Niles Cone Groundwater Basin. As described in Attachment 3, this technical evaluation should include: (1) a hydrogeologic assessment of the boundary between Niles Cone groundwater basin and South East Bay Plain groundwater basin; (2) aquifer tests to further characterize the nature of the

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boundary; (3) monitoring of groundwater levels and quality; (4) the development and utilization of an expanded regional groundwater model covering both the Niles Cone and South East Bay Plain groundwater basins; and (5) the evaluation of Project impacts under a range of hydrologic and Project operating conditions.

B. Develop mitigation measures sufficient to ensure that there are no significant unmitigated impacts to ACWD operations and no long-term adverse impacts to water quality in the Niles Cone groundwater basin. As discussed in Attachment 4, the mitigation measures should meet the CEQA criteria for detailed and enforceable mitigation measures, and should be developed in conjunction with ACWD.

C. Develop and evaluate a broader range of Project alternatives. These alternatives should not be artificially limited to alternative facility locations within the immediate Project area, but rather should include a broader geographic area and a feasible range of water supplies.

While this letter is focused specifically on the inadequacy of the DEIR, compliance with CEQA is not the only legal issue implicated by the Project. Fundamental principles of California water law must also be considered. Two such principles are particularly relevant here:

- The rights of public agencies pumping from a groundwater basin are appropriate in nature and therefore determined by the long-established rule "first in time, first in right." See *City of Lodi v. East Bay Municipal Utility District*, 7 Cal. 2d 316, 334 (1936). Accordingly, ACWD has priority to the groundwaters of the basin by virtue of its extractions, which long predate the proposed Bayside Project wells.
- Agencies which, like ACWD, replenish a groundwater basin with imported water have superior proprietary rights to recover those imported supplies. See *City of Los Angeles v. City of San Fernando*, 14 Cal. 3d 199, 259-61 (1975).

Significantly, water law principles were brought into play 75 years ago in litigation involving pumping at virtually the same location as the Project. In the early 1920s, the East Bay Water Company (a predecessor of EBMUD) operated wells at Robert's Landing. These wells were 300 to 800 feet deep and thus also utilized the same deep aquifer that EBMUD plans to tap with the Bayside Project.

In 1922 both ACWD and the Eden Township County Water District, which served an area now within the boundaries of Hayward, sued the EBWC in Alameda County Superior Court seeking to enjoin the pumping. This litigation led to the cessation of pumping at Robert's Landing. In May 1925 EBWC entered into a settlement agreement with the Eden Township Water District under which the company agreed to absolutely cease pumping at Robert's Landing no later than January 1, 1930 and to "abandon its said Robert's Landing wells and pumping plants as part of its water system" and promised that "thereafter it will not under any circumstances pump and divert water therefrom."

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The wells were shut down shortly after the settlement agreement was signed. A few years later, Cyril Williams, Jr., a San Francisco based civil and hydraulic engineer, published an article chronicling the history of groundwater use within ACWD. He attributed the rise in groundwater levels that had been observed since pumping ceased at Robert's Landing to the abandonment of those wells.

"When these pumps ceased operating, there was an almost immediate rise in a large number of wells in Alameda County Water District. A part of the leak in the Niles Cone has been stopped and the great cone of depression caused by the pumping at Robert's Landing was refilled."

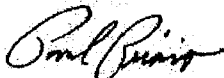
(Cyril Williams, Jr., "The Water Situation in Alameda County Water District," The Township Register, March 18, 1930.)

It is important to recognize that the Roberts Landing wells, which were operated between the years of 1918 and 1929, were pumped at levels that varied between 770 and 4,750 acre-feet per year (C.H. West, "Groundwater Resources of the Niles Cone, Alameda County, Calif.," Nov. 1937). That rate is substantially less than the proposed Bayside Project pumping rate of 10,000 to 15,000 acre-feet per year.

The Board of Directors and management of ACWD are no less committed to protection of its water rights, and the well being of its customers and its local environment, than were our predecessors decades ago.

ACWD hopes to work cooperatively with EBMUD to allow EBMUD's water supply reliability goals to be achieved while ensuring that ACWD's interests in protecting our water resources are met. However, because of the incomplete and inadequate nature of the existing DEIR, we believe that it will require substantial revisions and additions to adequately address ACWD concerns and to meet CEQA criteria. Therefore, a revised draft EIR should be circulated with adequate time for additional public review and comment.

Very truly yours,



Paul Piraino
 General Manager

Attachments

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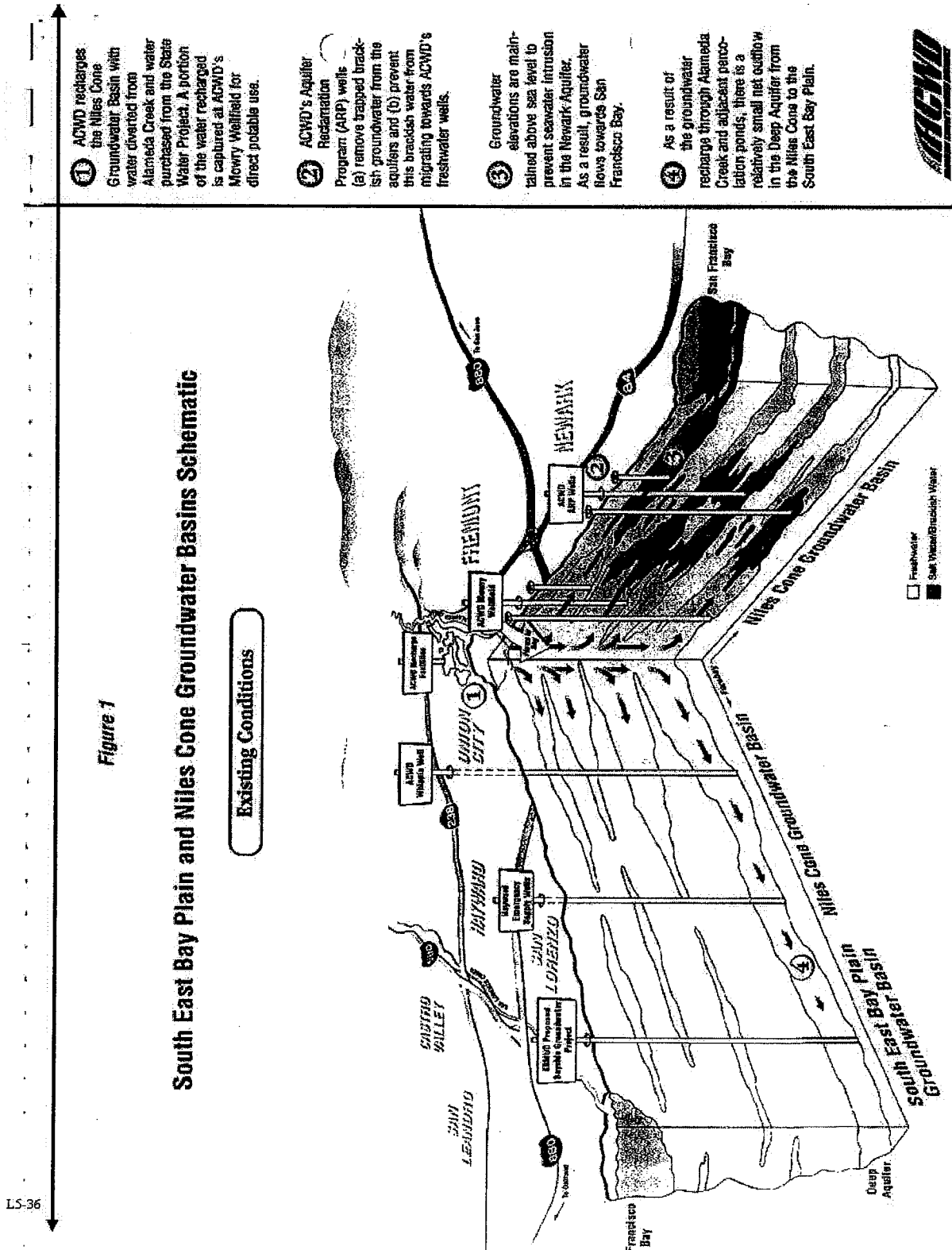


Figure 1

South East Bay Plain and Niles Cone Groundwater Basins Schematic

Existing Conditions

1 ACWD recharges the Niles Cone Groundwater Basin with water diverted from Alameda Creek and water purchased from the State Water Project. A portion of the water recharged is captured at ACWD's Mowry Wellfield for direct potable use.

2 ACWD's Aquifer Reclamation Program (ARP) wells (a) remove trapped brackish groundwater from the aquifers and (b) prevent this brackish water from migrating towards ACWD's freshwater wells.

3 Groundwater elevations are maintained above sea level to prevent seawater intrusion in the Newark Aquifer. As a result, groundwater flows towards San Francisco Bay.

4 As a result of the groundwater recharge through Alameda Creek and adjacent percolation ponds, there is a relatively small net outflow in the Deep Aquifer from the Niles Cone to the South East Bay Plain.



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- ① Groundwater extraction from 40 dry years at the Bayside Project may result in groundwater level declines of over 100 feet in the Deep Aquifer in the area adjacent to the Wellfield, and of up to 40 feet in the Niles Cone Groundwater Basin. This will result in significantly greater groundwater outflows (losses) from the Niles Cone to the South East Bay Plain.
- ② Groundwater level declines in the Deep Aquifer will then result in groundwater level declines in the upper aquifers in the Niles Cone Forebay area. This may significantly limit ACWD's ability to pump due to concerns regarding sea water intrusion and movement of brackish groundwater.
- ③ Groundwater level declines in the Deep Aquifer may cause the vertical or lateral spreading of trapped brackish groundwater plumes in the Niles Cone.
- ④ Seawater intrusion may occur if groundwater levels in the upper aquifer are drawn below sea level for an extended period of time.

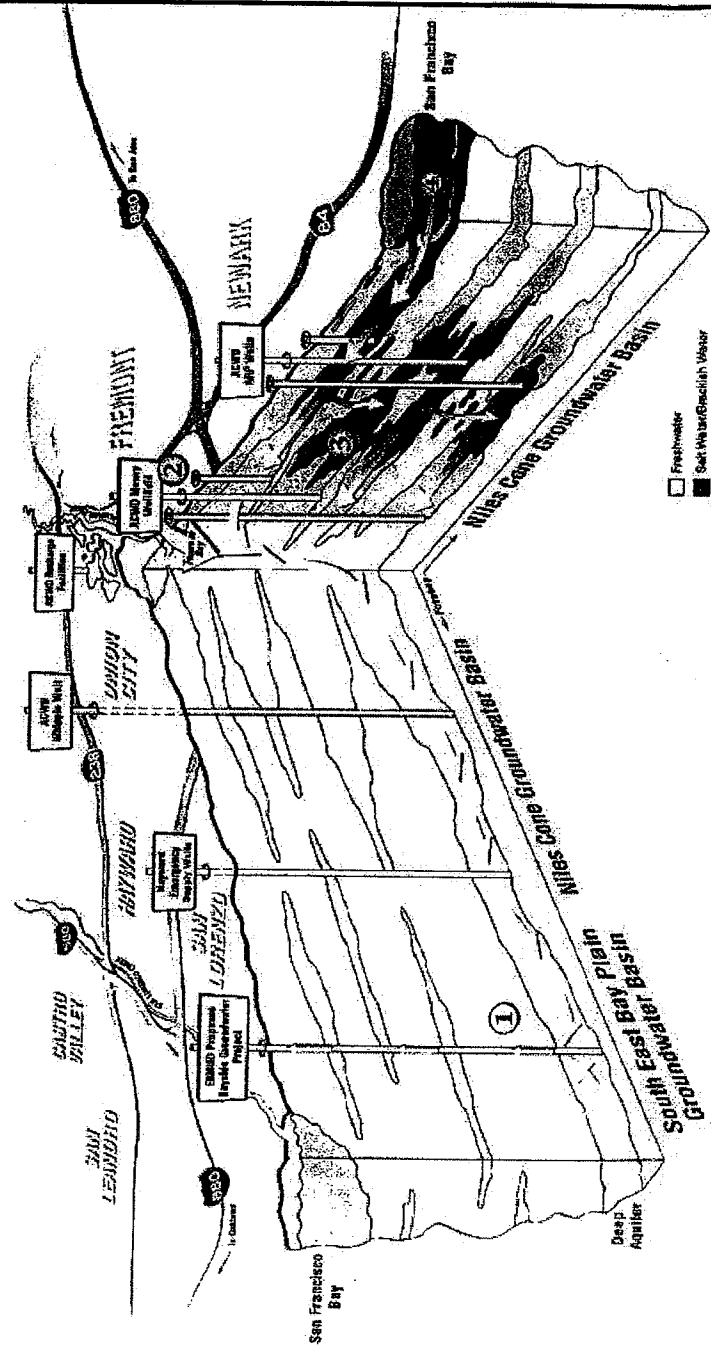


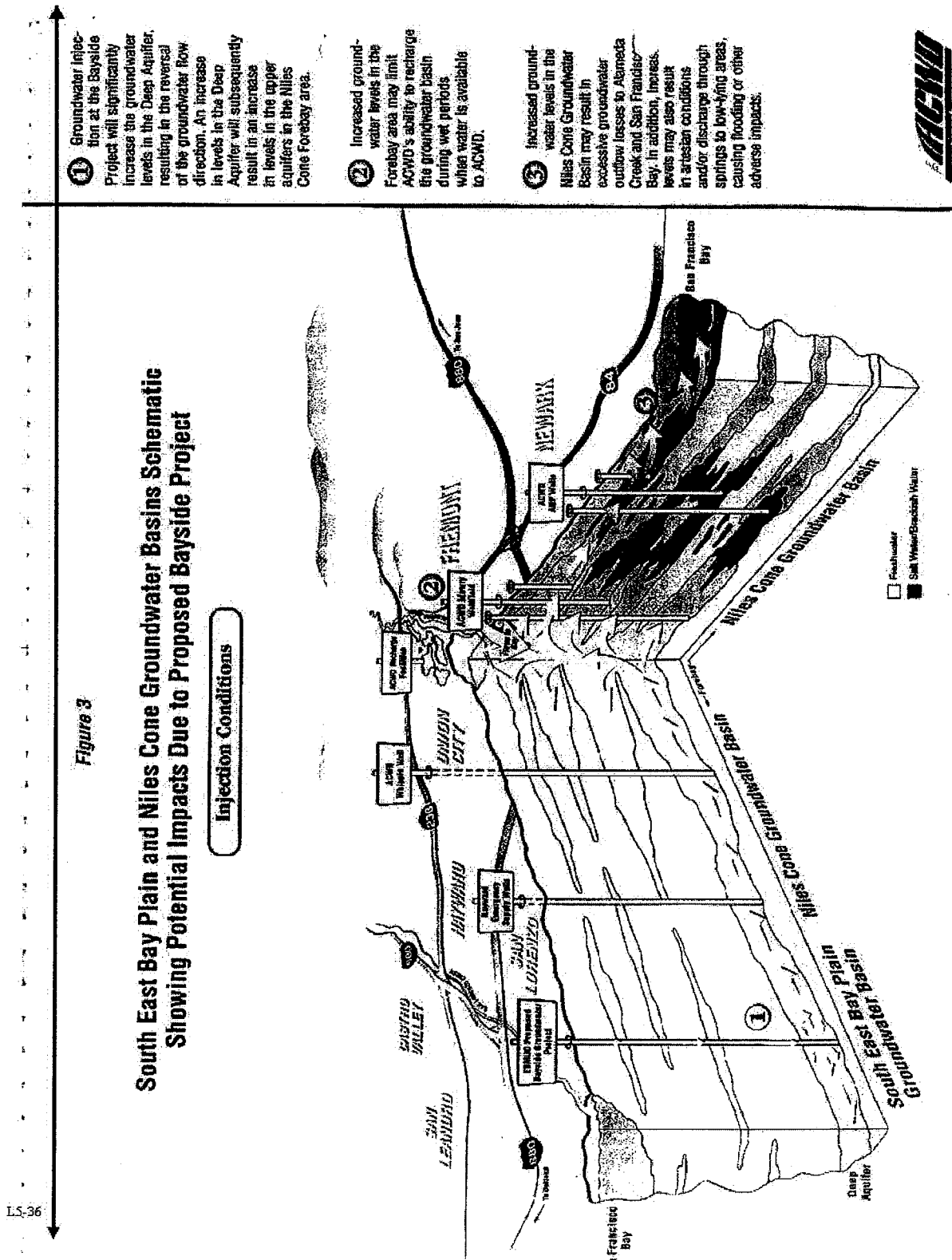
South East Bay Plain and Niles Cone Groundwater Basins Schematic Showing Potential Impacts Due to Proposed Bayside Project

Extraction Conditions

Figure 2

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ATTACHMENT 1 – ADEQUACY OF DESCRIPTION OF REGIONAL ENVIRONMENTAL SETTING

CEQA Guidelines state that an EIR "must include a description of the physical environmental conditions in the vicinity of the project." CEQA Guidelines § 15125(a). "Knowledge of the regional setting is critical to the assessment of environmental impacts. . . . The EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental context." CEQA Guidelines § 15125(c).

The DEIR provides a description of the South East Bay Plain ("SEBP") groundwater basin and also recognizes that the SEBP is hydraulically connected with the Niles Cone groundwater basin. However, the DEIR does not provide an adequate description of the Niles Cone groundwater basin, nor does it recognize ACWD's management of the Niles Cone groundwater basin as a source of drinking water to over 300,000 Alameda County residents. Since the two groundwater basins are hydraulically connected, a thorough understanding of Niles Cone groundwater basin and ACWD's management of this resource is absolutely essential to fully assess potential impacts to Niles Cone groundwater basin and ACWD operations, and to develop appropriate mitigation measures. The following provides (1) an overview of the Niles Cone groundwater basin and ACWD operations and (2) a summary of the documentation of the connection between the Niles Cone and South East Bay Plain groundwater basins.

Overview of the Niles Cone Groundwater Basin and ACWD Operations

ACWD's management and use of the Niles Cone groundwater basin is well documented in our Groundwater Management Policy, annual Groundwater Survey and Monitoring Reports, and the ACWD Integrated Resources Planning Study (1996). The hydrogeologic characteristics of the Niles Cone groundwater basin are also well documented by ACWD, Kolterman, California Department of Water Resources, and others. The following provides an overview of the groundwater basin and ACWD management of this important local resource. The Niles Cone groundwater basin is separated into two "sub-basins" by the Hayward Fault. The following overview is focused on the "Below Hayward Fault" (BHF) sub-basin since it is this portion of the Niles Cone groundwater basin that is connected with the SEBP Basin.

The BHF portion of the groundwater basin is comprised of three primary water producing zones (i.e., aquifers). The Newark Aquifer is the shallowest aquifer and is connected hydraulically with San Francisco Bay. Below the Newark Aquifer is the Centerville/Fremont Aquifer, and below the Centerville/Fremont Aquifer is the Deep Aquifer. In most areas these aquifers are separated from each other by layers of clay which impede the movement of water vertically between aquifer layers. An exception to this is in the inland area adjacent to Alameda Creek (Forebay Area). In this area the layers of clay become thinner and are discontinuous, allowing for a hydraulic connection between all three aquifers. This inter-connection between the Deep Aquifer and upper aquifers in the Niles Cone groundwater basin is well documented by the DWR and others and should be accounted for in the DEIR analysis of potential impacts to ACWD operations and the Niles Cone groundwater basin. However, this inter-connection differs significantly from the DEIR conceptualization of the Deep Aquifer as "hydrogeologically isolated" (Chapter 3.8).

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ACWD has long managed the Niles Cone groundwater basin to ensure a safe, reliable source of supply for our customers, and to prevent contamination from seawater intrusion and other sources. Most of ACWD's groundwater recharge and production facilities are located in the Forebay Area. It is in this area that ACWD recharges the groundwater basin with water diverted from Alameda Creek, as well as imported water from the State Water Project. Water that is percolated by ACWD recharges all three aquifers, and ACWD production wells also tap all three aquifers to recover the recharged water. ACWD has operated the groundwater basin in a balanced "put and take" operation whereby water is recharged into the aquifers prior to being pumped out. In general, ACWD operates the groundwater basin in a seasonal conjunctive use manner, with groundwater supplies used to meet peak summer demands (as well as a smaller portion of ACWD's year-round base demand).

Two inter-related factors which are key to understanding ACWD's operations of the Niles Cone groundwater basin (and which are highly relevant to potential impacts from the Bayside Project) are (1) the potential for seawater intrusion and the movement of existing trapped brackish water plumes in the Niles Cone groundwater basin, and (2) the very limited storage capacity in the Niles Cone groundwater basin. These factors are described below.

Prior to the importation of surface water from the State Water Project and San Francisco Hetch-Hetchy system in the 1960's, the Niles Cone groundwater basin was heavily overdrafted, with groundwater levels in the Newark aquifer up to 60 feet below sea-level. Historically there have also been other periods of overdraft throughout the region, including in the South East Bay Plain groundwater basin. The overdraft in the Niles Cone groundwater basin also resulted in significant contamination of aquifers in the ACWD service area due to seawater intrusion. The mechanism for this seawater intrusion was through the inland movement of salt water from San Francisco Bay through the Newark Aquifer (the top aquifer layer). Salt water from the Newark Aquifer then migrated downward to contaminate the Centerville/Fremont and Deep Aquifers. This seawater intrusion was effectively halted when ACWD began importing supplies, which were used to both replenish the groundwater basin as well as reduce reliance on groundwater pumping. Over the past thirty years ACWD has effectively maintained water levels within the groundwater basin to prevent any further seawater intrusion. However, much of the salt water still remains trapped in the groundwater basin. In 1974, ACWD initiated an Aquifer Reclamation Program (ARP) with the purpose of (1) preventing the brackish water plumes from migrating towards ACWD's wellfields; and (2) reclaiming the portions of the groundwater basin that have been impacted by salt water intrusion. ACWD utilizes a series of wells to pump out the trapped brackish water and replace it with fresh water from our recharge facilities. Starting in 2003, the brackish groundwater pumped from ACWD's ARP wells will be treated at a desalination facility and used for potable supplies.

Because the groundwater basin is hydraulically connected with San Francisco Bay, the usable storage of the basin is also very limited. In general, operating groundwater levels in the Newark Aquifer in the Forebay Area are limited to elevations of between 3 feet mean-sea-level (msl) and 20 feet msl, which provides total usable storage capacity of approximately 17,000 acre-feet within the BHF portion of the Niles Cone groundwater basin. Groundwater levels above 20 feet msl result in "overflow" losses to San Francisco Bay (through groundwater outflows or discharges to Alameda Creek which flows to the Bay). That is, any additional groundwater recharge that occurs when

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groundwater levels are above 20 feet is subsequently lost to San Francisco Bay as overflow spills. In addition, under normal operating conditions groundwater elevations are maintained above 3 feet msl to provide a bayward groundwater gradient, necessary to prevent seawater intrusion. Groundwater modeling analysis conducted by ACWD has indicated that during critical drought conditions, groundwater levels in the Forebay Area may be lowered temporarily to -5 feet msl without long-term impacts to the groundwater basin. However, because of concerns with migration of brackish groundwater plumes and seawater intrusion, this level of drawdown cannot be maintained other than for the short-term. Because the Newark, Centerville/Fremont and Deep Aquifers are all interconnected, it is not possible to pump heavily from the deeper aquifers without impacting the Newark Aquifer (and potentially inducing seawater intrusion). Within the limits described above, the groundwater basin provides a vital source of water supply for ACWD under both normal and dry year conditions.

ACWD's existing and future reliance on the Niles Cone groundwater basin is described in our Integrated Resources Plan (IRP). The IRP, adopted by our Board in 1996, provides a master plan of the water supply and demand management programs ACWD has implemented, or will be implementing, to meet future demands and to ensure adequate dry year water supply reliability. Because of limitations on the availability of imported supplies (up to 85% deficiency of SWP supplies in dry years), water supplies from the Niles Cone groundwater basin are vital for ACWD, especially during dry and critically dry years. In addition to local groundwater supplies, ACWD's IRP program also includes off-site storage, desalination, recycled water, and an aggressive demand management program. A cornerstone of our long-term water supply strategy is off-site storage (or banking) of excess SWP supplies, such as our existing program with the Semitropic Groundwater Banking Program. In wet years, SWP supplies are stored in the Semitropic groundwater basin in Kern County. These supplies can then be recovered by ACWD for use during dry years. Although participation in this banking program is much more expensive than storing water in the Niles Cone groundwater basin, ACWD's need for this off-site banking program is due to the very limited operational storage capacity of our own groundwater basin, as described above.

Interconnection Between the Niles Cone Groundwater Basin and the San Lorenzo Cone

The interconnection between the Niles Cone Groundwater Basin and the SEBP is recognized in the DEIR (page 3.8-1). As indicated in the DEIR, the interconnection occurs mainly through the Deep Aquifer. This interconnection is depicted in geologic cross-sections appearing in DWR Bulletins 81 and is referenced in DWR Bulletin 118-1; Appendix A:

The aquifers below 400 feet, called the 400-foot and 500-foot aquifers, may extend beyond the limits in the Niles subarea and thus act as conductive layers for the migration of ground water out of the Niles subarea. The configuration of water levels in wells tapping the deeper aquifers shows a gradient toward the north. This suggests that ground water moves toward the north beneath the boundary between the Niles subarea and the adjacent San Leandro Cone.

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The impact on groundwater in the Niles Cone groundwater basin due to historical pumping at East Bay Water Company's (EBWC's) Roberts Landing well field also serves as an indication of the degree of inter-connection between the Niles Cone and South East Bay Plain groundwater basins. The Robert's Landing well field was located in the same location as the proposed Bayside Project. This was confirmed by EBMUD, when at most of the public meetings on the proposed Bayside Project, EBMUD project engineers have stated that the Bayside Project site is located on the same site as the Roberts Landing well field. EBWC's Roberts Landing wells were deep wells, 300 to 800 feet deep, thus utilizing the same deep aquifer EBMUD plans to develop for the Bayside Groundwater Project (Norfleet Consultants, *Groundwater Study and Water Supply History of the East Bay Plain, Alameda and Contra Costa Counties, California*, 1998, page 51.)

The San Francisco-based civil and hydraulic engineer, Cyril Williams, Jr. published an article chronicling the water levels in the ACWD from 1913 to 1930. In explaining the causes of the extreme lowering of ACWD groundwater levels that occurred in 1924, he stated that "[t]he pumping by the Eastbay (sic) Water Company at Roberts Landing also contributed to the lowering of the water table in Alameda County Water District." (Cyril Williams, Jr., *The Water Situation in Alameda County Water District, The Township Register*, March 18, 1930, page 5.) This conclusion that pumping at Robert's Landing depleted the Niles Cone groundwater basin is reiterated in a recent study by Norfleet Consultants, which stated "[b]y 1913, it was known that pumping of the Roberts and Alvarado Well Fields caused a noticeable depression in the Niles Cone water table." (Norfleet Consultants, *Groundwater Study*, page 51.)

Eventually, pressures from ACWD and its neighboring district, Eden Township County Water District ("Eden District"), led to the cessation of pumping at Roberts Landing. EBWC entered into an agreement with the Eden District, dated May 18, 1925 ("Agreement"), whereby EBWC agreed to cease pumping from the Roberts Landing wells until at least April 1st, 1926, and then to pump only in the event of an emergency. (Agreement, paragraph 7).

After pumping ceased at Roberts Landing, Engineer Williams attributed the rise in ACWD's water table to the abandonment of Robert's Landing wells. He wrote:

Through a compromise between the Eden Township County Water District, and the Eastbay (sic) Water Company, Roberts Landing pumps have been abandoned. When these pumps ceased operating, there was an almost immediate rise in a large number of wells in Alameda County Water District. A part of the leak in Niles Cone has been stopped and the great cone of depression caused by the pumping at Roberts Landing was refilled.

(Cyril Williams, Jr., *The Water Situation in Alameda County Water District*, page 5.)

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In addition, in a 1928 letter to ACWD's President of its Board of Directors, discussing proposals to raise the water table in Niles Cone, Mr. Williams that:

One of the most serious offsets to any proposed methods of raising the water table is the pumping at . . . the Roberts Landing wells of the East Bay Water Company. As to the Roberts Landing wells I have the practical assurance of the Water Company that these will never be used again. Under a contract with the Eden Township County Water District these wells must be abandoned on Jan. 1, 1930. For over one year these wells have not been operating, and there has been a marked rise in the deep wells of that District.

(Letter from Cyril Williams, to Mr. J. C. Shinn, President, Board of Directors of Alameda County Water District, June 1, 1928.)

More recent research has borne out Cyril Williams' conclusions. A 1955 evaluation of the Niles Cone area by the State Water Resources Board determined that the deep aquifer underlying the San Leandro and San Lorenzo cones "appeared to be hydrologically connected throughout the east bay area." (Norfleet Consultants, *Groundwater Study*, page 8.)

Furthermore, a 1984 groundwater supply report to the Alameda County Flood Control and Water Conservation District stated that:

The lower zone [of the San Leandro and San Lorenzo aquifers], which occurs below a depth of 400 feet, contains considerably more water-bearing deposits than the upper zone. Geologic cross sections through the San Leandro and San Lorenzo cones show a thickening of the deeper aquifer towards the south. This thickening suggests that the source of aquifer material in the lower zone may be the ancestral Niles cone of Alameda Creek.

(Dennis P. Maslonkowski, *Groundwater in the San Leandro and San Lorenzo Alluvial Cones of the East Bay Plain of Alameda County*, June 1984, page 1) In addition, research into these deep aquifers led this researcher to the conclusion that "[t]he deeper aquifers in the study area are believed to be replenished by subsurface inflow from the south Subsurface inflow may be attributable to their interconnection with deeper aquifers of the Niles Cone." (Dennis P. Maslonkowski, *Groundwater in the San Leandro and San Lorenzo Alluvial Cones*, page 16.)

This conclusion has also been stated by EBMUD's own groundwater consultant. At the May 15th Public Comment meeting, the CH2M Hill groundwater consultant stated that the actual source of the Deep Aquifer was outside of the EBMUD service area and flowed North to the SEBP. Furthermore, at that same meeting, the consultant presented a chart of well logs from the SEBP indicating that the Deep Aquifer is much more productive closer to Hayward as compared to Oakland. Additionally, at most of the Public Comment meetings, when describing the Deep Aquifer, EBMUD project engineers have stated that the Deep Aquifer underlying the Bayside Project site becomes more productive in the southern portion of the SEBP.

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Another compelling indication of not only the interconnection but also the degree of "communication" between the two basins is provided through a comparison of historical water-level-versus-time plots for wells in both the Niles Cone and San Leandro Cone. Historical water level plots were reviewed for wells 4S/1W-28D02, a Newark Aquifer indicator well in the forebay area of the Niles Cone; 4S/1W-30E03, a Deep Aquifer well that is within or close to the forebay of the Niles Cone; 4S/2W-12C01, a Deep Aquifer well located in northern part of the NCGWB; and 3S/3W-01K01, a Deep Aquifer well located in the San Lorenzo Cone (as documented in Figure 3.8-2 in the DEIR). The important common feature among the water level data from these wells is that they include data back to at least the 1960s, when groundwater levels were depressed due to heavy agricultural pumping and the absence of an effective recharge operation using both imported and local waters. All the plots have a similar signature, the most obvious part thereof being the recovery of water levels in the 1970s. The Newark forebay well's recovery was in response to development of ACWD's recharge operation, including the importation of supplemental state water beginning in 1962, the acquisition of gravel quarries for use as recharge ponds in the 1960s and 1970s, and the construction of rubber dams in Alameda Creek the 1970s and 1980s. The fact that the deep aquifer wells have this similar signature as the Newark Aquifer forebay well offers strong evidence of vertical movement of water and communication between the Newark and Centerville-Fremont and Deep Aquifers within the Niles Cone. The close resemblance in signature between the San Lorenzo Cone well 3S/3W-01K01 and Niles Cone Deep Aquifer wells, and ultimately the Newark Aquifer Forebay well, is evidence that there is a high degree of communication between the NCGWB and SEBP. As such, we believe the recovery of water levels in San Lorenzo Cone (as evidenced by the water level trends in well 3S/3W-01K01) is largely a consequence of ACWD's recharge operation.

In order to comply with CEQA standards regarding the description of the regional environmental setting and in order to adequately assess potential Project impacts to ACWD and the Niles Cone groundwater basin, the EIR must acknowledge the previous studies and historical information which provide substantial evidence of a high degree of communication between Niles Cone groundwater basin and the SEBP groundwater basin.

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ATTACHMENT 2 – ADEQUACY OF IMPACT IDENTIFICATION AND ASSESSMENT

CEQA requires that an EIR consider and discuss all significant environmental impacts of the project. CEQA Guidelines § 15126 and 15126.2. "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" CEQA Guidelines § 15382.

CEQA Guidelines also state that "Direct and indirect significant effects of the project on the environment shall be clearly identified and described (in the EIR), giving due consideration to both the short-term and long-term effects." CEQA Guidelines § 15126.2(a). The EIR must describe the significant impacts that would lead to irreversible changes in the environment. CEQA Guidelines § 15126.2(c). Finally, in assessing impacts, "[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can." CEQA Guidelines § 15144.

As lead agency, EBMUD is also "encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect" CEQA Guidelines § 15064.7(a).

The DEIR does not meet these CEQA requirements for identifying and classifying impacts to ACWD and the Niles Cone groundwater basin. As described below, the DEIR (1) fails to adequately identify and describe potential impacts to ACWD and the Niles Cone groundwater basin; (2) improperly minimizes the significance of the impacts that are identified; and (3) does not address cumulative impacts on the Niles Cone groundwater basin due to pumping and recharge operations by ACWD and others in the Niles Cone groundwater basin and South East Bay Plain basin.

1. The DEIR fails to adequately identify and describe impacts to ACWD operations and the Niles Cone Groundwater Basin

As described below, the proposed Bayside Groundwater Project may have significant negative impacts on the Niles Cone groundwater basin and ACWD's operation of the Basin as a water supply source for our customers. ACWD's concerns with the proposed Bayside Project is due to the fact that the Niles Cone groundwater basin is in direct hydraulic connection with the South East Bay Plain groundwater basin (San Leandro Cone). In fact, previous studies by the California Department of Water Resources (see Attachment 1) characterize the Deep Aquifer as one continuous aquifer system connecting Niles Cone and San Leandro Cone. The Department of Water Resources (DWR) Bulletin goes on to state that the source of water for wells pumping from the deep aquifer in the San Leandro Cone is likely from recharge in Alameda Creek (i.e. through the Niles Cone groundwater basin).

Potential impacts to the Niles Cone groundwater basin and ACWD may occur as a result of (A) extracting groundwater from the deep aquifer in dry years, and (B) injecting water during normal and wet years, as detailed below.

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A. Impacts due to extraction

As stated in the DEIR, EBMUD proposes to extract up to 15,000 AF/Yr from the deep aquifer on a continuous basis during dry years. During a long term drought the duration of this pumping could be as long as 7 years. Based on the existing pumping rate of 1,704 AF/Yr by non-EBMUD wells (source: CH2M Hill, February 2001), EBMUD's proposed program would increase pumping during dry and critically dry years by over 900% in the South East Bay Plain basin. Impact 3.8-8 (page 3.8-25) in the DEIR states that the pumping of wells as part of the Bayside Project may result in groundwater level declines of up to 40 feet in the Deep Aquifer at the northern boundary of the Niles Cone groundwater basin. With groundwater levels currently maintained at approximately sea-level in the Deep Aquifer in the northern portion of the Niles Cone groundwater basin, this would mean resulting groundwater levels of 40 feet below sea-level (-40 feet msl) in ACWD's service area. The DEIR also indicates that the Bayside Project would induce about 3,500 acre-feet of groundwater outflow from the Niles Cone groundwater basin to the South East Bay Plain basin. However, the DEIR fails to address how this magnitude of groundwater level decline and groundwater outflows would impact ACWD and the Niles Cone groundwater basin, including loss of ACWD water supplies, seawater intrusion, movement of contaminants, and land subsidence.

The DEIR incorrectly states that there would be "no net impact" to the Niles Cone groundwater basin if the Project were used in the ASR mode. On page 3.8-25 (Impact 3.8-8) and on page 6-3 (Table 6-1, Comparison of Operating Alternatives), the DEIR states that over the long-term (i.e. 75 years) there would be no net impact to Niles Cone groundwater basin assuming that the amount of water injected by the Bayside Project is approximately equal to the amount of water extracted by the Project. However, this assertion is incorrect for two reasons.

First, the limited operational storage within the Niles Cone groundwater basin is already fully utilized by ACWD. Additional water "stored" by EBMUD in the Niles Cone groundwater basin would spill to San Francisco Bay during the times when ACWD is maintaining the basin at high levels. As previously described, this "spill" would occur because the Deep Aquifer is hydraulically connected with the upper aquifers in the Niles Cone groundwater basin. Increased groundwater levels in the Deep Aquifer may result in increased groundwater levels in the upper Newark Aquifer, with subsequent "overflows" to the Bay. Without the available storage capacity within the Niles Cone groundwater basin, subsequent extraction by EBMUD during dry years would result in groundwater outflows from the ACWD service area, resulting in a long-term net loss from the Niles Cone groundwater basin, with potentially significant impacts on ACWD's water supplies.

Second, the groundwater modeling conducted by EBMUD has indicated that, even with the ASR operations, the proposed Project would still result in significant groundwater level declines and groundwater outflows from Niles Cone groundwater basin during dry years. That is, similar to the extraction-only alternative, in the ASR mode the Niles Cone groundwater basin will still be impacted by groundwater level declines and groundwater outflows during dry years when the Bayside Project is in extraction mode (i.e. during dry and critically dry years). Therefore, the comments below regarding ACWD water supply losses, seawater intrusion, movement of contaminants and land subsidence should be considered as applicable to both the extraction-only and injection/extraction alternatives.

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In addition, rather than using the incorrect assumption of only considering "net" impacts for the ASR operating alternatives over a long-term hydrologic period, the EIR should consider impacts to ACWD and the Niles Cone groundwater basin separately for dry year operating conditions (extraction) and wet year operating conditions (injection).

The DEIR fails to identify the impacts to ACWD due to the loss of water supplies from the Niles Cone groundwater basin: Previous modeling by EBMUD's consultant has indicated that under existing conditions there is a flow of approximately 300 to 700 AF/Yr from the Niles Cone groundwater basin to SEBP basin. Additional reconnaissance level modeling by EBMUD has indicated that the proposed Bayside Project would result in an increase in "inflows" from the Niles Cone groundwater basin to the South East Bay Plain basin for a total of 2,500 AF/Yr during the first year of Bayside Project pumping, and up to 3,500 AF/Yr during the last year of a three year pumping period. From an ACWD perspective, this increase in "inflows" to the SEBP basin is actually an increase in "outflows" from the Niles Cone groundwater basin, representing a loss of ACWD water supplies previously recharged by ACWD. Over a seven year drought up to 20,000 AF of critical water supply would be lost from the Niles Cone groundwater basin due to groundwater outflows as a result of the operation of the Bayside Project (based on EBMUD's modeling analysis). Because the Deep Aquifer is hydraulically connected with the Centerville/Fremont and Newark aquifers in the ACWD service area, the groundwater outflows from the Deep Aquifer and related groundwater drawdown (estimated to be up to 40 feet in the Deep Aquifer) that occur as a result of Project operations would directly impact ACWD's water supplies. This would represent a significant water supply impact to ACWD, especially since ACWD will be relying on water previously stored by ACWD in the Niles Cone groundwater basin to make up for deficiencies in imported supplies during drought years. In addition, if ACWD needs to curtail pumping because of seawater intrusion concerns or concerns regarding movement of brackish groundwater plumes, the water supply impacts to ACWD would be even greater. Therefore, the EIR should evaluate the potential impacts on water supply to ACWD due to the Bayside Project and provide appropriate mitigation.

The DEIR fails to consider seawater intrusion impacts in the Niles Cone groundwater basin: The DEIR considers the potential for seawater intrusion in the SEBP groundwater basin (Impact 3.8-6, page 3.8-24) but does not consider potential seawater intrusion impacts in the adjacent Niles Cone groundwater basin. As discussed above, the DEIR indicates that there may be drawdown impacts of up to 40 feet in the Deep Aquifer in the Niles Cone Groundwater basin as a result of the Bayside Project's pumping. ACWD's modeling analyses have indicated that this level of drawdown in the Deep Aquifer would also result in lower groundwater levels at ACWD's well field in the Centerville/Fremont and Newark Aquifers. ACWD's analysis has also indicated that when EBMUD's planned dry year pumping from the proposed Bayside program is superimposed over ACWD's pumping from the Niles Cone groundwater basin, groundwater elevations in the Newark Aquifer will decline at a significantly accelerated rate (compared to without the Bayside Project). Finally, this analysis indicates that this accelerated rate of decline in the Newark Aquifer water levels will also result in potentially significant seawater intrusion through the Newark Aquifer, which would not have occurred absent the Bayside Project.

The DEIR fails to consider the movement of contaminants in the Niles Cone groundwater basin: The DEIR considers the potential for movement of contaminants in the SEBP groundwater basin (Impact 3.8-2, page 3.8-21) but does not consider the potential for similar impacts in the adjacent Niles Cone groundwater basin. As

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documented in ACWD's annual Groundwater Survey reports, even though ACWD has managed the groundwater basin to prevent further seawater intrusion, a significant amount of brackish water remains trapped in the aquifers. Over the past 25 years, ACWD has been removing this trapped brackish water through our Aquifer Reclamation Program. The purpose of this program is to reclaim to fresh water conditions the portions of the groundwater basin that have been previously impacted by seawater intrusion.

Based on the potential groundwater level declines and groundwater contour maps provided in the DEIR, the groundwater gradients in the Deep Aquifer, and possibly Centerville/Fremont and Newark Aquifers, will be significantly altered by the operation of the Bayside Project. In general, pumping from the Bayside Project will result in a significantly steeper groundwater gradient with a corresponding increase of groundwater flows to the north. This change in direction and magnitude of the groundwater gradient in the Niles Cone groundwater basin may cause the existing plumes of trapped brackish groundwater to also spread further north, thereby contaminating areas in the aquifer system that either have not previously been impacted, or areas that have been previously reclaimed by ACWD's Aquifer Reclamation Program.

The DEIR fails to consider land subsidence potential in the ACWD service area: ACWD is concerned with land subsidence impacts in the ACWD service area due to potential impacts on ACWD water supply infrastructure, as well as potential impacts on the residences and businesses which we serve. The DEIR estimates that there may be significant groundwater level declines in the ACWD service area, but does not provide an analysis of potential subsidence impacts in the ACWD service area. This analysis should be provided in the EIR and should be based on projected groundwater level declines and the local hydrogeologic conditions in the Niles Cone groundwater basin. Mitigation should be provided for any significant impacts.

B. Impacts due to injection

The preferred operating alternative identified in the DEIR is for an injection/extraction program. The DEIR states that under this operating scenario EBMUD will inject treated Mokelumne River supplies into the groundwater basin in approximately 40% of the years, in any month in which there are flood control releases from EBMUD's Pardee or Camanche Reservoirs. The DEIR also states that under this operating alternative, the amount of water extracted from the basin would approximately equal the water injected into the basin (assuming future hydrologic conditions similar to those of the past 75 years). The DEIR also indicates that the injection program will result in groundwater flows from the SEBP basin into the Niles Cone groundwater basin (resulting in higher groundwater levels in the Deep Aquifer). Because the Deep Aquifer system is interconnected with the Newark and Centerville/Fremont Aquifers in the Forebay area, it is likely that the Bayside injection operations will impact groundwater levels in all three of these aquifers, and not just the Deep Aquifer. ACWD concerns with the groundwater injection operations are related to potential impacts on ACWD's ability to store water in the Niles Cone groundwater basin and impacts on water quality in the Niles Cone groundwater basin.

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The DEIR fails to consider impacts due to the limited storage capacity of the Niles Cone groundwater basin: As described above, ACWD recharges the Niles Cone groundwater basin through the capture and percolation of local runoff and imported supplies from the SWP. However, as also described above, the amount of useable storage in the Niles Cone Groundwater basin is limited to approximately 17,000 AF due to (1) seawater intrusion concerns if the water levels drop significantly below sea-level, and (2) groundwater "overflow" losses to San Francisco Bay if the groundwater levels are too high. In order to optimize the conjunctive use of the basin, ACWD typically recharges the maximum amount possible to maintain high groundwater conditions when water supplies are available (within the operating parameters described above). This allows ACWD to have the maximum amount stored for future dry year conditions, as well as providing fresh water to displace brackish groundwater in contaminated portions of the aquifer system.

One of ACWD's concerns with the proposed injection operations is that, given the relatively small quantity of useable storage in the Niles Cone groundwater basin (approximately 17,000 AF), there is not sufficient capacity to provide storage for the Bayside Project. Given that it is ACWD's operational practice to maximize recharge (and storage) in the Niles Cone groundwater basin, any additional water stored through the Bayside Project would either (a) limit ACWD's subsequent use of this storage capacity or (b) result in "overflow" conditions in which recharged water would be lost to San Francisco Bay or cause damage to property through artesian conditions. In either case, the DEIR should consider the impacts the proposed injection operations may have on ACWD's ability to utilize the Niles Cone groundwater basin for storage of water supplies, and provide appropriate mitigation.

The DEIR fails to consider water quality impacts on the Niles Cone groundwater basin that would occur as a result of injection operations: A potential water quality impact of concern to ACWD is the movement of existing contaminant plumes due to changes in the direction and magnitude of groundwater gradients which will occur as a result of the injection operations. As discussed above, there are significant trapped brackish groundwater plumes in all of the aquifers, including Deep Aquifer, in the Niles Cone groundwater basin. Changes of groundwater pressures or gradients as a result of Bayside injection may cause these trapped plumes to migrate, adversely affecting adjacent potable waters. In addition, the DEIR indicates that the native groundwater to be extracted from the Deep Aquifer by the proposed Bayside Project will need to be treated to remove high levels of manganese and radon. The DEIR also indicates that, with the injection program, the water to be extracted may be of improved quality since EBMUD will be recovering, in part, the treated water that had previously been injected. ACWD's concern with this proposed operation is that while the injection program may result in improving groundwater quality in the vicinity of the Bayside wells, it may also displace the native groundwater in the SEBP basin, causing it to flow into aquifers in the ACWD service area. This may result in degrading groundwater water quality in the ACWD service area, especially since ACWD's wells tapping the Deep Aquifer do not currently have elevated concentrations of either manganese or radon. Both of these potential impacts should be addressed in the EIR, and appropriate mitigation should be provided.

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2. The DEIR incorrectly classifies the significance of the impacts that are identified:

CEQA Guidelines (CEQA Guidelines § 154065) state that finding a significant effect on the environment is mandatory whenever any of the following apply:

- The project has the potential to substantially degrade the quality of the environment;
- The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals;
- The project has possible environmental effects which are individually limited but cumulatively considerable; or
- The project will cause substantial direct or indirect adverse effects on humans.

The DEIR's evaluation of Impact 3.8-9 (Extraction of water could affect the Niles Cone groundwater basin) indicates that the impact to Niles Cone groundwater basin would be "less than significant with mitigation", but also indicates that there may be a "residual" impact of increased net inflows from Niles Cone groundwater basin to the SEBP groundwater basin. The proposed mitigation for these impacts is addressed in Attachment 4. As discussed below, the classification of the resulting level of significance as "less than significant" is incorrect and inappropriate.

A. The threshold for "significance" is inappropriate

The proposed mitigation for impacts to the Niles Cone groundwater basin indicates that the District will implement a groundwater monitoring network in the Deep Aquifer to assess impacts on the direction and magnitude of flows from the Niles Cone groundwater basin. The proposed mitigation also states that "Flux values will be estimated based on historical pumpage from the SEBPB to assess the *significance* of future impacts relative to past impacts. If adverse impacts are detected the District will take appropriate actions....". This description of what is considered "significant" is vague and confusing, especially regarding the determination of what constitutes "future impacts relative to historical impacts". The DEIR does not meet the CEQA Guidelines requirement to provide a threshold of significance that is an "identifiable quantitative, qualitative or performance level of a particular environmental effect".

In addition, the determination of what constitutes a significant impact to ACWD and the Niles Cone groundwater basin should not be based on "historical" groundwater conditions when both the SEBP and Niles Cone groundwater basin were heavily overdrafted. It was precisely under these unfortunate historical conditions that the Niles Cone groundwater basin was so significantly impacted by seawater intrusion. In addition, the historic overdraft in the SEBP and subsequent lowering of the Niles Cone water table and damage to ACWD operations led to litigation whereby ACWD sought to enjoin East Bay Water Company's pumping at Roberts Landing, the same site as the Bayside Project. We are concerned that EBMUD intends to pump groundwater to the level of historic conditions. At the May 1st Public Comment meeting, the CH2M Hill subsidence consultant stated that subsidence would not occur because EBMUD "will only lower the water table to historical levels." A lowering of the water table to levels seen in the early part of this century will seriously damage ACWD's groundwater basin. Rather, significance must be assessed based on changes from the existing groundwater

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conditions of Niles Cone groundwater basin and on how the proposed Project would impact ACWD's existing operation and balanced use of this resource.

B. Residual impact would be significant

The DEIR states that even with mitigation, there may be a residual impact of a net outflow within the Deep Aquifer from the Niles Cone groundwater basin to the SEBP Basin. As previously discussed, any increase in groundwater outflows from the Niles Cone groundwater basin due to extraction by the Bayside Project would constitute a loss of ACWD water supply, a potentially significant impact to ACWD, especially in dry years. Therefore, the DEIR should recognize this impact as significant and provide appropriate mitigation, as discussed in Attachment 4 below.

C. Significant and irreversible impacts may occur prior to mitigation

The DEIR states that it will monitor groundwater levels at the boundary between the Niles Cone groundwater basin and SEBPB, and, based on this monitoring data, will estimate flux values between the groundwater basins. The DEIR goes on to state that "If adverse impacts are detected, the District will take appropriate actions...". However, the DEIR fails to recognize that impacts that occur prior to the proposed mitigation actions may be environmentally significant. These impacts may include loss of ACWD dry year supplies, seawater intrusion, or movement of contaminants. The potential for salt water contamination and movement of contaminants triggers a mandatory finding of significance under CEQA. Therefore, the EIR should classify those impacts to ACWD and the Niles Cone groundwater basin which occur prior to the proposed mitigation as potentially significant and provide appropriate mitigation. Given that the movement of contaminants or salt water intrusion would cause long lasting harm to the Niles Cone groundwater basin, potentially taking decades to repair, the mitigation should be developed to ensure that such impacts will not occur as a result of the Bayside Project operations.

3. The DEIR does not address cumulative impacts due to pumping and recharge operations by ACWD and others in the Niles Cone groundwater basin and South East Bay Plain basin.

CEQA Guidelines state that "An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable" CEQA Guidelines § 15130(a). "Cumulatively considerable" means that the incremental effects of an individual 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. . . ." CEQA Guidelines § 15065.

An adequate discussion will include: a list of past, present and future projects, including those outside the lead agency's control, that produce cumulative impacts. CEQA Guidelines § 15130(b)(1).

However, the DEIR completely fails to consider the cumulative impacts of ACWD groundwater operations (pumping and recharge) and others who utilize the Niles Cone and South East Bay Plain groundwater basins as a water supply source. Other groundwater users include private well owners in the Niles Cone groundwater basin and the City of Hayward's emergency groundwater supply system. The analysis of

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cumulative impacts on ACWD operations and the Niles Cone groundwater basin is especially critical given that ACWD's current operation of the groundwater system is to maximize the use of local groundwater supplies in dry years (when our imported water supplies may be significantly cut back). It is during these dry periods that EBMUD also will likely be extracting groundwater from the proposed Bayside Project, thereby adding additional stresses on the Niles Cone groundwater basin. Potential cumulative impacts include groundwater level declines and subsequent ACWD water supply losses, saltwater intrusion, and movement of contaminants in the Niles Cone groundwater basin. Similarly, under current operating conditions, during wet periods ACWD maximizes the recharge into Niles Cone groundwater basin with local and imported State Water Project supplies. However, the amount of ACWD recharge is limited by the overall storage capacity of the Niles Cone groundwater basin. Based on information provided in the DEIR, it will be during the same wet periods that EBMUD will be injecting water into the Deep Aquifer. Because of the limited storage capacity of the Niles Cone groundwater basin, this additional injection of water by EBMUD may result in water supply losses due to excessive Niles Cone groundwater outflows to San Francisco Bay and potential artesian conditions with subsequent property damage. Therefore, the EIR should identify, evaluate and provide mitigation for these cumulative impacts, as required under CEQA.

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ATTACHMENT 3 – ADEQUACY OF TECHNICAL ANALYSIS

ACWD has reviewed in detail the DEIR's technical analysis of groundwater related impacts. As discussed below, the DEIR relies on a "reconnaissance level" groundwater model to analyze potential groundwater impacts in the Niles Cone groundwater basin. This approach is not adequate to determine impacts to Niles Cone groundwater basin or ACWD operations because of: (1) deficiencies in the groundwater model to analyze such impacts, and (2) the lack of technical studies to evaluate the hydrogeologic conditions in the area between Niles Cone groundwater basin and the South East Bay Plain groundwater basin. This attachment provides: (1) ACWD's comments regarding the groundwater model used for the DEIR technical analysis, and (2) ACWD's recommended approach for conducting the technical studies needed to evaluate the potential impacts on the Niles Cone groundwater basin and ACWD operations. As discussed in ACWD's summary letter, these technical studies and impact analyses should be completed by EBMUD prior to finalization of the EIR.

1. Limitations of EBMUD's Reconnaissance Model

CH2M Hill, EBMUD's consultant, developed a "reconnaissance level" computer model for the SEBP. Our comments on the modeling effort are based on the DEIR and additional information provided to ACWD. This included extensive discussions between ACWD and EBMUD staff and model documentation that appears in a draft calibration report.

The model was used to estimate the impacts on the Niles Cone by noting model-predicted flows across the southerly boundary of the model grid. The model results demonstrate a potential impact on the Niles Cone which, based on our analysis discussed in other sections of these comments, would be unacceptable to ACWD. But we are concerned that the actual impacts to ACWD could be even more severe because of uncertainties inherent in the reconnaissance level of effort. Accordingly, we do not share EBMUD's confidence that the model findings are "conservative." "Reconnaissance level" means that the level of effort was limited with respect to model calibration and the selection and distribution of aquifer parameters. Limiting the level of effort enables a "first-cut" examination of feasibility of installing a well field to be done quickly and economically. With reference to such an objective, we have no reason to believe that CH2M Hill did not do a reasonable job in both the modeling work and in recognizing the model's limitations. But in our opinion, the level of refinement is inadequate to predict impacts on the NCGWB with any confidence. The following inadequacies of the model for reliable calculation of the amount of water that would flow from the NCGWB to the SEBP (or vice versa) and the associated groundwater level impacts in the Niles Cone groundwater basin are discussed below.

- Unrealistic assumption of a constant head at the interface between the NCGWB and SEBP/ inadequate grid coverage;
- Lack of variability in aquifer parameter values with respect to geographic location;
- Over-reliance on a steady-state approach for calibration;
- Simplistic approach for selecting recharge parameters;
- Inadequate levels of "stress" on the aquifer system for model calibration; and

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- Inconsistency between EBMUD's assertion that there will be little or no subsidence as a result of the Project and its assumption that clay aquitards will compress, yielding considerable local water for the Project.

Incorrect Assumption of a Constant Head at the Interface between the NCGWB and the SEBP/ Inadequate Grid Coverage. Ideally, a model grid should extend horizontally to the actual limits of a flow domain whose boundaries either truly represent the physical limits of an aquifer system or an actual hydraulic divide (a no-flow boundary or constant-head boundary). When aquifers physically extend appreciably beyond the "area of interest", a modeler may elect to limit the geographic area of the grid by assignment of an artificial no-flow, general head, or constant head boundary. This approach may be acceptable, provided that the boundary is placed significantly beyond the influence of sources and sinks which could be located either within or outside the model grid.

EBMUD's model has an artificial constant head boundary whose location extends near the interface between the Niles Cone and the SEBP. In the Deep Aquifer, the "interface" is imaginary, not a true hydrogeologic interface. The Deep Aquifer is continuous across this arbitrary line, and there is no river or stream in direct communication with the Deep Aquifer at this location to render a constant-head type of hydraulic divide. What is problematic with assignment of a constant head boundary at this location is that there are substantial sources (i.e., ACWD's recharge ponds and potentially EBMUD's proposed injection wells) and sinks (ACWD's wells and the proposed Bayside Project's wells) that will likely cause the actual head to fluctuate appreciably over time. Hence, assignment of a constant head boundary at this "interface" is invalid, and the exchange of water from the NCGWB to SEBP cannot be reliably calculated with this model. Instead, a common model grid that encompasses both the NCGWB and the SEBP basins is needed.

Potentially, use of an artificial constant-head boundary may influence the simulation toward over-prediction of inflow from the NCGWB. Partially on this basis, EBMUD contends that the model, although a "reconnaissance level" of effort, is "conservative" with respect to impacts on the NCGWB. However, this contention assumes that the assigned head is appreciably higher in value than actual heads over the duration of time when EBMUD wells would be in operation, and consequently, that the actual gradient across the interface would be less than the model-predicted value. There can be no confidence in this potential outcome until the model grid is extended to include the NCGWB (and sources and sinks therein) and other limitations of the model are addressed. Essentially, we remain concerned that the model may over-predict the amount of water that the Bayside wells can derive from sources within the SEBP itself. The consequence of such an over-prediction would be an under-prediction of the amount of water that would be drawn from the Niles Cone. The following paragraphs provide additional bases for this concern.

Lack of Variability in Aquifer Parameter Values With Respect to Geographic Location. In real aquifer systems, aquifer parameter values can be expected to vary with geographic location as well as depth. For example, the Deep Aquifer's hydraulic conductivity may drop off with distance (north) from the Niles Cone. The ease of horizontal groundwater flow in the Deep Aquifer, both within the Niles Cone and SEBP, toward the Bayside Project wells would be governed by the parameter *transmissivity*, which is the product of hydraulic conductivity and saturated aquifer thickness. In the

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SEBP model, layer thickness does vary with horizontal geographic location but hydraulic conductivity does not. This unrealistic uniformity in hydraulic conductivity may skew the simulated direction of water flow to the Bayside wells relative to flow direction that would be actually be induced. If hydraulic conductivity is, in reality, greater in the southerly portions of the SEBP than in the northerly areas, then the model may over-predict the availability of water from the northerly areas within the grid to satisfy Bayside Project's demand. This, in turn, would mean an under-prediction of the amount of water exported from the Niles Cone.

We have similar concerns with the assumption of geographic uniformity in other parameters, such as vertical hydraulic conductivity and storage coefficients. Vertical hydraulic conductivity was taken simply as 10 percent of the value of horizontal conductivity. Such an assumption is common in "reconnaissance level" modeling. However, a greater level of effort to calibrate this parameter is necessary because the amount of water exported from the Niles Cone may be dependent on the amount of water in shallow layers of the SEBP that is fluxed to the Deep Aquifer, as estimated based on the parameters discussed above.

Over-Reliance on a Steady-State Approach for Model Calibration. Use of a steady-state approach is a common first-cut toward calibrating a model, but transient simulations are needed for calibrating parameters associated with fluctuations in conditions over time. Unless pump tests have been conducted throughout the model grid (not the case here), the values of storage coefficients (specific storage and specific yield), in particular, cannot easily be calibrated without considering temporal fluctuations in water levels. To EBMUD's credit, a transient simulation with the model was run to test the model predictions against measurements of local drawdown and "draw-up" at the Farmhouse Observation Well in response to pumping and injecting, respectively, at the Bayside Well. A comparison of model output with measured drawdown—even that induced from a single, short-term pump test—can serve to provide some feedback on the accuracy of certain model parameters over a localized area. However, achievement of model reliability for evaluating impacts on the NCGWB requires a transient approach for calibration/verification over a much greater expanse of time and geographic area. Essentially, the model should be calibrated against a long history (e.g., 40 years) of recorded water levels. Such levels should be measured at a large number of wells screened at various depths and located over a wide area throughout the model grid. This would give more confidence in the distribution of key input parameters. Accuracy with respect to these parameters, in turn, would allow for a more accurate estimate of the relative importance of various sources of supply (one being the NCGWB) that would feed the Bayside wells in times of drought.

Simplistic Selection of Recharge Parameters. The approach taken to select input parameters for recharge was too simplistic to achieve reliable predictions of impacts to the Niles Cone, especially during drought periods. Parameters for the recharge budget (stream seepage, pipe leakage, rainfall percolation) were input as average annual values heavily based on a document prepared by Muir (1993). The model has no routines to calculate these values independently from measured quantities such as rainfall and urban water use. No documentation in the form of measured data was provided supporting the estimated stream seepage. Another concern is that the recharge values were not reduced to appropriate levels for model simulations in drought years, when actual amounts of rainfall, stream seepage, and urban water use

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would be lower. Use of lower values, in line with actual drought conditions, is important because reduced recharge would coincide with times when the Bayside wells are pumping and groundwater drawn to those wells from the NCGWB. Without a basis for confidence in recharge values, the reliability of the model as a predictive tool in estimating the potential flux from the NCGWB to the SEBP is limited.

Inadequate Levels of "Stress" on the Aquifer System for Calibration. The model was run to test possible impacts on the Niles Cone in response to scenarios involving full-scale operation of the Bayside Project. However, the "stress" (e.g., severe pumping, drawdown, etc.) on the aquifers that would result from actual full-scale operation at the Bayside Project would likely be far greater than those considered in the calibration. The steady-state condition to which the model was calibrated was inherently stress-free. The only real stresses considered were the pumping and injection tests at the Bayside test well. However, these tests represent only a fraction of the stresses that would be induced under full-scale operation. This greatly limits the reliability of the "what-if" scenarios run by this model. The CH2M Hill February 22, 2001, draft document, which details Bayside Project simulation results, admits to data gaps which "center on response of the aquifer system to long-term, large scale pumping and injection stresses." Moreover, "these gaps will only be able to be addressed through operation of full-scale facilities." In other words, there are significant limitations on the model's reliability in attempting to predict the impact of the Project on the NCGWB. Rather than waiting until the Project is built to verify the reliability of the model, the calibration should consider the severe overdraft condition during and prior to the 1950's and 1960's and the subsequent rebound observed in the late 1970s and 1980s. The influence of the establishment and expansion of ACWD's recharge operation on this rebound should be considered, as similar hydrographic signatures between wells in the NCGWB and SEBP strongly suggest ACWD's recharge operation was largely responsible for recovery of aquifer pressures in the Deep Aquifer within the SEBP. Consideration of these stresses will increase the model's reliability in forecasting the responses of the aquifers to the Bayside Groundwater Project.

Inconsistency between EBMUD's assertion that there will be little or no subsidence as a result of the Project and its assumption that clay aquitards will compress, yielding considerable local water for the Project. According to the results of simulations with the SEBP and discussions with EBMUD staff, 15,000 acre-feet per year of pumping at the Bayside Project would induce approximately 3,000 acre-feet/year of water from the NCGWB via the Deep Aquifer. The other 12,000 acre-feet per year would be supplied by sources within the SEBP, mainly clay layers. Because of the thickness of the clay layers (the 400 feet of soil overlying the Deep Aquifer within the SEBP is mostly clay), the amount of water stored in such clays is substantial. According to EBMUD, these clay layers would yield sufficient water to supply the Bayside well demand so as to minimize the impact on the NCGWB, even during droughts when rates of recharge within the SEBP are reduced. In short, the clay layers were presumed to act as a big reservoir, yielding water to the Deep Aquifer when piezometric heads in the Deep Aquifer drop.

When the piezometric head of the underlying Deep Aquifer is lowered, the upward buoyant force on the overlying clay would be reduced, increasing the inter-granular stress within the aquifer and the overlying clay. If the soils are compressible, then subsidence could result. Fine-grained soils, especially clay, are much more compressible than sand and gravel. Without this compression, clay would not yield

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much stored water. Hence, the amount of water per unit area yielded from clay equals the amount of subsidence at that location. The amount of subsidence, and hence the amount of water yielded, has been demonstrated to be dependent on the coefficient of compressibility (logarithmic theory), the initial layer thickness, initial void ratio, and initial and final values of inter-granular stress, as provided by the following equation:

$$s_c = C_c H_o \frac{H_o}{1 + e_o} \log \frac{P_{f2}}{P_{i1}}$$

where:

C_c = the coefficient of compressibility,

e_o = the initial void ratio

P_{i1} = the initial intergranular stress

P_{f2} = the final intergranular stress

s_c = the amount of subsidence and water yielded per unit area

The amount of compression or subsidence depends on the historical levels of intergranular stress. The value of C_c in the above equation will be lower with intergranular stress levels that have already been experienced by the clay layer. Hence, for a clay that is stressed to levels less than the historical maximum (for example, if piezometric heads were lowered but not as low as the historical minimum), the subsidence may be reduced relative to what could be experienced with record stress levels. Previous years of pumping and associated drawdown were cited by EBMUD as probable reasons why subsidence would not likely occur to any significant degree. The corollary of this, however, is that the amount of water that can be stored and released from the clays will be very minimal.

Therefore, ACWD is concerned with the assumption used by EBMUD that the clays can serve as a significant reservoir that yield water in dry years and bank water in wet years. We contend that one should not expect to recover water stored in clay without some compression (subsidence). EBMUD claims no significant subsidence would occur from clays. Hence, in the course of selecting input parameters for the model, water storage capacity of the clay may have been overestimated, and this may have led to an underestimation of water imported to the SEBP from the Niles Cone and other groundwater impacts in the Niles Cone.

To address this concern, EBMUD should quantitatively reconcile the amount of water that is released from storage within clay layers with the expected amount of subsidence. The two should match reasonably well. We understand consolidation is a time dependent process, and for certain soil systems, it could take tens of years to realize the full yield of water for a given incremental increase in intergranular stress. The yield of water is limited by the low hydraulic conductivity of clay, limiting the rate of drainage to the underlying aquifer. It may be useful, therefore, to couple time-dependent subsidence calculations with (time-dependent) model predicted releases of water from storage.

Prediction of impacts on the Niles Cone in response to hypothetical pumping at the proposed Bayside Project requires a model that includes both the SEBP and NCGWB, developed and calibrated with an appropriately high level of refinement. The serious

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limitations of EBMUD's modeling effort to date need to be remedied before the final EIR is certified.

Impacts Indicated by ACWD's Modeling Efforts

To better characterize the impact of the Bayside Project, ACWD's own model, the *Integrated Groundwater Surface Water Model (IGSM)*, was used to simulate drought conditions with and without pumping at the proposed Bayside Project in San Lorenzo. Although the IGSM does not extend beyond the Niles Cone groundwater basin, it can serve as a preliminary tool to identify potential impacts to ACWD operations and Niles Cone groundwater basin as a result of the projected groundwater level declines and outflows that are estimated by EBMUD to occur as a result of the proposed Bayside Project.

In summary, ACWD's modeling efforts indicate that even if the flux between the two groundwater basins were to exactly match EBMUD model predictions, the impact on both the Niles Cone groundwater basin and ACWD's operation of the basin would be significant and unacceptable. The negative impacts to the Niles Cone groundwater basin would include new seawater intrusion from San Francisco Bay and aggravation of the existing brackish water conditions. Although sea water constituents (i.e. chlorides) were not modeled by IGSM as state variables, certain water quality impacts can be anticipated through consideration of historical water quality patterns, especially when (prior to the mid 1970s) the aquifers were overdrafted and the Newark Aquifer was below sea level. ACWD modeling analysis has indicated that, with the additional groundwater outflow and drawdown as a result of the Bayside Project, the perimeter of the existing brackish water plumes would expand, possibly threatening ACWD's Mowry Wellfield, contaminating areas that have always had favorable water quality, or re-contaminating areas whose water quality has been reclaimed since the mid 1970s. In connection with this, modeling analysis indicates that leakage from the more contaminated Newark Aquifer would move downward to the Centerville-Fremont and Deep Aquifers, which would increase chlorides in ACWD's Aquifer Reclamation Program wells. This in turn, will increase treatment costs at ACWD's new desalination facility. In addition, lower aquifer levels could translate into lower well yields and/or higher power costs. Because of dispersive effects and the slow speed of groundwater, it's not easy to reclaim a portion of an aquifer once it has become contaminated. It takes a substantial amount of fresh water applied over many years to flush through the aquifer system and reclaim even a small area.

As Indicated from the above description of the IGSM modeling results, the groundwater levels in the NCGWB will be drawn down in dry years, even if EBMUD's Bayside Project were not in operation during such times. The head in the Newark Aquifer may drop to a level as low as 5 feet below sea level by the end of a multi-year drought, assuming EBMUD's Bayside Project is not operated in such a period. ACWD is seeking additional dry year supplies for groundwater recharge to minimize the potential for operating the Newark Aquifer below sea level. Another draw on the NCGWB during dry years, which we believe would be the consequence of the Bayside Project, would aggravate an already serious situation. As discussed in Attachment 2, these potential impacts need to be adequately evaluated in the EIR, and appropriate mitigation provided.

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2. Recommended Approach for Analyzing Potential Impacts to ACWD Operations and Niles Cone groundwater basin

In the groundwater modeling report referenced in the DEIR, EBMUD's consultant (CH2M Hill) identifies the boundary condition between the Niles Cone and South East Bay Plain groundwater basins as an area for improvement. The reports states that, "If the District [EBMUD] decides to better define the characteristics of this boundary, then local water level and water construction data should be collected and select pumping tests performed. If the boundary appears to be hydraulically continuous with the SEBP, then the District [EBMUD] should consider extending the model into the NCGWB [Niles Cone groundwater basin]. Subsequent model simulation should be able to more accurately define potential impacts of the District's [EBMUD's] proposed Bayside Wellfield Project on water levels and water quality in the NCGWB [Niles Cone groundwater basin]."

We agree with CH2M Hill's recognition of the inadequacies of the model on which the DEIR relies and with the suggested approach for conducting the technical studies and developing the analytical tools necessary to assess these potential impacts. Unfortunately, EBMUD chose not to perform a complete technical analysis for the DEIR, and rather has relied on a groundwater model which, as discussed above, is not capable of addressing impacts to ACWD operations or to the Niles Cone groundwater basin.

Prior to finalization of the EIR, EBMUD should conduct the appropriate technical studies needed to adequately evaluate the potential impacts to ACWD operations and the Niles Cone groundwater basin. The results from these impact analyses should be included in the EIR and used to develop the appropriate mitigation measures for potential impacts (see Attachment 4 for further discussion regarding mitigation measures). The technical studies should include, at a minimum, the following components: (1) a detailed assessment of the hydrogeologic conditions in the area between the Niles Cone and SEBP; (2) aquifer pump tests utilizing existing wells to further define this inter-connection; (3) monitoring of existing wells for water levels and water quality in this area; (4) the development of a regional groundwater model (which includes both the South East Bay Plain and Niles Cone groundwater basins) with capabilities to adequately assess potential impacts to ACWD operations and the Niles Cone groundwater basin (as described in Attachment 2); and (5) the evaluation of potential Project impacts utilizing the groundwater model and monitoring results. Each of these items is outlined briefly below. However, detailed scopes for each of these items should be prepared in close coordination with ACWD and other appropriate agencies.

1. **Hydrogeologic Assessment:** Available hydrogeologic and hydrologic data related to the hydraulic connection between Niles Cone groundwater basin and the South East Bay Plain Basin should be collected and analyzed for the purpose of providing a better understanding of the inter-connection between these groundwater basins. This information should include: well logs and geophysical logs, pump tests, historical groundwater levels and groundwater quality data, and historical groundwater pumping. Groundwater contour maps should be prepared showing historical and current groundwater levels between the Niles Cone forebay area and the Bayside Project area. Geologic and aquifer cross-sections and maps of this area should be prepared to delineate the occurrence of the major aquifer units.

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2. Aquifer Tests: Aquifer tests with existing City of Hayward, EBMUD and ACWD wells should be conducted to better characterize aquifer properties and inter-connection between Niles Cone and SEBP. Aquifer tests should be of sufficient duration and magnitude to develop adequate information on the inter-connection between Niles Cone and South East Bay Plain groundwater basins for use in subsequent groundwater modeling analyses.
3. Groundwater Level and Quality Monitoring: A groundwater monitoring network of key wells should be established within Niles Cone groundwater basin and South East Bay Plain basin to determine groundwater elevations and the groundwater gradient between Niles Cone and SEBP. To the extent possible, existing wells with well defined construction characteristics should be included in the monitoring network. Monitoring points should be established between the Niles Cone and SEBP groundwater basins. ACWD is prepared to work cooperatively with EBMUD and Hayward to establish a monitoring network adequate to assess the impact of current and anticipated Bayside Project operations. A groundwater quality monitoring program should also be conducted to establish baseline groundwater quality data in Niles Cone and SEBP, including delineation of seawater intrusion, and to provide additional information on groundwater migration. Key wells should also be identified for this purpose.
4. Groundwater Modeling: A regional groundwater model (which includes both the South East Bay Plain and Niles Cone groundwater basins) should be developed with capabilities to adequately assess potential impacts to ACWD operations and the Niles Cone groundwater. As an alternative to EBMUD's existing model, ACWD's Integrated Groundwater-Surface Water Model (IGSM) could be extended to cover the South East Bay Plain Basin, including the proposed Bayside well field. The regional groundwater model should be developed to simulate Bayside operations and their impacts on ACWD operations and the Niles Cone Groundwater Basin. The model should cover the SEBP and Niles Cone area utilizing information developed from the hydrogeologic assessment, aquifer tests, and groundwater monitoring sub-tasks described above. The model should be calibrated and verified with historical hydrologic and pumping conditions to ensure that the model adequately simulates the groundwater basins under a wide range of hydrologic conditions, operating conditions and aquifer stresses. Historical monitoring data as well as monitoring data collected as part of this mitigation/monitoring program should be utilized to ensure accuracy of calibration.
5. Impact Analysis: The regional groundwater model should then be utilized to evaluate potential impacts on ACWD operations and the Niles Cone groundwater basin that may occur as a result of the Bayside Project operations under a range of hydrologic and Bayside Project operating conditions. Bayside Project impacts should be determined by modeling groundwater conditions with and without the Bayside Project operations. Any differences in Niles Cone groundwater conditions between these two scenarios should be attributed to the Bayside Project operations. Impacts to be evaluated include any and all ACWD operational impacts and long-term impacts to Niles Cone groundwater basin, as described in the summary letter and Attachment 2.

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As previously discussed, the DEIR's impact analysis on Niles Cone groundwater basin and ACWD operations is both inadequate and incomplete. Therefore, EBMUD should conduct the appropriate impact analysis, as defined above, prior to the finalization of the EIR. The results of the analysis should be included in the EIR, and appropriate mitigation measures should be developed, as discussed in the summary letter and Attachment 4.

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ATTACHMENT 4 – ADEQUACY OF MITIGATION MEASURES

As a lead agency EBMUD has a duty to provide mitigation measures for adverse environmental impacts that may occur as a result of the proposed Bayside Project. CEQA Guidelines state that "An EIR shall describe feasible measures which could minimize significant adverse impacts" CEQA Guidelines § 15126.4(a)(1). "Mitigation" as defined under CEQA Guidelines § 15370, includes:

- Avoiding the impact altogether by not taking a certain action;
- Minimizing impacts by limiting the degree or magnitude of the action;
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations;
- Compensating for the impact by replacing or providing substitute resources or environments.

In order to mitigate for groundwater related impacts to Niles Cone groundwater basin as a result of extraction operations from the proposed Bayside Project, the DEIR provides the following proposed mitigation measure (Measure 3.8-8, page 3.8-25):

"The District will implement a Deep Aquifer water-level monitoring program that will include the boundary between the NCGWB [Niles Cone groundwater basin] and the SEBPB [South East Bay Plain basin]. Resulting water-level data will be used to assess impacts on gradient magnitude and direction near this boundary. Flux values will be estimated based on historical pumpage from the SEBPB to assess the significance of future impacts relative to past impacts. If adverse impacts are detected, the District will take appropriate actions to limit them to the groundwater basin and/or local groundwater users."

However, as described below, the proposed mitigation measure does not meet CEQA requirements for formulating detailed and enforceable mitigation measures.

Formulate Detailed Measures

CEQA Guidelines require that lead agencies formulate detailed mitigation measures. "Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." CEQA Guidelines § 15126.4(a)(1)(B). If a mitigation measure would cause other significant effects in addition to the effects of the project as proposed, those effects must be discussed as well. CEQA Guidelines § 15126.4(a)(1)(D).

Formulation of a mitigation measure may only be deferred if (i) the adopted mitigation measure will commit the lead agency to a performance standard and (ii) the measure will prohibit changes to the environment unless the standard is satisfied. CEQA Guidelines

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§ 15126.4 (a)(1)(B). Even though formulation of mitigation measures may be deferred through use of performance measures, a mitigation measure is not adequate if it is based on a requirement that the lead agency adopt mitigation measures recommended in a future study.

The proposed mitigation measure fails to meet the above criteria for formulating detailed mitigation measures because: (1) the description of the method for determining impacts is overly vague (i.e. no details are provided on the proposed monitoring program and the methodology for the estimation of flux values); (2) the description of what constitutes an "adverse impact" is not provided; (3) the mitigation measure does not specify what actions EBMUD will take to mitigate for these adverse impacts, but rather states that the District will take some unspecified future actions; (4) the measure only addresses impacts due to increased fluxes across the Niles Cone groundwater basin and fails to address other potential impacts to ACWD and the Niles Cone groundwater basin, including groundwater level declines, seawater intrusion, movement of contaminants, and impacts to ACWD's use of Niles Cone groundwater basin for water storage; and (5) the proposed mitigation measure is flawed because it does not specify performance measures for mitigating impacts to Niles Cone groundwater basin.

Enforceability of Measures

CEQA Guidelines also state that: "Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments." CEQA Guidelines § 15126.4(a)(2). "The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation." Pub. Res. Code § 21081.6(a)(1).

However, the DEIR fails to provide the necessary enforcement measures to ensure that Mitigation Measure 3.8-8 will be implemented. The DEIR offers no conditions, agreement or other legally-binding instruments which will ensure that the mitigation measure is actually carried out.

ACWD's Suggested Framework for Mitigation

As discussed above and in Attachment 2, both EBMUD's technical analysis of groundwater-related impacts and the subsequent proposed mitigation program are flawed for a number of reasons. The following presents the proposed framework for EBMUD to (1) evaluate, monitor, and mitigate impacts on ACWD's water supply operations and (2) prevent any long-term impacts to the Niles Cone groundwater basin that may occur as a result of the operation of EBMUD's proposed Bayside Groundwater Project. The descriptions of tasks described within this framework are general in nature, and will require detailed scoping as part of the development of a mitigation/monitoring plan. This effort should be done in close coordination with ACWD, and should be completed prior to the finalization of the EIR.

The purpose of the development of this mitigation framework is to ensure that EBMUD can and will fully mitigate any and all adverse impacts to ACWD's water supply operations that occur as a result of the proposed Bayside Groundwater Project, and that

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the Project will not result in any long-term, adverse impacts to the Niles Cone groundwater basin.

The development of these mitigation measures will require that EBMUD first conduct the technical studies and analyses necessary to determine the potential impacts to ACWD operations and Niles Cone groundwater basin (as described in Attachment 2). As part of that effort, a regional groundwater model should be developed that will be capable of adequately assessing groundwater-related impacts to ACWD operations and the Niles Cone groundwater basin (as described in Attachment 3). This regional groundwater model should then be used to develop the initial operating rules for the Bayside Project and subsequently to refine the operating rules for the Project once the Project is operational. The development of initial operating rules should be completed prior to finalization of the EIR, and included in the EIR as part of the mitigation program.

1. **Develop Bayside Project Operating Rules:** Based on the results of evaluation of the Bayside Project impacts on ACWD operations and the Niles Cone groundwater basin, operating rules for the proposed Project should be developed to ensure that there are no long-term adverse impacts to the Niles Cone groundwater basin. Absent other mitigation for impacts to ACWD operations (as defined under task 4 below), the operating rules for the Bayside Project should also be developed to ensure no impacts to ACWD operations. Specific items which should be included in the Bayside Project operating rules are limitations on: (1) pumping and injection rates; (2) timing of the pumping and injection; and (3) duration of pumping and injection. The regional groundwater model should be utilized to develop these operating rules and potential impacts should be determined based on the difference between modeling scenarios with and without Bayside Project operations.

Schedule: The development of initial operating rules should be completed prior to finalization of the EIR, and included in the EIR as part of the mitigation program.

2. **Develop and Implement Long-Term Monitoring Program:** The purpose of this mitigation component is to monitor the groundwater-related impacts of the Project after Project construction to ensure that the Project is performing as anticipated.
 - **Groundwater Level Monitoring:** Groundwater level monitoring should be performed at all wells previously identified as monitoring wells during the baseline monitoring program. Water level elevation measurements should be taken at sufficient intervals to accurately assess potential Project impacts on groundwater elevations both within Niles Cone Groundwater Basin and at the interface between Niles Cone and the South East Bay Plain Basin.
 - **Groundwater Quality Monitoring:** Groundwater quality monitoring should be performed at all wells previously identified as groundwater quality monitoring wells during the baseline monitoring program. Water quality sampling should be taken at sufficient intervals to accurately assess potential Project impacts on groundwater quality both within Niles Cone Groundwater Basin and at the interface between Niles Cone and the South East Bay Plain Basin.

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- **Groundwater Modeling:** The groundwater monitoring discussed above will provide information on the Bayside Project's impacts on groundwater levels and quality. However, this monitoring data will not directly provide information on other groundwater impacts such as groundwater outflows and loss of storage capacity. Therefore, the regional groundwater model should be utilized to quantify these actual Project impacts on the Niles Cone Groundwater Basin and ACWD operations. The modeling analysis should be based on actual Bayside Project operations (i.e., pumping and injection rates), and the results should be verified with groundwater data collected during the monitoring program. In order to isolate impacts of the Bayside Project, the modeling analysis should also include groundwater management activities of ACWD, Hayward and other private pumpers in the basins.

Schedule: Agreement to be incorporated in Project conditions and made part of the Project approval process. On-going activity to be initiated after Bayside Project start-up

3. **Modify Project Operation Rules based on Long-Term Monitoring Program:** The purpose of the long-term monitoring program described above is to ensure that the impacts of the Bayside Project operations on ACWD and Niles Cone are consistent with those previously estimated when the operating rules for the Project were developed. If the long-term monitoring program indicates that previous estimates of potential Project impacts were underestimated (i.e., impacts occur sooner or with greater magnitude than previously estimated), then EBMUD will immediately mitigate by reducing or halting the Bayside Project injection and/or extraction activities. New operating rules will then be developed with the goal of ensuring no adverse long-term impact to the Niles Cone Groundwater Basin and no unmitigated impacts to ACWD operations.

Schedule: Agreement to be incorporated in Project conditions and made part of the Project approval process. On-going activity to be initiated after Bayside Project start-up.

4. **Alternative Mitigation for Impacts to ACWD Operations:** As an alternative to operating the Bayside Project such that there are no impacts to ACWD operations (i.e., loss of groundwater supplies, loss of storage capacity, increased treatment costs), EBMUD may propose alternative mitigation measures that fully compensate ACWD for any lost water supplies. These alternative mitigation measures may include purchase of additional off-site banking (e.g., EBMUD purchase of Semitropic Water Bank supplies), providing treated water supplies to ACWD (e.g., EBMUD treated water conveyance to ACWD through the City of Hayward), or providing raw water supplies to ACWD for use by ACWD (e.g., EBMUD provision of treated water to the Alameda County Zone 7 Water District to free up Zone 7's State Water Project water for ACWD water use), or providing raw water supplies to ACWD for recharge through ACWD facilities. If these alternative mitigation measures cannot be made available to match the quality, quantity, and timing of lost ACWD water supplies, or if these alternative measures do not fully mitigate impacts to ACWD, then EBMUD should reduce or terminate Bayside operations per item 3, such that impacts to ACWD operations

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are fully mitigated. However, under no circumstances will ACWD accept alternative measures to mitigate for long-term adverse impacts to the Niles Cone Groundwater Basin. The only acceptable mitigation for potential long-term adverse impacts is to prevent such impacts by developing and modifying Project operations as indicated in items 1 - 3 above.

Schedule: Alternative mitigation measures to be identified and evaluated prior to final EIR.

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ATTACHMENT 5 – ADEQUACY OF PROJECT ALTERNATIVES

CEQA Guidelines state that, "The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives." CEQA Guidelines § 15126.6(a). Alternatives to a project are also a form of mitigation and they have the same function: diminishing or avoiding adverse environmental effects. The description of different methods used or rejected in carrying out the project are not alternatives to the project, they are steps taken in mitigation. An alternative to a proposed activity is just that—a description of *another* activity or project that responds to the major environmental issues identified during the planning process.

[A]n EIR for any project subject to CEQA review must consider a reasonable range of alternatives to the project, or to the location of the project, which: (1) offer substantial environmental advantages over the project proposal; and (2) may be feasibly accomplished in a successful manner considering the economic, environmental, social and technological factors involved. CEQA Guidelines § 15126.6.

"[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." CEQA Guidelines § 15126.6(b). The EIR must describe alternatives in sufficient detail to serve the informational purpose of the report to the governmental body which will act and the public which will respond to the action through the political process.

The DEIR states that the objective of the Project is to provide 10,000 to 15,000 AF of water supply during droughts, and to implement this program "at the earliest possible opportunity". The alternatives evaluated by EBMUD include operational alternatives for injection/extraction and a treatment plant, as well as siting alternatives for pipelines, wells and treatment facilities. However, these alternatives only considered sites located within the limited area defined in the DEIR as the "Bayside Groundwater Project Area". Other alternatives considered by EBMUD, but rejected during the scoping process, included alternative facility locations located within the Bayside Groundwater Project Area.

Based on the CEQA Guidelines discussed above, the DEIR does not consider an appropriate range of alternatives to the proposed Project, but rather is limited to a relatively narrow range of alternatives, all of which are very minor variations of the proposed Project, and all of which are located within the boundary area of the Bayside Project (as defined in the DEIR). There are numerous other alternatives to the proposed Project potentially available to EBMUD, many of which may be environmentally superior to those considered in the DEIR. A partial list of alternatives that should be included in the Bayside EIR is provided below.

Freeport Regional Diversion Project: On January 21, 2001, the EBMUD Board of Directors unanimously voted to enter into a Memorandum of Understanding with the U.S. Bureau of Reclamation and City and County of Sacramento to develop the Freeport Regional Diversion Project. In a January 23, 2001 EBMUD press release John Coleman, EBMUD Board President, stated that "This is a historic accord that puts aside many years of legal and political battles. It will provide the District with a supplemental

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water supply that achieves all water quality standards. During dry years we will have adequate water supply to meet our customer needs." The press release also states that, "Under the plan, the project would be completed through construction by September 30, 2005." In a June 1st statement to the *Lodi News Sentinel*, spokesman for EBMUD, Charles Hardy, stated: "This is a drought project. We have enough water to serve our customers now."

The Freeport Regional Diversion Project (Freeport Project) and the Bayside Groundwater Project both have objectives of improving EBMUD's dry year water supply reliability. Assuming successful resolution of the recent challenges to the Freeport Project, that project will provide adequate supplies to ensure that EBMUD's dry year supplies are met (making the Bayside Project unnecessary). Given that the Freeport Project is planned to be operational in a relatively short time frame (i.e. by the year 2005), the DEIR should evaluate the Freeport Project as an alternative to the Bayside Groundwater Project.

Alternative Locations: On page S-2 the DEIR states that studies by EBMUD have concluded that the best site for storage and extraction of groundwater "in the local aquifer" is in unincorporated San Lorenzo and the City of San Leandro. However, the proposed Bayside Groundwater Project site is located as close as possible to the Niles Cone groundwater basin (while still remaining in the EBMUD service area). ACWD's concern is that while this location may provide the best site (in terms of hydrogeologic conditions), there may be other sites within the SEBP basin (and other groundwater basins in EBMUD's service area) that would be environmentally superior (i.e. sites located further north in the SEBP would likely have less of an impact on the Niles Cone groundwater basin). Therefore, the EIR should identify and evaluate alternative site locations, both within the SEBP basin as well as other local groundwater basins located throughout the EBMUD service area.

In addition, as presented in the DEIR, all Project alternatives are focused on placing the extraction wells in one concentrated area within the Bayside Groundwater Project boundaries. An alternative Project configuration would be to have the wells located over a much larger area throughout the SEBP groundwater basin (extending as far north as Alameda and Oakland). By spreading the wells out over a larger area, EBMUD could likely minimize the drawdown impacts that occur with the existing Project configuration. This may also reduce impacts to the Niles Cone groundwater basin and ACWD, as discussed above.

Smaller project: As documented in the DEIR, EBMUD requires an additional dry year water supply of up to 185,000 over a three year period to make up for deficiencies in its existing supplies. However, the DEIR sets an objective for the Bayside Project to provide a dry year supply of "10,000 to 15,000 AF/Yr" (up to 25% of the total additional dry year needs) without providing any rationale for why this particular project capacity is specified. The DEIR also recognizes that even with the Project sized at 15,000 AF/Yr, EBMUD would still require an additional supplemental supply project, other than from the Bayside Project, to meet its dry year needs. As such, as an alternative, the DEIR should consider smaller project sizes that would still meet EBMUD's general objective of increasing dry year supplies while likely significantly reducing the subsequent environmental impacts to ACWD and the Niles Cone groundwater basin.

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Other Potential Dry Year Supply Alternatives: Other potential dry year water supply alternatives that may be available for EBMUD, but not considered in the DEIR include: (1) desalination (with brackish groundwater or bay water as the source water), (2) dry year water purchases/transfers and (3) off-site storage programs in the Central Valley. As with the proposed Bayside program, these other potential dry year supply alternatives can be configured to meet a small portion of EBMUD's dry year needs.

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Attachment B – ACWD Specific Recommendations for Bayside Project Monitoring Program

The following should be specified in Section 2.4.1.3 Phase I Monitoring Program (Page 2-16 to 2-19) for the SEBP.

- During the start-up period, monitoring wells will be monitored for water levels no less frequently than weekly. In the first year of sustained long-term operation, the wells will be monitored no less frequently than monthly. For subsequent years, at least two wells per aquifer layer will be monitored monthly, and the remaining wells shall be monitored no less frequently than quarterly. Monitoring will continue for each year until Bayside facilities are decommissioned, even in those years when there is no extraction or injection since it is important to maintain a continuous data set for groundwater modeling purposes. EBMUD will consider the limitations of dedicated equipment (i.e., transducers) for measuring water levels, and will verify the accuracy of dedicated monitoring equipment using hand held methods (e.g., electronic probe) at appropriate times. [ACWD's recent experience with transducers for monitoring wells is that they tend to be reliable only on a very short-term scales (1 month or less), and have proven to be unreliable in longer time frames. The problems experienced include unreliable values (drift), battery failure, and water leakage in the components. For this reason, ACWD recommends that EBMUD use hand held methods at least once per month for all wells monitored weekly, and at each visit to wells monitored at time scales of 1 month or greater.]
- Any new EBMUD-owned monitoring wells will be installed according to state well standards. Any EBMUD-owned monitoring wells that are abandoned will be abandoned in conformance to state well standards.
- Acquisition of sufficient water level data in the SEBP will be particularly important for future recalibration of the model and in determining feasibility of a possible Phase II expansion of the Bayside Project. The monitoring well network for the SEBP, even after installation of the currently proposed wells, may not be adequate for future model recalibration. Therefore, in addition to the proposed facilities, EBMUD should consider installing a cluster of wells (Shallow, Intermediate, and Deep) to be placed in the area near the hills, but sufficiently west of the Hayward Fault, where the groundwater model simulated the greatest drawdown in shallower aquifers, and flow from shallow aquifers to the Deep Aquifer, in response to hypothetical Bayside Project pumping.
- During the start up period, EBMUD will provide ACWD Bayside pumping data and injection data on a monthly basis. Water level data will also be provided on a monthly basis. After the start up period, such operational and water level data, though collected on a monthly basis, may be provided to ACWD on an annual basis.
- In order to ensure that ACWD is prepared to monitor the Niles Cone groundwater basin's response to Bayside operations, EBMUD will notify ACWD of any planned changes to

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See Master Response 3 – Monitoring Programs. EBMUD will coordinate with ACWD in the development of the final Phase 1 Monitoring Program to include appropriate monitoring activities.

New EBMUD monitoring wells will be installed according to state standards and well destruction will follow state standards.

A cluster well as proposed is not necessary at this time for monitoring Phase 1 operations.

Bayside Groundwater Project monitoring information will be provided to ACWD upon request as frequently as monthly during start-up, and annually thereafter.

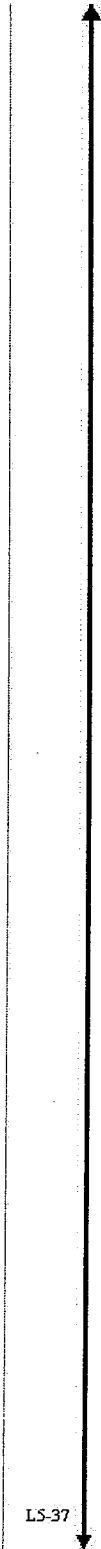
It is not practical for EBMUD to inform ACWD in advance of every operational change that may occur. However, operating data will be made available along with monitoring data as described above.

As discussed in response to comment L5-30, annual groundwater model updates are not warranted.

EBMUD acknowledges that ACWD may provide data from as many as 55 wells. As described in response to comment L5-3, EBMUD will recalibrate the groundwater model before initiation of Phase 2, but may consider recalibration at other times depending on monitoring results. Additional recalibration is not necessary because the Phase 1 impacts have been adequately determined by the current model. See responses to comments L5-29, L5-30, and L5-31. EBMUD cannot commit to use of a specific modeling code because at the time that a Phase 2 modeling effort is initiated, other codes may be available that are better suited to perform the analysis. Model recalibration for Phase 2 analysis will be performed in cooperation with ACWD.

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Letter L5. Alameda County Water District.

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Bayside actual operating conditions 5 working days in advance of such operational changes.

- On an annual basis, ACWD will coordinate with ACWD to append model time dependent data files with new historical operational and hydrologic data, and to run the groundwater model to compare model simulated heads with actual observations. A model run will also be conducted that includes the updated historical data but with Bayside Project operations set to zero. The heads of the two model runs will be compared as a means to discern Bayside-related effects (on the Niles Cone) from other sources and sinks.
- EBMUD understands that number of monitoring wells in the NCCB, not including City of Hayward Emergency supply wells, for use in model verification could be as high as 55.
- The model code will be IGSM 6.0, or EBMUD will consult ACWD if it desires to use a different code.
- In addition to recalibration between Phase 1 and Phase 2, the NEBIGSM model will be recalibrated if overall model accuracy for the Niles Cone (considering all calibration wells in the Niles Cone, which may not be the same as those used for the 1964-2000 calibration), after appending with data from September 2000 and beyond, is determined to be less accurate than the original calibration for the 1964-2000 period (considering all Niles Cone calibration wells used for the 1964-2000 calibration), unless ACWD concurs that no recalibration is necessary.
- When the model requires recalibration, EBMUD will recalibrate the NEBIGSM in cooperation with ACWD and the City of Hayward. For re-analysis of future impacts, EBMUD will use ACWD and the City of Hayward's projection of groundwater operations and water demands, understanding that such projections may be updated since the impact analysis performed for this DEIR.

LS-37

Letter L6. Bay Area Air Quality Management District.



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**



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Nate Wiley
Shelia Young

CONTRA COSTA COUNTY
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SOLANO COUNTY
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SONOMA COUNTY
Tim Smith
Patricia Tortosa

Jack P. Broadbent
EXECUTIVE OFFICER/BAQMD

July 5, 2005

Mike Tognolini
East Bay Municipal Utility District, MS 407
375 11th Street, MS #407
Oakland, CA 94607

Subject: Bayside Groundwater Project

Dear Mr. Tognolini:

The Bay Area Air Quality Management District (District) has received letters from San Leandro and San Lorenzo citizens concerned about potential air quality impacts of East Bay Municipal Utility District's (EBMUD) Bayside Groundwater Project (project). The purpose of this letter is to respond to those citizens' concerns and assist EBMUD in identifying measures that can further reduce potential impacts from air pollution.

The project involves the injection of potable drinking water into the South East Bay Plain Basin during wet years for storage, recovery and later use during a drought. District staff reviewed the March 2001 Draft Environmental Impact Report (DEIR) for the project and submitted comments in a letter dated July 6, 2001. We are aware that EBMUD has since revised the project and will now be considering its implementation in two phases. A revised DEIR, circulated in March 2005, addresses the environmental impacts of Phase 1 (the construction of conveyance and treatment facilities associated with the use of an existing well in San Lorenzo) exclusively. Although the March 2005 DEIR does not identify any significant and unavoidable impacts, District staff recommend the following measures to minimize air pollution from this project.

The revised DEIR indicates that several sites in the project area that may be disturbed during construction may be contaminated with various hazardous materials including gasoline, diesel, and waste oil. The short-term exposure of people to evaporation of contaminated soil can result in odor impacts and, possibly, adverse health effects. In addition, disturbing soils contaminated with petroleum-based products without taking proper measures can allow volatile organic compounds to evaporate into the atmosphere and contribute to ozone formation. Soil remediation requires careful mitigation planning and may require prior approval and/or a permit from the District. For more information on District regulations regarding the aeration of contaminated soil, please contact our Compliance and Enforcement Division at (415) 749-4795.

As the regional air quality management agency, the District is concerned about air quality and public health issues throughout the San Francisco Bay Area. The majority of our July 2001 comments on the previous DEIR for the project pertained to potential air quality impacts of a proposed water aeration process that is now proposed as part of the project's Phase 2 (future expansion of project

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Response to Comment L6-1

Comment noted.

Response to Comment L6-2

Construction activities would result in only small amounts of soil disturbance from construction of the wellhead facilities at the existing Bayside Well No. 1 and trenching to install the pipeline connection to Grant Avenue. The potential for exposure of construction workers and the public to pre-existing hazardous materials in the soil was evaluated in Phase 1 Potential Impact 3.7-1 in the 2005 DEIR. Several mitigation measures are included to minimize any potential impacts; see pages 3.7-26 and 3.7-27 of the DEIR. Mitigation measures include conducting Phase I site assessments, complying with the requirements of the EBMUD Trench Spoils Field Management Practice Program, preparing and implementing a health and safety plan, and developing a contingency plan for sampling and analysis of potential hazardous materials.

As described in Mitigation Measure 3.7-1a, if the Phase 1 site assessment indicates that a release of hazardous materials could have affected soil or groundwater at the site, a Phase II site assessment will be completed to assess the presence and extent of contamination at the site, in conformance with state and local guidelines and regulations. Final design of proposed facilities, if required, will comply with all regulatory requirements for site remediation.

With the mitigation measures, no significant impacts would occur.

Response to Comment L6-3

See Master Response 12 – Comments on 2001 DEIR. Groundwater quality may vary with location; therefore, because locations of Phase 2 facilities have not been determined, it is not known at this time if aeration would be included in a Phase 2 project, should EBMUD decide to pursue Phase 2. However, as discussed in Master Response 6 – Radon and Chloroform, aeration is not proposed for Phase 1 or anticipated for Phase 2.

Letter L6. Bay Area Air Quality Management District.

Mr. Mike Tognolini

-2-

July 3, 2003

capacity), such as District permit requirements and modeling methods. We understand that if EBMUD decides to proceed with Phase 2 of the project, your agency will prepare a subsequent EIR. We urge EBMUD to consider our earlier comments when preparing a Phase 2 EIR.

L6-3

District staff encourage EBMUD to incorporate all dust mitigation measures identified in Table 2 of the BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans (1999). Further, construction equipment is primarily diesel powered, and with continuous use, can lead to significant particulate matter emissions. The California Air Resources Board has identified diesel particulate matter as a toxic air contaminant. The project could result in increased emissions of diesel exhaust from construction equipment. While we do not typically require lead agencies to quantify emissions from construction activities, we urge lead agencies to require the implementation of all feasible control measures. Some of our suggested mitigations include: use diesel oxidation catalyst or particulate filters on construction equipment; use alternatively fueled equipment (CNG, biodiesel, water emulsion fuel, electric); minimize idling time of equipment; maintain properly tuned equipment; and limit hours of operation of heavy duty equipment. We encourage your agency to require the implementation of such specific measures through conditions of project approval.

L6-4

We understand the challenge of balancing multiple project objectives, including the need to be as protective of public health as possible. We believe it is important that EBMUD design and implement a project that minimizes potential impacts on nearby residents. We suggest that your agency work collaboratively with all concerned stakeholders to determine a way to reach your project objectives while at the same time minimizing residents' potential exposure to environmental impacts.

L6-5

If you have any questions regarding these comments, please contact Douglas Kolozsvari, Environmental Planner, at (415) 749-4602.

Sincerely,


Jack P. Broadbent
Executive Officer / APCO

Response to Comment L6-4

Comment noted. Mitigation Measure 3.6-1 on Page 3.6-6 of the 2005 DEIR states that construction activities must comply with the Basic Control Measures for dust emissions as outlined in the BAAQMD *CEQA Guidelines*. Phase 1 construction is estimated to generate only approximately 8 truck trips per day; thus, diesel exhaust particulate emissions are less than significant, and do not require explicit conditions of approval as recommended in the comment.

Response to Comment L6-5

Comment noted.

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5.3 Comments and Responses for Groups and Organizations

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Letter G1. Heron Bay Task Force.

Ms. Angela Knight
 EBMUD Water Supply Improvements Division
 375 Eleventh Street - MS 407
 Oakland, CA 94609-4240

Re: May 13, 2005 - Public Comment Letter for Bayside Groundwater Project.

Dear Ms Knight:

This letter presents comments on the Draft Environmental Impact Report (DEIR) for the East Bay Municipal Utility District (EBMUD) Bayside Groundwater Project dated March 2005. These comments, many of which were raised during the public comment meeting on April 20, 2005, are listed below. Also included are signatures of over 450 residents that oppose the Bayside Project due to its potential adverse impact on the public's health and property (Exhibit A). Additional information may be found at the Heron Bay Taskforce website: www.heronbaytaskforce.org.

1) Phased Project Approach.

CEQA section 15165 states "Where individual projects are, or a phased project is, to be undertaken and where the total undertaking comprises a project with significant environmental effect, the lead agency shall prepare a single program EIR for the ultimate project as described in Section 15168." The March 2005 DEIR, focusing on phase 1 only (1 Million Gallon per Day (MGD)) while providing only a brief qualitative descriptions of phase 2 (10 MGD), does not follow the requirements of a single program EIR described in Section 15168 and is therefore in violation of CEQA.

EBMUD's claim that phase 1 is a necessary precedent for action on a larger project is unfounded, as after 4 years of detailed testing since the 2001 DEIR and additional data collection dating back to 1997 from the Oro Loma demonstration well (same well proposed to be used for phase 1), EBMUD has collected significant amounts of testing information that can be used to develop a single program EIR so that the public can better understand the total project effects of both phase 1 (1 MGD) and phase 2 (10 MGD) projects. As defined in CEQA section 15168, a program EIR can "ensure consideration of cumulative impacts that might be slighted in a case-by case basis." EBMUD's case-by-case analysis of phase 1, then phase 2 at a later date has clearly slighted the cumulative subsidence, air quality, water quality, and water supply contamination impacts of the overall Bayside Groundwater Project.

Instead, this 2005 DEIR as submitted by EBMUD has chosen to omit detailed quantitative information, evaluations, and impacts related to phase 2 (10 MGD), such as the phase 2 estimated amount of subsidence, areas impacted from flowing wells, amount of toxic air quality emissions, and potential for deep aquifer contamination from shallow aquifer plumes. EBMUD has spent over \$10 million dollars to date on this project and EBMUD ratepayers expect that EBMUD should be able to estimate the impacts from both a 1 MGD and 10 MGD project in an 8 year period (1997-2005). The 2005 DEIR is approximately 200 pages long, which works out to about \$50,000 per page - for this amount of money EBMUD rate payers deserve answers, not a phase 1 EIR that states "more data needed for answers on phase 2."

It is quite apparent that EBMUD's 2005 approach to phasing the EIR and presenting only detailed information on the 1 MGD phase 1 project (and no detailed information on phase 2), is an attempt to side step and not address the many tough questions and comments related to subsidence, air quality, water quality, and groundwater contamination raised by the community in 2001. These previous

Response to Comment G1-1

See Master Response 7— Project Phasing. EBMUD has responded to community concerns raised in 2001 by starting with a small first phase project and operating it in a way that will demonstrate the safety and benefits of a local groundwater resource. EBMUD has not yet gathered the scientific data to proceed with a Phase 2 project. Some of that data will come from operating Phase 1, and all such data will be shared with the Community Liaison Group (CLG) as it becomes available. If EBMUD decides to proceed with a Phase 2 project, a subsequent EIR will be prepared at that time.

Letter G1, Heron Bay Task Force

Page 2

G1.2 comments submitted in 2001 by the Heron Bay Task Force are attached (Exhibit B) and are to be included in this 2005 public comment submission.

G1.3 EBMUD's own statement on pg. ES-12 of the 2005 DEIR, "Some of the concerns expressed about the original [2001] project have been eliminated by changing it [2005 DEIR] to a smaller, two-phase project," clearly shows that EBMUD's phrasing of the project is an attempt to put-off or ignore the public's 2001 comments to a later date. Ignoring and sidestepping the public's comments does not eliminate the public's concerns, rather it exacerbates them due to the apparent non-disclosure of information. It is important to note that EBMUD has every intention of ramping up the project to the 10 MGD project size, considering EBMUD has already spent millions of dollars on property purchases for phase 2 – the Friso Lay and MacMillan property sites.

This current 2005 DEIR has violated the intent of CEQA section 15165 and EBMUD must develop a new single program EIR for the ultimate 10 MGD project and recirculate it for public review and comment, or simply abandon this project and move on to one of the good EBMUD project alternatives that provides more benefit than risk to the community it will serve.

2) *Project Objectives and Alternatives.*

G1.4 EBMUD's overall objectives for the Bayside Groundwater Project as defined on pg. ES-2 of the DEIR are inconsistent with EBMUD's own policies and are so narrowly defined that these objectives artificially eliminate very good alternatives to the Bayside Project. The California courts have consistently and repeatedly held that when a project's objective is defined too narrowly, an EIR's treatment of alternatives may also be inadequate. *City of San Jose v. County of San Diego* ("San Jose"), 214 Cal. App. 3d 1438 (1989); *Rural Land Owners Association v. City Council* ("Rural Land Owners"), 143 Cal. App. 3d 1013 (1983); *County of Inyo v. City of Los Angeles* ("Inyo"), 124 Cal. App. 3d 1 (1981).

For example, the objective "To initiate EBMUD groundwater use within the SEBFB to prepare for both near-term (less than five years) and future drought conditions" has eliminated the East Contra Costa County Groundwater Development (ECCGD) Project on pg. 7-20 of the DEIR simply because this ARTIFICIAL objective specifies for "initiation in less than five (5) years." This elimination of the ECCGD Project is flawed and inconsistent with the CEQA process, as well as EBMUD's own policies, for the following reasons:

- a) EBMUD has made a huge assumption that the ECCGD Project cannot be accomplished in the near term due to an "institutional complexity" as defined on pg. ES-11. The only justification for this assumption is provided on pg. 7-20 of the EIR that states "... [ECCGD] would require a lengthy implementation schedule to secure the required agreements for implementation and therefore would not meet this objective." Why is the implementation schedule so lengthy to obtain agreements? EBMUD's inability to obtain agreements in a timely fashion, or choose not to obtain agreements, for the ECCGD Project is no justification to make the Bayside Project a superior alternative over the ECCGD Project.
- b) This DEIR has allowed the artificial "initiate within less than 5 year" objective to overrule Policy 81 (adopted by the EBMUD Board of Directors) which states that "... EBMUD will minimize public health risks by seeking the best available water source, proceeded from potential degradation, thereby reducing uncertainty of technology's ability to eliminate health risks and the potential for added risks from treatment by products." As stated in the

Response to Comment G1-2

See Master Response 12 — Comments on 2001 DEIR.

Response to Comment G1-3

See Master Response 7 — Project Phasing. The prior purchase of property has not committed EBMUD to a future, expanded groundwater project. The "Frito-Lay and Macmillan property sites" were not purchased for Phase 2. The two properties were acquired when the project described in the 2001 DEIR was under consideration. These properties can be used for any future utility purpose, or they can be sold. Also see Response to Comment G7-22.

Response to Comment G1-4

See Master Response 8 — Project Objectives and Alternatives. The comment presumes that EBMUD has eliminated the alternatives discussed in the DEIR from further consideration. As demonstrated in Master Response 8, the need for a supplemental water supply goes well beyond what the Bayside Groundwater Project Phase 1 could provide. EBMUD will continue to pursue development of East Contra Costa County groundwater, regional desalination, and other opportunities for new water sources, in addition to the currently proposed Phase 1 Bayside Project. The difference is that these other projects are not considered feasible to implement within the foreseeable future for the reasons described in Chapter 7 of the DEIR. These other projects are therefore too speculative to depend upon for meeting customers' near term water needs during drought years.

Letter G1, Heron Bay Task Force.

G1-4

Hazards section on page C-2 of the DEIR, the Bayside Project has a confirmed potential for degradation from existing groundwater contaminate plumes to areas with potable water and the RCOGD project does not have this confirmed potential of potable water degradation. Securing a water supply protected from degradation/contamination (EBMUD Policy 81) is a much more valid and broad based objective than the narrow and artificial objective to "initiate within less than 5 years."

G1-5

c) There is no basis or justification for the Bayside Project completion by the project In-service date of October 2008 as defined on pg. B5-12 of the EIR (artificial goal to "initiate within less than 5 years"). Because the Freport Regional Water Project is scheduled to be on-line roughly the same time frame as the Bayside Project (Fall 2009 vs. October 2008), the Freport Project alone will reduce EBMUD's customers rationing to 18% in a 3 year severe drought, well below EBMUD's rationing policy of 25%. Therefore, there is no need to rush or force the Bayside Project on our community as EBMUD customers will be adequately protected from drought by the Freport Project. Further comment on the Rationing Assumptions vs. Rationing Policy is provided in the next section of this letter.

G1-6

3) Project Need & Rationing Assumptions vs. Rationing Policy.

The Heron Bay Task Force submitted comments to the 2001 DEIR on August 2, 2001 and the comment related to rationing assumptions is restated below:

Page 1-1 of the [2001] DEIR states that "rationing of up to 68% may be necessary in the future without additional water supplies(FDNR, 1993). " A EBMUD handout given at the June 5, 2001 Bayside Public comment meeting (Question and Answer Summary) states that "without more water supplies available during drought, EBMUD customers face up to 60% rationing in prolonged severe drought." EBMUD should provide documentation/calculations in the EIR which prove that these levels of rationing would be required. EBMUD should also use more recent studies on rationing than of 1993 (now 8 years old), as referenced on pg. 1-1 of the [2001] DEIR.

Now in 2005, residents near the Bayside Project received a Proposed Bayside Groundwater Project "fact sheet" dated March 2005 from Alameda County Supervisor Alice La-Bikar. This March 2005 "fact sheet" (Exhibit C) claims that "unless we secure additional water supplies, residents may have to ration over 50% of their current water use." The 2005 DEIR provides no specific estimate for the amount of rationing that customers may expect in the next drought - the only rationing reference made is to EBMUD's "Water Supply Availability and Deficiency" policy that limits drought demand reductions to no more than 25% District wide" (page 1-10 of the 2005 DEIR).

During the Community Liaison Group Meeting of 3-16-05, of which Doug Liney (EBMUD Board Member for San Leandro) facilitated, a slidehandout titled "EBMUD needs additional drought supplies" (Exhibit D) was provided ONLY TO THOSE WHO ATTENDED THE CLG meeting. This "EBMUD needs additional drought supplies" slide defines that in a year 2020 three consecutive year critical drought, 146 Thousand Acre Feet (TAF) for "Drought rationing program" is needed from the 932 TAF of "3 year normal customer demand." This drought rationing equates to only 16% of the total customer demand. The "Remaining 3-year need" (of which the Bayside Project is assumed to supply) is 20 TAF or 2% of the 932 TAF of "3 year normal customer demand." Therefore, the total amount of drought rationing needed would be only 18% of the 3 year normal customer demand (16% plus 2%).

Response to Comment G1-5

See Master Response 8 — Project Objectives and Alternatives and Master Response 9 — Need for Project. The Freeport Regional Water Project does not fully meet EBMUD's need for water.

Response to Comment G1-6

The Community Liaison Group (CLG) was created in response to community requests. Its purpose is to coordinate with/through representatives selected by community leaders, not by EBMUD, to inform and disseminate project information to the represented communities. Members are recommended by elected officials such as the Mayor of San Leandro and the Alameda County Supervisor for that District, and represent a variety of viewpoints on the Proposed Project. Meetings of the CLG are open to the public; they are held in public places near the Bayside Project area for the convenience of anyone who is interested in attending, and all CLG members, as well as interested persons who have asked for notice of CLG meetings, are given notice by both surface and electronic mail.

The table referenced in the comment is presented and described in more detail in Master Response 9 — Need for Project.

The calculations of drought impact presented by the commenter are incorrect. To calculate the amount of rationing required during a drought, one must divide the total amount of water saved by rationing by demand after conservation and recycling. Therefore, the 3-year drought savings is 146 thousand acre-feet (TAF)/771 TAF or 19 percent. As stated in the public meeting on April 20, 2005, the reason that less than 25 percent is achieved over 3 years is that it takes time to implement a rationing program through education and media campaigns. The maximum target is achieved by the third year so that the average over the 3 years is somewhat less. Moreover, with District-wide rationing of 25 percent, residential customers will be asked to ration 35 percent or more to lessen the degree of rationing and economic impact on businesses and jobs. See also Master Response 9 — Need for Project which provides further information on EBMUD's approach to planning for a drought and accounting for needed future water supplies (EBMUD 2001b).

Letter G1, Heron Bay Task Force.

Page 4

61.6 Why is EBMUD not openly disclosing to the general public information on the true rationing requirements expected of the public during a drought? Why did only the select few who attended the 9-16-05 CLG meeting receive the information necessary to calculate the drought rationing requirements? EBMUD Policy 6.4 states that "Board Members will not grant any special consideration, treatment, or advantage to any person or group beyond that available to every other person in similar circumstance." Special consideration was clearly provided to those who attended the CLG meeting with distribution of the "EBMUD needs additional drought supplies" slide while no estimated rationing information is provided in the 2005 DEIR and rationing misrepresentation is provided in the Proposed BaySide Groundwater Project "fact sheet" dated March 2005 distributed by Alameda County Supervisor Alice Lai-Brikker (Exhibit C). Please note that the CLG is organized and run by EBMUD, consisting almost solely of supporters of the BaySide Project, while the community at large opposes the BaySide Project as documented at the only 2005 DEIR public comment meeting, held on 4-20-05. See Exhibit E (Slide show summary of opposition to BaySide project) for slides 6/18 and 7/18 developed by the Heron Bay Task Force and presented at the 4-20-05 public comment meeting which further illustrates the true 18% drought rationing need for year 2020 while EBMUD policy supports 25% rationing.

4) Environmental Justice

61.7 EBMUD's Policy 71, Environmental Responsibility states that "no community in the District shall bear an inequitable environmental risk burden as a result of District facilities, operations, or practices." It is clear that this project does in fact give our community (BaySide Project groundwater - stores water beneath known contaminant plumes) an inequitable risk burden of drinking supply water contamination than other communities (Mokelumne surface water - stored water in reservoirs with no potential for contamination).

61.8 The communities of San Leandro, San Lorenzo, and Lower Oakland, with a high percentage of Asian, Hispanic, and African American residents, will be exposed to higher levels of contaminants (arsenic, radon, etc.) in their drinking water supply than other communities in the EBMUD service area. These same communities of San Leandro, San Lorenzo, and Lower Oakland will also be exposed to a higher risk burden of property damage from ground subsidence and flowing wells into private property due the groundwater injection process. These same high ethnic communities will be exposed to higher levels of radon and other contaminants emitted into homes through water fixture aeration (e.g. showers).

61.9 In addition the communities of San Leandro, San Lorenzo, and Lower Oakland, with a high percentage of non-English speaking residents, have not been meaningfully included into the CEQA process. During the 2001 public comment period, the Heron Bay community which is approximately 80% Asian and who live as close as 200 feet from the proposed baySide project requested that Chinese translations of environmental documentation materials be provided to the Asian community. This comment is documented on page B-5 of the 2005 DEIR. EBMUD also responds on page B-5 of the DEIR that "The DEIR will be published in English only." EBMUD has effectively precluded the meaningful involvement of a high percentage of residents impacted from the BaySide project by the absence of Chinese Translation of the DEIR. EBMUD has clearly violated the CEQA process by denying residents, who specifically requested in writing back in 2001, involvement in the environmental review process.

61.9 EBMUD was also notified officially during the Notice of Preparation phase of the 2005 DEIR by the Heron Bay Task Force (Exhibit F) that the environmental justice issue related to the high percentage of Chinese residents should be fully evaluated. Instead EBMUD has decided to completely ignore this

Response to Comment G1-7

See Master Response 11 — Environmental Justice. The drinking water produced by the project would meet all state and federal requirements, including those in EBMUD's domestic water supply permit issued by the California Department of Health Services. As described in Section 3.2.3.1 of the DEIR, water quality goals for pH, chloramine, and fluoride will match levels currently in the local distribution system. Treatment is included to remove manganese to levels well below the allowed maximum; see Table 3.2-3 on page 3.2-13 of the DEIR. The quality of the extracted and treated water will be monitored to ensure that it meets all requirements. The drinking water produced by the project will be comparable in quality to drinking water supplied to other communities in the EBMUD service area. No significant impacts from ground subsidence, flowing wells, or radon will occur; see Master Responses 1 — Subsidence, Master Response 2 — Potential for Flowing Wells, Master Response 5 — Groundwater Contamination, and Master Response 6 — Radon and Chloroform.

Response to Comment G1-8

See Master Response 10 — Public Outreach and Notice, and DEIR Review. The nearest residence in Heron Bay is approximately 1,900 feet from the BaySide Phase 1 site, not 200 feet as claimed by the Commenter.

Response to Comment G1-9

See Master Response 11 — Environmental Justice. Extensive outreach to the community was implemented, including publication of notices in multiple languages and provision of Chinese translators at the April 20 public meeting; see Master Response 10 — Public Outreach and Notice, and DEIR Review.

Letter G1. Heron Bay Task Force.

comment, and no mention of environmental justice is made in the 2005 DEIR, again precluding the meaningful involvement of a high percentage of residents impacted by the Bayside project.

5) *Energy/Resource Conservation.*

The comment below was submitted to EBMUD by the Heron Bay Task Force in during the 2001 public comment period. However, this comment has been completely ignored by EBMUD and not even listed or referenced in the 2005 DEIR Appendix B "Bayside Groundwater 2001 DEIR Comments Summary." As ratemakers of EBMUD we expect EBMUD to be responsible with the District's energy resources and expect a response to our 2001 comment. This comment has been modified slightly to reflect the current 2005 DEIR:

EBMUD should analyze the overall energy/resource efficiency associated with the operation of the Bayside Project, considering the fact that this project will pump previously treated water (high quality, well above drinking water standards) into the ground. EBMUD will treat the water once at the Upper San Leandro Treatment Plant, then pipe the treated water down to the Bayside project, pump the treated water into the ground, then treat the water a second time at the proposed Bayside water treatment plant. By treating the water twice, it appears that EBMUD is not only wasting the electricity used in the original treatment process, but the chemicals, manpower and all other resources necessary to treat the water once to drinking water standards.

As ratemakers of EBMUD, we feel that EBMUD should use our rate payer dollars and conserve energy/resources responsibly. EBMUD should perform a cost/resource analysis comparing the Bayside project to other groundwater projects, such as the East Contra Costa County Groundwater Development Project that would pump only raw water into the ground that was not already treated well above drinking water standards. EBMUD should also consider/discuss/mitigate the issue of pumping previously treated water, containing chlorine other chemicals, into the ground and its effect of increasing the amount of chloroform, phosgene and other emissions in the community and homes through water fixture aeration and possible aeration lowers emissions.

6) *Ground Water Contamination - General.*

Fig. 3.1-8 of the 2005 DEIR states that the deep aquifer is naturally recharged with water through rainfall infiltration, stream seepage, agricultural return flow, pipe leakage, and subsurface inflow. It is further described that vertical gradients are present throughout the study area. The proposed Bayside Project is located in an area with several known unremediated releases of gasoline, diesel, and waste oil with the potential for MTBE's to be encountered in the soil and groundwater. Why does EBMUD not recognize the danger of toxic pollutants entering the proposed deep aquifer drinking water supply through natural recharge? Natural recharge has is how the water originally got to the aquifer in the first place.

EBMUD references that the water in the Deep aquifer is 9000 years old, but also states the aquifer is recharged through natural infiltration. Does it take 9000 years for any surface water to reach the deep aquifer? If the deep aquifer was pumped to historic low levels in the early 1900's, but levels have now risen above the historic lows, where did this water come from to recharge the aquifer in the past century? EBMUD must publish testing information (sample data, number of samples, sample location, testing methods, when sample taken, etc.) in the DEIR to prove how it arrived at the 9000 year number.

Response to Comment G1-10

The use of treated water for injection is standard practice in aquifer storage and recovery projects. As the project is intended for drought supply, the California Department of Water Resources (DWR) supports the concept of conjunctive use projects. See Master Response 13 – Additional Information Regarding ASR Projects, Section 3.13.2 and reference to DWR's *California Water Plan Update 2005* (DWR 2005), which lists "conjunctive management & groundwater storage" as the first of its Resource Management Strategies (Abstract, p. 4). The use of treated water for injection is standard practice in aquifer storage and recovery projects. As the project is intended for drought supply, the benefit of a supplemental water supply during future droughts outweighs its cost and required energy use over time. Pumping costs for an East Contra Costa County groundwater project would be substantially greater than the Bayside Project because of the tremendous pressures in the Mokelumne Aqueducts, which are pressurized by Pardee Reservoir at an elevation of approximately 550 feet. The Bayside Project will pump against a water system pressure of only about 200 feet.

Response to Comment G1-11

See Master Response 6 — Radon and Chloroform and Master Response 3 – Monitoring Programs.

Response to Comment G1-12

The Bayside Project is located in a part of the basin where the deep aquifer is isolated from shallow aquifers with thick layers of clay. With this existing hydrogeologic condition and the mitigation measures described in Master Response 5 — Groundwater Contamination, the risk of groundwater contamination is less than significant. See also Master Response 3 – Monitoring Programs.

Response to Comment G1-13

See Master Response 5 – Groundwater Contamination. The age estimate of the water is based on radiocarbon (Carbon-13 and Carbon-14) techniques. The U.S. Geological Survey (USGS) analyzed samples taken from the existing Bayside Well No. 1 using radiocarbon techniques (Carbon-13 using mass spectrometry and Carbon-14 using accelerator mass spectrometry) to assess the water's age. Samples were taken between 1997 and 2000 from Bayside Well No. 1 as well as 10 other wells in the vicinity of Bayside Well No. 1. Preliminary results of the analysis indicate that the water sampled from these wells is approximately 9,000 years old (*South East Bay Plain Groundwater Model Calibration* [CH2M HILL 2001b]). The age estimate reflects the time it takes for water molecules to physically travel from the surface (initially as infiltration) to the Deep Aquifer. The drawdown in water levels reflects a pressure response in the system (such as the water level drawdowns observed in the early 1900s), which is much more rapid than the physical movement of water (as reflected in the 9,000 year old age of the water). The age of the water was also estimated using the groundwater model; the resulting estimate, 8,750 years, is consistent with the radiocarbon results. The model also replicates the more rapid drawdown in water levels (seasonal and yearly). The preliminary radiocarbon results were confirmed in the final USGS study; see *Hydrogeology and Geochemistry of Aquifers Underlying the San Lorenzo and San Leandro Areas of the East Bay Plain, Alameda County, California* (USGS 2003).

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The Ground Water Contamination-General section of these previous comments submitted in 2001 by the Heron Bay Task Force are attached (Exhibit B) and are incorporated by reference to be included in this 2005 public comment submission. All the previous 2001 comments are still valid and applicable and must be addressed by EBMUD.

7) Ground Water Contamination- Vertical Conducts & Flowing Wells.

The Ground Water Contamination- Vertical Conducts section of the previous comments submitted in 2001 by the Heron Bay Task Force are attached (Exhibit B) and are incorporated by reference to be included in this 2005 public comment submission. All the previous 2001 comments are still valid and applicable and must be addressed by EBMUD.

In addition, page 3.1-51 of the 2005 DEIR states that "As indicated on Figure 3.1-16, the area where deep aquifer water levels are above ground in the SEBFB is larger than the No Project conditions (Figure 3.1-17) which would cause additional active or improperly abandoned wells to flow at the surface." As previously stated in our 2001 comment letter, but apparently this comment was ignored in 2005, the residual impact of flowing wells which may push known contaminants from the shallow aquifer to the surface is not acceptable or fair to our community. EBMUD cannot claim flowing wells into residential properties are "less than significant after mitigation" when the mitigation is nothing more than watch the wells flow then try to cap them. The damage to property, and potentially to the residents' health if the flowing wells carry contaminants from the shallow aquifer, will have already occurred and EBMUD's "monitoring" of flowing wells does absolutely nothing to prevent the damage from occurring in the first place. EBMUD should also be made aware that the flowing wells may also cause mold and mildew problems into homes which cause not only property damage but very serious health impacts as well.

A very important point for EBMUD to accept is that EBMUD does recognize that the injection process of the BaySide Project may cause wells to flow at the ground surface and if these wells flow (due to deep aquifer injection) then the deep aquifer is obviously connected to the ground surface and possibly the shallow aquifer. If the deep aquifer and ground surface and/or shallow aquifer are connected then there is the potential for contamination of the deep aquifer from the confined contaminants in the shallow aquifer. This is how the deep aquifer at EBMUD's Oakport well was likely contaminated (see attached 2001 comment letter). EBMUD cannot continue to ignore the fact that the deep aquifer is at significant risk of contamination from the known shallow aquifer contaminant plumes and arbitrarily claim this potential contamination impact as "less than significant after mitigation." Again, EBMUD's mitigation is nothing but watch for the problem to happen (contamination of the deep aquifer) and by then it would be too late - the aquifer will be contaminated and nothing was done to prevent this contamination of the public's drinking supply.

8) Air Quality.

Page 3.6-3 of the 2005 DEIR, section 3.6.2.4 provides false information to the public by stating "There are no sensitive receptors adjacent to or nearby the Phase 1 site." This section defines "Sensitive receptors are those population groups associated with schools, daycare centers, hospitals, and convalescent homes." The Heron Bay community, which contains a large population of young children and senior adults is adjacent to the phase 1 site. The Challenger elementary school and San Lorenzo homes (of which many homeowners are seniors) are also located adjacent to the phase 1 site. Has EBMUD done a survey of the elderly and young children in the communities adjacent to the phase 1

Response to Comment G1-14

See Master Response 12 — Comments on 2001 DEIR and Master Response 5 — Groundwater Contamination.

Response to Comment G1-15

See Master Response 12 — Comments on 2001 DEIR and Master Response 5 — Groundwater Contamination.

Response to Comment G1-16

Flowing well conditions can occur only in the deep wells located in the area shown in DEIR Figure 3.1-16. Even then, if the well is properly abandoned or capped, flowing conditions will not occur. As surface contaminants have not been found in the deep aquifer, transporting contaminants from the deep aquifer to the shallow aquifer is highly unlikely. See Master Response 2 — Potential for Flowing Wells, Master Response 3 — Monitoring Programs, and Master Response 5 — Groundwater Contamination.

Response to Comment G1-17

The connectivity among aquifers varies depending on the hydrogeology of a specific location. Trichloroethene (TCE) contamination was detected at the Oakport site in monitoring wells of the “middle zone aquifer” at a depth of approximately 350 feet. TCE was never detected in deep wells at depths of 550 feet (Fugro West 1999b). Because the hydrogeologic conditions, water quality, and potential yields at the Oakport site would not support municipal groundwater project development, the site was abandoned as a potential project location. Unlike the Oakport site, the Bayside Project site has been selected due to favorable water quality, hydrogeologic conditions, and potential yields. See Master Response 3 — Monitoring Programs and Master Response 5 — Groundwater Contamination.

Response to Comment G1-18

Phase 1 does not include facilities or devices producing air emissions during operations (2005 DEIR, Section 3.6). The closest residence to Bayside Well No. 1 is located approximately 1,900 feet from the site as shown on Figure 2-3 of the DEIR. The nearest sensitive receptors, Bay Elementary School and Challenger School, are each approximately 2,800 feet from the site. Because the project will not result in air quality impacts, no sensitive receptors would be impacted.

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G1-18 project? EBMUD must provide data that verifies there are no sensitive receptors, instead of making a false and unsubstantiated claim.

G1-19 This DEIR is also deficient because it completely sidesteps the issue of radon and makes arbitrary assumptions, in contradiction to the proposed government radon regulations, that EBMUD will need to do nothing to protect residents and customers. The DEIR on page 3.2-11 clearly states that the proposed regulation is 300 Picocuries per liter (pCi/L) and that any water having levels higher than that will require treatment or participation in a program to educate the public about radon exposure. The DEIR on this same page then makes an arbitrary claim that "when promulgated, the standard is likely to be higher than radon concentrations at Bayside." EBMUD cannot make a "significant" versus "less than significant" impact determination based upon an unjustified assumption that the adopted radon regulations will be different than the proposed regulations.

G1-20 As stated in the "Phased Project Approach" section of this comment letter, EBMUD should provide more detailed information related to phase 2. Whether phase 2 is 5 MGD or 10 MGD, EBMUD does have the tools and information available, especially considering over 10 million dollars has been spent on this project to date, to make an estimation on the amount of radon and chloroform emissions. EBMUD's approach to try and minimize the impacts of the Bayside Project by only showing phase 1 information only, while excluding phase 2, is disingenuous, unfair to the public who deserve to know the true impacts of the Bayside, and in violation of the CEQA process.

G1-22 EBMUD cannot simply ignore the fact that in 2001 the DEIR proposed up to 3,790 lbs/yr of chloroform emissions at the 15 MGD project size and now in 2005 at the 1 MGD project size EBMUD remains silent on how much chloroform is emitted. EBMUD must fully disclose how much chloroform emissions will be emitted in phase 1 and phase 2 and how/where these emissions will be produced (e.g. showers, aeration towers, ?). Or will EBMUD allow the radon and chloroform to stay in the water for only the residents of San Leandro, San Lorenzo, and Lower Oakland to drink? - This information must be disclosed.

G1-23 The Air Quality section of these previous comments submitted in 2001 by the Heron Bay Task Force are attached (Exhibit B) and are to be included in this 2005 public comment submission. All the previous 2001 comments are still valid and applicable and must be addressed by EBMUD.

9) *Water Quality.*

G1-24 It has been described in the DEIR and presented by EBMUD during the public comment meetings that this Bayside Project will provide water to only EBMUD customers south of High Street in Oakland. It is also described in the DEIR and presented by EBMUD during the public comment meetings that the quality of this water is not of the same quality as the water from the Mokelumne River Supply that all other customers would receive. Table 3.2-1 of the DEIR show that the Bayside ground water will have higher levels of radon and arsenic than the Mokelumne supply. While these values are below the Maximum Contaminant levels, they are still higher than that of which other EBMUD customers (in more affluent areas) receive and will provide increased health risks to the residents of San Leandro, San Lorenzo and South Oakland. Why should our community not receive the same quality of water as other communities (with lower levels of harmful components such as radon and arsenic) when there are still alternatives available such as raising Paradise Dam or East Contra Costa County Groundwater Development that would give all customers an equal quality of water?

Response to Comment G1-19

See Master Response 6 – Radon and Chloroform.

Response to Comment G1-20

At this time, EBMUD does not know whether it will pursue Phase 2 or, if it does pursue it, exactly what Phase 2 facilities would be necessary, where those facilities would be located, or what the ultimate size of those facilities would be. A subsequent EIR would be prepared to evaluate impacts related to radon and chloroform prior to implementation of Phase 2. Also see Master Response 7 – Project Phasing.

Response to Comment G1-21

See Master Response 7 – Project Phasing and Master Response 6 – Radon and Chloroform.

Response to Comment G1-22

See Master Response 6 – Radon and Chloroform.

Response to Comment G1-23

See Master Response 12 – Comments on 2001 DEIR and Master Response 6 – Radon and Chloroform.

Response to Comment G1-24

See Master Response 6 – Radon and Chloroform and Master Response 11 – Environmental Justice. Currently, the constituent concentrations in drinking water delivered to EBMUD customers vary based on season and local reservoir source. Water delivered in the winter from reservoirs filled with recent runoff differs from water delivered in the summer. In addition, water treated at different water treatment plants and delivered through different systems would vary minimally when collected from different household taps and analyzed. However, all delivered water in the EBMUD system, including water produced from the Bayside Project, would meet drinking water standards, which are established to protect public health. Table 3.2-1 in Section 4.3.1 of this document includes water quality information from the current sources of water to the project area as well as native groundwater and recovered water qualities in the Bayside area.

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10 EBMUD Commitments made to the public.

The Heron Bay Community, as well as much of San Leandro, San Lorenzo, and Southern Oakland, risk loss of home value due to several factors, including damage and contamination of air, water, and land (subsidence). EBMUD has made a commitment to the San Leandro and San Lorenzo Communities at the May 15, 2001 public comment meeting that "The [Bayside] Project will only go forward if this project is demonstrated not to ask no more of this community [Heron Bay, San Leandro, and San Lorenzo] than would be asked or expected of any other community within the EBMUD Service Area" (see EXHIBIT G, copy of two overhead transparencies presented by EBMUD at the May 15, 2001 Bayside Project public comment meeting -- hard copy requested by Ms. Sally Law, Heron Bay resident, and provided by EBMUD employee Ms. Angela Knight).

It is clear that Heron Bay, San Leandro, San Lorenzo, and Lower Oakland are asked (by publication of the 2001 and 2005 Draft Bayside EIR) more of than other communities because the drinking water for Heron Bay, San Leandro, San Lorenzo, and Lower Oakland will contain higher cancer causing substances (radon and arsenic), the air quality (indoor or outdoor depending on type of aeration) for Heron Bay, San Leandro, San Lorenzo, and Lower Oakland will be of lower quality containing higher cancer causing substances (radon), the homes of Heron Bay, San Leandro, San Lorenzo, and Lower Oakland are at risk of damage from subsidence and flowing walls from EBMUD's rejection and extraction process.

Our community expects EBMUD to uphold its commitment made to the public on May 15, 2001 to not move forward with this project since our community bears more of a burden than other communities in the EBMUD Service Area as a result of operation of the Bayside Project.

11) Subsidence.

The Heron Bay community, as well as much of San Leandro, San Lorenzo, and Southern Oakland risk loss of home value due to several factors, including structural damage and contamination of air, water, and land. EBMUD has made a commitment to the San Leandro/San Lorenzo communities in the public comment meetings that EBMUD will not pursue the Bayside Project if one community bears more of a burden than others as a result of the Bayside Project. It is clear that not only Heron Bay but all of San Leandro, San Lorenzo, and Southern Oakland, bear more than a fair share of burden and risk. EBMUD has made no "mitigations" in the DEIR to the loss of property value, property damage or negative health effects that could be incurred by residents as a result of this project.

EBMUD's actions AFTER damage has already occurred is not a mitigation. For example, on pg 3.1-56 of the 2005 DEIR it states "If any inelastic subsidence is detected the accuracy of the extensometers is such that it will be a very small amount measurable near the Bayside Well No. 1, and EBMUD would implement corrective action, such as reducing pumping or ceasing extractions." Reducing pumping or ceasing extractions DOES NOT mitigate the potential inelastic permanent subsidence and resulting damage that would have already occurred to the residential neighborhoods located adjacent to the Bayside Project.

Pg 3.1-55 of the 2005 DEIR documents this potential subsidence damage resulting from the Bayside Project as increased flooding, greater back-flushing of water from the Bay, and changes in gradients in gravity flow structures (negatively impacting storm drain systems within our communities). These impacts are by no means reduced to less than significant impacts just because EBMUD will watch and monitor the damage after it has already occurred.

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Response to Comment G1-25

See Master Response 6 — Radon and Chloroform.

Response to Comment G1-26

See Master Response 1 — Subsidence, Master Response 2 — Potential for Flowing Wells, and Master Response 11 — Environmental Justice.

Response to Comment G1-27

See Master Response 11 — Environmental Justice. All impacts of the project are mitigated to a less than significant level, and the project does not present an undue burden or risk to any community.

Response to Comment G1-28

See Master Response 11 — Environmental Justice. California Environmental Quality Act (CEQA) Guideline 15131 provides that economic effects of a project shall not be treated as significant effects on the environment. However, all impacts of the project are mitigated to a less than significant level, and the project does not present an undue burden or risk to any community. The DEIR includes mitigation measures for drawup effects, subsidence, and water quality; see DEIR mitigation measures 3.1-3a-d, 3.1-6, and 3.2-1a-c. Because all impacts are mitigated to a less than significant level, EBNUD does not foresee any risk to property values. See also Response 1 — Subsidence, Master Response 2 — Potential for Flowing Wells, Master Response 5 — Groundwater Contamination, and Master Response 6 — Radon and Chloroform.

Response to Comment G1-29

No inelastic subsidence is expected as a result of operation of the Bayside Project, as discussed in Master Response 1 — Subsidence.

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G1-30 Pg 3.1-55 of the 2005 DEIR also goes on to say that damage to infrastructure and private structures (homes) would not be expected. What if EBMUD's expectations of project operations are not met and private structures are damaged? EBMUD's statement that damage to our homes "would not be expected" is of little assurance, and definitely no guarantee, that our homes are protected from damage by EBMUD. If EBMUD truly believes that damage will not occur, EBMUD should state confidently that damage "will not occur" and back up this statement with a contract with each and every homeowner that EBMUD will repair any damage to homes caused by subsidence (whether temporary or long term subsidence). Without a contract with each homeowner, EBMUD is not taking responsibility for the potential damage and harm inflicted upon the residents from the Bayside Project.

G1-31 EBMUD must also recognize that pg 3.1-54 of the 2005 DEIR states that subsidence is expected at the Bayside well of 1/4 inch and 1/10 inch several miles from the site. Since the ground will be settled by different amounts in different areas, this is by definition called differential settlement. EBMUD cannot claim, let alone guarantee, that all the ground will settle evenly, and it quite possible that damage to homes may occur from the Bayside Project caused by ground settlement and/or subsidence.

G1-32 This phase 1 estimated 1/4 inch versus 1/10 inch of subsidence is a perfect example of how and why EBMUD must prepare a programmatic EIR to reflect the amount of subsidence expected from phase 2. EBMUD does have the modeling tools and information to make an estimate on phase 2 subsidence. Since the 2001 DEIR was able to estimate subsidence for the 15 MGD project, then why is EBMUD now unable to estimate subsidence for the 10 mgd phase 2 project? After 10 million dollars spent on this project to date of ratpayer funds, there is absolutely no reason why EBMUD should not provide this phase 2 subsidence information to the public. Is the phase 2 subsidence a few feet at the Bayside well and few inches several miles away? Whatever the phase 2 subsidence is, this information should not be hidden from impacted residents, but instead shared with the public so that the public can understand the true impacts of the Bayside Project.

G1-33 The Subsidence section of these previous comments submitted in 2001 by the Heron Bay Task Force are attached (**Exhibit B**) and are incorporated by reference to be included in this 2005 public comment submission. All the previous 2001 comments are still valid and applicable and must be addressed by EBMUD.

12) Seismic Hazards.

G1-34 EBMUD too easily dismisses the potential for EBMUD induced seismicity due to injection into the deep aquifer as commented previously by the Heron Bay Task Force in 2001. Note that cases have been documented, even here in Northern California, which have confirmed induced seismicity or "triggered earthquakes" caused by injection of fluids into the ground. EBMUD does not have an exact mapping of the deep aquifer or its connection to the nearby fault system and cannot be certain that ground water injection will not trigger earthquakes. EBMUD must recognize that this project is situated only a few miles from the Hayward Fault, one of the most dangerous faults in the Bay Area and, under Antrepreneur Law, the inducer of an earthquake can be made to pay for damages resulting from the quake.

G1-35 Page 3.5-11 of the 2005 DEIR states that "Consistent with CEQA Guidelines Appendix G, a project would normally have significant geological impacts if it would: ... Be located on a geologic unit or soil that is unstable or could become unstable as a result of the project and potentially result in ... liquefaction." This proposed Bayside Project would cause wells to flow as stated on page 3.1-51

Response to Comment G1-30

See Master Response 1 – Subsidence and Master Response 3 – Monitoring Programs.

Several comments submitted on the DEIR addressed insurance or special funds to address damage claims. While EBMUD recognizes these concerns, it should be emphasized that EBMUD internal procedures and methods regarding insurance coverage and claim evaluation are not subject to the California Environmental Quality Act (CEQA). As described in the DEIR, the risk of damage to property from subsidence is less than significant with mitigation (Mitigation Measure 3.1-6). Notwithstanding these facts, and to address the concerns about insurance coverage and the claim evaluation process, EBMUD provides the following background information regarding the nature of its insurance policies and its standard claims process that EBMUD would employ to facilitate the intake, evaluation, and resolution of any claim.

EBMUD's standard claims process provides for reimbursement of reasonable costs to repair damage to property that results from negligent activity on the part of the District.

In the event that a person wishes to file a claim, he or she would contact the Bayside Project Manager by phone or e-mail. The Project Manager contact information will be posted on EBMUD's website, www.edmud.com, and will be available prior to the start of construction and operation. The Project Manager will provide an EBMUD form and written procedures for the claimant to follow. The form should be returned with supporting documentation from the claimant (e.g., photographs, videos, measurements, description of damage) and the date and time that the incident occurred. All claims should be filed as soon as possible after the incident.

EBMUD cannot compensate claimed damages without first assessing the incident and determining responsibility. The suggested approach, for EBMUD to compensate homeowners via a special fund, is inconsistent with EBMUD procedures for evaluating claims. EBMUD's responsibilities as a public agency for managing its funds, and our system of jurisprudence with respect to proving causation. The existing claims process is fair and adequate, and a special fund is not needed or warranted.

For complex claims not related to the contractor, the claim would immediately be assigned to a third-party claims adjuster. The third-party adjuster would review the claim, engage appropriate experts to analyze the claim, establish the amount of damage or cost, and prepare a response. If liable, EBMUD would settle the claim. The liaison would remain the contact for the claimant and would facilitate the process.

The above description is intended solely to provide information concerning how EBMUD intends to handle claims that may arise. It is not intended to change, modify or alter EBMUD's legal responsibilities. Similarly, the claim process described above is not intended to change, modify or alter any legal responsibilities a claimant may have to submit a claim within the time established by law.

Response to Comment G1-31

See Master Response 1 — Subsidence.

Response to Comment G1-32

See Master Response 1— Subsidence and Master Response 7 — Project Phasing. At this time, EBMUD does not know whether it will pursue Phase 2 or, if it does pursue it, exactly what Phase 2 facilities would be necessary; where those facilities would be located; or what the ultimate size of those facilities would be. If Phase 2 is pursued in the future, a subsequent EIR would be prepared to evaluate potential impacts of Phase 2, including those related to subsidence prior to implementation of Phase 2. The Phase 2 study area is substantially larger than the project area described in the 2001 DEIR. Since Phase 2 facilities may extend over a much broader area, the subsidence analysis presented in the 2001 DEIR is not relevant.

Response to Comment G1-33

See Master Response 12 — Comments on 2001 DEIR.

Response to Comment G1-34

The Bayside Project proposes injecting water into the Deep Aquifer of the South East Bay Plain Basin (SEBPB), approximately 600 feet below ground surface. Earthquake hypocenters (locations within the earth at which earthquakes originate) typically occur at great depth. Along most faults within the San Francisco Bay Area, including the Hayward fault, hypocentral depths typically range from approximately 3 to 20 kilometers (1 to 12 miles) below the ground surface. A review of hypocentral locations of earthquakes that occurred along the Hayward fault in the vicinity of the project area between 1984 and 2000 (Simpson et al. 2004) indicates that the shallowest earthquakes originated at depths greater than 1.5 kilometers (5,000 feet) below the ground surface. There is no evidence to suggest Bayside Project injection could trigger seismic activity.

Response to Comment G1-35

See Master Response 4 — Liquefaction.

Section 4.5 of the DEIR qualitatively evaluates the potential impacts related to geology, soils, and seismicity for Phase 2 of the project. If EBMUD proceeds with Phase 2, a subsequent EIR will be prepared to evaluate potential impacts associated with the specific locations for Phase 2 facilities.

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of the DEIR. When wells are flowing, the groundwater table in the Heron Bay and many other areas in San Leandro and San Lorenzo will likely rise, increasing the risk of liquefaction damage. Page 3.5-9 of the 2005 DEIR states that the phase 1 site is located within a zone of potential liquefaction, but completely ignores the increased risk or impacts that the injection process of the Bayside Project has on the liquefaction potential of San Leandro, San Lorenzo, and Lower Oakland. Ignoring the liquefaction related impacts caused by the Bayside Project is in violation of CEQA process. Liquefaction and other seismic hazards associated with phase 2 must also be thoroughly evaluated and results presented to the public for review and comment.

13) *Fiscal Responsibility.*

EBMUD has a responsibility to their ratepayers to be mindful of project costs and expenditures. Between the period of 3/1/01 and 3/10/05 EBMUD has spent over 10 million dollars (See Exhibit B) on a project that has significant negative impacts to San Leandro, San Lorenzo, and Lower Oakland, while the risks/adverse impacts far outweigh any benefits. In addition, EBMUD is proposing to increase water rates on EBMUD customers by approximately 4% in July 2005 and another 4% in July 2006 to cover money-wasting projects like the Bayside Groundwater Project. This "blank check" style of project management is unacceptable and all expenditures on this project should be ceased.

The ER should fully disclose all expenditures and provide a cost versus benefit analysis to justify how this project makes financial sense. Not just the Phase 1 costs - but costs for phase 2, the true project that EBMUD plans to construct and operate - a 10 million gallon per day (MGD) groundwater project. In addition to costs already expended, EBMUD should estimate all future costs such as design and construction costs, litigation costs, lifetime operational costs (including the fact that EBMUD will be treating the water twice - once before it is injected and again after extraction), maintenance costs, and costs (both cash and lifetime water transfers converted to present cash value) paid to other agencies, organizations, or individuals to "mitigate" their opposition to this project.

For example, pg 3.1-52 of the 2005 DEIR states "EBMUD will provide up to \$50,000 of funding to the City of Hayward ... to mitigate impacts from the Phase 1 of the Project. EBMUD will also provide surplus water to Hayward through existing or planned emergency intakes..." All costs of the current Hayward Intake Project (planning, design, construction, life time operations and maintenance costs) shall also be included in the total cost of the Bayside Project since providing "surplus water to the City of Hayward" is a necessary "mitigation" measure per this 2005 DEIR - to reduce impacts to a "less than Significant after mitigation" level. Is that how EBMUD approaches the CEQA process? EBMUD pays someone opposes the project cash on providers surplus water to gain their support? This does not sound like fiscal responsibility or even an ethical approach protecting the community and environment.

We understand that EBMUD obtained a grant from the State of California for Construction of this Project - but the money has not yet been awarded. Did EBMUD disclose any of the public's concerns or the strong community opposition associated with the Bayside Project to the State? Our website www.heronbaytaskforce.org clearly documents the communities' concerns and opposition since 2001. It would have been fiscally responsible to disclose to the State, and associate taxpayers, the true history, issues, costs, and impacts associated with the Bayside Project when applying for grant funding and NOT to falsely represent that the Bayside Project as such a wonderful project with minimal impacts - lets hope EBMUD has fully disclosed all issues to the State as well as the public. If not, how is your chance EBMUD to present the true costs and impacts to a majority of EBMUD customers and decide if all the costs from the Bayside Project are worth pursuing this unnecessary project (See *Project Need & Rationale Assumptions vs. Rationale Policy section of this comment letter*). Our community

Response to Comment G1-36

Comment noted. This comment is not related to a CEQA issue or the contents of the DEIR; therefore, no response is provided.

Response to Comment G1-37

California Environmental Quality Act (CEQA) Guideline 15131 provides that economic effects of a project shall not be treated as significant effects on the environment. As described on page 3.1-52 of the DEIR, potential groundwater impacts from Phase 1 on the Hayward Emergency Supply Wells will be mitigated in part through additional emergency capacity for Hayward's well system or other improvements that will mitigate impacts to the system. EBMUD will provide up to \$50,000 of funding to the City of Hayward to help meet the costs of these measures. The decision was made to provide monies to Hayward so that they could make the appropriate upgrades to their system, as they are in a better position to determine the improvements that are required. The provision of funds from one agency to another to compensate for the cost of mitigation measures is a typical practice. The City of Hayward requested that the provision for funding be documented in the DEIR.

See also Master Response 7 – Project Phasing.

Response to Comment G1-38

Comment noted. EBMUD provided a summary of public comments on the 2001 DEIR and specific examples as a part of the original Proposition 13 application to the California Department of Water Resources (DWR). Further, representatives of DWR responsible for approving issuance of Proposition 13 funds for the BaySide Project have attended several CLG meetings and the April 20, 2005 public meeting for the project. EBMUD also provided DWR with copies of all comments to the 2005 DEIR. Final approval of funding is contingent upon the certification of this Final EIR, which will be reviewed by DWR. The Final EIR includes all public comments and EBMUD responses to those comments.

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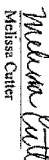
opposes the Bay-side project and any funding that the State of California proposes to provide for this detrimental groundwater project.

In consideration of the comments and information provided above, we request that EBMUD not proceed with the Bay-side Groundwater Project in the San Leandro, San Lorenzo or Oakland areas.

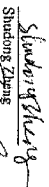
Heron Bay Task Force.


Edgardo Gonzalez


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5-15-05


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Frank Mellon, EBMUD Board Member
David Richardson, EBMUD Board Member
Dennis M. Dierich, EBMUD General Manager
Lynelle Lewis, EBMUD District Secretary
Shella Young, Mayor of San Leandro
Joyce R. Sarostrik, San Leandro City Councilmember
Surlene Grant, San Leandro City Councilmember
Glenda Nardine, San Leandro City Councilmember
Bill Stephens, San Leandro City Councilmember
Tony Santos, San Leandro City Councilmember
Orval Baugher, San Leandro City Councilmember
Alice Lai Bihler, Alameda County Supervisor
Nate Wiley, Alameda County Supervisor
Scott Haggerty, Alameda County Supervisor
Ellen Corbett, Assemblymember
Johan Klefs, Assemblymember
Liz Figueroa, State Senator
Pete Stark, United States Congressman
Ms. Tracee Billington, California Department of Water Resources

Letter G1. Heron Bay Task Force.

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EXHIBIT A

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Letter G1, Heron Bay Task Force.

TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
 WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
 OPERATION OF THE PROPOSED BAYSIDE GROUNDWATER PROJECT
 DUE TO ITS POTENTIAL ADVERSE IMPACT ON THE PUBLIC'S HEALTH
 AND PROPERTY.

Printed Name	Signature	Address, City, and Zip Code	Phone/Email
Ping Kang		15226 66th St. Redefg	510-667-8144
Robin Xia		15226 66th St. Redefg	510-617-8019
Liboao E. Limas		15226 66th St. Redefg	510-483-1542
Kathleen		7122 Rockwood Ct	510-483-1542
John		1055 N. Ave	510-37-0472
John		5104 HUNTERIN	352-3958
CHARIS LOW		13385 SAN TIAGO RD. S.L	604-2039
Carl F. Lim		14370 Bounded Rd. S.L	510-895-6121
ARACIS LIM		15173 Colby St	710-895-6204
ROS GALIANO		2251 Rockwood way	510-483-2445
Marco Segura		2357 Rockwood Ct.	661-606-0935
TAMARA H. JENNINGS		15205 Oceanwide Way	510-352-6235
Richard M.		" "	
Jim Yeh		677 Great Ave	510-352-8792
Colin Young		542 S. Ave	510-352-2599
Eric Yeh		976 Lyons Ct	510-352-6202
Andrey To		16116 KENNEDY ST	610-388-1603
Suzanne Chao		2303 Overlook Ct	510-443-0530
PHILIP YEH		11051 V.A. Road	510-374-5188
MELISSA BROWN		2228 Conquest Ave	610-667-9296

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Response to Comment G1-39

Comment noted.

Letter G1. Heron Bay Task Force
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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
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DUE TO ITS POTENTIAL ADVERSE IMPACT ON THE PUBLIC'S HEALTH
AND PROPERTY.

Printed Name	Signature	Address, City, and Zip Code	Phone/Email
Denise Tracy	<i>[Signature]</i>	2012 LIBERTY WAY S.L. 94579	614-0123
Frank Blythe	<i>[Signature]</i>	14317 SANDHILL ST. 1505 OCEAN SIDE WAY	352-6255
William King	<i>[Signature]</i>	586 Fleming	357-3817
Yang Q. Shen	<i>[Signature]</i>	677 Greenwood Ave	585-8792
Tang Nianhua	<i>[Signature]</i>	1555 S. SANDHILL ST SAN LEANDRO CA 94577	614-2807
Ann H. Taylor	<i>[Signature]</i>	127 ALZA DR. (112	819-9832
Alvin L. Lee	<i>[Signature]</i>	15723 VIA SERATA	512
Barbara M. Smith	<i>[Signature]</i>	4019 OCEANVIEW WAY	(510) 357-2311
Jeff Wain	<i>[Signature]</i>	15160 Bayside Ave	(510) 483-3830
Walter Lee	<i>[Signature]</i>	15331 Sandhill	94579
Al SHIN TSOI	<i>[Signature]</i>	2346 Diamond Bar Court	510-951-5114
BOB SMITH	<i>[Signature]</i>	2207 AUBURN CT	510-895-2308
THOMAS VINCENT	<i>[Signature]</i>	15186 Shilving St. La	510-811-3388
David McDonald	<i>[Signature]</i>	2331 Seacrest Ct 94579	Dmcsd@comcast.net
Al Kark	<i>[Signature]</i>	1445 Temperate	415-8907
Geoffrey	<i>[Signature]</i>	1027 FORDWOOD AVE	352-1888
BOB BOE	<i>[Signature]</i>	2372 Lagoon Ct.	351-2048
Amie Jabe	<i>[Signature]</i>	2372 Lagoon Ct.	351-2048
Greg Peters	<i>[Signature]</i>	1785 Redwood Ave	614-9769

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Letter G1, Heron Bay Task Force.

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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
 WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
 OPERATION OF THE PROPOSED BAYSIDE GROUNDWATER PROJECT
 DUE TO ITS POTENTIAL ADVERSE IMPACT ON THE PUBLIC'S HEALTH
 AND PROPERTY.

Printed Name	Signature	Address, City, and Zip Code	Phone/Fax#
KAR WONG	<i>Kar Wong</i>	2347 Ely Way S.L. 94577	674-7111
Shu Yee	<i>Shu Yee</i>	15467 Heron Pt. S.L. 94577	357-5845
Richard Wong	<i>Richard Wong</i>	15467 Heron Pt. S.L. 94577	357-5845
Trevi Sp	<i>Trevi Sp</i>	15467 Heron Pt. S.L. 94577	357-5845
Grace Chen	<i>Grace Chen</i>	San Leandro, CA 94577	
Kathy Chen	<i>Kathy Chen</i>	San Leandro, CA 94577	
Shiu Neil	<i>Shiu Neil</i>	1055 Aven Stanford	357-0072
CHAKEN UHO	<i>Chaken Uho</i>	2222 CONGRESS AVE	483-9169
DERNAR YU	<i>Dernar Yu</i>	2222 CONGRESS AVE	483-9169
David Jimenez	<i>David Jimenez</i>	811 LAKELAND RD.	891-1133
Michael Yu	<i>Michael Yu</i>	1947 Juniper St. San Leandro	674-0868
AUUA YU	<i>Auua Yu</i>	1947 Juniper St. San Leandro	674-2206
Frank Hsieh	<i>Frank Hsieh</i>	3299 Sunbeam Court	357-9800
Daniel Lu	<i>Daniel Lu</i>	1552 Goldings Ct	357-4656
Bonnie Lo	<i>Bonnie Lo</i>	1526 Shining Star Lane	357-3412
Mary Ng	<i>Mary Ng</i>	1226 Braxton Court	637-2486
Joseph Wong	<i>Joseph Wong</i>	2225 Regatta Way San	667-9659
Eric Ma	<i>Eric Ma</i>		667-0323
David Hsieh	<i>David Hsieh</i>		351-5811

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Letter G1. Heron Bay Task Force

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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD),
 WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
 OPERATION OF THE PROPOSED BAYSIDE GROUNDWATER PROJECT
 DUE TO ITS POTENTIAL ADVERSE IMPACT ON THE PUBLIC'S HEALTH
 AND PROPERTY.

Printed Name	Signature	Address, City, and Zip Code	Phone/Email
KEN MINTON	<i>[Signature]</i>	16033 W. Hillside St. 94609	707.390.0200
Nancy Minton	<i>[Signature]</i>	15156 Atlatlucan Way	351-8675
Chao Hong	<i>[Signature]</i>	2025 DEWITT WAY	707.847.2187
Tony Chen	<i>[Signature]</i>	13332 Nevada St	707.847.2187
Joanna Wu	<i>[Signature]</i>	16071 Hillside Dr	707.847.2187
Richard K.	<i>[Signature]</i>	714 Nevada Dr	833-9245
Amita V.	<i>[Signature]</i>	1575 Arden Dr. 94609	707.331-3131
Victoria Abonzo	<i>[Signature]</i>	1722 Taylor Rd SL	marco@victoria.com
Doreen Assisi	<i>[Signature]</i>	15098 Fremont Dr. SL	351-3573
Steve Young	<i>[Signature]</i>	1508 Shining Star Lane	707.847.2187
Stacy Chan	<i>[Signature]</i>	14072 Opal St	707.847.2187
1 Dandy Long	<i>[Signature]</i>	2025 Dewitt Way	707.847.2187
Debra Koss	<i>[Signature]</i>	2025 Dewitt Way	707.847.2187
Jeff Pei	<i>[Signature]</i>	324 Wilson Ct. SL 94609	707.847.2187
Sarah Nj	<i>[Signature]</i>	1216 Harbor Court St. 94609	707.847.2187
EMILY FAN	<i>[Signature]</i>	1541 Shining Star Lane 94609	707.847.2187
CHI ZHANG	<i>[Signature]</i>	1574 Wicks Rd 94609	614-9875
Chloe Chan	<i>[Signature]</i>	1551 Shining Star Lane	351-2748
Chloe Chan	<i>[Signature]</i>	1551 Shining Star Lane	351-2748
Chloe Chan	<i>[Signature]</i>	1551 Shining Star Lane	351-2748

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BA09GROUP_16-1-165_LANDSCAPE_CORRECTED.DOC

TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
OPERATION OF THE PROPOSED BAYSIDE GROUNDWATER PROJECT
DUE TO ITS POTENTIAL ADVERSE IMPACT ON THE PUBLIC'S HEALTH
AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax/Email
Richard Olanowich	[Signature]	2361 Pacific View Ct Berkeley, CA 94704	520-389-2883
Angela M. Murrell	[Signature]	2361 Pacific View Ct Berkeley, CA 94704	520-377-2383
ARLENE MUELL	[Signature]	2361 OYSTERCREEK Berkeley, CA 94704	510-351-0271
ROBERT WOOD	[Signature]	2357 OYSTERCREEK CT Berkeley, CA 94704	925-644-7628
Debbie Wood	[Signature]	2357 OYSTERCREEK CT Berkeley, CA 94704	510-614-7628
Gregory Wood	[Signature]	2357 OYSTERCREEK CT Berkeley, CA 94704	(510) 614-7628
Jack Chung	[Signature]	2352 OYSTER CT Berkeley, CA 94704	510-252-8324
MILVA LY	[Signature]	2312 OYSTER CT Berkeley, CA 94704	510-351-3127
ALY	[Signature]	2318 OYSTER CT Berkeley, CA 94704	510-351-3127
Eric Linn	[Signature]	2303 OYSTER CT Berkeley, CA 94704	510-483-0150
KEITH STONER	[Signature]	2301 OYSTER CT Berkeley, CA 94704	510-358-7274
ERIC LHM	[Signature]	2301 OYSTER CT Berkeley, CA 94704	510-358-7274
Eric Linn	[Signature]	15508 Harbor Way Berkeley, CA 94704	510-358-5157
Colleen Lee	[Signature]	2357 OYSTER CT Berkeley, CA 94704	(510) 351-3127
Colleen Lee	[Signature]	2357 OYSTER CT Berkeley, CA 94704	(510) 351-3127
Anna Choi	[Signature]	2325 Diamond Street Berkeley, CA 94704	

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Letter GI, Heron Bay Task Force

TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
 WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
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 AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Email
IC Siaghu	[Signature]	15501 Ocean Side Way 94524	916-247-5674
Willy Byrd	[Signature]	15516 Ocean side way 94524	510-257-1477
Joseph Lopez	[Signature]	15527 Ocean side way 94524	510-598-8331
Wendy Lee	[Signature]	15511 Ocean side way 94524	916-257-9494
Raymond Lee	[Signature]	15511 " "	" "
ALEX Rodriguez	[Signature]	15511 " " "	" "
MAOUI LOUIS	[Signature]	15521 Ocean side way	510-257-3044
Alfred Lam	[Signature]	15529 Ocean side way	916-257-3044
Paul Donald	[Signature]	15527 Ocean side way	916-257-3044
Karin Heng	[Signature]	15516 Ocean side way	916-257-3044
YVES HENG	[Signature]	15516 Ocean side way	916-257-3044
KEVIN HENG	[Signature]	15516 Ocean side way	916-257-3044
L. Jackson	[Signature]	15517 HANNAH WAY	510-614-0611
Franklin	[Signature]	15517 HANNAH WAY	510-782-8888
MARK FRANK	[Signature]	15517 HANNAH WAY	510-782-8888
Gene Frank	[Signature]	15517 HANNAH WAY	510-782-8888
CHRISTINE FRANK	[Signature]	15517 HANNAH WAY	510-782-8888
CHRISTINE FRANK	[Signature]	15517 HANNAH WAY	510-782-8888
PETER VEE	[Signature]	15517 HANNAH WAY	510-782-8888

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Letter G1 Heron Bay Task Force.

TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD);
 WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
 OPERATION OF THE PROPOSED BAYSIDE GROUNDWATER PROJECT
 DUE TO ITS POTENTIAL ADVERSE IMPACT ON THE PUBLIC'S HEALTH
 AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax
Isidro Rojas	[Signature]	16017 Via Mariposa, San Jose, CA 95131	415-7552
Hui Tsang	[Signature]	16017 Via Mariposa, San Jose, CA 95131	720-312956
John Wu	[Signature]	1605 Via Mariposa, San Jose, CA 95131	378-5135
YOUNG MARIKOLA	[Signature]	16032 VIA RIVERA, SHERWOOD, CA 94642	276-4642
Youni Hachibuchi	[Signature]	16033 Via Laguna, Sunnyvale, CA 94086	510-226-4192
Shirley	[Signature]	16038 Via Mariposa, San Jose, CA 95131	510-276-8279
St. Ann's	[Signature]	16038 Via Mariposa, San Jose, CA 95131	510-276-2379
Dianna	[Signature]	16030 Via RIVERA, Sunnyvale, CA 94086	670-5284
Paul	[Signature]	15748 Via RIVERA, Sunnyvale, CA 94086	875-0312
Wanda	[Signature]	15748 - Vista Mariposa, Sunnyvale, CA 94086	278-4312
Wanda	[Signature]	5748 Via Mariposa, Sunnyvale, CA 94086	278-4312
Paul	[Signature]	16032 Via RIVERA, Sunnyvale, CA 94086	—
William	[Signature]	16032 Via RIVERA, Sunnyvale, CA 94086	278-5567
Chas	[Signature]	16032 Via RIVERA, Sunnyvale, CA 94086	316-8618
F. Gonzalez	[Signature]	16032 Via RIVERA, Sunnyvale, CA 94086	481-1934
YOUNG	[Signature]	1487 VIA RIVERA, SHERWOOD, CA 94642	481-1934
Michael	[Signature]	1532 Via RIVERA, Sunnyvale, CA 94086	317-5251
MARLYN	[Signature]	16148 1/4 SOMERVA, Sunnyvale, CA 94086	397-2750
BARBARA	[Signature]	" "	" "
Paul	[Signature]	15748 Via Mariposa, Sunnyvale, CA 94086	278-4312

To return completed petition forms, mail to: HSTF Petition Collection, 2260 Charter Way, San Leandro, CA 94578.
 For more information, email info@hstfbaytaskforce.org

Letter G1, Heron Bay Task Force.

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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
 WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
 OPERATION OF THE PROPOSED BAYSIDE GROUNDWATER PROJECT
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 AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax#
Mary C. Leblond	Mary C. Leblond	15717 Via Mar... 94780	278-3193
Elizabeth DeLave	Elizabeth DeLave	15763 Via Mar... 94780	510-276-3545
Allen DeLore	Allen DeLore	15763 Via Mar... 94780	376-3875
Bill Force	Bill Force	15763 Via Mar... 94780	510-276-7905
Jim Stovener	Jim Stovener	15779 Via Mar... 94780	510-276-0413
Douglas Stovener	Douglas Stovener	" " " "	" "
Barbara Wilson	Barbara Wilson	15778 Via Mar... 94780	510-276-7116
Ch. DeLore	Ch. DeLore	15778 Via Mar... 94780	510-401-2116
Larrie Turner	Larrie Turner	1701 Kaledon... 94782	510-401-8449
Mary Jo Jones	Mary Jo Jones	1738 Lindero... 94782	510-277-1879
Will Boehman	Will Boehman	1739 Lindero... 94782	510-276-1057
Sean Storch	Sean Storch	1723 Via Mar... 94782	510-276-8390
Leah Hill	Leah Hill	1685 Via Mar... 94782	516-481-2668
Terrence Anderson	Terrence Anderson	1831 Via Mar... 94782	510-276-2192
Steve Williams	Steve Williams	15764 Via Mar... 94782	317-8363
Special Agent	Special Agent	15778 Via Mar... 94782	" "
David R. Clark	David R. Clark	15781 Via Mar... 94782	278-4621
Christine S. Clark	Christine S. Clark	15772 Via Mar... 94782	278-4159
William Brown	William Brown	1701 Via Mar... 94782	481-9284
V. Spivack	V. Spivack	15731 Via Mar... 94782	278-9572

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 For more information, email info@heronbaytaskforce.org

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Letter G1, Heron Bay Task Force.

TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
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 AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Email
L.V. Lee	[Signature]	3910 Divisadero Blvd, San Francisco, CA 94115	506-7728
The N.Y. Times	[Signature]	114 Bedford St, New York, NY 10014	212-2814
Robert Landry	[Signature]	2359 Q Street, Berkeley, CA 94704	510-2546
THAN	[Signature]	5305 Diamond Blvd, Oakland, CA 94612	352-1361
DRS. WILSON	[Signature]	1572 OREGON ST, WOODBRIDGE, CA 94702	357-2910
KARNAL SRI	[Signature]	2085 Sherman Way, Fremont, CA 94538	510-5171
ANISHA AHI	[Signature]	15505 Christie Way, Fremont, CA 94538	352-6255
TAMARA AHI	[Signature]	15508 Christie Way, Fremont, CA 94538	352-6255
Srinidhat Ahi	[Signature]	15508 Christie Way, Fremont, CA 94538	352-6255
George Diaz	[Signature]	16080 Ardmore Dr, San Francisco, CA 94115	359 3103
FRANCO LEE	[Signature]	15755 VANDERBILT, SAN FRANCISCO, CA 94115	415-444-4444
KEVIN S. S. S. S.	[Signature]	2277 Redwood Ave, San Francisco, CA 94115	510-252-2525
SUSAN STEIN	[Signature]	2277 Redwood Ave, San Francisco, CA 94115	510-352-2525
STEVE WARD	[Signature]	17819 Bayview, San Francisco, CA 94115	415-667-0922
Dyane Wright	[Signature]	15851 Perry Ct, San Francisco, CA 94115	510 552-3025
WIM WANG	[Signature]	2228 Chandler Way, San Francisco, CA 94115	415-372-3916
TU WILSON	[Signature]	2228 Chandler Way, San Francisco, CA 94115	510 352-2936
JOE LAWRENCE	[Signature]	16329 STEVEN CT, San Francisco, CA 94115	510-614-2439
WILSON B. WILSON	[Signature]	15426 HERONS COVE, San Francisco, CA 94115	415-483-1592
PAUL ORLANDO	[Signature]	15130 KENNEDY ST., San Francisco, CA 94115	510-351-3010

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Letter G1, Heron Bay Task Force
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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
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AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax#
Heather Wood	[Signature]	853 Stearns Ave St Larkspur, CA 94041	415-948-9441
Maria Szwarc	[Signature]	918 Rockside Blvd Wood Belvedere, CA 94026	(503) 750-7619
John Brown	[Signature]	2077 Bayside Drive Sausalito, CA 94965	510-357-2788
John Brown	[Signature]	2100 Wilbur Ave. 20 Sausalito, CA 94965	510-357-2788
Debra Lee	[Signature]	32 Astoria St #1 Lby Sausalito, CA 94965	502-5576
Dawn Scheraga	[Signature]	2250 Beach St Sausalito Sausalito, CA 94965	347-4620
John Scheraga	[Signature]	1417 Hancock St. N.L. Sausalito, CA 94965	414-4480
John Scheraga	[Signature]	707 Linden Blvd Sausalito Sausalito, CA 94965	342-4620
John Scheraga	[Signature]	3081 Redwood Dr Sausalito Sausalito, CA 94965	347-4620
Emily Daniel	[Signature]	3081 Redwood St Sausalito Sausalito, CA 94965	347-4620
Lord Lugo	[Signature]	1469 Elm St Sausalito Sausalito, CA 94965	415-347-4620
Wilson Lugo	[Signature]	14659 Elm St Sausalito Sausalito, CA 94965	415-347-4620
NETI N. GUANI	[Signature]	883 Forest St Sausalito Sausalito, CA 94965	415-347-4620
Vicky Pardo	[Signature]	881 Redwood St Sausalito Sausalito, CA 94965	415-347-4620
Shanna Richmond	[Signature]	3081 Redwood St Sausalito Sausalito, CA 94965	510-347-4620
Evva Luvua	[Signature]	3081 Redwood St Sausalito Sausalito, CA 94965	415-347-4620
Richard S. Stone	[Signature]	8081 Tanager St Sausalito Sausalito, CA 94965	415-347-4620
ANTHONY LAPPE	[Signature]	972 WILLIAMS ST Sausalito Sausalito, CA 94965	270-8346
HONG WILSON	[Signature]	572 WILLIAMS ST Sausalito Sausalito, CA 94965	278-8346

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Letter G1, Heron Bay Task Force.

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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
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 AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax#
Crystal Seibert	<i>[Signature]</i>	Hobart, LA 504	510-720-5298
WALTER	<i>[Signature]</i>	333 W. 17th Ave, Lakewood, CO 80401	303-441-1000
LIBERTE LIEBERA	<i>[Signature]</i>	12915 NEPTUNE DR SW, EVERETT, WA 98203	425-352-1000
Dennis N. Minkoff	<i>[Signature]</i>	4031 Linden Ave, Raleigh, NC 27605	919-876-1000
Sharon M. Brown	<i>[Signature]</i>	1285 Pacific Ave, San Francisco, CA 94133	415-398-1000
William K. Brown	<i>[Signature]</i>	15540 Highway 17, San Gabriel, CA 91781	510-552-1000
AND SIMONS	<i>[Signature]</i>	1627 GREEN, 9805 TEL, WA 98148	509-377-1000
Angela Jackson	<i>[Signature]</i>	22700 BAYVIEW CT, VALLEY, CA 94591	925-884-1000
Leslie Hume	<i>[Signature]</i>	904 N. 1st Ave #2, Fremont, CA 94536	925-934-1000
Raygor	<i>[Signature]</i>	880 Abbey Dr, Oakland, CA 94612	925-1802
Raygor	<i>[Signature]</i>	40224 74th St, Oakland, CA 94612	(925) 451-1000
Randy M. Brown	<i>[Signature]</i>	15389 E WIDA DR, DENVER, CO 80231	303-752-3894
DEBRA SHAW	<i>[Signature]</i>	2223 KIMBLE AVE, DENVER, CO 80231	303-977-1000
Edwin Sigler	<i>[Signature]</i>	2223 KIMBLE AVE, DENVER, CO 80231	303-977-1000
DAVID RAVENHILL	<i>[Signature]</i>	1535 S. FARMERS AVE, DENVER, CO 80231	303-752-3894
Art Karpavich	<i>[Signature]</i>	1789 BIRKENHEAD ST, DENVER, CO 80231	303-752-3894
Alan Johnson	<i>[Signature]</i>	15389 E WIDA DR, DENVER, CO 80231	303-752-3894
Barbara Brown	<i>[Signature]</i>	2000 1st St, Oakland, CA 94612	925-451-1000
Sam Galt	<i>[Signature]</i>	16139 Yale Ave, San Diego, CA 92128	619-451-1000
Zingme Baker	<i>[Signature]</i>	16139 Yale Ave, San Diego, CA 92128	619-451-1000

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Letter G1. Heron Bay Task Force

TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
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 AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Email
Tessie Pruvost	<i>[Signature]</i>	8614 Highway 20, CA 94964	777 0448
David Lopez	<i>[Signature]</i>	720 Poplar Highway, CA 94971	831-21-891
Anthony O'Roark	<i>[Signature]</i>	2419 Oceanview Blvd, CA 94920	570 547-2241
Lesly Lee	<i>[Signature]</i>	2810 L. Austin, CA 94920	510 327-1658
Stephen Vogt	<i>[Signature]</i>	1916 Lundy Blvd., CA 94920	410-387-3528
Christina	<i>[Signature]</i>	331 DIXON DR CT	510-483-7285
Mary Ann	<i>[Signature]</i>	18000 Via Verde	510-915-6561
Spencer	<i>[Signature]</i>	1799 Avenida Real, CA 94920	(607) 228-7452
Joseph	<i>[Signature]</i>	15615 Avenida Real, CA 94920	710-351-1323
Tom	<i>[Signature]</i>	16470 Highway 20, CA 94920	
Louis	<i>[Signature]</i>	15725 Highway 20, CA 94920	510-582-2204
Scott	<i>[Signature]</i>	15592 Highway 20, CA 94920	
Cherie	<i>[Signature]</i>	15552 Highway 20, CA 94920	
Victor	<i>[Signature]</i>	2528 Haste Ct	510-352-1990
Priscilla	<i>[Signature]</i>	2332 Avenue C	510-352-1092
Hank	<i>[Signature]</i>	407 Borden Ave	501 250-5755
Christina	<i>[Signature]</i>	3808 Lake Superior Pl, Fremont, CA 94538	(510) 429-9109
Eric	<i>[Signature]</i>	2210 W. Bayview Rd, CA 94920	415-352-1175
Y. Lopez	<i>[Signature]</i>	1821 Redwood St, CA 94920	510-485-3406
John	<i>[Signature]</i>	1335 Frodo St	510-352-1175

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¹TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
 WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR
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 DUE TO ITS POTENTIAL ADVERSE IMPACT ON THE PUBLIC'S HEALTH
 AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax
Phyllis Arson	<i>Phyllis Arson</i>	71265 Via Casabella	510-276-5161
Faith Chen	<i>Faith Chen</i>	15516 05262 ST	510-278-8036
MINNOSSEY	<i>MINNOSSEY</i>	11730 VILFRANCOSS	510-276-7223
WELLING	<i>WELLING</i>	15435 Willow Ave	510-551-5519
Louise Rhoads	<i>Louise Rhoads</i>	1014 Denise Drive	578-835-7535
Bella Bond	<i>Bella Bond</i>	10000 Dreyfus Ave	578-687-8505
John Mordant	<i>John Mordant</i>	14336 Fern Hill St	351-5931
Francis H. H.	<i>Francis H. H.</i>	Pacific Heights	376-0610
Maureen Lathrop	<i>Maureen Lathrop</i>	Somehow, 44528	278-2600
A. Lewis	<i>A. Lewis</i>	20954 Hesterway	795-1452
Evira Carr	<i>Evira Carr</i>	11152 Vantage Dr	432-5428
Mary Lou Jones	<i>Mary Lou Jones</i>	91160 ELLIOTT ST	578-885-2481
Teresa T. T.	<i>Teresa T. T.</i>	1475 Via Pine St	510-276-9268
Gayle Sanders	<i>Gayle Sanders</i>	14892 Via Sierra	510-278-9961
Barbara Butts	<i>Barbara Butts</i>	15327 Greenway Ln	578-278-9983
Raf Ostro	<i>Raf Ostro</i>	135 E Laurel Ave	578-278-8891
Wendy Kasek	<i>Wendy Kasek</i>	311 E. Quail Run	578-371-728
RUTH USVE	<i>RUTH USVE</i>	13305 WAKE AVE	625-7335
Lois Johnson	<i>Lois Johnson</i>	1488A - 137TH AVE	510-357-1990
EDWYN SUNDY	<i>EDWYN SUNDY</i>	5410 Sand	578-276-7384

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Letter G1, Heron Bay Task Force.

¹TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD); WE, THE UNDERSIGNED, OPPOSE ANY CONSTRUCTION OR OPERATION OF THE PROPOSED BAYSIDE GROUNDWATER PROJECT DUE TO ITS POTENTIAL ADVERSE IMPACT ON THE PUBLIC'S HEALTH AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax
William Ho	<i>[Signature]</i>	15552 Atlantic Ave #88	510-325-6852
Van Kiu To	<i>[Signature]</i>	15642 Atlantic Ave #519	949-452-0900
HSE KOK HO	<i>[Signature]</i>	15652 Atlantic Ave #519	
SAE N. H	<i>[Signature]</i>	15672 Atlantic Ave #519	
HOWARD HO	<i>[Signature]</i>	15672 Atlantic Ave #519	
AARON H	<i>[Signature]</i>	2230 Compass Cove	510-351-8728
Toy Phuong	<i>[Signature]</i>	15329 S. Silverleaf Dr #552	570-271-9226
Li Ling Yu	<i>[Signature]</i>	15359 S. Silverleaf Dr #552	510-351-7278
Clifford Lukic	<i>[Signature]</i>	2138 Bouverie Ave #1002	510-352-0863
Peter Ho	<i>[Signature]</i>	3230 Compass Cove	510-351-8728
Mathew HU	<i>[Signature]</i>	122 Aradale Drive San Leandro CA 94577	
Matthew Moy	<i>[Signature]</i>	122 Aradale Drive San Leandro CA 94577	
Rag Bhatnag	<i>[Signature]</i>	2271 Aquatic Ct	(510) 614-4451
PETER SINGH	<i>[Signature]</i>	2259 Aquatic Ct	(510) 352-5754
Phanou Singh	<i>[Signature]</i>	2259 Aquatic Ct	510-352-5754
Victor Yu	<i>[Signature]</i>	2221 Aquatic Ct	510-352-1890
Mimi Li	<i>[Signature]</i>	2222 Aquatic Court	510-352-1890
Albert Fong	<i>[Signature]</i>	2268 Charter Way	710-483-6338
Angelina Fong	<i>[Signature]</i>	2268 Charter Way	710-483-6338

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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
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AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax#
ANNIE M L...	<i>[Signature]</i>	1582 N St, Alameda, CA 94601	510-881-6271
...	<i>[Signature]</i>	1615 Rowan Ave, San Diego, CA 92105	619-276-8149
...	<i>[Signature]</i>	1115 La Honda St, San Jose, CA 95128	408-459-1025
...	<i>[Signature]</i>	16125 PENN AVE, Laguna Hills, CA 92653	949-27-7103
...	<i>[Signature]</i>	1911 Westpark Dr, San Diego, CA 92116	619-576-4541
...	<i>[Signature]</i>	1900 ...	278-2140
...	<i>[Signature]</i>	1729 Wainwright, San Diego, CA 92116	619-597-7777
...	<i>[Signature]</i>	1729 Via Ventana, San Diego, CA 92116	619-597-7773
...	<i>[Signature]</i>	1726 Via de la Villa, San Diego, CA 92116	619-597-6453
...	<i>[Signature]</i>	1050 ...	619-597-6080
...	<i>[Signature]</i>	2037 E ...	619-597-5556
...	<i>[Signature]</i>	271 ...	619-597-8583
...	<i>[Signature]</i>	276 ...	619-597-7683
...	<i>[Signature]</i>	576 ...	619-471-5715
...	<i>[Signature]</i>

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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
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AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax
Maria Ouseg	<i>Maria Ouseg</i>	738 Victoria San Leandro 94577	635-3039
Michelle Crossin	<i>Michelle Crossin</i>	655 DeWitt St. 94577	957-9096
Michelle Crossin	<i>Michelle Crossin</i>	1711 Hisingwood Dr S.L.	unlisted
Michelle Crossin	<i>Michelle Crossin</i>	5722 Alameda St 52 94575	483-024
Steven M. ...	<i>Steven M. ...</i>	15300 Hercules St. X 80271	483-5024
Ellen ...	<i>Ellen ...</i>	1371 ...	418-5510
David ...	<i>David ...</i>	951 Emerson St. S.L. 94577	603-53-4861
MAR ...	<i>MAR ...</i>	780 ...	
Tom ...	<i>Tom ...</i>	216 ...	
George ...	<i>George ...</i>	307 ...	
Mary ...	<i>Mary ...</i>	310 ...	
...	<i>...</i>	526 ...	
...	<i>...</i>	532 ...	
...	<i>...</i>	1650 ...	

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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EMUD):
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 AND PROPERTY.

Printed Name	Signature	Address, City and Zip Code	Phone/Fax#
Diana Rivera	<i>[Signature]</i>	20710. Bc 2A Ave	510-447-9914
Blanca Gonzalez	<i>[Signature]</i>	1450 Alamo St St	1614 7859
Jose Lopez	<i>[Signature]</i>	1225 W. 3rd St San Leandro	
Elizabeth Silva	<i>[Signature]</i>	1238 W. 14th St San Leandro	422 8719
Muse Perez	<i>[Signature]</i>	708 Alameda Ave Fremont	510-568-1925
Olivia Perez	<i>[Signature]</i>	2007 W. 13th Ave	510-417-4914
Sharon Helen	<i>[Signature]</i>	2228 Charter Way	510-351-6889
Jenny Hill	<i>[Signature]</i>	373 San Francisco St	510-828-1165

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TO THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD):
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 AND PROPERTY.

Printed Name	Signature	Address, City, and Zip Code	Phone/Fax#
M.L. Malcom	<i>[Signature]</i>	15200 Heron Rd. S. Sl. 94878	415-502-4
Dr. Konrad	<i>[Signature]</i>	15200 Heron Rd. S. Sl. 94878	415-502-4
Karen T.	<i>[Signature]</i>	2338 Rocke Hill Ct. Sl. 94878	510-322-3388
Bryan McNeil	<i>[Signature]</i>	1800 Van Buren St. Sl. 94878	510-322-3388
Q. C. Garcia	<i>[Signature]</i>	2221 Marina Way Sl. 94878	510-322-3388
Cathy Kwang	<i>[Signature]</i>	3319 Sprinkler Ct. Sl. 94878	510-322-3388
Rodriguez	<i>[Signature]</i>	2119 Sprinkler Ct. Sl. 94878	510-322-3388
Rafael Wong	<i>[Signature]</i>	2219 Sprinkler Ct. Sl. 94878	510-322-3388
S.K. Wong	<i>[Signature]</i>	2219 Sprinkler Ct. Sl. 94878	510-322-3388
Mike Genova	<i>[Signature]</i>	120414 Calle de las Flores Sl. 94878	510-322-3388
Sam Jiang	<i>[Signature]</i>	2373 Secret Ct. Sl. 94878	510-322-3388
ALICE YU	<i>[Signature]</i>	15461 HERON DR. SL. 94878	510-364-6481

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EXHIBIT B

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Angela Knight (MS 309)
East Bay Municipal Utility District
375 Eleventh Street
Oakland, CA 94623

August 2, 2001

Dear Ms Knight:

This letter presents comments on the Draft Environmental Impact Report (DEIR) for the East Bay Municipal Utility District (EBMUD) Baywide Groundwater Project dated March 2001. These comments, many of which were raised during the seven public comments meetings, are listed below.

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Project Alternatives

1) Pg. 6-1 of the DEIR (summary of the California Environmental Quality Act (CEQA) guidelines Section 15126.6) states that an EIR must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. However, this DEIR does not present a reasonable range of alternatives, because all proposed sites are located within the same general area. Why does EBMUD not discuss the results and/or findings from its proposed groundwater projects in the San Joaquin County, or other areas? Why are other groundwater alternatives, which do not have negative impacts on the health and property of neighboring homeowners (i.e. projects in rural, not residential areas), not considered nor presented for public input and participation?

EBMUD should fully evaluate all of its potential drought relief projects (not just the Baywide Groundwater Project) to allow the public to understand and consider a reasonable range of alternatives. What makes the Baywide Project higher in priority over all the other water supply/drought relief projects? Pg. 1-7 of the DEIR essentially states that EBMUD has given up on the San Joaquin Project as "successful conclusion of these efforts remains speculative". Why? Pg. 1-7 states that the raising of Pardee study scope was reduced and completed in June 1998 with no further work performed since that time. Why was the Raising Pardee project discontinued with no explanation? Pg. 6-1 of the EIR (summary CEQA guidelines Section 15126.6) states that the reasons for rejected alternatives (San Joaquin, Raising Pardee, etc.) should be identified. It appears that EBMUD has some great alternatives available to provide drought relief that would not negatively affect the health and property of nearby homeowners, and these should be presented to the public for consideration.

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Response to Comment G1-40

See Master Response 12 — Comments on 2001 DEIR.

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Ground Water Contamination-General
2) Fig. 3.8-5 of the DEIR states that the deep aquifer is naturally recharged with water through rainfall infiltration, stream seepage, agricultural return flow, pipe leakage, and subsurface inflow. It is further described that vertical gradients are present throughout the study area. Fig. 3.4-17 of the DEIR shows that central facility sites are located in an area with several known unmigated releases of gasoline, diesel, and waste oil with the potential for MTBE's to be encountered in the soil and groundwater. Why does EBMUD not recognize the danger of toxic pollutants entering the proposed deep aquifer drinking water supply through natural recharge? Natural recharge is how the Bayside groundwater originally made its way to the aquifer.

Why is EBMUD building the Bayside pipelines and wet well water holding tank right in the middle of known contaminants in the soil and shallow aquifer? Why does EBMUD not recognize the danger of toxic pollutants entering the proposed drinking water supply through direct contact with the water treatment structures? Why does EBMUD make no mention of cleaning the known hazardous material in the soil and natural groundwater above the deep aquifer? Why has EBMUD not recognized or mitigated the potential for the proposed iteration towers to strip potential contaminants in the water supply (from vertical conduits or natural recharge) into the air for the community to breathe?

Ground Water Contamination- Vertical Conduits

3) Why did the DEIR not disclose nor account for the fact that the South East Bay Plain Groundwater Basin deep aquifer has tested positive for contamination (only 5 miles from the Bayside project site), which is evidenced by recent well testing at the EBMUD Oakport site near the Oakland Coliseum? Fig. 3.2 of the EBMUD Regional Hydrogeologic Investigation South East Bay Plain records this contamination of the deep aquifer and also states that contamination in the area may have migrated to deeper zones through improperly abandoned wells. Why does EBMUD not recognize/mitigate/eliminate the high risk of toxic pollutants entering the proposed drinking water supply through abandoned wells at the Bayside Groundwater Project site (a historic farm and well field area with a high potential for unknown improperly abandoned wells) or any other contaminated site above the aquifer? Why has EBMUD not considered the transport of contamination through subsurface inflow from other contaminated areas like Oakport? These risks of drinking water supply contamination are borne only to those EBMUD customers receiving Bayside water (as stated by EBMUD during public comment meetings: those customers south of High Street in Oakland down to San Lorenzo will only receive Bayside water).

EBMUD's Policy 71, Environmental Responsibility (see Attachment 1) states that "no community in the District shall bear an inequitable environmental risk burden as a result of District facilities, operations, or practices". It is clear that this project does in fact give our community (Bayside Project groundwater - stores water beneath known contaminants) an inequitable risk burden of drinking supply water contamination than other communities (Mokelumne surface water - stored water in reservoirs with no potential for contamination). In addition, contamination is not addressed in any of the circumstances listed below.

a) According to the United States Geological Survey (USGS) and the Regional Water Quality Board, there will be opportunities for contaminated ground water to enter into

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the aquifer through abandoned wells in the East Bay Plain acting as "vertical conduits" as well as through natural recharge. In fact, the San Leandro Bay/San Leandro Creek has been labeled a "Toxic Hot Spot" by the State Water Resources Control Board, citing elevated concentrations of contaminants such as Hg, Pb, Se, Zn, PCB's, PAH's, DDT, chlordane, dieldrin, p,p'DD's, hexachlorobenzene, heptachlor and thiorpyrifos. It is plausible for the water stored in the aquifer to become contaminated to levels that are unsafe for drinking. EBWUD has not discussed this possibility or its ramifications in the DEIR.

b) The Regional Water Quality Control Board reports that "in the range of 15,000 wells were drilled in the East Bay Plain between 1860 and 1950...many were 200 to 500 feet deep with the deepest reaching 1000 feet below ground surface...Virtually none of these wells were properly destroyed". Furthermore, the USGS claims that within the project area there are at least 12-15 wells in the Rogers well field that extend down to the deep aquifer. The USGS also reports that there are no records of their location or destruction. This is a huge loophole in the proposed Bayside project. Once the proposed system is pressurized, it could cause these abandoned wells to "bubble up", spewing the above mentioned contaminants and water into the area. These wells could be under a home, they could be in a backyard, or they could be in a federally protected wetland area that lies within the scope of the proposed project, compromising wildlife.

The possibility of flowing wells has not been addressed in the DEIR. Page 3 8-24 of the DEIR states that "some wells screened across the deep aquifer and overlying units might not be located during the District's well identification program. These wells may remain as flowing until identified and modified." This residual impact of flowing wells, which may push known contaminants to the surface, is not acceptable or fair to our community. Again, EBWUD's Policy 71 (see Attachment 1), Environmental Responsibility states that "no community in the District shall bear an inequitable environmental risk burden as a result of District facilities, operations, or practices." It is clear that the Bayside project does in fact give our community an inequitable risk burden as the DEIR states that we may have flowing wells, pushing known contaminants from the shallow aquifer into our community. Has any of EBWUD's well testing programs ever caused abandoned wells to flow at the surface? If so, where?

c) According to the DEIR, "there is a 17 percent probability of an M 6.7 or greater earthquake occurring on the Southern region of the Hayward fault in the next 30 years." It goes on to say on page 3.7-10 that "it is likely that the (project) area (would be) placed within the potentially liquefiable zone." In fact, according to the liquefaction hazard map for San Leandro prepared by the Association of Bay Area Governments (ABAG) for a Hayward Fault earthquake, our community (the proposed Bayside Project area) is currently rated as the highest hazard possible for the Bay Area. The mitigation's offered in the DEIR are not thorough, and only speak of the EBWUD above ground structures and pipelines. The possibility of wells being ruptured is not evaluated. The effect of a ruptured well could create increased movement of contaminated waters to the deep aquifer. This action of breaking wells could also damage surface structures such as

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nearby homes. Further, the effects of a breaking pipeline are not fully investigated or mitigated. What are the ramifications to the project area if the system is destroyed in an earthquake? These effects could be devastating to local residents and wildlife.

Air Quality

4) This DEIR proposes the use of aeration towers to remove radon and chloroform (toxic air contaminant known to cause cancer) in an area completely surrounded by residential neighborhoods and protected wetlands which house endangered species of animals such as the Clapper Rail. Up to 3,700lbs. per year of chloroform alone will be emitted into the air (pg. 3.12-16 of the DEIR) and the Bay Area Air Quality Management District's (BAAQMD) toxic air contaminant trigger is 36 lb./yr. At 3,700 lbs/yr. of chloroform emissions, this project may produce the highest toxic chloroform emissions of all facilities in the Bay Area (per BAAQMD Toxic Air Contaminants 1999 annual report, highest current level is 2,500 lb./yr). Please note again that this facility is sited in the heart of residential neighborhoods (with a high percentage of elderly), schools, business and protected wetlands.

In addition EBMUD did not include results of an air toxics impact analysis for a San Lorenzo Air Stripper in the DEIR. This analysis, made available to the public for viewing on April 20, 2001 at the EBMUD office, included an incremental lifetime cancer risk study and illustrated the chloroform cancer risk contours resulting from operation of the proposed air strippers. This impact analysis, dated March 9, 2001 should have been made available for the entire public to review in the March 23, 2001 DEIR, as this information sheds light on the cancer risks to the community. Even more concerning is that this analysis does not reflect the toxic effects of the EBMUD preferred alternative sites closest to residential neighborhoods. To illustrate our concerns, we have sketched the chloroform cancer risk contours in the EBMUD preferred site next to the Heron Bay and San Lorenzo residential communities (see Attachment 2). It is noted that EBMUD did attempt to address this situation by posting the above mentioned March 9th report on its website after May, 1, 2001, but changed the original report (changed pg. 3 from +/- 50% accuracy to 10% accuracy) during the DEIR process.

How is EBMUD allowed to change results from an original air toxics analysis memorandum during the DEIR process, immediately after the public showed outrage during the May 1, 2001 public comment meeting over the recently disclosed air toxics analysis? How can there be two of the same documents presenting different information floating around during a public comment period? Please see Attachment 3 (pg. 3 of the 3/19/01 memo with a +/- 50% accuracy made available for public viewing at EBMUD offices) and Attachment 4 (pg. 3 of the 3/19/01 memo with a +/- 10% accuracy made available for public viewing on the internet).

No other community in EBMUD area has aeration towers that will emit the cancer causing substances. Why is EBMUD subjecting our community to greater health and environmental risks from chloroform and radon emissions through aeration towers than other communities in the EBMUD District? In addition, the Ora Loma treatment plant adjacent to the proposed Bayview site also emits chloroform (490 lb./yr. per BAAQMD 1999 Annual report). EBMUD should

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consider the cumulative effects of the Ora Loma chloroform emissions with those emissions from the proposed EBMUD aeration towers.

Why has EBMUD not investigated not presented any other alternatives for radon removal in the DEIR. Please note that residents asked during several public comment meetings if there are any type of filters that could be put on the treatment system to prevent the neighbors from breathing the cancer causing emissions from the aeration towers and EBMUD representative responded that filters do not exist. Why is the Granular Activated Carbon filter option (discussed as a feasible option in the U.S. Environmental Protection Agency Technologies and Costs for the Removal of Radon from Drinking Water report dated May 1999 - a DEIR supplemental document made available for public viewing) not analyzed in the DEIR? Why were the Granular Activated Carbon filters not disclosed to residents when asked of EBMUD during the public comment meetings?

Water Quality

5) It has been described in the DEIR and presented by EBMUD during the public comment meetings that the Bayside Project will provide water to only EBMUD customers south of High Street in Oakland down to San Lorenzo. It is also been described in the DEIR and presented by EBMUD during the public comment meetings that the Bayside water is not of the same quality as the water from the Mokelumne River Supply that all other customers would receive. Table 3.10-1 and pg. 3.10-18 of the DEIR show that the Bayside ground water will have higher levels of radon and arsenic than the Mokelumne supply. Yes, these values are below the Maximum Contaminant Level, but they are still higher than that of which other EBMUD customers (in more affluent areas) receive. Why should our community not receive the same quality of water as other communities (water with lower levels of harmful components such as radon and arsenic) during a drought when there are still alternatives available, such as raising Pardes or San Joaquin Groundwater that would give all customers an equal quality of water?

Subsidence

6) It is noteworthy that many references are made to USGS study results in the DEIR while the final report is not due until 2002. Also, it appears that EBMUD has been selective about what information it will provide from USGS research that may be available thus far. For example, the USGS admits that there could be a "broad-scale regional lowering," which has been mentioned in the DEIR as the only type of subsidence likely to occur. However, the USGS also claims that "localized and intense changes in land surface elevation" could result from this project. This is not mentioned in the DEIR. In any case, there is damage to homeowners since a broadscale lowering could make home locations qualify as flood zones. Localized subsidence could cause damage to surface structures. These possibilities, particularly the possibility of localized subsidence, have not been fully studied or discussed in the DEIR.

The houses in the Heron Bay community risk loss of home value due to several factors, including damage or contamination of air, water and land. EBMUD has made a commitment to the San Leandro/San Lorenzo communities at the public comment meetings that EBMUD will not pursue the Bayside project if one community bears more of a burden than others as a result of the Bayside project. It is clearly true that Heron Bay bears more than a fair share of burden and

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risk. EBMUD has made no "mitigations" in the DEIR to loss of property value, property damage or negative health effects that could be incurred by residents as a result of this project. EBMUD has also made a commitment to the San Leandro/San Lorenzo community at public comment meetings that the BaySide Project will go forward only if science confirms there would not be adverse impact to your home value of your property (see Attachment 5, copy of two overhead transparencies presented by EBMUD at the May 15, 2001 BaySide Project public comment meeting - hard copy requested by Sally Law, Heron Bay Resident, and provided by Angela Knight).

In addition, the homes of Heron Bay appear to be constructed on recently placed soil fill. EBMUD should consider/evaluate the potential settlement of this recently placed fill when combined with the subsidence/settlement effects from the BaySide project, as our homes may be subjected to greater risks of structural damage and overall elevation lowering. EBMUD should evaluate all potential risks of settlement and evaluate them cumulatively. Please note that our homes are now only a few feet above sea level, and this project only adds to the likelihood that our homes will drop in elevation, endangering the community to flood effects. The DEIR should evaluate and consider the non-uniform layers of soil (settlement, peat, etc) that may contribute to non-uniform settlement in the area. EBMUD'S mitigation plans to only monitor for subsidence/settlement and adjust project operations after settlement has occurred is not acceptable, as it can never reverse the original subsidence/settlement effects that were initially caused.

Energy/Resource Conservation

7) EBMUD should analyze the overall energy/resource efficiency associated with the operation of the BaySide plant, considering the fact that this project will pump previously treated water (to drinking water standards) into the ground. It appears that EBMUD will treat the high quality Mokelumne River water once at the Upper San Leandro Treatment Plant, then pipe the treated water down to the BaySide project, pump the treated water into the ground (where contaminants are known to exist in the shallow aquifer), then treat the water a second time at the proposed BaySide water treatment plant. By treating the water twice, it appears that EBMUD is not only wasting the electricity used in the treatment process, but the chemicals, manpower and all other resources necessary to treat the Mokelumne water once to drinking water standards. As ratepayers of EBMUD, we feel that EBMUD should use our rate payer dollars and conserve energy/resources responsibly. EBMUD should perform a cost/resource analysis comparing the BaySide project to other groundwater projects, such as the San Joaquin that would pump only raw water into the ground that was not already treated to drinking water standards. EBMUD should also consider/discuss/mitigate the issue of pumping previously treated water into the ground and its effect of increasing the amount of chlorine emissions in the community when treating the water a second time, such as at the proposed BaySide plant.

Rationing assumptions

8) Page 1-1 of the DEIR states that "rationing of up to 68% may be necessary in the future without additional water supplies(EDAW, 1993)". A EBMUD handout given at the June 5, 2001 BaySide Public comment meeting (Question and Answer Summary) states that "Without more water supplies available during drought, EBMUD customers face up to 60% rationing in

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Letter G1, Heron Bay Task Force.

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prolonged severe drought". EBVMUD should provide documentation/calculations in the EIR that proves that these levels of rationing would be required. EBVMUD should also use more recent studies on rationing than of 1993 (now 8 years old), as referenced on pg. 1-1 of the DEIR

Seismicity

9) Page 3-8-26 of the DEIR states that "Minor increases in pore water pressure in the upper 500 feet of sediment along a short section of the fault should not cause or contribute to the generation of or increase the magnitude of an earthquake". The use of the term "should not" in the above statement leads to the possibility that an earthquake may be triggered by injection of water into the ground. Please note that cases have been documented which have confirmed induced seismicity or "triggered earthquakes" caused by injection of fluids into the ground (described in a report by John Fortuna titled "an Overview of Induced Seismicity, with a special emphasis on fluid injection"). For example, in 1966, in Denver, Colorado at the Rocky Mountain Arsenal, an earthquake was caused by injection of fluids into the ground.

EBMUD has made a commitment to the San Leandro/San Lorenzo communities that the Bayside Project will go forward only if science confirms there is no reason to anticipate an increased risk for seismic impact" (see Attachment 5, copy of two overhead transparencies presented by EBVMUD at the May 15, 2001 Bayside Project public comment meeting - hard copy requested by Sally Law, Heron Bay Resident and provided by Angela Knight). Earthquake engineering and induced seismicity are new and very complex fields of study. Therefore, these sciences are not as clear cut as other engineering fields of study and conclusions cannot be as easily and definitively drawn as implied in the Bayside DEIR. EBVMUD should thoroughly research and evaluate the potential induced seismicity risks and present these calculations/risk assessments for public review and comment. EBVMUD should also recognize that this project is in very close proximity to the Hayward Fault, and as described in an Abstract titled "Induced Seismicity and the potential for Liability Under American Law" by Darlene A. Cypel, Attorney at Law, and Scott D. Davis, Geophysicist, USGS, that under American Law, the inducer of an earthquake can be made to pay for damages resulting from the quake.

HERON BAY TASK FORCE.

Edgardo Gonzalez


15688 Altamira Ave
San Leandro, CA 94579

Sally Law



Irene Ip





Letter GI, Heron Bay Task Force.

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Vanessa O'Connor



Shudong Zhang



Betty Chan



Melissa Carter



cc:

- Key Foster, EBAMUD Board President
- John A. Chalmers, EBAMUD Board Member
- David H. Hays, EBAMUD Board Member
- Frank M. McNeil, EBAMUD Board Member
- Frank Mathew, EBAMUD Board Member
- William R. Peterson, EBAMUD Board Member
- David Richardson, EBAMUD Board Member
- Daniel M. Bennett, EBAMUD General Manager
- Lynelle Lewis, EBAMUD District Secretary
- Shelia Young, Mayor of San Leandro
- Bob Clark, Vice-Mayor of San Leandro
- Butler Green, San Leandro City Councilmember
- Henry Sorenson, San Leandro City Councilmember
- Gregory Smith, San Leandro City Councilmember
- Troy Street, San Leandro City Councilmember
- Orcel Bolger, San Leandro City Councilmember
- Alice La-Biller, Alameda County Supervisor
- Nate Miley, Alameda County Supervisor
- Scott Higgins, Alameda County Supervisor
- Ulken Conwell, Alameda County Supervisor
- Liz Ferguson, State Senator
- Steve Stark, U.S. Congressman
- Kathleen Cooper, Mayor of Hayward

Attachments:

- 1) EBAMUD Policy 71, Environmental Responsibility
- 2) Chertkova, Client Risk Control Egress Rollback EBAMUD Preferred Site
- 3) March 19, 2001 Air Toxics Memo with 41-2001 necessary (4 pages)
- 4) March 19, 2001 Air Toxics Memo with 41-2001 necessary - Comments - copy of two overhead transparencies prepared by EBAMUD at the May 15, 2001 Board public comment meeting - hard copy prepared by SHV's law, Heron Bay Resident, and provided by Anselm Knight (2 pages)

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Letter GI Heron Bay Task Force.

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Additional Sources for Items 3(Ground Water Contamination- Vertical Conductivity) (Subsidence), and 9(Sensitivity) are as follows:

- "Convention with John Inghel, Project Chief of USGS study: "Source, Movement, and Age of Contaminant in the San Leandro and San Lorenzo Alluvial Cones of the East Bay Platte Groundwater System." Project Period: October, 1999 - September, 2001.
- "East Bay Platte Groundwater Basin Beneficial Use Prioritization Report (Draft)" August 4, 1999 by the San Francisco Bay Regional Water Quality Control Board.
- "Consolidated Toxic Hot Spots Cleanup Plan Volume II: Regional Cleanup Plans," June 1999 by the State of California Water Resources Control Board.
- A report by John Foreman titled "an Overview of Induced Seismicity, with a special emphasis on fluid injection", www.jimichl.edu/~jch365/induced.html
- An abstract titled "Induced Seismicity and the potential for Liability Under American Law" by Dandrea A. Cyber, Attorney at Law, and Scott D. Davis, Geophysicist, U.S.G.S., www.usgs.gov/~daxper/induced/liability.html

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Letter G1, Heron Bay Task Force

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ENVIRONMENTAL RESPONSIBILITY

Policy 71

Attachment 1

EFFECIVE 22 SEP 94
SUPERSEDES 14 SEP 94

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Provide reliable, high-quality drinking water and wastewater services with operational maintenance and construction activities that avoid, minimize or mitigate adverse environmental effects to the maximum extent feasible.

Objective

The District will integrate environmental values and awareness into its decision-making, policies, programs and work practices, and regularly evaluate the success of this integration; promote an environmental stewardship ethic in its staff and among other drinking water and wastewater treatment agencies; assure that the District adheres to the principles of environmental justice; encourage pollution prevention whenever possible; reduce risk to the ratepayers and consumers near District facilities; and foster communication with employees and the public about the environmental significance of its current and future operations.

Responsibilities

To facilitate compliance with environmental laws and regulations, the District will conduct compliance audits, establish staff training and assist in the development and implementation of management and operational practices that ensure compliance. The District will maintain strong working relationships with local regulatory agencies, exchanging information on District plans and procedures for environmental compliance, thereby supporting the development of regulatory agency environmental guidelines for the water and wastewater industry at large.

To ensure environmental leadership and awareness, the District will participate in drinking water and wastewater organizations and associations, and work cooperatively with and solicit input from the environmental community and public on District activities.

The District will prepare, and routinely update a Regulatory Compliance Plan. The Plan will describe the efforts that are to be implemented to meet the objective of this policy and to achieve and keep the District in compliance with environmental regulations. An annual report on the status of the District's compliance will be presented to the Board of Directors.

Environmental justice assures that no community in the District bears an unequal environmental risk burden as a result of District facilities, operations, or practices.

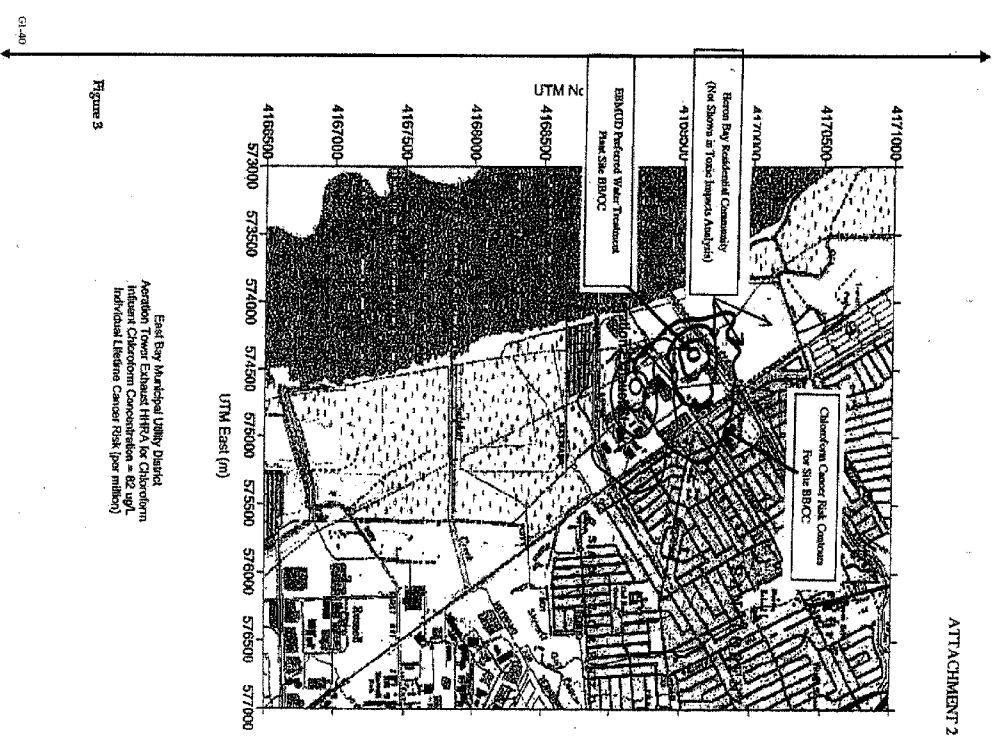
Revised 5/2016

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Letter GI, Heron Bay Task Force.

ATTACHMENT 2



Letter G1, Heron Bay Task Force.

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Attachment 3

TECHNICAL MEMORANDUM

CH2M HILL

Air Toxics Impact Analysis for San Lorenzo Air Stripper

PREPARED FOR: John Schroeder/EBR/UD
PREPARED BY: John Castellberry/CH2M HILL
 Keith McGeehan/CH2M HILL
CHECKED BY: Jay Witherspoon/CH2M HILL
DATE: March 9, 2001

Introduction

This technical memorandum presents the methodology and results of an analysis of Incremental Lifetime Cancer Risk for a proposed air stripper in San Lorenzo, California. The risk analysis was conducted using a dispersion model approved by the U.S. EPA, and health risk factors developed by the California Office of Environmental Health Hazard Assessment (OEHHA). The inhalation exposure pathway was assessed for a single compound, chloroform, which is released to the atmosphere through 4 identical stacks.

The results of this risk analysis are considered approximate because they are based on modeling a single year of meteorological data. Our preliminary discussions with a meteorologist at the Bay Area Air Quality Management District (BAAQMD) indicate that up to 5 years of meteorological data may be required in the model. Because of the delay in acquiring meteorological data from the National Climatic Data Center, the additional 4 years of data are not yet ready for use. Our experience suggests that the risk results from using 1 year of meteorological data could differ from the 5-year results by as much as ± 50 percent.

The following 3 operating scenarios were analyzed in this study:

- 41 µg/L influent chloroform concentration, 25-foot release height
- 59 µg/L influent chloroform concentration, 25-foot release height
- 82 µg/L influent chloroform concentration, 25-foot release height

Results of the risk analysis are presented in the form of risk contours shown over a map of the project vicinity.

Source Description

The proposed air stripper will be located near the intersection of Worthy and Grant Streets, within an area bounded by San Lorenzo Creek to the north, Bockman Slough to the south, the bay mudflats to the west, and the railroad tracks to the east. The exact location of

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Letter G1. Heron Bay Task Force.

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AP TOXICS WORKING GROUP ENVIRONMENTAL IMPACT STATEMENT

the stripper has not yet been determined. As a result, the stripper was arbitrarily modeled in the approximate geographic center of the project area. Because the terrain is relatively flat, the risk contours would simply follow the stripper to its actual location with no significant change in size or shape.

Stack Parameters

The air stripper was modeled as a series of 4 identical stacks arranged along an east-west axis with an 18-foot center-to-center distance between stacks. Each stack was represented with the following parameters in the dispersion model:

- Release height 25 feet
- Exhaust port diameter 36 inches
- Diameter of towers 12 feet
- Exhaust flow rate 10,500 dm per stack
- Exhaust velocity 25 feet/sec
- Exhaust temperature 65°F

The aerodynamic effects of the 12-foot diameter towers on plume dispersion were accounted for in the model.

Emissions

Emissions were calculated by assuming all of the chloroform present in the influent water would be released to the atmosphere through the exhaust ports without abatement. A water influent rate of 15 million gallons per day was assumed. The following emission rates were used in the risk analysis:

Influent Chloroform Concentration (µg/L)	Chloroform Emission Rate, All 4 Stacks Combined (lb/yr)
41	1,874
50	2,285
82	3,747

Modeling Approach

Annual average concentrations of chloroform in the project vicinity were predicted using the Industrial Source Complex - Short Term (ISCST3, v. 00101) dispersion model. ISCST3 is approved by the EPA for modeling a wide variety of stationary industrial facilities. The following options were selected in ISCST3:

- Rural dispersion coefficients
- Regulatory default features
- Flat terrain

Meteorological data from the Oakland International Airport were used in ISCST3. The data consists of 1 year of consecutive hourly parameters (such as wind speed, wind direction, temperature, mixing height, and atmospheric stability) for the year 1997. The BAAQMD

EM40 STRIPPER RES.DOC

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Letter GI, Heron Bay Task Force

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AIR FORCE WORKING WITH THE BIA TO IMPROVE AIR QUALITY

considers Oakland Airport data as representative of the project site (Jim Cordova, personal communication, March 5, 2001).

Four additional years (1995-1996) of meteorological data are currently on order with the National Climatic Data Center; these data are expected shortly. For a formal submittal, the BAAQMD may require up to 5 consecutive years of meteorological data to be used in the dispersion modeling. Therefore, the results in this memorandum, which are based on 1 year of data, should be considered preliminary and approximate. The risk results could change by up to ±10 percent¹, should additional years of meteorological data be used in a subsequent analysis.

Chloroform concentrations were calculated by ISC3/3 over a grid of receptor points spaced at 100-meter intervals. The grid extended approximately 2.5 km in all directions from the stripper.

Risk Assessment Approach

Incremental lifetime cancer risk (ILCR) is calculated by multiplying the OEHHA-approved cancer unit risk factor by the average chloroform concentration in air over an individual's 70-year lifetime. In this study, the 1-year average chloroform concentration (as predicted by ISC3/3) was assumed to be representative of a lifetime concentration. The unit risk factor for chloroform is presented in the following table.

Compound	Unit Risk Factor (µg/m ³ /yr) ²
Chloroform	5.3 × 10 ⁴

A unit risk factor of 5.3 × 10⁴, for example, means that an individual's risk of contracting cancer is 5.3 in one million if he is exposed to the compound at an average lifetime air concentration of 1 µg/m³. Exposure is assumed to be continuous for a 70-year period. This risk is in addition to the risk of contracting cancer from all other factors, which is about 1 in 3.

Risk Results

Individual lifetime cancer risks were calculated at every receptor point in the grid modeled by ISC3/3. The risk values were plotted by a contouring routine and are presented in the attached figures. Figures 1, 2, and 3 show the risks associated with influent concentrations of 41, 50, and 82 µg/L, respectively. In all 3 scenarios, the maximum risk levels lie to the east of the stripper, in response to the predominant wind direction at the project site.

In Figure 1, which reflects an influent concentration of 41 µg/L, the 1-in-one-million risk contour extends approximately 575 meters to the east of the stripper.

In Figure 2, which reflects an influent concentration of 50 µg/L, the 1-in-one-million risk contour extends approximately 650 meters to the east of the stripper.

¹Based on input from the Bay Area Air Quality Management District (BAAQMD), this number was changed from the estimate used in the previous draft, May 2, 2001.

CHAS STREFFEN, INC.

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Letter GI, Heron Bay Task Force

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ATTORNEY GENERAL'S OFFICE

In Figure 3, which reflects an influent concentration of 82 µg/L, the 1-in-one-million risk contour extends approximately 900 meters to the east of the stripper.



EMSD STRIPPER RISK.DWG

Letter G1, Heron Bay Task Force.

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Attachment 4
CH2M HILL

TECHNICAL MEMORANDUM

Air Toxics Impact Analysis for San Lorenzo Air Stripper

PREPARED FOR: John Schroeter/BERNARD
PREPARED BY: John Castleberry/CH2M HILL
 Keith McGregor/CH2M HILL
COMES: Jay Witherspoon/CH2M HILL
DATE: March 9, 2001

Introduction

This technical memorandum presents the methodology and results of an analysis of incremental lifetime cancer risk for a proposed air stripper in San Lorenzo, California. The risk analysis was conducted using a dispersion model approved by the U.S. EPA, and health risk factors developed by the California Office of Environmental Health Hazard Assessment (OEHHA). The inhalation exposure pathway was assessed for a single compound, chloroform, which is released to the atmosphere through 4 identical stacks.

The results of this risk analysis are considered approximate because they are based on modeling a single year of meteorological data. Our preliminary discussions with a meteorologist at the Bay Area Air Quality Management District (BAAQMD) indicate that up to 5 years of meteorological data may be required in the model. Because of the delay in acquiring meteorological data from the National Climatic Data Center, the additional 4 years of data are not yet ready for use. Our experience suggests that the risk results from using 1 year of meteorological data could differ from the 5-year results by as much as ± 50 percent.

The following 3 operating scenarios were analyzed in this study:

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- 50 µg/L influent chloroform concentration, 25-foot release height
- 82 µg/L influent chloroform concentration, 25-foot release height

Results of the risk analysis are presented in the form of risk contours shown over a map of the project vicinity.

Source Description

The proposed air stripper will be located near the intersection of Worthingley and Grant Streets, within an area bounded by San Lorenzo Creek to the north, Beckman Slough to the south, the bay mudflats to the west, and the railroad tracks to the east. The exact location of the stripper has not yet been determined. As a result, the stripper was arbitrarily modeled in the approximate geographic center of the project area. Because the terrain is relatively

ES&O/STP/PER/RSK_002

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Letter G1, Heron Bay Task Force.

ARE TOWERS SPACED? YES FOR SOME LOCATIONS SHIPPERS

flat, the risk contours would simply follow the shipper to its actual location with no significant change in size or shape.

Stack Parameters

The air stripper was modeled as a series of 4 identical stacks arranged along an east-west axis with an 18-foot center-to-center distance between stacks. Each stack was represented with the following parameters in the dispersion model:

- Release height 25 feet
- Exhaust port diameter 36 inches
- Diameter of towers 12 feet
- Exhaust flow rate 10,500 cfm per stack
- Exhaust velocity 25 feet/sec
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The aerodynamic effects of the 12-foot diameter towers on plume dispersion were accounted for in the model.

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- Rural dispersion coefficients
- Regulatory default features
- Flat terrain

Meteorological data from the Oakland International Airport were used in ISCST3. The data consists of 1 year of consecutive hourly parameters (such as wind speed, wind direction, temperature, mixing height, and atmospheric stability) for the year 1997. The BAAQMD considers Oakland Airport data as representative of the project site (Jim Cordova, personal communication, March 5, 2001).

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Letter GI, Heron Bay Task Force

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ATTORNEYS WONG, WATKINS, FRYSON, GORDON AND STRIPPEN

Four additional years (1993-1996) of meteorological data are currently on order with the National Climatic Data Center; these data are expected shortly. For a formal submittal, the BAQMD may require up to 5 consecutive years of meteorological data to be used in the dispersion modeling. Therefore, the results in this memorandum, which are based on 1 year of data, should be considered preliminary and approximate. The risk results could change by up to ± 50 percent, should additional years of meteorological data be used in a subsequent analysis.

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Incremental lifetime cancer risk (ILCR) is calculated by multiplying the OEHHA-approved cancer unit risk factor by the average chloroform concentration in air over an individual's 70-year lifetime. In this study, the 1-year average chloroform concentration (as predicted by ISCST3) was assumed to be representative of a lifetime concentration. The unit risk factor for chloroform is presented in the following table.

Compound	Unit Risk Factor (kg/m ³) ^a
Chloroform	5.3 x 10 ⁻⁴

A unit risk factor of 5.3 x 10⁻⁴, for example, means that an individual's risk of contracting cancer is 5.3 in one million if he is exposed to the compound at an average lifetime air concentration of 1 µg/m³. Exposure is assumed to be continuous for a 70-year period. This risk is in addition to the risk of contracting cancer from all other factors, which is about 1 in 3.

Risk Results

Individual lifetime cancer risks were calculated at every receptor point in the grid modeled by ISCST3. The risk values were plotted by a contouring routine and are presented in the attached figures. Figures 1, 2, and 3 show the risks associated with ambient concentrations of 41, 50, and 82 µg/L, respectively. In all 3 scenarios, the maximum risk levels lie to the east of the stripper, in response to the predominant wind direction at the project site.

In Figure 1, which reflects an ambient concentration of 41 µg/L, the 1-in-one-million risk contour extends approximately 575 meters to the east of the stripper.

In Figure 2, which reflects an ambient concentration of 50 µg/L, the 1-in-one-million risk contour extends approximately 680 meters to the east of the stripper.

In Figure 3, which reflects an ambient concentration of 82 µg/L, the 1-in-one-million risk contour extends approximately 900 meters to the east of the stripper.

TRANS:STRIPPER_RISK_DOC

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BAQMDGROUP_10-11-95_LANDSCAPE_CORRECTED.DOC

The Project will go forward ONLY if:

- Science confirms there would not be adverse impact to your home values or your property
- Science confirms that all existing or currently proposed standards & regulations for air and water quality are met or exceeded

The Project will go forward
ONLY if:

- Science confirms there is no reason to anticipate an increased risk for seismic impact
- This project is demonstrated to ask no more of this community than would be asked or expected of any other community within the EBMUD Service Area

Letter G1. Heron Bay Task Force.

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EXHIBIT C

Letter G1. Heron Bay Task Force.

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Alice Lai-Bitker, SUPERVISOR, THIRD DISTRICT
ALAMEDA COUNTY BOARD OF SUPERVISORS

COMMITTEES:

Health, Chair
Social Services
Unincorporated Services

April 1, 2005


G1-41

Thank you for your interest in the EBMUD's Groundwater Storage Project. For your convenience I have included the latest fact sheet on the project.

The EBMUD Board of Directors will hold a public hearing on the newest Environmental Impact Report (EIR) on **Wednesday, April 20th from 7:00pm – 10:00pm at Washington Manor Middle School, 1170 Fargo Ave, San Leandro.**

I have been and will continue to be closely monitoring this project. In addition, I have been advocating to EBMUD for more public input. If I can be of further assistance on this issue or if you should have any questions, please contact my San Lorenzo Office at (510) 278-0367.

Sincerely,


ALICE LAI-BITKER
Alameda County Supervisor
Third District

Attachment

OAKLAND OFFICE: 1221 OAK ST., ROOM 536, OAKLAND, CA 94612 • (510) 272-6693 • FAX (510) 268-8004
DISTRICT OFFICE: 15803 HESPERIAN BLVD., SAN LORENZO, CA 94580 • (510) 278-0367 • FAX (510) 278-0467
www.acgov.org/lai-bitker

Response to Comment G1-41

Comment noted. See also Master Response 10 – Public Outreach and Notice, and DEIR Review.

Letter G1. Heron Bay Task Force.

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PROPOSED BAYSIDE GROUNDWATER PROJECT

March 2005

Why do we need the Bayside Groundwater Project?

Another serious drought is inevitable—like the ones in 1976-77 and in the late 1980s—when everyone was required to use about 40% less water. When the next drought comes, EBMUD must be ready and able to help our customers through it. Unless we secure additional water supplies, residents may have to ration over 50% of their current water use.

What does 50% rationing mean? Just over half of EBMUD's customers live in single family homes. An average EBMUD household of 3 people uses 296 gallons each day; 50% rationing means having only about 150 gallons per day. Over 70% of household water is used indoors, so to meet rationing we would have to seriously reduce water for laundry, cooking, house cleaning and for showers. And we would have to be prepared to sacrifice most lawns and landscaping.

The Bayside Groundwater Project is needed as a key part of EBMUD's plans to assure that customers aren't forced into unacceptable levels of rationing in the next drought.

What is the Bayside Groundwater Project?

The project involves storing excess water in underground sand layers by injecting drinking water into a well during wet years for later recovery and use during a drought. In response to public concerns, EBMUD has redesigned the proposed project to eliminate potentially significant impacts or to reduce to less than significant the impacts that remain. The project is proposed in two phases. Phase 1 would be implemented immediately to provide an annual water capacity of 1 million gallons per day (MGD). Phase 2 is the potential future expansion of groundwater facilities with an annual capacity of between 2 and 10 MGD. If EBMUD determines to implement Phase 2, EBMUD would at that time complete an additional Phase 2 Project Environmental Impact Report (EIR) with full public review.

Bayside Groundwater Project Phase 1 – 1 MGD Project

- 1 MGD injection in wet years
- 1 MGD (1,121 acre-feet) annual extraction capacity during drought years
- Uses existing Bayside Demonstration Well
- Chloramine and fluoride addition at the well (NO aeration or air emissions)
- Connection to existing distribution system (NO new pipeline on Grant Avenue)
- Extensive water quality, water levels and subsidence monitoring to verify and calibrate existing model and gather data for project's potential Phase 2

Benefits of 1 MGD Project:

- Reliably provides more water for customer use during drought periods than would be available from current water supplies alone
- Makes beneficial use of local resources
- Provides water that complies with state and federal drinking water standards while maintaining or enhancing basin water quality
- Enables collection of data to determine whether it is appropriate to implement a larger capacity facility in Phase 2, and if so, how to design it.

Key Community Issues for Phase 1:

- **Air Quality:** Because there would be no aeration treatment, the only air quality effects would be those associated with normal construction activities and standard emission controls.
- **Land Subsidence:** Because the Phase 1 project will be limited to only a fraction of the historic pumping in the area, permanent land subsidence would not occur. EBMUD will install state-of-

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Fact Sheet: 3/16/2005

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Letter G1. Heron Bay Task Force.

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the-art monitoring equipment and slowly ramp up initial pumping while monitoring for ground surface changes.

- **Water Quality:** All delivered water will meet state and federal drinking water quality standards. During Phase 1 and as part of the project's groundwater monitoring program, water samples will be collected and tested annually for contaminants.

Phase 2 - Possible Future Expanded Bayside Project:

- 2 to 10 Million Gallons per Day (mgd) annual capacity
- Will require a new EIR and public review

EBMUD has made no commitment to implement Phase 2. EBMUD intends to use information gathered from Phase 1 operations to help decide whether and how to proceed with Phase 2. EBMUD would not proceed with Phase 2 until it clearly defines the scope of this phase, certifies a new EIR and considers Phase 2 for approval in the same manner done for Phase 1.

EIR Process:

- Draft EIR Circulation: 45 day period from March 14, 2005 to April 28, 2005
- Public Hearing on Draft EIR: April 20, 2005, 7-10 pm Washington Manor Middle School 1170 Fargo Ave., San Leandro
- Final EIR Certification Consideration: August 2005
- Consideration of Project Approval: August 2005

Where to find the Draft EIR:

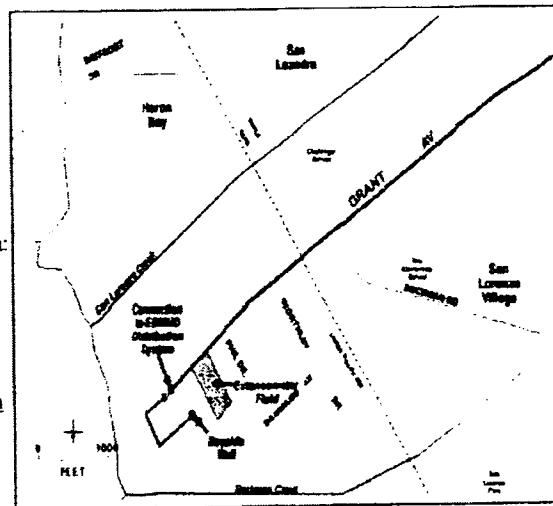
- EBMUD website – www.ebmud.com
- These locations:

<p>San Leandro Main Library 300 Estudillo Street San Leandro, CA</p>

<p>San Lorenzo Village Homes Assn. 377 Paseo Grande San Lorenzo, CA 94580</p>
--

<p>San Lorenzo Public Library 395 Paseo Grande San Lorenzo, CA</p>

<p>San Leandro Public Library 1307 Manor Blvd. San Leandro, CA</p>

**How to Comment on the EIR:**

- Attend public hearing – April 20, 2005 Washington Manor Middle School, 1170 Fargo Avenue, San Leandro, 7-10 pm
- Submit written comments to: Angela Knight East Bay Municipal Utility District 375 11th Street, MS 407 Oakland, California 94607
- Send email to aknight@ebmud.com

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Fact Sheet: 3/16/2005

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Letter G1. Heron Bay Task Force.

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EXHIBIT D

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EBMUD needs additional drought supplies

Year 2020 Three Consecutive Year Critical Drought

[REDACTED]	[REDACTED]
3 year normal customer demand (277MGD)	932
Demand reduction through conservation	-114
Demand reduction through recycling	-47
[REDACTED]	[REDACTED]
Available yield from reservoirs	-440
[REDACTED]	[REDACTED]
Drought rationing program	-146
[REDACTED]	[REDACTED]
Freeport Yield (max)	-165
[REDACTED]	[REDACTED]

- Does not account for longer droughts, climate change, unexpected reductions in Freeport deliveries, or ability to ration 25% on top of aggressive conservation and recycling.

Response to Comment G1-42

Comment noted. This table was presented at the March 16, 2005 CLG meeting. More information on this data can be found in Master Response 9 — Need for Project.

Letter G1. Heron Bay Task Force.

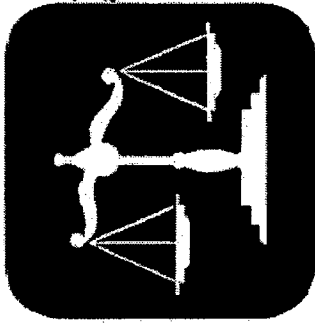
Page 78

EXHIBIT E

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EBMUD Bayside Groundwater Project

One half of One percent of EBMUD's projected customer demand in 2020.



INCREASED RISKS:

- **Ground movement** damaging our homes, schools or businesses.
- **Cancer** from known higher levels of **Arsenic** and **Radon** in our drinking supply.
- **Contamination** of our drinking supply from known plumes and spills.
- **Flowing wells** damaging homes and property.
- **Air Quality pollution** from Aeration.

Slide 1/18

Response to Comment G1-43

Comment noted. See responses to comment letter G2.

Heron Bay Task Force (HBTF)

Who We Are:

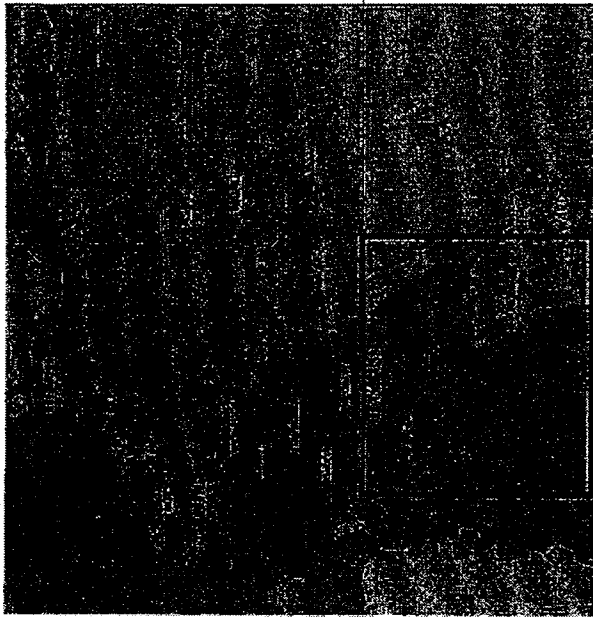
- Homeowners, of various professions and backgrounds, speaking on behalf of concerned residents in Heron Bay and communities throughout San Leandro and San Lorenzo.
- Since 2001, we have studied the documents provided by EBMUD, made public requests for others, and engaged the EBMUD staff and Board in discussions regarding the Bayside project.
- After extensive consideration, it is our assertion that approval of the Bayside project would demonstrate that EBMUD:
 1. Has allowed Advocacy to replace Assessment
and
 2. Intends to allow a minority of their customers – in neighborhoods apparently over represented in Senior and Immigrant populations - to carry an undue burden for the claimed benefit of all EBMUD customers.

Slide 2/18

G1-43

Letter G1. Heron Bay Task Force.

A Minority of customers ...



Approval of this project would require a minority of EBMUD customers – in neighborhoods apparently over represented in Senior and Immigrant populations - to carry an undue burden for the claimed benefit of all EBMUD customers.

(DEIR, Figure 3.5-1)



GI-43

Environmental Justice assures that no community in the district bears an inequitable risk burden as a result of District facilities, operations, or practices. (EBMUD, Policy 71)

Letter G1. Heron Bay Task Force.

Special Note ... Phase Two



GI-43

Letter G1. Heron Bay Task Force.

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Advocacy, not Assessment of the Bayside Project

- Bending numbers to get to “Much Needed Drought Supply”
- Skipping the hard questions: Aeration Towers
- Publishing what fits one view:
 - Radon
 - Subsidence
 - Flowing Wells
 - Water Quality
- Communicating what fits at the time.

Slide 5/18

G1-43

G1-43

Bayside: Bending numbers to get to 'Much Needed Drought Supply'

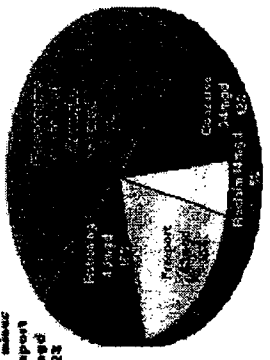
1 cubic foot = 7.481 gallons	1,481		
1 acre = 43,560 square feet	43,560		
1 acre foot = 325,851 gallons	325,851		
1 MGD = 3,068 acre feet per day	3,068		
3 years = 985 days	985		
Data Values from EBMUD (aggregated to 3 year assumption)			
3 year normal customer demand (277 mgd)	832		
Demand reduction through conservation	-116		
Demand reduction through recycling	-47		
Available yield from reservoirs	-440		
Drought rationing program	-148		
Freeport Yield (max)	-185		
MGD Required	277		
Reservoir supply balance required	229		
Conservation	34		
Rationing	14		
Freeport	49		
Need minus Freeport	6		

MGD Imputed Calculation
 $(TAF \times 1000) / (85 \times 365) \times 325,851 / 1,000,000$
 MGD calculated value was derived from the TAF value table column from the "2006 Volume from EBMUD"

Non-Drought Year (imputed from 3 year assumption)



Severe Drought Year (imputed from 3 year assumption)

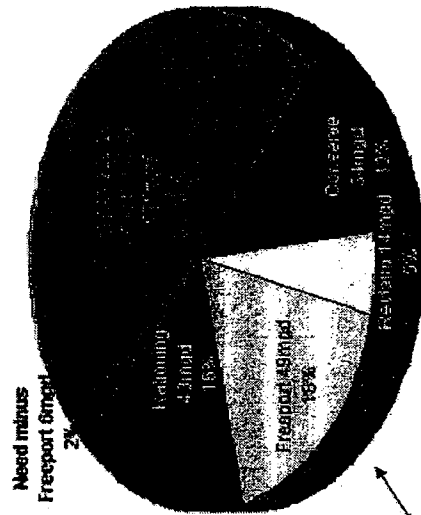


Slide 6/18

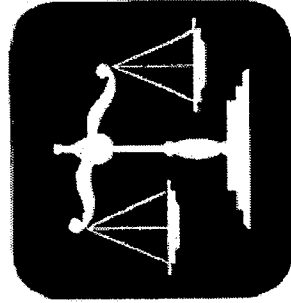
*HBTF converted CLG presentation to MGD, then used MGD values from DEIR

HBTF: Unbending the numbers

Severe Drought Year (Imputed from 3 year assumption)



Short Term Need?
Freeport comes on line in roughly the same timeframe as Bayside would.



- Severe drought year only requires 16% Rationing... (2010 and 2020 versions)
- EBMUD policies support up to 25% rationing!

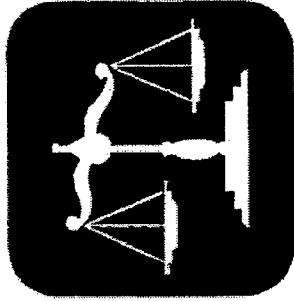
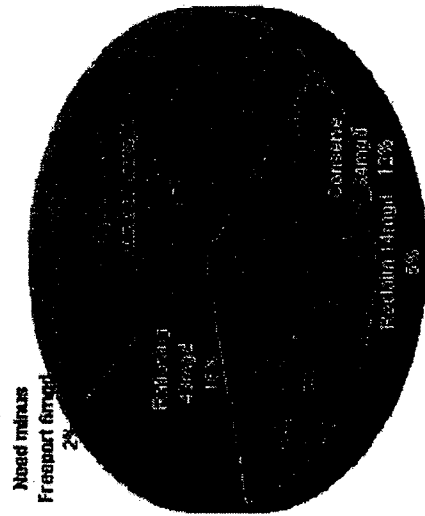
Slide 7/18

G1-43

Letter G1. Heron Bay Task Force.

HBTF: Unbending the numbers

Severe Drought Year (Imputed from 3 year assumption)



- Is 18% Rationing that much worse than 16%?
- EBMUD policies support up to 25% rationing!

Slide 8/18

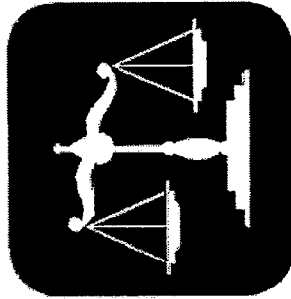
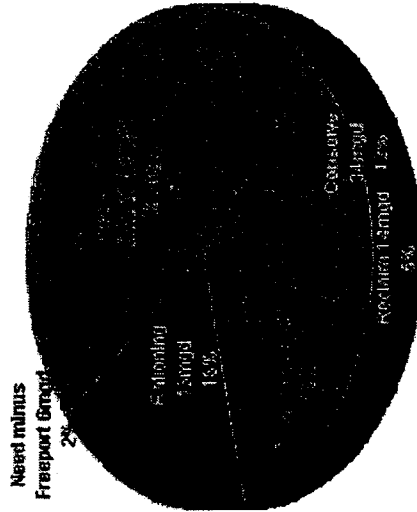
G1-43

Letter G1. Heron Bay Task Force.

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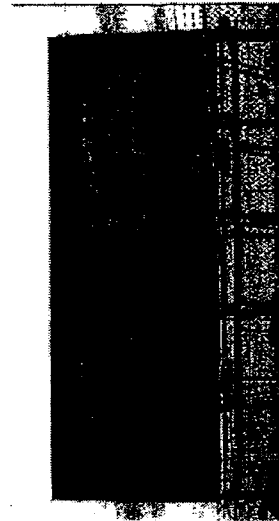
Unbending the numbers

Severe Drought Year (imputed from 3 year assumption)



Alternatives to reduce rationing requirements

- East Contra Costa Groundwater (rural?)
- Desalination
- Repair Leaking EBMUD Pipelines



Slide 9/18

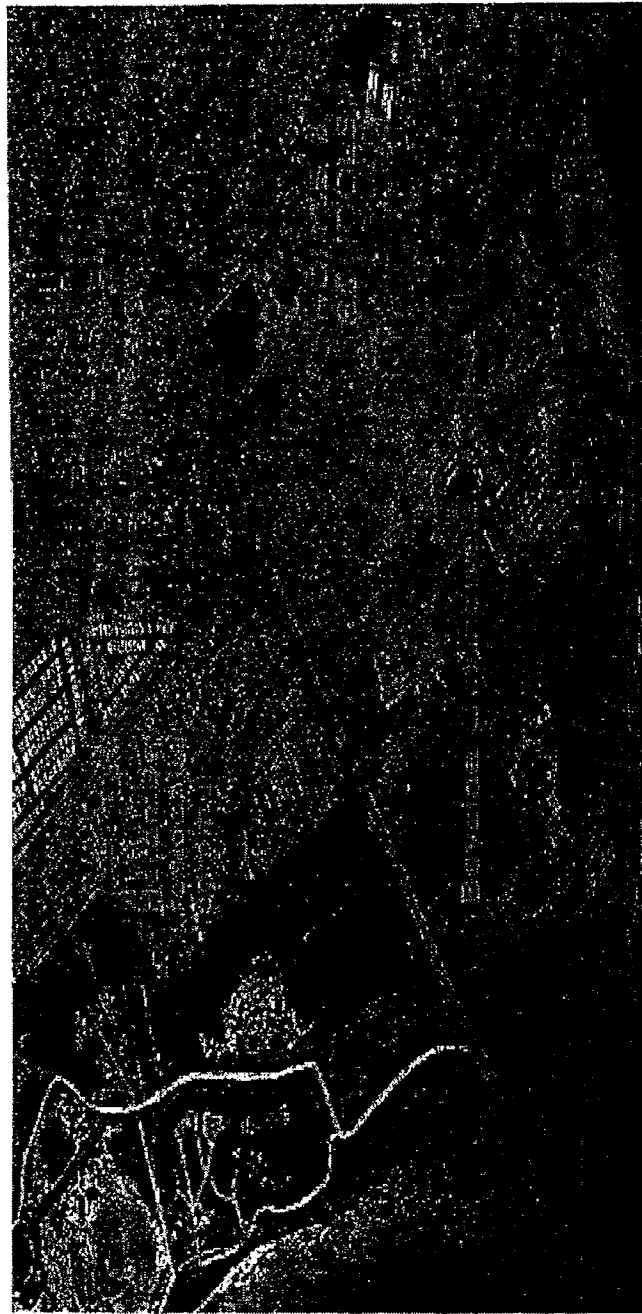
About 9.9 TAF per year (~ 3 MGD) wasted...

G1-43

Letter G1. Heron Bay Task Force.

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Skipping the Hard Questions: Aeration Towers



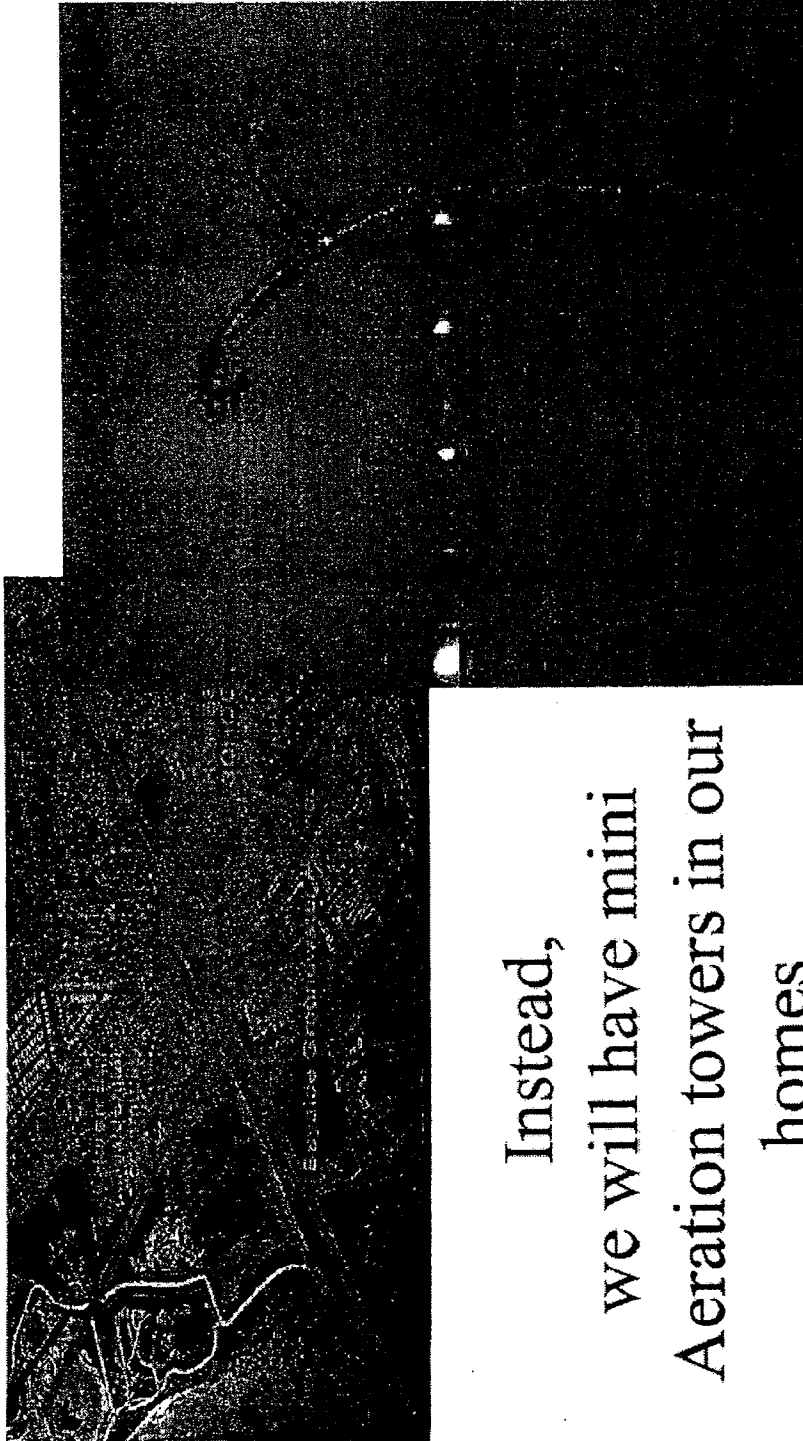
*HBTF Representation of Potential Chloroform Plumes, from 2001 EBMUD drawing
Slide 10/18

G1-43

Letter G1. Heron Bay Task Force.

Page 89

Skipping the Hard Questions: Aeration Towers



Instead,
we will have mini
Aeration towers in our
homes.

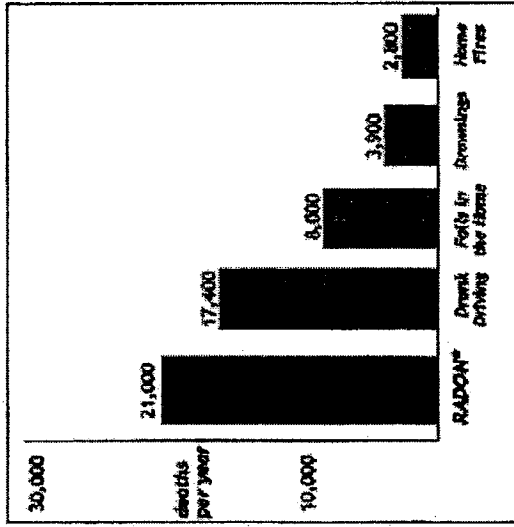
Slide 11/18

G1-43

Letter G1. Heron Bay Task Force.

Publishing what fits one view: Radon

Radon is estimated to cause thousands of lung cancer deaths in the U.S. each year.



* Radon is estimated to cause about 21,000 lung cancer deaths per year, according to EPA's 2003 Assessment of Risks from Radon in Homes (EPA 402-R-03-003). The numbers of deaths from other causes are taken from the Centers for Disease Control and Prevention's 1999-2001 National Center for Injury Prevention and Control Report and 2002 National Safety Council Reports.

Slide 12/18

G1-43

Publishing what fits one view: Radon

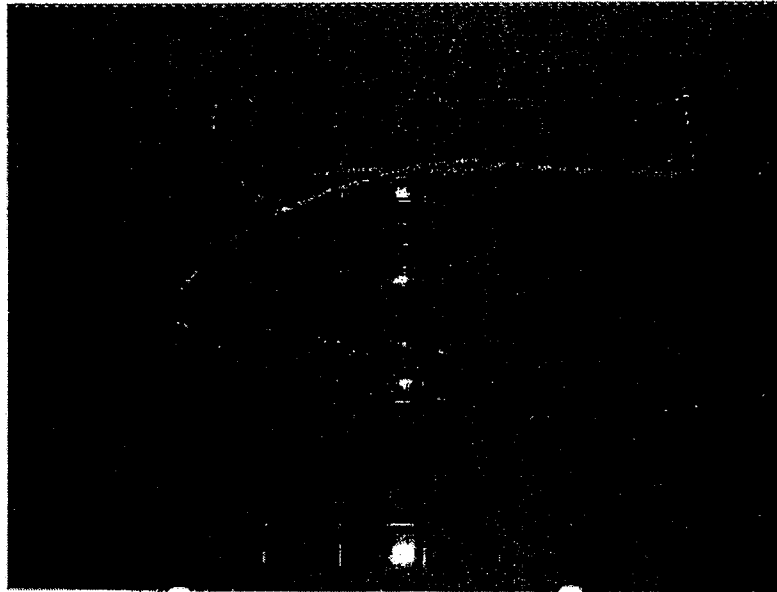
• “According to the proposed [federal] regulation, if ... radon concentration is less than 300 picocuries per liter, then the water will not need to be treated.” (DEIR, 3.2-11 para 5)

• Radon in Recovered Groundwater
470 – 700 picocuries per liter
(DEIR, Table 3.2-1)

• “When [approved], the standard is likely to be higher than radon concentrations at Bayside.”
(DEIR 3.2-11 para 6)

Slide 13/18

G1-43



Publishing what fits one view: Subsidence

...inelastic subsidence would not be expected (DEIR, 3.1-55)

...elastic subsidence...is expected to range from about a quarter inch
...to about a tenth of an inch several miles [away] (DEIR, 3.1-54)

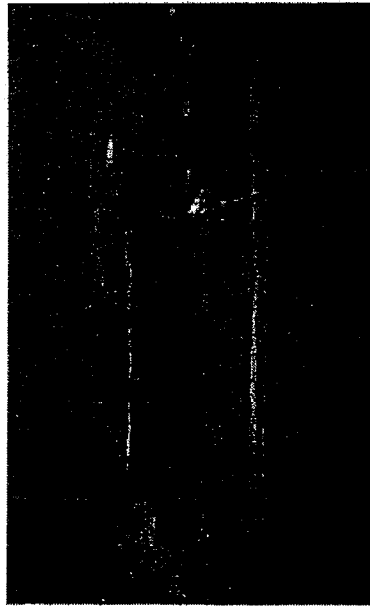


Figure 2. Photograph of house in Windsor Park subdivision in North Las Vegas

Photo by John W. Dell.



Figure 1. Photograph of Las Vegas Valley Water district Well No. 5 showing well-head protrusion caused by subsidence. Photo by John W. Dell. 1989.

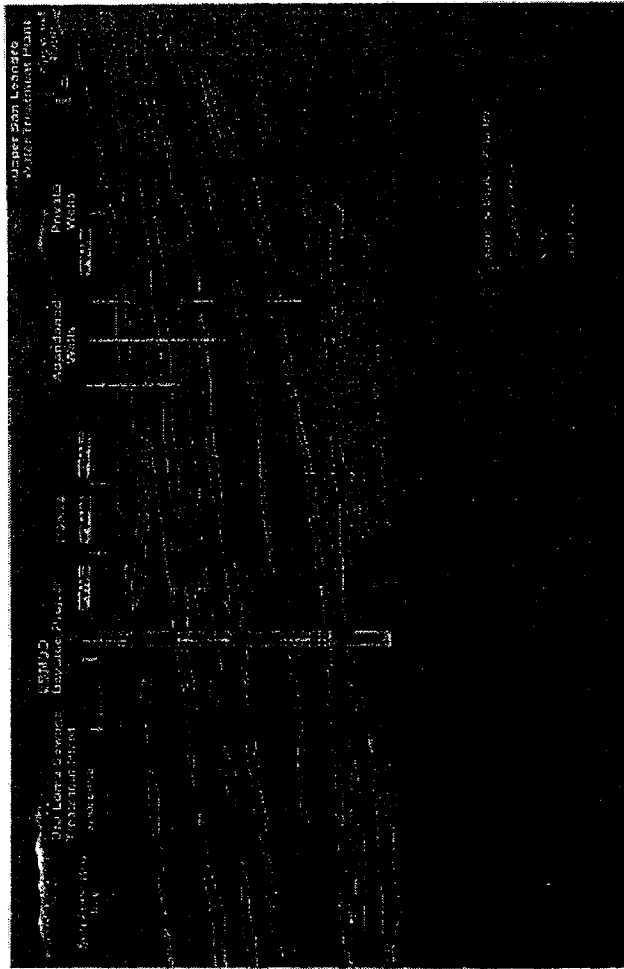
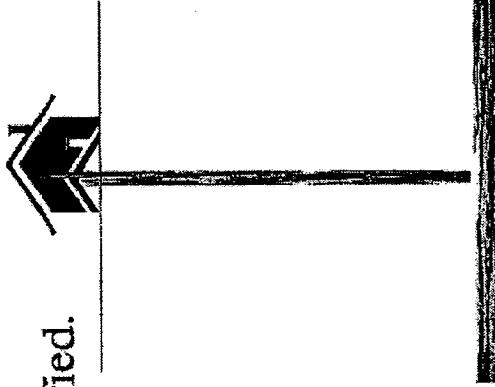
Insurance won't cover subsidence or settlement.

Slide 14/18

G1-43

Publishing what fits one view: Flowing Wells

- Called "Less than significant after Mitigation." (DEIR, 3.1-52, para 2)
- But, mitigation includes capping after identification of problem wells
- ... after damage has occurred and been identified.

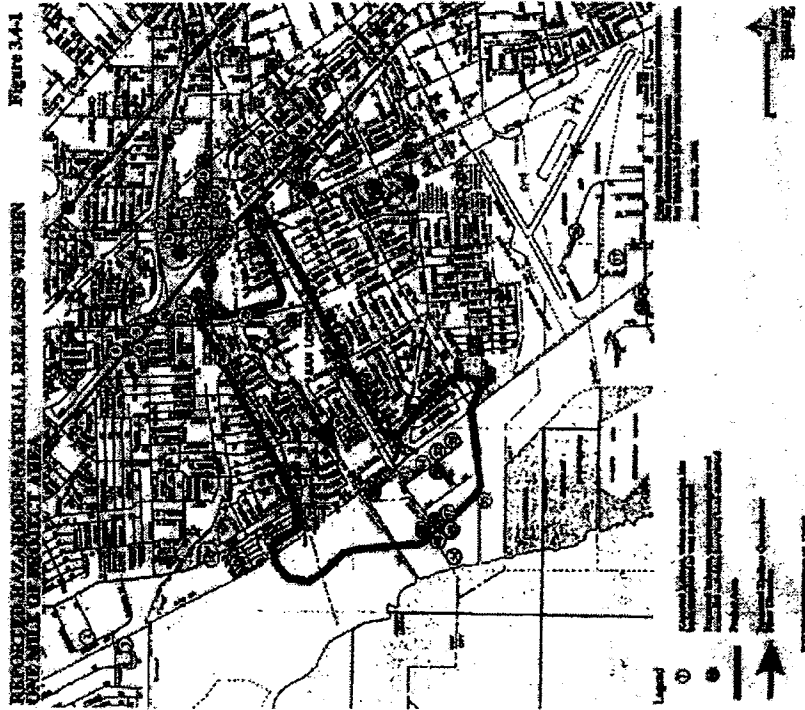


Slide 15/18

G1-43

Publishing what fits one view: Water Quality

Meets the standards, but so did proposed Crematorium



Lower quality water for drinking and usage for all San Leandro and San Lorenzo residents

- Higher levels of arsenic & radon (known carcinogens), manganese, etc. (DEIR,
- Potential for further contamination from shallow aquifer contaminant plumes (MTBE, waste oils, etc.)

...minimize public health risks by seeking the best available water source, protected from potential degradation ... (EBMUD Policy 81)

Slide 16/18

G1-3

Letter G1. Heron Bay Task Force.

Page 95

Communicating What Fits at the Time.

Regarding Freeport Project in Lodi News-Sentinel, May 31, 2001

"This is a drought project," said Charles Hardy, spokesman for EBMUD. "We have enough water to serve our customers now."

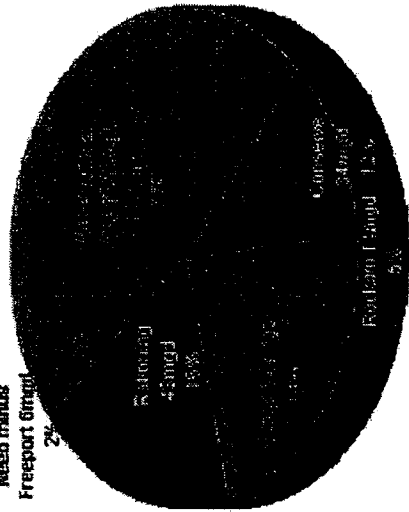
Statement in San Leandro Times, June 24, 2004

"The Freeport project was our main drought prevention project but it is not enough to eliminate all water rationing that would occur during a drought," says Hardy.

Severe Drought Year (imputed from 3 year assumption)

Need minus
Freeport benefit

2%

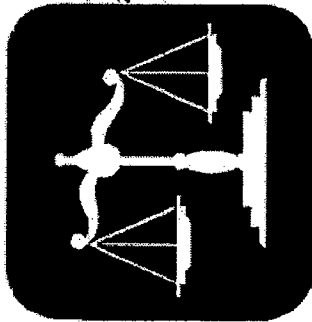


Slide 17/18

G1-43

EBMUD Bayside Groundwater Project

One half of One percent of EBMUD's projected customer demand in 2020.



INCREASED RISKS:

- **Ground movement** damaging our homes, schools or businesses.
- **Cancer** from known higher levels of **Arsenic** and **Radon** in our drinking supply.
- **Contamination** of our drinking supply from known plumes and spills
- **Flowing wells** damaging homes and property
- **Air Quality pollution** from Aeration in your home.

Board Members: Please vote 'no'.

Slide 18/18

G1-43

Letter G1. Heron Bay Task Force.

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EXHIBIT F

Letter G1. Heron Bay Task Force.

Page 98

NOP: Task Force Response

Ms. Angela Knight
November 17, 2004
East Bay Municipal Utility District MS 407
PO Box 24055
Oakland, CA 94623-1055

Dear Ms Knight,

G1-44

This letter presents comments on the Notice of Preparation (NOP) for the East Bay Municipal Utility District (EBMUD) Bayside Groundwater Project dated October 21, 2004.

NOP Comments:

1> The Heron Bay Task Force (HBTF) is an interested party in the Bayside Groundwater Project Environmental review Process and request that future notifications and information related to the Bayside Project be sent to HBTF P.O. Box 1702 San Leandro, CA 94577. In addition, HBTF requests 10 printed copies of the revised DEIR to be mailed immediately following its release to the PO box listed above.

2> The NOP states that extensive public comments on the previous Bayside Groundwater Project DEIR were received and carefully reviewed and considered by EBMUD. Therefore, the hundreds of nearby residents, including, but not limited to the Heron Bay Task Force and Heron Bay Interest Group, who submitted comments in August of 2001 expect a written response to each of the comments submitted. These important comments from nearby residents should not be ignored by EBMUD, rather these comments with EBMUD responses should be displayed and included in the upcoming revised DEIR for all to review.

3> EBMUD should provide more that the minimum 45-day review period to the public to review and comment on this revised DEIR. As EBMUD has recognized from the extensive public comments received during the 2001 DEIR, the public is extremely concerned with the environmental impacts of this project and adequate time should be allowed for the public review. EBMUD has taken over 3 years to "carefully review and consider" the 2001 public comments and we expect EBMUD to equally provide the public with a fair and reasonable opportunity to review the revised RDEIR. We hereby request a 120day public review period of the revised RDEIR.

Response to Comment G1-44

Comment noted. Comments on the Notice of Preparation were considered and incorporated as appropriate into the DEIR. See also Master Response 10 – Public Outreach and Notice, and DEIR Review, Master Response 12 – Comments on 2001 DEIR, Master Response 11 – Environmental Justice, and Master Response 8 – Project Objectives and Alternatives.

Letter G1. Heron Bay Task Force.

Page 99

4> The DEIR should include an Environmental Justice section to evaluate the disproportionate adverse environmental impact of adjacent Asian American and Chinese-American Residents as well as low-income populations in San Leandro, San Lorenzo, and East Oakland.

5> The DEIR should discuss in detail other alternative drought relief projects so that the public has a "big picture" understanding of other available drought relief projects. EBMUD should not focus its alternative analysis so narrow that the readers of the new Bayside RDEIR are Uninformed of the other drought relief options, including but not limited to, the Freeport Project and raising Pardee Dam.

Sincerely,

Benny Lee

Heron Bay Task Force Spokesperson


G1-44

Letter G1. Heron Bay Task Force.

Page 100

18 Oct 2005

1001



Home > [Water & Environment](#) > [Water Supply](#) > [Current Projects](#) > [Bayside Groundwater](#)

Search

Bayside Groundwater Project

A Notice of Preparation (NOP) for the Bayside Groundwater Project has been prepared and sent to Responsible and Trustee Agencies and involved federal agencies to solicit participation in determining the scope of the Draft Environmental Impact Report (DEIR).

The project described in this NOP, and in the new DEIR which is intended to be released early 2005 for public review and comment, will have an initial phase of 1 million gallons per day (MGD) average annual capacity, by converting the existing demonstration well on the Oro Loma site to a permanent potable water source. Water levels, water quality and ground surface elevations will be monitored during operation of the Phase 1 project to understand the feasibility and potential effects of implementing a second phase that would expand capacity up to 10 MGD, in future increments.

The document below is a PDF file that can be viewed and printed through Adobe Acrobat Reader, a free software.

[Notice of Preparation \(5mb\)](#)

For more information on this project, please contact Angela Knight at aknight@ebmud.com or (510) 298-1213.

[Site Map](#) [Search](#) [Contact Us](#) [Publications](#) [Disclaimer](#)

G1-44

http://www.ebmud.com/water_&_environment/water_supply/current_projects/bayside_groundwater/def... 11/18/2004

Letter G1. Heron Bay Task Force.

Page 101

EXHIBIT G

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Letter G1. Heron Bay Task Force.

Page 102

The Project will go forward

ONLY if:

- Science confirms there would not be adverse impact to your home values or your property
- Science confirms that all existing or currently proposed standards & regulations for air and water quality are met or exceeded

Attachment 5

G1-45

Response to Comment G1-45

Comment noted. See also Master Response 1 – Subsidence, Master Response 2 – Flowing Wells, Master Response 4 – Liquefaction, Master Response 5 – Groundwater Contamination, Master Response 6 – Radon and Chloroform, and Master Response 11 – Environmental Justice.

The Project will go forward

ONLY if:

- Science confirms there is no reason to anticipate an increased risk for seismic impact
- This project is demonstrated to ask no more of this community than would be asked or expected of any other community within the EBMUD Service Area

G1-45

Letter G1. Heron Bay Task Force.

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EXHIBIT H

Letter G1. Heron Bay Task Force.

Page 105

G1-46

Bayside Project Expenditures (3/1/01-4/8/04)

Account	Object	Amount
5101 Total	Salaries	\$1,998,441.16
5108 Total	Overtime	\$26,675.00
5110 Total	Paid Absence	\$445,682.20
5111 Total	Employee Benefits	\$910,840.58
	SUBTOTAL Labor costs :	\$3,381,638.93
5201 Total	Supplies/Services	\$28,008.53
5202 Total	Printing	\$4,125.59
5203 Total	Small Off Equip	\$3,102.45
5204 Total	Furniture < \$5k	\$6,236.34
5205 Total	Publications/Subs	\$743.91
5211 Total	Mailing Costs	\$3,264.30
5216 Total	Small Tools/Instr	\$3,450.78
5221 Total	Clothing/Equip	\$644.68
5223 Total	Safety Clothing	\$237.03
5228 Total	Janitorial Supp	\$19.32
5231 Total	Prof Svcs	\$2,629,465.08
5233 Total	Lab Svcs	\$15,732.18
5234 Total	DISTRICT Lab Svcs	\$25,936.41
5237 Total	Fees/Licenses	\$2,181.07
5241 Total	Other Svcs/Exp	\$62,263.27
5247 Total	Comp Equip <\$5k	\$455.64
5251 Total	OT Meals	\$1,200.00
5271 Total	Travel (Routine)	\$3,686.92
5272 Total	Travel (Non-Routine)	\$9,574.92
5278 Total	Emp/Group Mtgs	\$17.00
5281 Total	Vehicle Use	\$12,871.98
5288 Total	Rents/Leases (Vehicle)	\$6,226.98
5301 Total	Parts/Materials (Bldg)	\$18,673.96
5312 Total	Outside Svcs (Bldg)	\$11,978.16
5318 Total	Rents/Leases (Land/Bldg)	\$20,913.00
5321 Total	Rents/Leases (Mach & Equip)	\$0.00
5331 Total	Pipe, Metal & Treatment	\$143.69
5341 Total	Sand, Backfill & Rock	\$372.31
5351 Total	Concrete/Paving Material	\$2,258.28
5374 Total	Energy	\$30,197.82
5378 Total	Hazardous Waste Disp	\$4,851.23
5482 Total	Chgs Wastewater	\$514.92
5501 Total	Land	\$3,395,000.00
5521 Total	Portable Equipment	\$0.00
	Grand Total	\$7,491,985.63

PRA for Bayside.xls - 03-01-01 - 04-3-04
4/20/2008 - 10:08 AM

Response to Comment G1-46

Comment noted.

Letter G1. Heron Bay Task Force.

Page 106

Bayside Project Expenditures (4/9/04 - 3/10/05)

Account and Description	Amount
5101 Salaries Total	\$392,674.45
5105 Overtime Total	\$1,314.87
5106 Job Site Reporting Pay Total	\$20.00
5110 Paid Absence Total	\$88,544.82
5111 Employee Benefits Total	\$205,749.07
5201 Office Services & Supplies Total	\$6,135.71
5202 Printing Expense Total	\$243.27
5205 Publications/Subscriptions Total	\$323.53
5211 Mailing Costs Total	\$141.22
5216 Small Tools and Instruments Total	(\$71.87)
5223 Safety Rel Clotnng & Equipt Iss Total	\$78.59
5226 Janitorial & Household Splices Total	\$26.22
5231 Professional Services Total	\$368,254.87
5234 District Laboratory Services Total	\$41,046.77
5241 Other Services And Expenses Total	\$15,202.50
5251 Overtime Meals Total	\$32.00
5271 Travel, Routine Total	\$609.82
5272 Trng Conf & Non-Routine Travel Total	\$858.95
5281 Use Charges-Vehicle & Equipt Total	\$7,758.46
5301 Parts&Mtl-Bldg,Grnd,Mach&Equip Total	\$87.42
5312 Spclzd Outsd Srv-Bdg,Grds,M,Eq Total	\$457.70
5316 Rents & Leases-Land & Buildings Total	\$6,791.00
5331 Pipe, Metal, And Treatments Total	\$491.67
5374 Energy Total	\$2,152.17
5377 Disposal Expenses Total	\$58.20
Grand Total	\$1,033,981.61

G1-46

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Letter G2. Heron Bay Task Force.

EBMUD Bayside Groundwater Project

One half of One percent of
EBMUD's projected
customer demand in 2020.



INCREASED RISKS:

- **Ground movement** damaging our homes, schools or businesses.
- **Cancer** from known higher levels of **Arsenic** and **Radon** in our drinking supply.
- **Contamination** of our drinking supply from known plumes and spills.
- **Flowing wells** damaging homes and property.
- **Air Quality pollution** from Aeration.

G2-1 [

G2-2 [

G2-3 [

G2-4 [

G2-5 [

Slide 1/18

Response to Comment G2-1

See Master Response 1 — Subsidence.

Response to Comment G2-2

See response to comment G1-24. Water produced by the Bayside Project will meet state and federal drinking water standards, which are established to protect public health.

See Master Response 6 — Radon and Chloroform.

Response to Comment G2-3

See Master Response 5 — Groundwater Contamination.

Response to Comment G2-4

See Master Response 2 — Potential for Flowing Wells.

Response to Comment G2-5

Phase 1 does not include aeration. At this time, EBMUD does not know whether it will pursue Phase 2 or, if it does pursue it, exactly what Phase 2 facilities would be necessary; where those facilities would be located; or what the ultimate size of those facilities would be. Phase 2 may or may not include aeration, depending on facility locations and radon concentrations in those locations. Potential impacts to air quality from a Phase 2 project would be evaluated in a subsequent EIR.

Letter G2. Heron Bay Task Force.

Page 2

Heron Bay Task Force (HBTF)

Who We Are:

- Homeowners, of various professions and backgrounds, speaking on behalf of concerned residents in Heron Bay and communities throughout San Leandro and San Lorenzo.
- Since 2001, we have studied the documents provided by EBMUD, made public requests for others, and engaged the EBMUD staff and Board in discussions regarding the Bayside project.

- After extensive consideration, it is our assertion that approval of the Bayside project would demonstrate that EBMUD:
 1. Has allowed Advocacy to replace Assessment

and
 2. Intends to allow a minority of their customers – in neighborhoods apparently over represented in Senior and Immigrant populations - to carry an undue burden for the claimed benefit of all EBMUD customers.

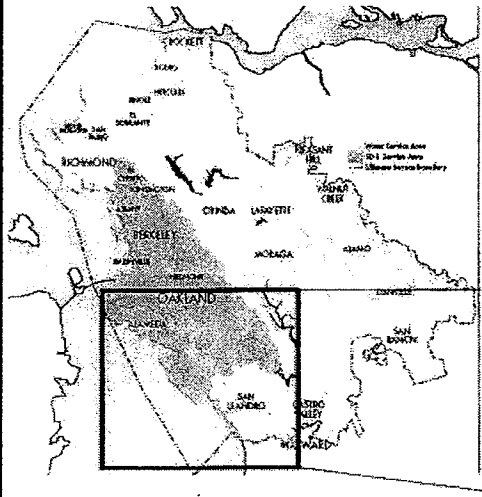
Slide 2/18

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Letter G2. Heron Bay Task Force.

G2-6

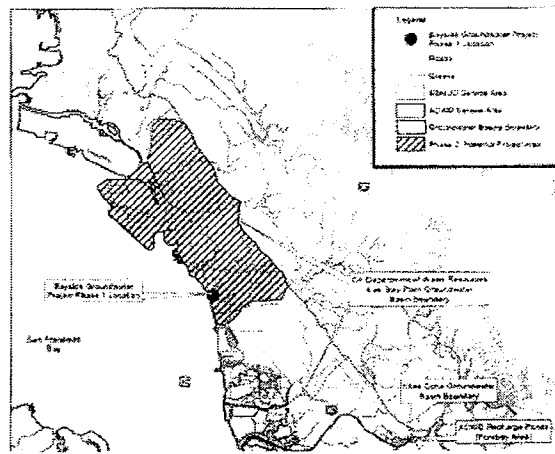
A Minority of customers ...



Approval of this project would require a minority of EBMUD customers – in neighborhoods apparently over represented in Senior and Immigrant populations - to carry an undue burden for the claimed benefit of all EBMUD customers.

(DEIR, Figure 3.5-1)

Environmental Justice assures that no community in the district bears an inequitable risk burden as a result of District facilities, operations, or practices. (EBMUD, Policy 71)

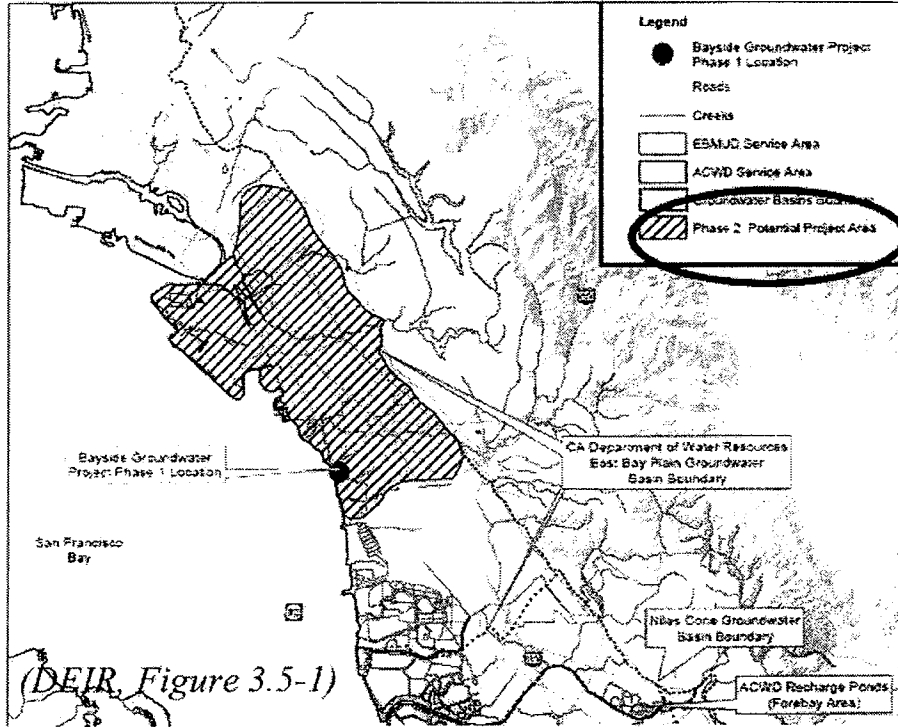


Response to Comment G2-6

See Master Response 11 — Environmental Justice.

Letter G2. Heron Bay Task Force.

Special Note ... Phase Two



G2-6

Side 4/18

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Letter G2. Heron Bay Task Force.

Page 5

Advocacy, not Assessment of the Bayside Project

G2-7

- Bending numbers to get to “Much Needed Drought Supply”

- Skipping the hard questions: Aeration Towers

- Publishing what fits one view:
 - Radon
 - Subsidence
 - Flowing Wells
 - Water Quality

- Communicating what fits at the time.

Slide 5/18

Response to Comment G2-7

See Master Response 9 – Need for Project; Master Response 6 – Radon and Chloroform; Master Response 1 – Subsidence; and Master Response 2 – Flowing Wells.

Letter G2. Heron Bay Task Force.

Bayside: Bending numbers to get to 'Much Needed Drought Supply'

G2-8

1 cubic foot = 7.481 gallons	7.481		
1 acre = 43,560 square feet	43,560		
1 acre foot = 325,852 gallons	325,852		
1 MGD = 3,068 acre feet per day	3,068		
3 years = 365 days	1,095		

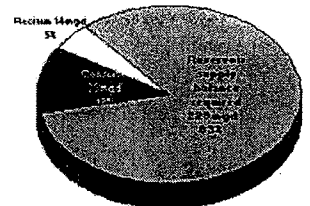
Data Values from EBMUD (aggregated to 3 year assumption)			
Source: EBMUD CLG slide presentation on 3/9/2005			
		TAF	
3 year normal customer demand (277 mgd)	932		
Demand reduction through conservation	-115		
Demand reduction through recycling	-47		
Supply Need (229 MGD)	773		
Available yield from reservoirs	-440	Thousands of Acre Feet Acre Feet = (TAF x 1,000)	
Drought shortage	333		
Drought rationing program	-116		
Need for water	185		
Freeport Yield (max)	-165		
Reissuing 3 Year need (MGD)	20		

Normal Year (imputed from 3 year assumption)	MGD	MGD %
Reservoir supply balance required	229	83%
Conserve	34	12%
Reclaim	14	5%

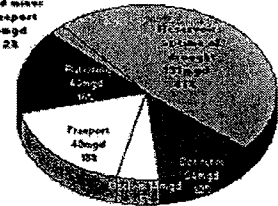
Severe Drought Year (imputed from 3 year assumption)	MGD	MGD %
Reservoirs at time of drought	121	47%
Conserve	34	12%
Reclaim	14	5%
Rationing	43	16%
Freeport	49	18%
Need minus Freeport	6	2%

MGD Imputed Calculation
 (TAF x 1,000) / ((3 x 365) + 325,852) x 1,000,000
 MGD calculated value derived from the TAF value table
 taken from the "Data Values from EBMUD"

Non-Drought Year (imputed from 3 year assumption)



Severe Drought Year (imputed from 3 year assumption)



HBTf converted CLG presentation to MGD, then used MGD values from DEIR

Slide 8/18

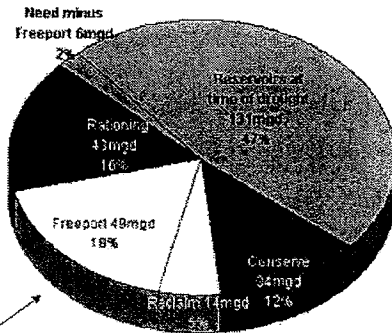
Response to Comment G2-8

See Master Response 8 – Project Objectives and Alternatives, and Master Response 9 – Need for Project.

Letter G2. Heron Bay Task Force.

HBTF: Unbending the numbers

Severe Drought Year (imputed from 3 year assumption)



Short Term Need?

Freeport comes on line in roughly the same timeframe as Bayside would.

• Severe drought year only requires 16% Rationing... (2010 and 2020 versions)

• EBMUD policies support up to 25% rationing!

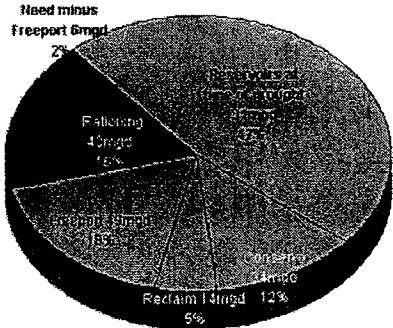
G2-8

Slide 7/18

Letter G2. Heron Bay Task Force.

HBTF: Unbending the numbers

Severe Drought Year (imputed from 3 year assumption)



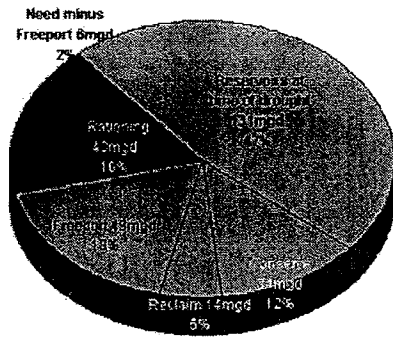
- Is 18% Rationing that much worse than 16%?
- EBMUD policies support up to 25% rationing!

Slide 8/18

Letter G2. Heron Bay Task Force.

Unbending the numbers

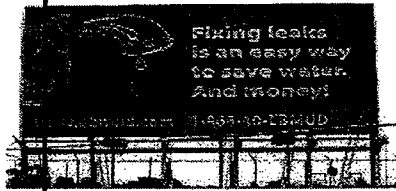
Severe Drought Year (imputed from 3 year assumption)



G2-9

Alternatives to reduce rationing requirements

- East Contra Costa Groundwater (rural?)
- Desalination
- Repair Leaking EBMUD Pipelines



About 9.9 TAF per year (~ 3 MGD) wasted...

Slide 9/18

Response to Comment G2-9

See Master Response 8 — Project Objectives and Alternatives.

Letter G2. Heron Bay Task Force.

Page 10

G2-10

Skipping the Hard Questions: Aeration Towers



*HBTf Representation of Potential Chloroform Plumes, from 2001 EBMUD drawing ^{Slide 10/18}

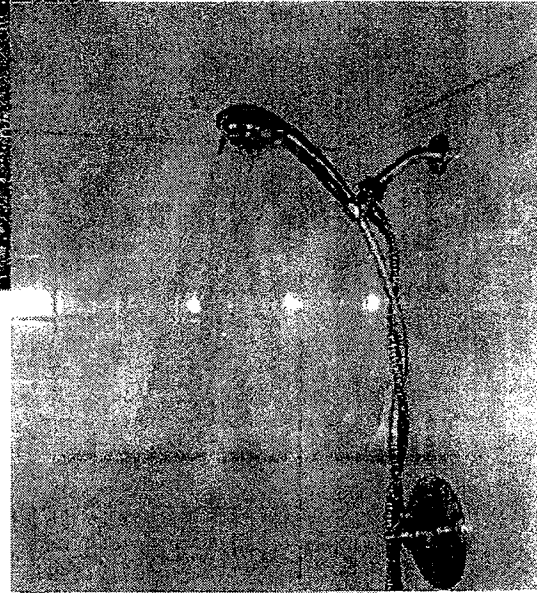
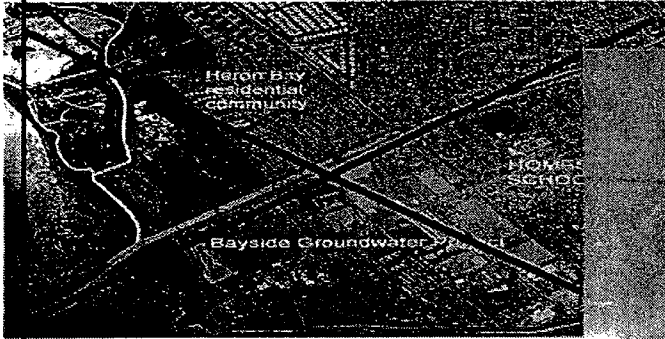
Response to Comment G2-10

See Master Response 6 — Radon and Chloroform.

Letter G2. Heron Bay Task Force.

Page 11

Skipping the Hard Questions: Aeration Towers



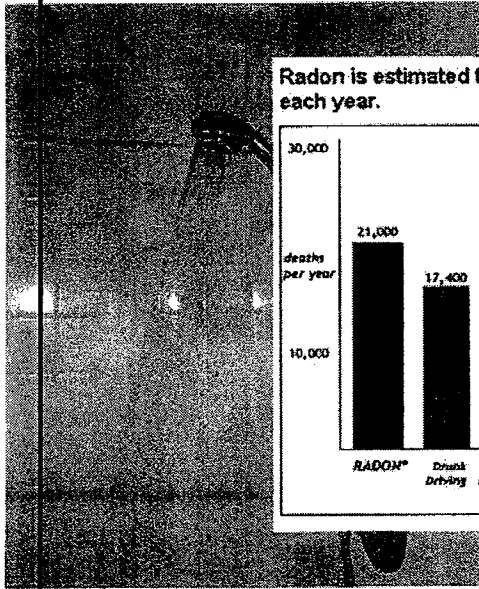
Instead,
we will have mini
Aeration towers in our
homes.

Slide 11/18

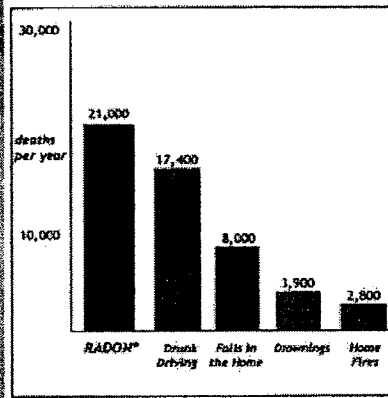
G2-10

Letter G2. Heron Bay Task Force.

Publishing what fits one view: Radon



Radon is estimated to cause thousands of lung cancer deaths in the U.S. each year.



* Radon is estimated to cause about 21,000 lung cancer deaths per year, according to EPA's 2003 Assessment of Risks from Radon in Homes (EPA 802-R-03-003). The numbers of deaths from other causes are taken from the Centers for Disease Control and Prevention's 1999-2001 National Center for Injury Prevention and Control Report and 2002 National Safety Council Reports.

Slide 12/18

G2-10

Letter G2. Heron Bay Task Force.

Page 13

Publishing what fits one view: Radon



• “According to the proposed [federal] regulation, if ... radon concentration is less than 300 picocuries per liter, then the water will not need to be treated.” (*DEIR, 3.2-11 para 5*)

• Radon in Recovered Groundwater
470 – 700 picocuries per liter
(*DEIR, Table 3.2-1*)

• “When [approved], the standard is likely to be higher than radon concentrations at Bayside.”
(*DEIR 3.2-11 para 6*)

G2-10

Slide 13/18

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Letter G2. Heron Bay Task Force.

Publishing what fits one view: Subsidence

...inelastic subsidence would not be expected (DEIR, 3.1-55)

...elastic subsidence...is expected to range from about a quarter inch
...to about a tenth of an inch several miles [away] (DEIR, 3.1-54)

G2-11

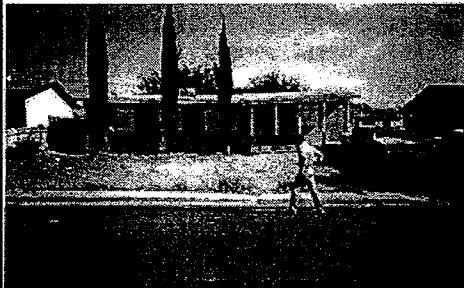


Figure 2. Photograph of house in Windsor Park subdivision in North Las Vegas

Photo by John W. Bell.



Figure 1. Photograph of Las Vegas Valley Water district Well No. 5 showing well-head protrusion caused by subsidence. Photo by John W. Bell, 1989.

Insurance won't cover subsidence or settlement.

Slide 14/18

Response to Comment G2-11

The Las Vegas photos show subsidence that occurred from many years of overpumping an aquifer for water supply to the point of severe overdraft. Las Vegas has implemented an aquifer storage and recovery (ASR) project (similar to the Bayside Project) to help manage its water supplies and the basin conjunctively. In this case, ASR has been a mechanism to alleviate subsidence, not cause it; see the technical memorandum presented as Attachment A for more information on the Las Vegas ASR program. Also see Master Response 1 – Subsidence and Master Response 13 – Additional Information Regarding ASR Projects.

Response to Comment G2-12

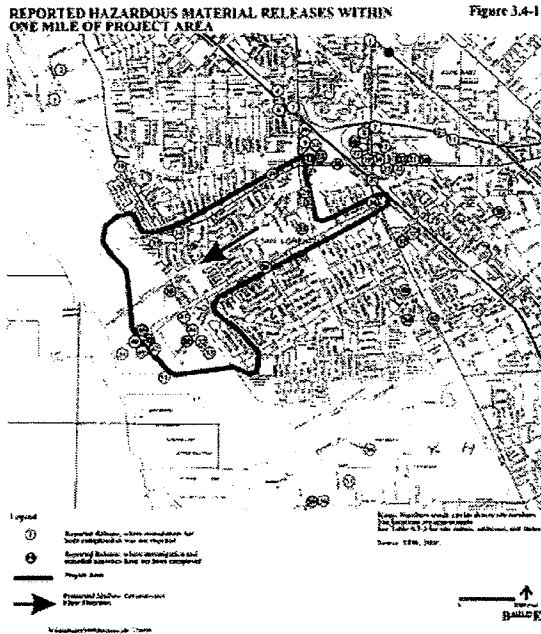
See Master Response 2 — Potential for Flowing Wells.

Letter G2. Heron Bay Task Force.

Publishing what fits one view: Water Quality

Meets the standards, but so did proposed Crematorium

G2-13



Lower quality water for drinking and usage for all San Leandro and San Lorenzo residents

- Higher levels of arsenic & radon (known carcinogens), manganese, etc. (DEIR,
- Potential for further contamination from shallow aquifer contaminant plumes (MTBE, waste oils, etc.)

...minimize public health risks by seeking the best available water source, **protected from potential degradation ...** (EBMUD Policy 81)

Slide 16/18

Response to Comment G2-13

See Master Response 5 — Groundwater Contamination, Master Response 6 — Radon and Chloroform, and Master Response 11 — Environmental Justice. The reference in the title of the slide to a "crematorium" is wholly unrelated to the Bayside Project described in the DEIR.

Letter G2. Heron Bay Task Force.

Communicating What Fits at the Time.

Regarding Freeport Project in Lodi News-Sentinel, May 31, 2001

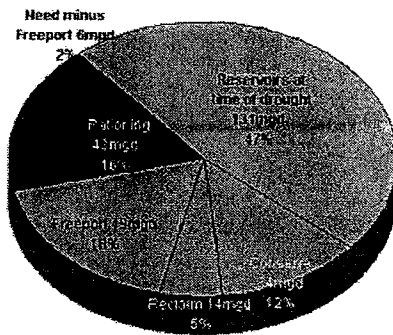
"This is a drought project," said Charles Hardy, spokesman for EBMUD. "We have enough water to serve our customers now."

Statement in San Leandro Times, June 24, 2004

"The Freeport project was our main drought prevention project but it is not enough to eliminate all water rationing that would occur during a drought," says Hardy.

G2-14

Severe Drought Year (imputed from 3 year assumption)



Slide 17/18

Response to Comment G2-14

The relationship between Freeport and the Bayside Project is discussed in Master Response 8 — Project Objectives and Alternatives, and in the 2005 DEIR in Section 1.4.6.

Letter G2. Heron Bay Task Force.

Page 18

EBMUD Bayside Groundwater Project

One half of One percent
of EBMUD's projected
customer demand in 2020.



INCREASED RISKS:

- **Ground movement** damaging our homes, schools or businesses.
- **Cancer** from known higher levels of **Arsenic** and **Radon** in our drinking supply.
- **Contamination** of our drinking supply from known plumes and spills
- **Flowing wells** damaging homes and property
- **Air Quality pollution** from Aeration in your home.

G2-15

Board Members: Please vote 'no'.

Slide 18/18

Response to Comment G2-15

The bulleted topics on this slide are addressed above in responses G2-1 through G2-14.

Letter G3. San Lorenzo Village Homes Association.



SAN LORENZO VILLAGE HOMES ASSOCIATION

377 Paseo Grande - San Lorenzo, CA 94580-2482 - Phone (510) 278-4554
FAX (510) 481-5827 - E-Mail: slvha@slvha.com - www.slvha.com

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Kathie Ready, Pres
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Pat Pyskiet, Sec/Treas
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Jim Sherman
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Nancy Van Huffel

May 13, 2005

RECEIVED

MAY 17 2005

SECRETARY'S OFFICE

William Patterson
President, Board of Directors
East Bay Municipal Utility District
375 - 11th Street, MS 407
Oakland, CA 94607

RE: Comments to the Bayside Groundwater Project Draft Environmental
Impact Report (DEIR)

Dear Mr. Patterson:

This letter is in response to the call for comments on the above-referenced report. We note with thanks the District's extension of the comment period by an additional 15 days.

G3-1

The Vice President of our Board of Directors, Patrick Ledesma, is employed in the field of groundwater protection and regulation, and has contributed his relevant professional experience to our review of the DEIR. He has prepared the enclosed comments on the DEIR from that perspective, and we are pleased to forward them with the endorsement of our Board.

G3-2

This Association has been generally supportive of this project during its long development. Our major concerns continue to be the issues of subsidence and the taste characteristics of the extracted water, which will periodically be the drinking water for San Lorenzo residents. Subsidence appears to be thoroughly addressed in the DEIR. However, the prospect of settlement induced by subsidence is simply dismissed as "not expected." Our concern over this aspect is expressed in the enclosed comments. The matter of water taste remains somewhat unknown and could become a cause of contention, if our local residents feel they are bearing more than their fair share of a District burden.

G3-3

We take this opportunity to express our appreciation to the District for the formation of the Community Liaison Group (CLG). The CLG will play a vital role in forestalling community apprehensions over a possible runaway project going astray. The DEIR only briefly mentions the CLG (Section 1.3.1). We suggest that the CLG should be formalized in the DEIR by chartering it as a Mitigation Measure in itself.

Very truly yours,

Nancy Van Huffel,
Administrator

Response to Comment G3-1

Comment noted. See Master Response 1 — Subsidence.

Response to Comment G3-2

See response to comments G1-24 and G7-34.

Response to Comment G3-3

Comment noted. The CLG itself does not affect potential impacts of the project and therefore cannot be considered a mitigation measure. However, EBMUD is committed to continuing CLG meetings throughout the construction and operation of the project to facilitate communication between EBMUD and the community and to assure the community that EBMUD is meeting its commitments.

Letter G3. San Lorenzo Village Homes Association.

Page 2



SAN LORENZO VILLAGE HOMES ASSOCIATION

377 Paseo Grande - San Lorenzo, CA 94580-2492 - Phone (510) 276-4554
FAX (510) 481-5827 - E-Mail: slvha@slvha.com - www.slvha.com

Board of Directors
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Patrick Ledesma, VP
Pat Pebler, Sec/Treas
Peggy Sheridan
Jen Sherman

Administrator
Nancy Van Hulle

May 11, 2005

EBMUD
Board of Directors
c/o William Patterson, President
375 11th Street, MS 407
Oakland, CA 94607

Subject: Comments to the Bayside Groundwater Project Draft Environmental Impact Report

Dear President Patterson and Distinguished Directors:

The San Lorenzo Village Homes Association (the Village) would like to take this opportunity to comment on the subject Draft Environmental Impact Report (DEIR). As stated at the April 20, 2005 special meeting, we support the use of aquifer storage recovery (ASR) as a viable water supply alternative. However, we also stated our opinion that EBMUD could and must do a better job of presenting and justifying this project to its stakeholders. Our comments to the DEIR are presented as an attachment.

While we realize that it may be impossible to garner unanimous public support, we also believe that the vast majority of stakeholders, including the Village residents, need more information to evaluate the DEIR and understand the proposed project. It was imperative that EBMUD afford us that opportunity. To that end, we thank you for extending the comment period to 60 days so that an appropriate assessment of the project could be made. We urge you to carefully consider the attached comments and provide appropriate response and/or changes to the final EIR that would give your stakeholders the opportunity to fully understand the proposed project. We believe that this level of commitment most certainly would ensure that "undecided" stakeholders ultimately believe that EBMUD provided the best information possible to address potentially significant environmental impacts associated with this project.

The Board of Directors made a widely popular and politically successful decision to come to the April 20 special meeting, which was extremely important to the public. We believe that extending the comment period was a crucial decision that will positively affect the public's perception of EBMUD's desire to include their stakeholders in the decision-making process and will give EBMUD added credibility in the community, particularly within the Village.

G3-3

Letter G3. San Lorenzo Village Homes Association.

Page 3

President William Patterson
Comments to DEIR,
Bayside Groundwater Project
May 11, 2005
Page 2 of 2

Thank you for considering and addressing our comments to the DEIR. Please do not hesitate to contact Nancy Van Huffell at NVanHuffel@aol.com or (510) 276-4554 or Patrick Ledesma at pdledesma@sbcglobal.net or at (510) 520-5965 if you wish to further discuss this project or if you need further clarification of any comments that we have made.

Sincerely,



Patrick Ledesma
Vice President
San Lorenzo Village Homes Association

Attachment: Comments to Bayside Groundwater Project DEIR

cc: Angela Knight (MS 407), East Bay Municipal Utility District, 375 Eleventh Street,
Oakland, CA 94607-4240
Supervisor Alice Lai-Bitker, Alameda County, 3rd District, 1221 Oak St., Ste. 536
Oakland, CA 94612
Nancy Van Huffel, San Lorenzo Village Homes Association, 377, Paseo Grande, San
Lorenzo, CA 94580
San Lorenzo Village Homes Association, Board of Directors
John Partridge, San Lorenzo Village Homes Association
Jack Mackinnon, San Lorenzo Village Homes Association
Chris Malloy, Heron Bay Task Force, 2260 Charter Way, San Leandro, CA 94579
Laura Harnish, CH2M Hill, 155 Grand Avenue, Suite 1000, Oakland, CA 94312

Letter G3. San Lorenzo Village Homes Association.

San Lorenzo Village Homes Association
 Comments to DEIR
 Bayside Groundwater Project
 May 11, 2005

Comment #	Section	Page	Comment	Recommendation
1	Global	--	The DEIR generally lacks sufficient documentation of references.	Provide references, where appropriate.
2	Global	--	The figures commonly are difficult to read or evaluate. Specifically, legend keys, such as north arrow and scale, for numerous figures are lost in the figure details and are not readily visible in photocopies (e.g., Figure 3.1-11, Location of Wells - Existing EBMUD Monitoring Well Network).	Evaluate the figures within the document and revise as appropriate to ensure that the DEIR is more readable and easy to interpret.
3	Global	--	The DEIR, specifically sections 1.0 and 2.0, do not adequately illustrate a need for the project. No figures are presented identifying historical drought cycles, legally allocated EBMUD water supplies, historical water supply trends, and anticipated water supply needs. Similarly, little discussion is provided distinguishing between projected water supply shortfalls caused by drought versus shortfalls caused by increased demand.	Provide more discussion and illustrate through tables and figures the need for the project. Table 1-1 should identify the available water supply, relative to the planning level of demand through 2020. A figure overlaying projected demand over historical drought cycles is needed to demonstrate the correlation between anticipated water supply shortcomings, anticipated drought cycles, and increases in customer demand.
4	Global	--	Blank pages are accounted for in the page numbering scheme.	Identify that blank pages are intentional and number the pages or exclude them from the numbering scheme.
5	2-4.1	2-5, 2-6	The Phase 1 project description does not clearly describe how water will be transported to the wellhead treatment facility for injection into the aquifer for storage. This section does not sufficiently identify the origin or location of the source water supply for injection, nor does it describe the treatment process prior to injection. Specifically, the DEIR does not clearly identify if treated water already within EBMUD's distribution system will be used for Phase 1 or if raw water (e.g., surface runoff to local EBMUD reservoirs, such as Upper San Leandro) will be used.	Expand the Phase 1 project description to include a detailed discussion (and figures [e.g., a flow chart or diagram following Figure 1-1], if applicable) depicting the method of supplying treated groundwater to Bayside Well No. 1 and identify where water treatment will occur. If raw water is used, the DEIR must identify how and where water treatment will occur prior to introducing the raw water into the existing pipelines that are planned to supply Bayside Well No. 1.
6	2-4.1	2-5, 2-6	The Phase 1 project description does not clearly describe how water will be stored between extraction and treatment or prior to introduction back into the existing distribution pipelines. Specifically, it is not clear if post extraction water treatment activities will allow for immediate distribution to customers or if temporary storage will be required to allow for adequate treatment and water quality monitoring.	Provide more detailed description of the groundwater extraction and treatment process. Incorporation of a flow chart into the DEIR may be necessary to adequately illustrate the extraction and treatment process.

G3-4

G3-5

G3-6

G3-7

G3-8

G3-9

Response to Comment G3-4

Comment noted. The references included in the document are complete.

Response to Comment G3-5

Figure 3.1-11, among others, is a color figure. To view this and other figures in color, please see the version of the DEIR on the EBMUD website at www.ebmud.com/water_&_environment/water_supply/current_projects/bayside_groundwater/default.htm, or a CD-ROM can be provided upon request.

Response to Comment G3-6

The 2005 DEIR references the EIR for the Water Supply Master Plan (WSMP) (EDAW 1993) and Urban Water Management Plan (UWMP) (EBMUD 2001b), where detailed information on EBMUD water supply and demand is presented and analyzed. Relevant summaries of these documents have been provided in the DEIR. See Master Response 9 — Need for Project for further details.

Response to Comment G3-7

Comment noted.

Response to Comment G3-8

Raw water would not be injected into the aquifer. All injected water will be transported from the water treatment plants through EBMUD's treated water distribution system. See Master Response 6 – Radon & Chloroform, Section 3.6.2. The source of water for aquifer recharge is described on page 1-9, Section 1.4.5 of the DEIR.

Response to Comment G3-9

Extracted water will be pumped directly to the wellhead treatment facility, treated, and conveyed directly to the existing distribution main at Grant Avenue through a new 500-foot connection. No storage facilities will be provided for water following extraction from the aquifer. Monitoring of treated water quality will be done at the wellhead treatment facility as required by the Department of Health Services.

Letter G3. San Lorenzo Village Homes Association.

San Lorenzo Village Homes Association
 Comments to DEIR
 Bayside Groundwater Project
 May 11, 2005

Comment #	Section	Page	Comment	Recommendation
7	2.4	2-7	Figure 2.2, Relationship of the Project Components, does not include the additional project objectives presented in Section 2.3.	Revise Figure 2.2, Relationship of the Project Components, to include the additional project objectives on page 2-2 related to meeting near-term and future drought conditions and collecting data to ensure informed decision-making by EBMUD.
8	2.4.1.2	2-15	The Maintenance section of Phase 1 Operations does not provide enough detail on the anticipated degree of maintenance.	Provide a more detailed description of the anticipated maintenance required by injecting non-native water into the aquifer.
9	2.4.1.2 and 3.1.6	2-15 and 3.1-35	Although sections 2.4.1.2, Phase 1 Operations, and 3.1.6, Impacts and Mitigation Measures, acknowledge that there is a potential for clogging due to mixing of injection water and the aquifer, this section does not adequately address the significance of clogging on project maintenance and long term cost to the project.	Provide more detail regarding the affect of well clogging on maintenance requirements and anticipated costs to maintain the well's productivity. Identify the anticipated life of the well, based on clogging and other factors that may adversely impact the wells productivity.
10	2.4.1.3	2-19	The last sentence on the page identifies that a detailed monitoring plan will be developed by EBMUD in consultation with local groundwater management agencies, but neglects to include the Community Liaison Group in the monitoring plan development process.	Revise this sentence to include the Community Liaison Group in the monitoring plan development process
11	2.4.1.3	2-19	The Water Quality Monitoring section does not identify the water quality sampling and analysis analytical suite or frequency. This section needs to identify water quality sampling and analysis objectives to ensure that the water monitoring program is sufficient.	Revise this section to identify water monitoring objectives for the project. The objectives should also incorporate other data collection sets, such as post injection water level monitoring and post extraction recovery rates within the aquifer.
12	2.4.2.2	2-20	Phase 2 Facilities describes potential treatment facility(ies) options, should Phase 2 be implemented.	In addition to evaluation of a centrally located treatment facility (at a well cluster) versus wellhead treatment, any Phase 2 evaluations should also evaluate the feasibility of developing infrastructure from each wellhead to a centrally located treatment facility
13	2.5, global	2-21, global	Phase 1 Construction indicates that the extensionmeter cluster will require 24-hour drilling operations. The DEIR does not address construction, such as the extensionmeter field development as a potential impact.	Identify potential impacts caused by construction of the proposed project, specifically on residences in the vicinity, and identify adequate mitigation measures for those impacts.

G3-10

G3-11

G3-12

G3-13

G3-14

G3-15

Response to Comment G3-10

The additional project objectives described in Section 2.3 are shown in Figure 2-2 under Phase 1 only. This is because these two project objectives only apply to Phase 1.

Response to Comment G3-11

Maintenance activities to remove debris from the well system and address potential clogging are described in Section 2.4.1.2 of the DEIR and may include periodic backflushing to remove any particulates swept into the well, as well as cleaning through mechanical brushing or chemical treatment to address any clogging that may occur. In addition, pH adjustment of the recharge water may be used to control clogging, as described on page 3.1-36 of the DEIR. These maintenance costs are expected to be minor. With proper maintenance and operation, the well is expected to last at least 20 years.

Response to Comment G3-12

See Master Response 3 — Monitoring Programs. The CLG will have an opportunity to review and provide input on the monitoring program.

Response to Comment G3-13

See Master Response 3 — Monitoring Programs. As described in Mitigation Measure 3.2-1b, sentinel groundwater monitoring wells will be analyzed for contaminants known to exist in the area such as petroleum hydrocarbons and chlorinated hydrocarbons. Groundwater monitoring well analyses will also include mineral analysis and disinfection byproduct analysis. The Bayside Phase 1 production well will be analyzed for the full list of drinking water standards and constituents as required by the California Department of Health Services; see Table 3.2-2 in the DEIR for a list of primary and secondary standards.

Response to Comment G3-14

At this time, EBMUD does not know whether it will pursue Phase 2 or, if it does pursue it, exactly what Phase 2 facilities would be necessary. It is not known whether Phase 2 would include a centrally located treatment facility serving multiple wells or well clusters, or treatment at each wellhead. See Master Response 7 – Project Phasing. If EBMUD decides to implement Phase 2 a subsequent EIR would consider various options for treatment.

Response to Comment G3-15

Each extensometer within the cluster will include a small shed enclosure approximately 10 feet by 10 feet and about 12 feet high, as well as a possible solar panel for electrical supply. The extensometer cluster will be located as shown on Figure 2-4 of the 2005 DEIR. Installation of each extensometer in the cluster will take approximately 1 week of 24-hour drilling, though the extensometers may be drilled simultaneously. Overall construction activities for the extensometers will last approximately 2 to 3 months.

No significant impacts from construction of the extensometer cluster on residences in the vicinity are expected. The nearest residences to the extensometer location are approximately 1,500 feet away. As noted in Table 3.9-7 (included in Section 4.3.1 of this Final EIR), noise

levels for drilling would be well below the sleep interference criterion. As noted in Section 3.9.5.1 of the DEIR, noise from construction equipment drops significantly at 100 feet from the equipment, and the 1,500-foot setback distance of the closest residences will keep the temporary noise impacts at a less than significant level. As described in Section 3.8.5 of the DEIR, construction of Phase 1 would generate an estimated 18 vehicle trips per day, and no transportation impacts would occur. No mitigation measures for installation of the extensometer cluster are required.

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Letter G3. San Lorenzo Village Homes Association.

San Lorenzo Village Homes Association
 Comments to DEIR
 Bayside Groundwater Project
 May 11, 2005

Comment #	Section	Page	Comment	Recommendation
14	2.7.1	2-21	Although significant changes have occurred to the project since the original DEIR, the project schedule calls for a 45-day comment period.	Extend the comment period to 120 days to allow for the affected public to digest the changes and research the new project.
15	2.7.2	2-22	Table 2-2, Required Permits for Phase 1, does not mention any permit requirements from the San Francisco Bay Regional Water Quality Control Board or the State Water Resources Control Board. Additionally, required permits from local agencies (for construction and well installation activities) are not identified.	Identify what permitting requirements, if any, are required by these agencies.
16	3.0, Global	3.1-1 et al.	The DEIR refers to the Southeast Bay Plain Groundwater Basin (SEBPP) and the Niles Cone Groundwater Basin (NCGWB) and identifies the SEBPP and NCGWB as groundwater basins. According to Department of Water Resources, Bulletin 118 (which is cited in the Section 3 references), the SEBPP (basin #2-9.04) and NCGWB (basin #2-9.01) are identified as subbasins of the Santa Clara Valley Groundwater Basin.	Revise the DEIR to accurately represent the geologic and hydrogeologic setting and features. An additional figure showing the subbasins within the greater basin may be necessary.
17	3.0	3.1-1 through 3.11-4	The Phase 1 Environmental Setting, Impacts, and Mitigation Measures does not adequately address the water sources proposed or anticipated for injection into the aquifer, nor does it adequately address the anticipated potential for ASR to violate the anti-degradation policy established in the Region 2, RWQCB Basin Plan.	Provide a section describing how the injection of chlorinated (treated) water into the aquifer will affect the aquifer's groundwater quality. Specifically demonstrate that the injection process will not degrade the Deep Aquifer, since it is designated as a beneficial use aquifer. Identify what analysis has been performed and what analysis and monitoring is planned to ensure that the Deep Aquifer is not degraded.
18	3.1.2.1	3.1.5	The cross section, Figure 3.1-2, Generalized Geologic Cross-Section of SEBPP, R. & NCGWB is not shown in plan view. Additionally, the cross section does not identify the thickness of San Francisco Bay (Bay) at the marina (at the northwest end of the cross section).	Identify the cross section transect in plan view and identify any projection along the transect. EBMUD should illustrate the thickness of the Bay to further illustrate the separation between the Deep Aquifer, relative to other geologic features that the public is familiar with so that the vertical separation of the project is more clearly illustrated (e.g., regarding subsidence concerns).

G3-16

G3-17

G3-18

G3-19

G3-20

Response to Comment G3-16

See Master Response 10 — Public Outreach and Notice, and DEIR Review.

Response to Comment G3-17

Based on California Government Code Section 53091(d), the building and zoning ordinances of local jurisdictions do not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water. All of the Bayside Project facilities meet this definition.

Operation of Phase 1 will require a waiver from the Regional Water Quality Control Board. See Section 4, Errata, for a revised version of Table 2-2.

Response to Comment G3-18

The geologic and hydrogeologic setting information for the SEBPB and the Niles Cone Ground Water Basin (NCGWB) are accurately represented in the DEIR. DWR does define the SEBPB and NCGWB as sub-basins of the Santa Clara Valley Basin. However, this does not change any of the setting information or conclusions provided in the DEIR.

Response to Comment G3-19

The water source for injection is described in the DEIR in Sections 2-1 and 3.2-1. The quality of water to be injected meets all regulatory criteria and will be treated at either the Orinda Water Treatment Plant or the Upper San Leandro Water Treatment Plant (WTP) prior to injection. See Master Response – Radon and Chloroform, Section 3.6.2 of the DEIR. In fact, the quality of injected water may be considered better than the native groundwater. For example, total dissolved solids in injected water will be about 40 to 200 milligrams per liter (mg/L), while in groundwater it is about 440 to 520 mg/L. The beneficial uses of the Deep Aquifer are preserved, not degraded, by injecting treated drinking water into the aquifer. No identified beneficial use (drinking water, irrigation, etc.) would be compromised by the project.

Response to Comment G3-20

The cross-section shown in Figure 3.1-2 in the DEIR does not intersect San Francisco Bay. A plan view of the region showing the location of the cross-section is shown in Figure 3.1-2a, included in the errata section of this Final EIR. In addition, the depth of the Bay near the Proposed Project site is only a few feet, and would not be discernible on the scale (+200 to -1,200 feet) of the cross-section in Figure 3.1-2.

Letter G3. San Lorenzo Village Homes Association.

San Lorenzo Village Homes Association
 Comments to DEIR
 Bayside Groundwater Project
 May 11, 2005

Comment #	Section	Page	Comment	Recommendation
19	3.1.2.2	3.1-11	Not all of the groundwater contours are labeled in Figure 3.1-4, Groundwater Contours (FT MSL), Newark and Equivalent Aquifer (1990-1998 Average). Figure 3.1-7, Historic Water Levels SEBPG and NCGWB, is difficult to read.	Complete the labels for the groundwater contours.
20	3.1.2.2	3.1-17	The Impacts and Mitigation Measures and Disinfection By-products Formation subsections do not adequately address the impact of disinfectant by-products (DBP) within the aquifer, which may degrade the aquifer and potentially pose a human health threat. This section indicates that during pilot studies trichloroethane (TCE) concentrations were produced in the aquifer at or near the MCL (80 µg/L); however, further discussion or mitigation was not provided.	Present the figure in landscape on 11 x 17 so that each trend is separated more. Revise this section to more adequately address THM and other DBP production and accumulation in the aquifer and identify how the data collected during the pilot studies relates to the proposed project. Specifically, compare the magnitude of pumping during the pilot study to anticipated pumping levels during Phase 1 and address whether DBP production will exceed MCLs. Evaluate the significance of this issue's impact and identify proposed mitigation measures.
21	3.1.6 and 3.2.3.2	3.1-36, 3.2-13, and 3.2-14	Insufficient data was collected (or presented) in Figure 3.2-4, Test Cycles-Chloroform and Chloride Data, to evaluate the effect of injecting chloraminated water into the aquifer. Similarly, data trends in Figure 3.2-4 appear to merely mimic injection and extraction trends and do not appear to provide any information on THM breakdown, accumulation, or degradation.	Provide a table showing all sample data conducted during the pilot study activities. Additional injection of treated water into the aquifer and analysis of groundwater quality over time (without extraction) appears warranted to identify the level of DBP accumulation and degradation so that the total impact can be assessed and mitigated.
22	3.1.6	3.1-51	Mitigation Measure 3.1.3b indicates that EBMUD could connect well owners of wells rendered inoperable and cannot be appropriately modified (based on predicted drawdown at the time of Phase 1 certification).	EBMUD should commit to connecting well owners to their service area and establish billing schedules and well destruction reimbursement, rather than just suggest a connection as a possibility.
23	3.1.6	3.1-53	Evaluation of Potential Impact 3.1-5 concludes that there is not potential impact of saltwater intrusion into the SEBPG or NCGWB, as a result of Phase 1 pumping and no mitigation measures are proposed.	The planned groundwater monitoring schedule (identified in Section 2.4.1.3) should include sensory wells that monitor for saltwater intrusion, especially if Phase 2 is implemented.

G3-21

G3-22

G3-23

G3-24

G3-25

Response to Comment G3-21

Figure 3.1-4 has been revised to show more contour labels. The revised figure is included in the errata section of this Final EIR.

Response to Comment G3-22

As requested, Figure 3.1-7 has been printed on an 11x17 sheet. The larger print-out of Figure 3.1-7 is included in the errata section of this Final EIR.

Response to Comment G3-23

See Master Response 6 — Radon and Chloroform.

As discussed in 3.2.3.2 of the DEIR, trihalomethanes (THMs) are the primary disinfection byproducts of interest for EBMUD. THM concentrations detected in the aquifer during the distribution system injection pilot studies were at or slightly below those in the injected water, indicating that THMs are not formed after injection. Possible explanations for potential decreases of THM concentrations include mixing with native groundwater or biodegradation. It is also worth noting that since the pilot studies were conducted, due to modifications in treatment operations, THM levels in EBMUD water from both the Orinda WTP and the USL WTP have decreased and are well below the maximum contaminant level (MCLs) (see Section 4.3.1, Table 3-2.1). Lower levels in injected water would result in lower levels in the extracted water than was observed during the pilot study. The concentration of THMs in recharge water is well below MCLs and work to date (injection of more than 200 million gallons) has shown that concentrations in the aquifer are stable or decreasing. Accordingly, there is no indication that THMs are forming in the aquifer under injection conditions anticipated for the project and therefore THMs are not expected to increase in concentration with an increase in volume of injection or extraction.

Chloride, a conservative (non-reactive) constituent, was used as a tracer during the study to assess potential gains and losses of THM from injected water. Observed THM concentrations generally paralleled those of the chloride, indicating that THM levels were relatively stable and constant in concentration and did not exhibit significant breakdown, accumulation or degradation during the 8-month testing period.

Studies at some ASR sites have indicated that THM concentrations may decrease with increasing lengths of storage (Pyne 1995, AWWA Research Foundation 2005). It is currently uncertain whether this will occur at the Bayside Project site with increasing periods of storage, up to several years at a time.

Response to Comment G3-24

Mitigation Measure 3.1-3b on page 3.1-51 of the DEIR as written is appropriate because connection to the EBMUD system may not be the preferred solution for every well. Well modifications such as well or pump deepening may be preferred.

Response to Comment G3-25

The monitoring program, as described in Master Response 3 — Monitoring Programs, will include monitoring of water quality and water levels, which will assure that any saltwater intrusion, though not anticipated from the Bayside Project, would be detected.

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Letter G3. San Lorenzo Village Homes Association.

San Lorenzo Village Homes Association
 Comments to DEIR
 Bayside Groundwater Project
 May 11, 2005

Comment #	Section	Page	Comment	Recommendation
24	3.1.6	3.1-55	Mitigation Measure 3.1-6 addresses permanent subsidence. There are anecdotal reports from San Lorenzo residents that during the 1977-78 drought groundwater pumping by neighborhood wells did produce some settlements, resulting in fracturing of outdoor concrete works and misalignment of household doorframes. Granting that these wells were screened in the shallow aquifer, an apparent history of past localized settlement area caused by groundwater extraction is established.	The DEIR should fully assess this impact and provide for a process for resolving possible claims of settlement damage.
25	3.5.5	3.5-12	It has been established that under certain conditions, liquid injection into geologic formations has caused minor seismic activity. Based on the proximity of the proposed project to known fault systems (e.g., the Hayward Fault system) capable of significant seismic activity, discussion of potential seismic activity as a result of the project appears appropriate. This section does not address the potential for the project to induce seismic activity.	Revise Section 3.0 to address this issue.
26	3.6	3.6-1 through 3.6-7	Radon emissions from groundwater pumping are not discussed as a potentially significant impact to sensitive receptors (human health).	Background radon concentrations in ambient and indoor air should be monitored and compared to radon concentrations in indoor air as a result of Phase 1.
27	3.9	3.9-1 through 3.9-13	Noise impacts are not assessed for 24-hour drilling during the extensometer well field installation activities.	Address the potential impacts and mitigation measures required as a result of anticipated 24-hour drilling activities.
28	3.10	3.10-1 through 3.10-4	Phase 1 Utilities does not adequately discuss the impacts associated with injecting non-potable water into the Deep Aquifer on the well and pipeline infrastructure. The DEIR acknowledges that non-potable water injection can create precipitates in the well, but Phase 1 Utilities does not address the anticipated burden on regular maintenance or infrastructure replacement. Similarly, effects on EBMUD's existing water supply system are not addressed.	Provide a more detailed description of the anticipated maintenance required to keep the injection/extraction well serviceable. Additionally, identify the anticipated changes in water chemistry within the affected portions of EBMUD's existing water supply system and how these changes will affect maintenance for EBMUD and EBMUD's customers.

G3-26

G3-27

G3-28

G3-29

G3-30

Response to Comment G3-26

See Master Response 1 — Subsidence. Anecdotal information is generally not regarded as substantial evidence of a potential impact. Even so, as described in the Master Response, settlement is not an anticipated impact from the Proposed Project. See response to comment G1-30 for information on the EBMUD process for claims.

Response to Comment G3-27

See Response to comment G1-34.

Response to Comment G3-28

See Master Response 6 — Radon and Chloroform.

Response to Comment G3-29

The noise impacts from 24-hour drilling are quantified in Table 3.9-7 on page 3.9-12 of the DEIR. Footnote D of this table explains how the daytime speech interference criterion and the nighttime sleep interference criterion were derived. Column 7 of this table shows that projected drilling-related noise levels at the closest residential receptors would not exceed the daytime speech interference or nighttime sleep interference criteria. Therefore, drilling-related impacts would be less than significant and no mitigation is required.

Response to Comment G3-30

See response to comment G3-11.

Letter G4. Heron Bay Task Force.

Board of Directors
East Bay Municipal Utility District
375 11th Street
Oakland, CA 94607

April 7, 2005

MNC file
RECEIVED

APR 11 2005

SECRETARY'S OFFICE

cc: A. Coate ✓
W. Alcott
F. Etheridge

Dear EBMUD Board of Directors:

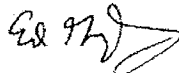
On behalf of the Heron Bay Community - over 1,500 residents living adjacent to the proposed Bayside Groundwater Project injections site - we request an extension of the public comment period for the New Draft Environmental Impact Report (NDEIR). A 120-day comment period would allow our residents to properly review the NDEIR given: 1) this project is technically complex and our residents need adequate time to fully evaluate this document (four years in the works at EBMUD), and 2) many of our residents are non-English speaking and need additional time to work with bi-lingual neighbors to review the NDEIR.

G4-1

As you know from the many public comments submitted on the Original Draft Environmental Impact Report (ODEIR) in 2001, many San Leandro residents have serious concerns regarding the health and property impacts of the Bayside Groundwater Project. After several extensions, the public comment period for the ODEIR ended up at 130 days, reflecting the significant level of public interest.

We hope that you value the concerns of our community, especially with the new phasing aspects of the Bayside Project, and allow adequate time to review the NDEIR. Please respond in writing not later than April 13, 2005.

Sincerely,



Ed Gonzalez
Heron Bay Task Force
P.O. Box 1702
San Leandro, CA 94577

Response to Comment G4-1

See Master Response 10 — Public Outreach and Notice, and DEIR Review.

Letter G5. Heron Bay Homeowners Association (Berger & Hopkins).

A. ALAN BERGER
JANE FRANCIS HOPKINS

BERGER & HOPKINS
ATTORNEYS
210 NORTH FOURTH STREET
SUITE 150
SAN JOSE, CALIFORNIA 95112

TELEPHONE (408) 536-0500
FAX (408) 536-0504

April 15, 2005

VIA FACSIMILE TRANSMISSION
& OVERNIGHT MAIL

RECEIVED
APR 20 2005
WATER SUPPLY IMPROVEMENTS

Board of Directors
East Bay Municipal Utility District
375 11th Street
Oakland, Ca. 94607

RE: Heron bay Homeowners Association re:
Environmental Impact for the Bayside Groundwater Project

Gentlepersons:

G5-1

As you may be aware, we are the attorneys for the Heron Bay Homeowners Association. In the past we have been in contact, both orally and in correspondence, with Ms. Angela Knight. The last such contact was on November 18, 2004. Heron Bay Homeowners Association is comprised of more than 600 individual single-family homes and town homes and represents more than 1,500 residents all of whom are potentially affected by the proposed Groundwater Project.

The purpose of this correspondence is to formally request an extension of the time period for public comment to the New Draft Environmental Impact Report (NDEIR). It is our understanding that the public comment period is set to expire on April 28, 2005, a mere 45 days from issuance of the notice of the right to comment. As you may recall, the Association, on August 6, 2001, filed a Response to the Draft Environmental Impact Report that was previously published for comment for this project. That response was the product of extensive scientific effort and research. Since that time more than two and one-half years have passed during which engineers and consultants for EBMUD have presumably been working on the current version of the NDEIR. The Association considers it completely unreasonable that they are expected to now review this massive document, which is complex and highly scientific in nature, in a mere 45 days. Furthermore, the mechanics of distributing such a document; notifying homeowners who have a vested interest in the project and its viability and design, keeping in mind that the majority of those owners do not speak English or are not fluent in English; and gathering a consensus opinion for the public response is nearly impossible.

It goes without saying that this is an extremely important project to the owners of homes in the Heron Bay complex. The past history of this project clearly suggests that there was and is an overwhelming public interest in the project as originally designed. There is no reason to suspect that that interest will be any less for the current suggested design. As the residents of Heron Bay feel that their homes and, in most cases, their most valuable

Response to Comment G5-1

EBMUD extended the public comment period for the DEIR as described in the section entitled "Extended Comment Period" in Master Response 10 — Public Outreach and Notice, and DEIR Review.

Letter G5. Heron Bay Homeowners Association (Berger & Hopkins).

Page 2

assets are potentially being dramatically and negatively affected by the construction of this project, it would be unreasonable for the Board to deny or overlook this simple request for additional time. The Association is asking for an additional 90 days from April 28, 2005 for their public comment to the NDEIR. The Association will have to expend considerable time and expense even to meet this deadline should it be granted. Again, we would submit that considering that the District had more than two years to develop this amended document that equity would dictate that this very reasonable request be granted. If your Board fails to grant this request, we will have only a few remaining days to respond. Should the Association be forced to prepare and respond to a document that potentially affects their homes and property values in a manner that denies them due process, the Association reserves it's right to raise this issue in a Court of competent jurisdiction.

We would appreciate a response to our request not later than April 21, 2005. .
Thank you for your anticipated cooperation in this request. If you have any questions with any of the above, please do not hesitate to call the undersigned.

G5-1

Very truly yours,


A. Alan Berger
AAB/ceb

CC: Ms. Angela Knight
Heron Bay Homeowners Association
via Professional Association Services

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Letter G6. Heron Bay Homeowners Association (Berger & Hopkins).

A. ALAN BERGER
JANE FRANCIS HOPKINS

BERGER & HOPKINS
ATTORNEYS
210 NORTH FOURTH STREET
SUITE 150
SAN JOSE, CALIFORNIA 95112

TELEPHONE (408) 536-0500
FAX (408) 536-0504

REC-11
APR 21
WATER SUPPLY IMPROVEMENT

April 18, 2005

VIA FACSIMILE TRANSMISSION
& OVERNIGHT MAIL

Board of Directors
East Bay Municipal Utility District
375 11th Street
Oakland, Ca. 94607

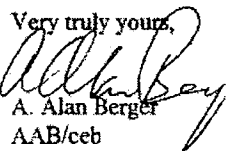
RE: Heron bay Homeowners Association re:
Environmental Impact for the Bayside Groundwater Project

Gentlepersons:

G6-1 [Last week we forwarded correspondence to your attention requesting that the date for public comment to the New Draft Environmental Impact Report for the Bayside Groundwater Project be continued 90 days from the current due date of April 28, 2005. A copy of correspondence from the City of San Leandro wherein they request an additional 120 days is attached hereto in support of our request. Of course we agree with the City that a 120 day extension is warranted. If, however, you do not see fit to grant the request for 120 days, then Heron Bay Homeowners Association renews its request for an extension of not less than 90 days.

Thank you again for you anticipated cooperation in this regard. If you have any questions on any of the above, please do not hesitate to call the undersigned.

Very truly yours,


A. Alan Berger
AAB/ceb

Enclosure

CC: Ms. Angeia Knight
Heron Bay Homeowners Association
via Professional Association Services

Response to Comment G6-1

EBMUD extended the public comment period for the DEIR as described in the section entitled "Extended Comment Period" in Master Response 10 — Public Outreach and Notice, and DEIR Review.

Letter G6. Heron Bay Homeowners Association (Berger & Hopkins).

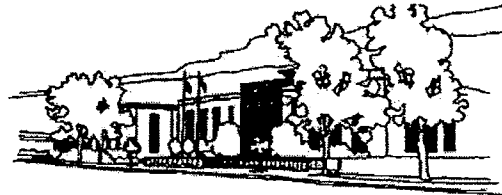
Page 2

City of San Leandro

Civic Center, 835 E. 14th Street
San Leandro, California 94577

Office of the Mayor 510-577-3356
Fax 510-577-3340

April 12, 2005



Ms. Angela Knight
East Bay Municipal Utility District
375 11th Street, MS 407
Oakland, California 94607

Re: Request for Extension of the Comment Period on the EBMUD Bayside Groundwater Storage Project New Draft Environmental Impact Report

Dear Ms. Knight:

Respectfully, the City of San Leandro requests that the comment period for the new Draft Environmental Impact Report on the EBMUD Bayside Groundwater Storage Project be extended by 120 days.

G6-2 We have heard concerns from the community regarding the project and residents have asked for more time to review and comment on this lengthy technical document. City staff would appreciate additional review and comment time as well.

Please extend the comment period on the new Draft EIR for 120 days to allow adequate time for everyone to respond. Also, please notify the City of San Leandro in writing by April 25, 2005 of your decision regarding our request for the 120-day extension.

Thank you for your consideration of this important matter.

Sincerely,

Shelia Young
Mayor

cc: City Council
EBMUD Board Member Frank Mellon
EBMUD Board Member Doug Limev

Response to Comment G6-2

This letter is a duplicate of letter L2; see the response to comment L2-1.

Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).



FITZGERALD ABBOTT & BEARDSLEY LLP
ATTORNEYS AT LAW

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Paul S. Kibel
pkibel@fablaw.com

RECEIVED
MAY 1 2005
WATER SUPPLY IMPROVEMENTS

May 12, 2005

HAND DELIVERY

Ms. Angela Knight
Water Supply Improvements Division-Bayside Groundwater Project
East Bay Municipal Utility District
375 Eleventh Street - MS 407
Oakland, CA 94607

William Patterson
President of Board of Directors
East Bay Municipal Utility District
375 Eleventh Street
Oakland, CA 94607

Doug Linney
Board of Directors Representing Ward No. 5
East Bay Municipal Utility District
375 Eleventh Street
Oakland, CA 94607

Re: **Heron Bay Homeowners Association's Comments on
EBMUD's March 2005 Draft Environmental Impact Report for
Bayside Groundwater Project**

Dear Ms. Knight, Mr. Patterson and Mr. Linney:

This law firm represents the Heron Bay Homeowners Association ("Heron Bay HOA"), a California nonprofit mutual benefit corporation comprised of the owners of more than 700 individual homes located within the Heron Bay Project in the City of San Leandro. The members of Heron Bay HOA live in homes that are located directly above the groundwater aquifer and directly adjacent to the above-ground facilities proposed for the Bayside Groundwater Project.

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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

Page 2

Ms. Angela Knight

Page 2

May 12, 2005

In March 2005, the East Bay Municipal Utility District ("EBMUD") released a document entitled *Draft Environmental Impact Report for the Bayside Groundwater Project ("2005 DEIR")*. Pursuant to the California Environmental Quality Act ("CEQA"), EBMUD has provided interested parties with an opportunity to submit public comments on the 2005 DEIR.

Notwithstanding the severe time restraints resulting from the limited public comment period afforded by EBMUD (discussed further below), Heron Bay HOA has worked diligently to review and analyze the 2005 DEIR. As set forth below, this review and analysis indicates that the manner in which EBMUD proceeded with its preparation of the 2005 DEIR did not comply the requirements of the California Public Records Act and CEQA, and that the 2005 DEIR document itself also does not comply with CEQA in several critical aspects.

G7-1

The procedural and substantive legal deficiencies identified in this letter are so fundamental that they cannot be cured by EBMUD simply revising the 2005 DEIR and proceeding to a Final Environmental Impact Report. Rather the 2005 DEIR should be set aside, and a new DEIR for the Bayside Groundwater Project should be prepared and recirculated for public comment. Moreover, as discussed further below, the apparent willful concealment and non-disclosure of information by certain EBMUD staff during the environmental review process for the Bayside Groundwater Project raises fundamental questions of agency trust and accountability that need to be addressed.

I. A History of EBMUD's Bayside Groundwater Project, 2000-2005

In 2000, EBMUD completed a study entitled *Update of Water Demand Projections (2000 Demand Study)* indicating that water demand in the agency's service area would be 277 million gallons per day ("mgd") by the year 2020. This demand was well in excess of the amount of water that EBMUD could supply given its current storage capacity.

G7-2

To address its need for additional water storage capacity to meet projected water supply demand, in 2000 EBMUD began exploring the possibility of storing diverted surface water (from local runoff and the Mokelumne River) in the groundwater aquifer beneath the City of San Leandro. Initially, EBMUD's proposed project was entitled the Oro Loma Project and called for only one well to inject and extract the surface water into the aquifer with a collective annual capacity of about 1 mgd. However, when EBMUD determined that a project of this limited size would not enable it to make any sizable improvement in the water storage and supply problems identified in the 2000 Demand Study, it expanded this scope of the proposed storage project dramatically to include 26 wells and a collective annual capacity of about 15 mgd. This new expanded project (renamed the Bayside Groundwater Project) represented a 2600% increase in the amount of wells and a 1500% increase in the amount of stored surface water from the original Oro Loma Project.

In March 2001, EBMUD released a Draft Environmental Impact Statement ("*2001 DEIR*") for the expanded Bayside Groundwater Project. In response to the 2001 DEIR, EBMUD received numerous public comments letters expressing serious concerns over impacts to water quality, air quality, and built structures (e.g. homes, schools, businesses) overlying the aquifer that could suffer structural damage as the ground rose and fell when the aquifer was being filled

Response to Comment G7-1

Comment noted.

Response to Comment G7-2

Several factual corrections to this comment are noted below:

1. The original capacity of the single-well project studied by EBMUD in 2000 was 2 to 3 million gallons per day (mgd), not 1 mgd as stated in the comment letter.
2. There is no discussion of "water storage and supply problems" in the District-wide *Update of Water Demand Projections* (commonly called the "2000 Demand Study"). Rather, the analysis in that document describes only water demand.
3. The 2000 Oro Loma project was an internal preliminary study by EBMUD. The reason for abandoning further study of the 2000 project was not related to the lack of improvement to the water supply, but rather, was related to the site constraints that limited the ability to aerate and remove radon. At the time, because of uncertainty in the ultimate outcome of the radon regulation, EBMUD believed that radon removal by aeration would be necessary. The proposed Oro Loma site was too small to include an aeration tower in addition to the other treatment proposed, making the 2000 project infeasible. Further study of the 2000 project was therefore halted.

Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

Page 3

Ms. Angela Knight

Page 3

May 12, 2005

G7-3 or drained. Among those that submitted public comment letters on the 2001 DEIR was Heron Bay HOA and a community organization called Heron Bay Task Force. The comment letter submitted by Heron Bay HOA in 2001 included the expert opinion letter of Thomas D. Elson of Luhdorff & Scalmanini Engineers. Copies of the comment letters submitted by Heron Bay HOA and Heron Bay Task Force (on the 2001 DEIR) are attached respectively as Exhibits A and B and are incorporated herein by this reference. Following the submission of comments on the 2001 DEIR by Heron Bay HOA and the Heron Bay Task Force, Ms. Irene Ip (a member of both the Heron Bay HOA and the Heron Bay Task Force) submitted a California Public Records Act request to EBMUD to obtain additional information about the Bayside Groundwater Project. A copy of the records request submitted by Ms. Ip to EBMUD is attached as Exhibit C and incorporated herein by this reference.

G7-4 In light of the adverse public response to the 2001 DEIR, EBMUD spent the next several years internally discussing and revising the project and in March 2005 released a new DEIR for the Bayside Groundwater Project. The project description in the 2005 DEIR had changed significantly from the project description in the 2001 DEIR. Instead of the single groundwater storage project calling for 15 mgd that was proposed in the 2001 DEIR, the 2005 DEIR's project description calls for a "Phase 1" with only 1 mgd, and a "possible Phase 2" with "up to 10 mgd." In essence, "Phase 1" of the project description in the 2005 DEIR is the original Oro Loma Project considered back in 2000 (and rejected by EBMUD as too small) and "Phase 2" of the project description in the 2005 DEIR is a slightly scaled-back version on the expanded storage project formerly proposed in the 2001 DEIR.

G7-5 On April 20, 2005, a public hearing on the 2005 DEIR was held at Washington Manor Middle School in San Leandro. At this meeting, several members of Heron Bay HOA gave public testimony, and Heron Bay HOA's President Christopher Malloy made a detailed power point presentation. Copies of the power point slide presented by Christopher Malloy at this hearing are attached as Exhibit D and are incorporated herein by this reference.

In addition to the chronology noted above, the remainder of our comments require identifying upfront the following key staff people at EBMUD that have been involved in environmental review of the Oro Loma/Bayside Groundwater Project:

Robert Jung: In the period from 2000-mid 2001, Robert Jung was employed at EBMUD as the agency's Supervisor of the Environmental and Regulatory Section. During this period, Robert Jung civil service title at EBMUD was Senior Mechanical Engineer. In his position as Supervisor of EBMUD's Environmental and Regulatory Section, Robert Jung's responsibilities included insuring the agency's compliance with CEQA. Robert Jung was part of the EBMUD team that worked on the Oro Loma Project and the 2001 DEIR for the Bayside Groundwater Project. He holds a B.S. and M.S. in Mechanical Engineering from the University of California at Berkeley, and retired from EBMUD in March 2004.

Mark Williamson: Mark Williamson was EBMUD's Project Manager for the Bayside Groundwater Project during the period when the 2001 DEIR was being prepared. He was appointed to the acting Division Manager position in February 2001 by John Lampe. Robert Jung reported to Mark Williamson about CEQA compliance issues during the preparation of 2001 DEIR.

Response to Comment G7-3

A factual correction to the comment is noted as follows. The comment letter of Thomas D. Elson was not attached to the comment letter from the Heron Bay Home Owners Association received by EBMUD in 2001. Also, Attachment B to the May 12, 2005 Heron Bay HOA comment letter is not the 2001 comment letter of the Heron Bay Task Force, but that of another group. It should be noted that this comment is not related to the 2005 DEIR. See also master Response 12 – Comments on the 2001 DEIR.

Response to Comment G7-4

Factual corrections to this comment are noted below:

1. The 2000 project was not rejected because its production capacity was too small. See response to comment G7-2.
2. The Phase 2 project discussed in the 2005 DEIR is not the same as the project described in the 2001 EIR. In addition to the substantial difference in capacity (up to 10 mgd for a potential Phase 2 as described in the current EIR vs. 15 mgd in the 2001 base project), the potential Phase 2 project area is much larger than the original project area considered in 2001. As explained in Section 2.4.2 of the 2005 DEIR, at this time the capacity and location of future Phase 2 facilities are not known, but may extend throughout the Phase 2 area.

Response to Comment G7-5

See responses to letter G2.

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Alex Choate: Alex Choate was EBMUD's Manager of Regulatory Compliance when the 2001 DEIR was prepared. He currently serves as EBMUD's Manager of Water Supply Improvements and was appointed to this position by John Lampe.

John Lampe: John Lampe was EBMUD's Director of Water Planning during the period when the 2001 DEIR was being prepared. Mark Williamson reported to John Lampe in connection with the Bayside Groundwater Project, and John Lampe reported directly to EBMUD's General Manager Dennis Diemer.

Kurt Ladensack: Kurt Ladensack served as EBMUD's Manager of Water Supply Improvements during the period when the 2001 DEIR was being prepared.

Joaquin Cruz: Joaquin Cruz was an Associate Civil Engineer with EBMUD during the period when the 2001 DEIR was being prepared. Joaquin Cruz reported to Robert Jung in connection with environmental regulatory compliance matters related to the Bayside Groundwater Project.

I-Pei Hodge: I-Pei Hodge was a Junior Civil Engineer with EBMUD during the period when the 2001 DEIR was being prepared. I-Pei Hodge reported to Robert Jung in connection with environmental regulatory compliance matters related to the Bayside Groundwater Project.

II. EBMUD's Compliance with the California Public Records Act

As noted above, on October 16, 2001, Ms. Irene Ip (a member of both the Heron Bay Task Force and the Heron Bay Homeowners Association) sent a California Public Records Act Request to EBMUD (see Exhibit C) seeking disclosure of a broad range of categories of records related to the Bayside Groundwater Project. Among other things, Ms. Ip specifically requested that EBMUD provide her copies of the following categories of documents:

- "All documents (including but not limited to memorandums [sic], emails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Mark S. Williamson to EBMUD employee Mr. Robert Jung that occurred between January 1, 2000 and October 5, 2001..."
- "All documents (including but not limited to memorandums [sic], emails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Robert Jung to EBMUD employee Mr. Mark S. Williamson that occurred between January 1, 2000 and October 5, 2001..."
- "All documents (including but not limited to memorandums [sic], emails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Robert Jung to EBMUD employee Mr. Joaquin Cruz that occurred between January 1, 2000 and October 5, 2001..."

Ms. Ip's October 16, 2001 California Public Records Act request further provided that: "If EBMUD is withholding from disclosure any Public Record responsive to this Request on the

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grounds that such Public Record is exempt from disclosure under express provisions of the California Public Records Act, or otherwise, please provide the following information for the withholding of each such Public Record as required pursuant to California Government Code §6255: (A) The general nature of subject matter of the Public Record; (B) The identity (name, address and position) of the author(s), and, if applicable, the sender(s) of the Public Record; (C) The date on which the Public Record was prepared and, if applicable, the date(s) on which the Public Record was transmitted; (D) The identity (name, address and position) of the addressee(s) and recipient(s) of the Public Record (including any copies of the Public Record); (E) The claimed basis for withholding the Public Record; (F) Other information sufficient to demonstrate the justification for withholding the Public Record."

G7-6 In response to Ms. Ip's request, EBMUD produced a small stack of documents containing approximately 50 pages. None of the documents produced by EBMUD were written correspondence between Robert Jung, Mark Williamson and/or Joaquin Cruz, and EBMUD did not identify, mention or provide any information about documents that were responsive to Ms. Ip's request but that were not being produced because of an alleged privilege/exemption under California Government Code §6255.

G7-7 Since receiving these documents, Heron Bay HOA has learned that EBMUD withheld a large number of responsive documents from the response it provided to Ms. Ip's Public Records Act request. Many of these withheld/omitted documents, identified and quoted from below (and attached as exhibits to this letter), indicate that certain EBMUD staff may have been intentionally manipulating the CEQA documentation process to minimize disclosure of the adverse environmental effects of the Bayside Groundwater Project.

Below are examples (provided in chronological order) of some of the documents in EBMUD's possession that the agency did not include in its response to Ms. Ip's October 16, 2001 California Public Record Act request:

- G7-8
- March 27, 2000 memo from Robert Jung to Kurt Ladensack that provided in pertinent part: "... You have requested that we provide an opinion as to the adequacy of this document to fulfill the obligations of the California Environmental Quality Act (CEQA). **In the professional judgment of the regulatory staff, the draft document... does not meet the objectives of CEQA to disclose to decision makers and the public the significant environmental effects of proposed activities or enhance public participation in the planning process... Issues raised by the regulatory staff during the initial review process which were eliminated from consideration or documentation in the current version of the draft document include the following:** Treatment of the Oro Loma project as independent of the planned and budgeted local groundwater projects (i.e. up to five well fields) and lack of analysis of their potential cumulative effect. The appearance of piece-mealing has not been satisfactorily resolved... **Other issues for which questions raised by this document include...** accusations of piece-mealing should we purchase the adjacent parcel for expansion of the well fields or treatment system; the water quality sphere of influence to certain customers; environmental justice implication... **In conclusion, the document as modified during the multiple draft stage within**

Response to Comment G7-6

It should be noted that this comment is not related to the 2005 DEIR.

The comment states that in October 2001, Ms. Irene Ip, a member of both Heron Bay Task Force and the Heron Bay HOA, sent a Public Records Act request to EBMUD. The comment summarizes the records request and notes that EBMUD produced approximately 50 pages of documents in response to that request. The comment then states that "[s]ince receiving these documents, Heron Bay HOA has learned that EBMUD withheld a large number of responsive documents from the response it provided to Ms. Ip's Public Records Act request." This implies Heron Bay only recently learned that documents were withheld in 2001. In fact, as explained below, EBMUD wrote Ms. Ip twice in 2001 on potential and claimed exemptions from disclosure under the Public Records Act.

The first such letter, dated October 26, 2001, was EBMUD's initial determination letter to Ms. Ip. At that time, EBMUD had just received the records request and had not yet compiled all responsive documents, so was not in a position to determine what documents were exempt. Nevertheless, to provide advance notice that some documents might be withheld from production based on the law, the letter stated that records would be made available "subject to a reservation of rights to withhold those documents which are exempt from disclosure under the Public Records Act, the Evidence Code, any other statutory exclusions, and applicable case law, including the deliberative process privilege." EBMUD then continued reviewing its files to compile responsive documents.

Once that compilation was completed, EBMUD wrote Ms. Ip a second letter, dated December 19, 2001, informing her that it had finished compiling records in response to her request, and that those records were ready for review in the Secretary's Office. EBMUD stated that it had produced all requested records not otherwise exempt under four expressly cited exemption provisions of the California Public Records Act and "applicable case law including the deliberative process privilege." In short, Heron Bay HOA learned 4 years ago, not recently, that EBMUD claimed exemptions as to the 2001 request. Neither the HOA nor Ms. Ip requested additional information or expressed concern about the adequacy of the 2001 EBMUD response until the issue was raised in the 2005 Heron Bay HOA comment letter. The documents withheld from disclosure in 2001 were validly withheld pursuant to the four expressly cited exemption provisions of the Public Records Act and applicable case law, including the deliberative process.

Response to Comment G7-7

This comment does not relate to the 2005 DEIR but instead relates to the 2001 project that EBMUD is no longer pursuing. EBMUD reviewed the record and found no evidence of efforts by EBMUD staff to manipulate the 2001 CEQA documentation process by withholding information from the public. See also response to comment G7-6, above.

Response to Comment G7-8

This comment is not related to the 2005 DEIR.

The project referenced in these bullet items was not publicly proposed by EBMUD. Rather, it was only preliminarily studied by EBMUD and rejected for the reasons set forth in

response G7-2, and is not relevant to the current Proposed Project. The attachments to this comment letter reflect the review process for a CEQA document at EBMUD in which a draft document is circulated for review by experts throughout the organization. Those experts provide input and the document is edited before being published. In the event that there is a difference of opinion between reviewers and the document preparers, EBMUD management considers all the information and makes an appropriate decision. In the case of the notes referenced in this comment letter, the decisions did not always support Mr. Jung's views.

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the Water Supply Improvements Division no longer reflects the sensibilities of the Environmental and Regulatory Section..." (bold added.) A copy of this email is attached as Exhibit E and incorporated herein by this reference.

- March 30, 2000 email from Robert Jung to John Lampe that provides in pertinent part: "...On the issue of Oro Loma -- our section developed an environmental document through considerable arm twisting by Kurt [Ladensack] and others. We don't agree with the content, but have no choice but to allow them to send it out. However, Kurt has insisted that we buy off on this document, but based on previous memorandums [sic] sent to him, we are not comfortable and cannot compromise our principles. For the record, my section is concerned that the document prepared is inadequate and there appears to be a rush to push this document through. We have not fully disclosed information that may be detrimental to the project and particularly information that our customers should be aware of." (bold added.) A copy of this email is attached as Exhibit F and incorporated herein by this reference.
- March 30, 2000 email from Robert Jung to I-Pei Hodge that provides in pertinent part: "...I know that it is not easy for you, but if you compromise your principles then you have nothing left. It is easy to let people bully you... **The 5,000 or 15,000 taps that are impacted are residents in 'working class' neighborhoods apparently with many apartment buildings. The residential mix includes many representatives of ethnic minority groups.** They are not likely to voice concerns unless we bring up the issues. It is our responsibility as public servants to bring up the issues. **If this project was located in an affluent neighborhood, I certainly doubt that the issues we bring up would be summarily dismissed...** In the long run, we don't know how this plays out, but even if we get overruled, the effort was well worth it..." (bold added.) A copy of this email is attached as Exhibit G and incorporated herein by this reference.
- April 4, 2000 memo from Robert Jung to Kurt Ladensack regarding CEQA compliance issues for what was then called the Oro Loma Project. This memo provides in pertinent part: **"It can be argued that, given the District's current water quality, addition of the carcinogen radon and increased total dissolved solids does substantially degrade our water quality (the discussion is silent about side-by-side-comparison between the existing Mokelumne water quality standards enjoyed by our customers and the departure from these standards and its impact on a limited number of customers). It can further be argued that, the effect is a potentially significant impact (unless mitigated by treatment), as even radon concentrations in drinking water at 300 piC/L (the proposed MCL) will cause 2 in 10,000 individual lifetime fatal cancer risks and at 500piC/L (the approximate concentration of radon in our extracted water) will cause 3.35 in 10,000 individual lifetime fatal cancer risks (Data from EPA Proposed Radon Rule, Table VII.1-Evaluation of Radon Levels). The environmental effect of human fatal cancer risks should be clearly stated in the CEQA document, and if the determination is made that this effect is not significant, the reasons why should be stated...** The document does not

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include analysis of environmental justice issues... A segmented population of District customers will be served water of lesser quality and increased health risk than that received by other customers..." (bold added.) A copy of this memo is attached as Exhibit H and incorporated herein by this reference.

G7-9

- May 11, 2000 memo from Robert Jung to Kurt Ladensack that provides in pertinent part: "...Prejudging the case and direction of environmental documentation and trying to control its content is not fair to the project or our customers. It undermines the credibility of the document and hides the true impacts... Our repeated concerns about the Oro Loma environmental document have been ignored and instead met with a torrent of accusations of sabotaging the project..." (bold added.)

G7-10

- March 14, 2001 email from Mark Williamson to Robert Jung that provides in pertinent part: "...I am expecting you to redraft the chloroform section. At our 3/12 meeting we agreed that the section need say nothing more than: problem identified, consulted with Air District, determined probably could obtain permit but additional study/Air Board consultation necessary, project will not be operated without Air District permit. This is what my edits reflect, and based on our 3/12 discussion what I am expecting you to redraft for my review by close of business today. A memorandum stating what is wrong with this approach is not where you should be spending your time..." A copy of this email is attached as Exhibit I and incorporated herein by this reference.

G7-11

- March 15, 2001 memo from Robert Jung to Mark Williamson that provides in pertinent part: "...After review and consultation with Geier and Geier, our air quality consultant, and review of the March 9, 2001 work of CH2MHill, I have deep reservations concerning the approach to minimize their analysis as discussed in our meeting of March 12th. You should seek a legal opinion whether the approach compromises full disclosure issues required of an environmental document... Since their chloroform analysis mirrors the radon analysis, to not include their extensive chloroform work would be inconsistent with the rest of the environmental documentation, discounts their work, and is not recommended as it could be described as a lack of full disclosure... The breakpoint chlorination indicates that the modeled site will have some impact on residential receptors... One can draw conclusion that it would be better to site a facility furthest away from any residential receptors... Again this is useful information and should be reported and not ignored..." (bold added.) A copy of this email is attached as Exhibit J and incorporated herein by this reference.
- March 16, 2001 email from Robert Jung to Mark Williamson, cc'd to John Lampe, that provides in pertinent part: "Per your oral request, I have transferred the CH work and Section 3.12 to you for reassignment... At this point, I am not going to question your decision even though I was not consulted beforehand... If your decision results in full disclosure of the modeling work conducted by Geier and Geiger and CH, then not all is lost..." A copy of this email is attached as Exhibit K and incorporated herein by this reference.

Response to Comment G7-9

This comment is not related to the 2005 DEIR.

The document referred to in this comment is not attached to this comment letter, but the comment appears to be referring again to the project under study by EBMUD in 2000 and later rejected. Also see responses to comments G7-2 and G7-7.

Response to Comment G7-10

This comment is not related to the 2005 DEIR.

These comments relate to the 2001 DEIR process, not the 2005 DEIR process. Furthermore, the currently proposed Phase 1 2005 Bayside Project does not include aeration treatment or related air emissions like those described in the comments. Therefore, since chloroform emissions are only associated with aeration treatment, no such chloroform emissions would occur for Phase 1. Aeration is not anticipated for Phase 2, but treatment technologies cannot be determined until facility locations are known. See also Master response 6 – Radon and Chloroform.

The entire 2001 DEIR, including the chloroform emissions section, was prepared with review and editing by subject matter experts. This internal review is common CEQA document preparation practice. Differences of opinion are often decided by the next level manager, in this case, Mr. Williamson. Ultimately, the findings of the 2001 DEIR with respect to chloroform emissions were essentially unchanged from the original proposed language circulated within EBMUD. Both versions found that impacts related to chloroform emissions were less than significant after mitigation. EBMUD could not operate the project without a permit from the Bay Area Air Quality Management District (BAAQMD) and could not obtain such a permit unless project impacts were less than significant.

In their July 6, 2001 comment letter on the 2001 DEIR, BAAQMD stated that in regard to permitting, "It is not clear what specific requirements of our New Source Review program would apply to the project..." and "...the project would be subject to an analysis of emissions of toxic air contaminants, including chloroform. Depending on the estimated health risk, control of chloroform emissions *may* be required as well" (emphasis added). Later in the letter, BAAQMD asked that chloroform modeling results be included in the Final EIR. BAAQMD described no deficiencies in the 2001 DEIR analysis that would inhibit EBMUD's working with BAAQMD at a future time to secure the necessary permits for the 15-mgd project. However, as discussed above, the Phase 1 Project analyzed in the 2005 DEIR will not result in any chloroform emissions. Further, EBMUD has made no commitment to implement Phase 2. If, based on information gathered from Phase 1 operations, EBMUD decides to implement Phase 2, an analysis of chloroform emissions would be prepared if necessary at that time when treatment facility type and location(s) are identified.

Response to Comment G7-11

This comment is not related to the 2005 DEIR.

These comments relate to the 2001 DEIR process, not the 2005 DEIR process. Furthermore, the Phase 1 Project does not include aeration treatment or related air emissions like those

described in the comments, and therefore will not result in chloroform emissions. Aeration is not anticipated for Phase 2, but treatment technologies cannot be determined until facility locations are known. See also Master Response 6 – Radon and Chloroform. Allegations that EBMUD withheld air emission health risk information and chloroform emission data in the 2001 DEIR public review process are not supported by a detailed review of project records. The "Geier & Geier report" referred to by Heron Bay HOA was in fact a two-page screening-level overview of a worst-case scenario of chloroform emissions, which specifically stated that further analysis using *actual* meteorological data, instead of synthetic worst-case assumptions, "may show that the risk never reaches significant levels under any operational scenario." A copy of the original Geier & Geier two-page overview is presented as Attachment C. The Geier & Geier overview was redundant to a previously completed analysis of chloroform emissions by CH2M HILL. Importantly, the Geier & Geier and CH2M HILL screening-level recommendations are the same: conduct a more detailed study. A detailed risk assessment using a model that relied on site-specific wind information instead of generic assumptions was completed by CH2M HILL and published by EBMUD on its Bayside Project web page and provided at public meetings during the 2001 DEIR public comment period. The CH2M HILL analysis indicated that a permit could be obtained from the BAAQMD for the then proposed 15-mgd project analyzed in the 2001 DEIR. However, as discussed above, the Phase 1 Project analyzed in the 2005 DEIR will not result in any chloroform emissions. Further, EBMUD has made no commitment to implement Phase 2. If, based on information gathered from Phase 1 operations, EBMUD decides to implement Phase 2, an analysis of chloroform emissions would be prepared if necessary at that time when treatment facility type and location(s) are identified.

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- March 22, 2001 email from Robert Jung to John Lampe, cc'd to Mark Williamson, that provides in pertinent part: "... Chloroform section of Draft EIR... Just had an opportunity to review it and realized it is too late... This version chops off the Geier and Geier work and does not include the CH2MHill work. The original chloroform writeup mirrored the radon writeup, yet it was excluded...My main concern is the issue of full disclosure as stated in my 3/15/01 memo. We paid thousands of dollars for Geier and Geier and CH to conduct an air quality modeling analysis. Because the analysis shows that we may impact certain residential receptors, we are not going to use this information. There may be justification for this, but it certainly seems 'odd.' Sooner or later, someone will find out that we did this type of modeling and did not report it. What would the San Leandro mayor or other political types think of our credibility?" (bold added.) A copy of this email is attached as Exhibit L and incorporated herein by this reference.
- March 23, 2001 email from Robert Jung to John Lampe, cc'd to Mark Williamson, that provides in pertinent part: "It is true that money spent on analyses does not automatically result in its inclusion in an environmental document. However, the chloroform analysis written by Geier and Geier followed the exact same format as the write-up for radon. We are willing to accept the radon write-up, but not the chloroform?... My section did not manage the CH2MHill work. Since their work was a final and not a draft, it appears to have been accepted... The present chloroform write-up does not address my concerns... If the modeling work was favorable to our project, would we be more inclined to include it?... Without full disclosure, the appearance of inequity may be much worse than the inequity, magnified by chloroform as a carcinogen. Our opponents will surely bring up environmental justice as a reason we chose not to include this information." (bold added.) In this email, Robert Jung recommends that EBMUD "rewrite the chloroform section to include full disclosure and send it out as an addendum. It is better to reassure the public of full disclosure rather than explain it later, after they discovered we had adequate information, and did not provide it." (bold added.) A copy of this email is attached as Exhibit M and incorporated herein by this reference.
- March 29, 2001 email from Robert Jung to Mark Williamson, cc'd to John Lampe, that provides in pertinent part: "Your final write-up completely ignores the Geier and Geier modeling study that was conducted similar to that conducted for radon. The 3/9/01 CH2MHill work that shows potential cancer risk impacts was also not included. Other than the statement 'EBMUD conducted preliminary modeling of...', neither of these modeling results was referenced at the end of the chapter. The statement 'preliminary modeling results indicate that a permit can be obtained...' is not supported by these studies, particularly if breakpoint chlorination is being considered. Ignoring these issues could subject the environmental documentation to recirculation..." (bold added.) A copy of this email is attached as Exhibit N and incorporated herein by this reference.

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- March 29, 2001 email from Robert Jung to Mark Williamson, that provides in pertinent part: "...Impact 3.12-3 re Chloroform Emissions was substantially re-written... As I have discussed in recent email and in my 3/15/01 memorandum, the re-write is inadequate. **It fails to address two modeling studies that were conducted. One of the modeling studies shows potential cancer risk impact from chloroform emissions on residential receptors and a nearby school,** depending on the site location. Pushing future analysis onto the Bay Area Air Quality Management District does not presently address potential concerns of citizens that reside in the impacted area, particularly their input on operating conditions and site locations to minimize cancer risk issues... Central Facility Site Screening Criteria... **When it was discovered that impacts on residential and industrial receptors from chloroform were site dependent, it was recommended that the existing central treatment facility site screening criteria be reviewed. The modeling studies indicate that some of the sites had much more impact on residential receptors than others and should have been included... However our recommendation was ignored and X'ed out...**" (bold added.) A copy of this email is attached as Exhibit O and incorporated herein by this reference.

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- April 5, 2001 email from Robert Jung, cc'd to Mark Williamson, that provides in pertinent part: "Ed Chin is a scientist at Genentech-SSF and former member of the Board of Directors of Heron Bay. His main concern had to do with radon emissions... When he [Ed Chin] asked about the chloroform, I told him that the level of detail that he is asking is not in the EIR but may be contained in the modeling studies mentioned, but not included or referenced. When he desired the information, I told him to direct his request to Angela [Angela Knight at EBMUD] via email... **This is the Pandora's box that I forewarned by not providing full disclosure in the chloroform write-up. Rest assured that others will also want these modeling studies. I don't believe we have a legitimate right not to provide it...**" (bold added.) A copy of this email is attached as Exhibit P and incorporated herein by this reference.

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- April 9, 2001 email from Robert Jung to Mark Williamson, cc'd to John Lampe and Joaquin Cruz, that provides in pertinent part: "...My notes document concerns that I had and still have about the environmental document... My concerns in these areas are well known and have been stated many times to you... I have yet to hear an acceptable explanation why those items are not considered and to claim that these issues have not been brought up is preposterous. Certainly, a resident in the impacted area should be given assurances that the groundwater aquifer is protected from potential contamination. The present environmental document does not offer that level of comfort... **Removing my section from the air quality permitting or chloroform discussion does not make the issues go away...**" A copy of this email is attached as Exhibit Q and incorporated herein by this reference.

Response to Comment G7-12

This comment is not related to the 2005 DEIR.

See response to comment G7-10.

Response to Comment G7-13

This comment is not related to the 2005 DEIR.

A copy of this email was made available to Ms. Ip in 2001. See also response to comment G7-11.

Response to Comment G7-14

This comment is not related to the 2005 DEIR.

See responses to comments G7-10 and G7-11.

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- April 23, 2001 email from Robert Jung to Mark Williamson, that provides in pertinent part: "Pursuant to your verbal request, we removed the reference (3.12-13) related to the chloroform SCREEN3 model conducted by our consultant, Geier and Geier, from the initial Administrative Record.... While conducting a final review of the documents before submission to the Secretary's office, we discovered an inserted document that was troubling and cast suspicion on our environmental process. This document was an unsigned memorandum dated April 17, 2002 from John Schroeter, Manager of Environmental Compliance, to you entitled 'Supporting Documentation for Evaluation of Chloroform Emissions from Aeration Tower System, Bayside Groundwater Project. Several things are troubling and they include the following... 1) This document was inserted without our knowledge, and no reason has been provided to our section with respect to this action... 3) The documentation is a justification, after the fact, and we did not rely upon it for the Draft EIR. Its inclusion now and insertion after publication of the March 22, 2001 DEIR appears suspicious... 4) There is an appearance of impropriety as the attachment was stamped "DRAFT" and the original technical 3/0/01 memorandum from CH2M Hill did not arrive with a draft stamp... The document should not have been included and its inclusion compromises the integrity of our process. We have been concerned about the issue of chloroform emissions and its lack of full disclosure... These maneuvers provide further ammunition to critics concerning the credibility of our environmental process..." (bold added.) A copy of this email is attached as Exhibit R and incorporated herein by this reference.
- May 1, 2001 email from Robert Jung to Mark Williamson, cc'd to John Lampe and Joaquin Cruz, that provides in pertinent part: "I believe you missed the point in my memo. Your first paragraph is inaccurate and does not address why the SCREEN3 analysis conducted by Geier and Geier was removed... My point/points in the memo was the appearance of deception in manipulating the administrative record w/o my knowledge. You again inserted another memo dated April 20th to replace the April 17th memo w/o telling me. These memos were developed after submittal of the DEIR and should not have been included in the initial Administrative Record... We had talked about the need for credibility in our documentation, but it is apparent that is not the direction being taken..." (bold added.) A copy of this email is attached as Exhibit S and incorporated herein by this reference.
- May 10, 2001 email from Robert Jung to Mark Williamson, cc'd to John Lampe and Joaquin Cruz, provides in pertinent part: "...The issues of manipulating information on chloroform emissions is troubling and has been documented in numerous emails to you... From the outset, we have been concerned about the issue of chloroform emission and its lack of full disclosure... This has resulted in suspicion and casts further doubt on the rest of the environmental documentation... I recommend that you and your air quality advisors formulate a plan on how to address the issue of trust and credibility on chloroform emissions, not only with the public but also with the BAAQMD, before your actions erode

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Response to Comment G7-15

This comment is not related to the 2005 DEIR.

After publication of the 2001 DEIR, CH2M HILL updated its technical memorandum on chloroform emissions based on new information provided by BAAQMD staff during a public meeting on May 1, 2001. The new information provided by BAAQMD indicated that the original CH2M HILL study was more accurate than first reported. EBMUD posted the revised technical memorandum on its web page on May 2, 2001 to provide the public with the most current information about the effects of chloroform emissions. A copy of the revised CH2M HILL Technical Memorandum is presented as Attachment D.

Also see responses to comments G7-10 and G7-11.

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our environmental integrity..." (bold added.) A copy of this email is attached as **Exhibit T** and incorporated herein by this reference.

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- A red-lined re-write of a draft of Section 3.8-2 of the *2001 DEIR* in which other EBMUD staff changed the proposed conclusion of Robert Jung's environmental staff that the "Extraction and injection of water may adversely affect contaminant plume migration. **Potentially significant and Unmitigable.**" (bold added.) The language was changed, over Robert Jung's objections, to read: "Extraction and injection of water may adversely affect contaminant plume migration. **Less than significant after mitigation.**" (bold added.) A copy of this red-lined re-write is attached as **Exhibit U** and incorporated herein by this reference.
- A red-lined re-write of a draft of Section 3.8-2 of the *2001 DEIR* in which other EBMUD staff changed the proposed conclusion of Robert Jung's environmental staff that the "Impact Significance After Mitigation: **Wells screened across the Deep Aquifer and overlying units might not be located during the District's well identification program. These wells may remain as vertical conduits for contamination.**" (bold added.) The language was changed, over Robert Jung's objections, to read: "Impact Significance After Mitigation: Wells screened across the Deep Aquifer and overlying units will be properly destroyed during the District's well identification program. Additional wells identified during operation will be properly destroyed. The monitoring program will identify potential movement of contaminated water before its impacts the wellfield..." A copy of this red-lined re-write is attached as **Exhibit U** and incorporated herein by this reference.
- A red-lined re-write of a draft of Section 3.8.5-6 of the *2001 DEIR* in which other EBMUD staff changed the proposed conclusion of Robert Jung's environmental staff that the "Extraction and injection of water may lead to seawater intrusion. **Potentially Significant and Unmitigable.**" (bold added.) The language was changed, over Robert Jung's objections, to read: "Extraction and injection of water may lead to seawater intrusion. **Less than significant after mitigation.**" (bold added.) A copy of this red-lined re-write is attached as **Exhibit V** and incorporated herein by this reference.
- A red-lined re-write of a draft of Section 3.8.5-6 of the *2001 DEIR* in which other EBMUD staff changed the proposed conclusion of Robert Jung's environmental staff that the "Impact Significance After Mitigation: **Potentially Significant and Unmitigable. Some wells screened across the Deep Aquifer and overlying units may not be located during the District's well identification program. These wells may remain as vertical conduits for seawater intrusion...**" (bold added.) The language was changed, over Robert Jung's objections, to read: "Impact Significance After Mitigation: **Less than Significant with Mitigation.** Wells screened across the Deep Aquifer and overlying units will be properly destroyed during the District's well identification program. Additional wells identified during operation will be properly destroyed. The monitoring program will identify potential movement of contaminated water before it impacts the

Response to Comment G7-16

These comments relate to the 2001 DEIR process, not the 2005 DEIR process.

The entire 2001 DEIR was prepared with review and editing by subject matter experts at EBMUD. This internal review is common CEQA document preparation practice. Edits to the internal review draft reflect the expertise of the review team and subject matter experts.

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wellfield..." (bold added.) A copy of this red-lined re-write is attached as Exhibit V and incorporated herein by this reference.

G7-17

- A hand-written, re-write (dated March 9, 2001) of Section 3.12.-3 of the 2001 DEIR in which Mark Williamson changed the conclusions of Robert Jung's environmental staff that the "Operation of the central treatment facility would have the potential to generate chloroform emissions. **Potentially Significant.**" (bold added.) The language was changed, over Robert Jung's objections, to read: Operation of the central treatment facility would have the potential to generate chloroform emissions. **Less than Significant with Mitigation.**" (bold added.) According to Robert Jung, Alex Choate was involved in this re-write. A copy of this red-lined re-write is attached as Exhibit W and incorporated herein by this reference.

G7-18

- A hand-written, re-write (dated March 9, 2001) of Section 3.12.-3 of the 2001 DEIR in which Mark Williamson changed the conclusions of Robert Jung's environmental staff that the "The above screening level health risk analysis indicated **potentially significant impacts** in 15 years of system operation using breakpoint chlorination and in approximately 30 years of operation under normal chlorination." (bold added.) The language was changed, over Robert Jung's objections, so that this entire sentence was struck out and removed. According to Robert Jung, Alex Choate was involved in this re-write. A copy of this red-lined re-write is attached as Exhibit W and incorporated herein by this reference.

Of particular significance, all of the documents identified and quoted from above were in the physical possession the EBMUD staff responsible for responding to Ms. Ip's California Public Records Act request. More specifically, on November 21, 2001, Robert Jung provided all of these documents to EBMUD's General Counsel office along with a cover memo that provided in pertinent part: "DATE: November 21, 2001. MEMO TO: General Counsel's Office. FROM: Robert A. Jung, Regulatory Compliance Division. SUBJECT: **October 16, 2001 Public Information Request of Ms. Irene Ip - Bayside Project.** Pursuant to the public information request of Ms. Irene Ip, attached are the following documents: 1) a 5-page index of the submitted materials; 2) **Ninety-eight (98) separate documents from my outlook sent file;** 3) **Seventy-nine (79) separate documents from my outlook received file;** 4) Twenty-two (22) separate written documents; 5) a 5-page chronological summary of oral communications...**Specific requests of Ms. Ip, which includes emails dated March 19, 23, and 29, 2001, April 12, and 17, 2001, and May 10, 2001 and memorandums dates August 3 and 23, 2000 and March 14, 2001 have been included...**" (bold added.) A copy of Robert Jung's November 21, 2001 cover memo to EBMUD's General Counsel is attached as Exhibit X and incorporated herein by this reference.

G7-19

According to Robert Jung: "I was told that Williamson took our 12 inch pile of documents and reduced it to 1/2 inch. He suppressed the information that was damning to him and especially the information that questioned why he modified public documents."

EBMUD's nondisclosure to Ms. Ip of the above identified and quoted documents, and EBMUD's refusal to identify the documents that were being withheld and the legal basis for this

Response to Comment G7-17

These comments relate to the 2001 DEIR process, not the 2005 DEIR process.

See response to comment G7-10. Additionally, the findings of the internal review draft document were never changed. Only the heading was changed to agree with the finding of "Less Than Significant" written in the text of the internal review draft document.

Response to Comment G7-18

These comments relate to the 2001 DEIR process, not the 2005 DEIR process.

See responses to comments G7-10 and G7-11. The original text of the review draft reflected the earlier analysis by Geier & Geier, which was then superseded by more detailed modeling performed by CH2M HILL. Therefore, the screening-level analysis by Geier & Geier was obsolete, and was removed from the 2001 DEIR document.

Response to Comment G7-19

See Response to Comment G7-6.

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withholding, are inconsistent with the requirements of the California Public Records Act. The Act favors disclosure of government records. CA Govt Code, 6250; Citizens for a Better Environment ("CBE") v. California Department of Food and Agriculture (1985) 171 Cal.App.3d 704, 711. Denying a disclosure request must be based on the specific exemption in the Act. CBE at 711. The exemptions are construed narrowly to accomplish the policy of disclosure. CBE at 711. Moreover, the California Supreme Court has held that "if records within the ambit of the request are withheld based on a statutory exemption, the agency must disclose that fact." Haynie v. Superior Court (2001) 26 Cal.4th 1061, 1073; CA Govt Code §6255(b).

In its response to Ms. Ip's request, EBMUD did not identify the responsive documents that it was withholding, nor did it identify a statutory exemption to justify such withholding. This is inconsistent with what Haynie and CA Govt Code §6255(b) require.

Section 6254(a) of the California Public Records Act provides a limited exemption for "Preliminary drafts, notes, or interagency or intra-agency memorandum that are not retained by the public agency in the ordinary course of business, provided that the public interest in withholding those records clearly outweighs the public interest in disclosure." In the case of the documents Robert Jung provided to EBMUD's General Counsel's office in response to Ms. Ip's request, however, these documents were in fact retained in the ordinary course of business and there does not appear to be a public interest in concealing/withholding documents that clearly outweighed the public interest in disclosure. Moreover, this exception has been interpreted very narrowly by the California courts, and has been found to only apply to opinions meaning that memorandum containing facts must be disclosed. CBE at 717. Furthermore, if internal agency memoranda contain both facts and opinions in which the facts are severable, the factual parts must be disclosed. CBE at 716. Most of the emails and memoranda from Robert Jung contained specific factual disclosures -- particularly regarding the omission of the Geier and Geier/CH2MHill chloroform studies and allegations about improper manipulation of EBMUD's administrative record for the Bayside Groundwater Project -- concerning the 2001 DEIR.

EBMUD's noncompliance with the California Public Records Act suggests an environmental review process that was flawed from the very beginning. Moreover, as discussed below in Section IV of this comment letter, the implications of EBMUD's omissions and acts in regard to environmental review of the 2001 DEIR bear directly on the legal adequacy of the 2005 DEIR.

G7-19

Additionally, although a fuller account of this is beyond the scope of this comment letter, it appears that certain EBMUD staff may have taken retaliatory measures against Robert Jung because of his refusal to condone the actions and omissions noted above. More specifically, it appears that following his involvement in the 2001 DEIR process Robert Jung was removed from his position, transferred and subject to internal agency review for alleged insubordination. Such retaliatory measures would appear to be in direct contravention of EBMUD Policy 6.4 (entitled Ethics Policy and adopted by EBMUD's Board on March 23, 2004) which provides in pertinent part that the agency will not "...intimidate, threaten, coerce, command or influence any other person for the purpose of preventing such person from acting in good faith to bring to the attention of the General Manager or the Board any information that, if true, would constitute: a work-related violation by a Board member of District employee of any law or regulation...[or]...a specified and substantial danger to public health or safety due to any

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Response to Comment G7-20

This comment does not relate to environmental issues under CEQA.

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action or omission of a District official or employee..." (bold added). These provisions are provided in the section of EBMUD Policy 6.4 with the heading "Protection of Whistleblowers."

In the weeks ahead, Heron Bay HOA will be sending EBMUD a California Public Records Act request to obtain additional documentation from the agency's files regarding the continued involvement of Mark Williamson, John Lampe, Kurt Ladensack and Alex Choate in the Bayside Groundwater Project's environmental review process, as well as regarding other matters covered in the emails and memos noted above.

III. EBMUD's Public Comment Period for the 2005 DEIR

G7-21

The San Leandro community that lives above and adjacent to the site of the Bayside Groundwater Project proposed in the 2005 DEIR and the 2001 DEIR contains a very large percentage of Chinese residents many of whom do not speak English well or at all. On April 15, 2005 a representative of the Heron Bay HOA sent a letter to the EBMUD's Board of Directors that provided in pertinent part: "The purpose of this correspondence is to formally request an extension of the time period for public comment to the New Draft Environmental Impact Report (NDEIR). It is our understanding that the public comment period is set to expire on April 28, 2005... The Association considers it completely unreasonable that they are expected to now review this massive document, which is complex and highly scientific in nature, in a mere 45 days... Keep in mind that the majority of those owners do not speak English or are not fluent in English... The Association is now asking for an additional 90 days from April 28, 2005 for their public comment to the NDEIR... Again, we would submit that considering the District has had more than two years to develop this amended document and that equity would dictate that this very reasonable request be granted..." A copy of the computerized version (without signature) of the April 15, 2005 letter sent to on Heron Bay HOA's behalf is attached as Exhibit Y and incorporated herein by this reference.

This question has been raised previously in the public comment letter submitted by the Heron Bay Task Force on the 2001 DEIR (see p. 12 of Exhibit B), which stated in pertinent part: "More than 70% of the residents of Heron Bay are Asian Americans, and the majority of the Asian-American residents are Chinese. Many of the Chinese residents in Heron Bay are recent immigrants who do not read and speak English... Because EBMUD has refused to provide Chinese translations of [CEQA] documents, and because EBMUD has refused to provide Chinese translations at public hearings, many of the Chinese-speaking residents of Heron Bay remain unaware and/or misinformed about the project."

Similar concerns were expressed by Heron Bay residents to EMBUD staff at the April 20, 2005 public hearing on the Bayside Groundwater Project, where once again Heron Bay HOA requested a 90-day extension for the time-period to file public comments to permit Chinese residents a reasonable period of time to translate, review and analyze the voluminous, highly-technical 2005 DEIR. Additionally, responding to the concerns expressed by the city's Chinese residents, the Mayor of the City of San Leandro, Ms. Shelia Young, sent a letter to EMBUD on April 12, 2005 that stated in pertinent part: "Respectfully, the City of San Leandro requests that the comment period for the new Draft Environmental Impact Report on the EMBUD Bayside Groundwater Storage Project be extended by 120 days. We have heard concerns from the community regarding the project and residents have asked for more time to review and comment

Response to Comment G7-21

See Master Response 10 — Public Outreach and Notice, and DEIR Review. This master response describes how EBMUD provided translated materials to non-English speaking project area residents well beyond the requirements under CEQA.

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on this lengthy technical document. . . Please extend the comment period on the new Draft EIR for 120 days to allow adequate time for everyone to respond. . . ." A copy of Mayor Young's April 12, 2005 letter to EBMUD is attached as Exhibit Z and incorporated herein by this reference.

At the April 20, 2005 public hearing on Bayside Groundwater Project, EBMUD did not grant the request of Heron Bay residents and the Mayor of San Leandro for an extension of the public comment period.

On September 22, 1998, EBMUD adopted Policy 71 entitled *Environmental Responsibility*. EBMUD Policy 71 provides in pertinent part: "The District will integrate environmental values and awareness into its decision-making, policies, programs and work practices, and regularly evaluate the success of this integration; promote an environmental stewardship ethic in its staff. . . assure that the District adheres to the principles of environmental justice. . . foster communication with employees and the public about the environmental significance of its current and future operations." (bold added.) EBMUD Policy 71 further provides that "Environmental justice assures that no community in the District bears an inequitable environmental risk burden as a result of District facilities, operations or practices."

Beyond inconsistencies with EBMUD Policy 71, EBMUD's refusal to make reasonable accommodations to permit Heron Bay's Chinese-speaking residents to translate and review the 2005 DEIR is also inconsistent with CEQA and constitutional due process requirements.

In the 1991 CEQA case of El Pueblo Para el Aire y Agua Limpio v. Kings County (Slip Op. No. 366045, Kings County Superior Court, December 30, 1991), the Court invalidated an EIR and a project approval because the local agency did not make appropriate accommodations to the significant portion of the impacted residents that only spoke and read Spanish. In this case the Court held: "The residents of Kettleman City, almost 40 percent of whom were monolingual in Spanish, expressed continuous and strong interest in participating in the CEQA review process for the incinerator project at the Kettleman Hills facility, just four miles from their own homes. Their meaningful involvement in the CEQA review process was effectively precluded by the absence of Spanish translation." A more detailed summary of the facts and holding in the 1991 Kettleman City case is provided in Exhibit AA, incorporated herein by this reference.

Similarly, in the 1979 case of Horn v. County of Ventura (24 Cal.3d 605), the California Supreme Court held that CEQA's minimal notice requirements may be insufficient to satisfy the constitutional due process mandates when constitutionally protected interests (such as the Heron Bay residents' interest in their homes) are at stake. The Horn Court held that where fundamental interests may be substantially affected by a proposed project, "notice must be reasonably calculated to afford affected persons the realistic opportunity to protect their interests." *Id.* at 617. If EBMUD's denies a significant portion of Heron Bay's residents a reasonable time period to public comment -- one that affords them a time period to translate and review the voluminous 2005 DEIR so that they have a "realistic opportunity to protect their interests" -- this denial would appear to run afoul of the Horn decision.

After denying the City of San Leandro's 120-day extension request and Heron Bay HOA's 90-day extension request at the April 20, 2005 public hearing, on April 26, 2005 (just two days before the comments were due) EBMUD's Board announced that it would grant a 15-day

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extension as a courtesy to the Mayor of San Leandro. This 15-day extension, however, still falls far short of providing Heron Bay's Chinese-speaking residents with a reasonable time period to translate the 2005 DEIR and therefore still greatly frustrates the ability of these residents to participate in the CEQA process and protect their interests.

G7-21

IV. CEQA's Requirement for Agency Completion of Environmental Review Process Prior to Acquisition of a Site for a Public Project

G7-22

CEQA Guideline §15004(b)(1) is entitled *Time of Preparation* provides: "With public projects [i.e. project undertaken by public agencies such as EBMUD], at the earliest feasible time, project sponsors shall incorporate environmental considerations into project conceptualization. **CEQA compliance should be completed prior to acquisition of a site for a public project.**" (bold and underline added.) The reasoning behind this CEQA Guideline §15004(b)(1) is plain enough -- if a public agency has already committed extensive funds to the purchase of a particular site for an anticipated project then it is unlikely that this agency will give serious consideration to alternative sites or project alternatives that do not involve use of the recently purchased site. CEQA Guideline §15004(b)(1) is akin to the parallel provisions of the federal National Environmental Policy Act ("NEPA") expressly prohibiting the irrevocable commitment of agency resources prior to completion of the environmental impact assessment process.

In the case of the Bayside Groundwater Project, in May of 2002 EBMUD purchased two properties in San Leandro that just happened to be located where the central water treatment facilities, well fields and aeration towers for the expanded project described in the 2001 DEIR were proposed to be sited. The two properties acquired by EBMUD in May 2002 were known as the Frito Lay Property and the McMillan Property. The Frito Lay Property is a 4.7-acre parcel on Grant Avenue (located just south of San Lorenzo Creek on the other side of the Heron Bay residences) for which EBMUD paid \$1,735,000. The McMillan Property is a 6.27-acre parcel on Grant Avenue in San Leandro (just south of San Lorenzo Creek on the other side of the Heron Bay residences) for which EBMUD paid \$1,660,000. Copies of documents evidencing EBMUD's purchase of the Frito Lay and McMillan Properties are provided in Exhibit BB and are incorporated herein by this reference. To confirm that the Frito Lay and McMillan Properties are located where the central water treatment facilities, well fields and aeration towers in the 2001 DEIR were proposed to be situated, one need only compare the Frito Lay and McMillan parcel maps provided in Exhibit BB with the project map provided in the attached Exhibit CC (incorporated herein by this reference). Exhibit CC is a copy of *Figure S-3: Central Treatment Facility Site Alternatives* that was included in the 2001 DEIR for the Bayside Groundwater Project.

At the time EBMUD purchased the Frito Lay Property and the McMillan Properties, EBMUD adopted resolutions for each of these acquisitions that provided in pertinent part that "...the District's purchase of the property is **not a project and is exempt under CEQA** because... the Board hereby restricts the District's use of the Property by the express condition that the District... will not use the property for any other type of use, **including as a central water treatment facility**, without first complying with CEQA by completing CEQA documentation." (bold added.) In essence, notwithstanding that the sole purpose for purchasing the Frito Lay and McMillan Properties was to facilitate the siting of the central water quality

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In 2002, EBMUD acquired the Frito-Lay and McMillan properties consistent with the CEQA Guidelines, conditioning its use of the sites on CEQA compliance, as follows.

The 2001 Draft EIR on the now-abandoned 15-mgd Bayside Project identified four preferred potential sites for the location of that project's central water treatment facility. The Frito-Lay warehouse property was one of those four sites, while the McMillan property was another. In 2002, when EBMUD was reviewing comments on the 2001 DEIR for the prior project (which was, as noted, ultimately abandoned), the Frito-Lay and McMillan properties became available for purchase.

The Frito-Lay property contained an operating warehouse and was 4.7 acres in size, while the McMillan property was approximately 6.3 acres of unimproved property. EBMUD was concerned that if other purchasers obtained the properties in 2002 and began operating businesses on them, they might later be displaced by EBMUD if the 15-mgd project was approved and implemented and one of the sites was needed for the central water treatment facility. As noted in its approvals of the two purchases, to avoid such displacement of other businesses, EBMUD determined to purchase the properties in 2002, consistent with the following CEQA Guidelines.

Guideline 15004(b)(2)(A) allows an agency to enter a land acquisition agreement prior to completing CEQA documentation so long as the agency conditions its future use of the property on CEQA compliance. Consistent with that Guideline, in its 2002 approval of the purchase of the Frito-Lay property, EBMUD expressly conditioned its use of the property by providing that EBMUD shall not increase the level of warehouse use of the property above its then-existing level of use and, further, that EBMUD will not use the property for any other type of use, including as a central water treatment facility, without first complying with CEQA by completing CEQA documentation.

In addition, EBMUD determined that its acquisition of the Frito-Lay property would not change the type of use or increase the level of use of the property from the warehouse uses then existing on the property. Thus, EBMUD concluded that acquisition of the Frito-Lay property would have no potential for causing a significant effect on the environment, and was exempt from CEQA under Guideline 15061(b)(3). EBMUD made a similar finding with regard to its decision authorizing the acquisition of the McMillan property.

EBMUD's purchase approvals also provided that if the Frito-Lay and/or McMillan properties were not used for the Bayside Project, EBMUD could use the properties for other District use or could sell them. Thus, acquiring the properties did not predetermine a specific course of action. The former Macmillan property remains vacant, while EBMUD does not use the former Frito-Lay warehouse site nor are there any private tenants on the premises. Utility service to the former Frito-Lay property remains active to keep the air handling equipment in working order and to provide security lighting. EBMUD crews occasionally perform outdoor maintenance such as weed removal at both properties.

Finally, as explained in the 2005 DEIR, Phase 1 of the current Bayside Project does not include a centralized water treatment facility. Thus, neither the McMillan nor Frito-Lay properties are needed for the current Phase 1 project. Phase 2, if and when it ever is proposed, also may not require a central water treatment facility (2005 DEIR, Section 2.4.2.2)

and will be subject to environmental review in a separate EIR. The purchase of the Frito-Lay and McMillan properties has not predetermined any specific course of action and was done consistent with the CEQA Guidelines.

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treatment facility, well fields and aeration towers specifically proposed in the *2001 DEIR*, EBMUD determined that it was not required to comply with CEQA in connection with these purchases so long as the agency promised to comply with CEQA at some later point in time.

EBMUD's determination that it need not comply with CEQA's environmental review requirements in connection with the agency's acquisition of the Frito Lay and McMillan Properties is inconsistent with CEQA Guideline §15004(b)(1) that establishes that "With public projects CEQA compliance should be completed **prior** to acquisition of a site for a public project." (bold added.) EBMUD attempted to circumvent this requirement by adopting a resolution suggesting that the agency had perhaps not yet made a final decision to proceed with the proposed siting of the central water treatment facility, well fields and aeration towers (and therefore that these sites were not yet really part of a "public project"). The administrative record on the Bayside Groundwater Project, however, reveals that this suggestion lacks credibility. As demonstrated further below, at the time the Frito Lay and McMillan Properties were purchased in 2002, it appears that EBMUD had already made an internal decision to proceed with the main elements of the project proposed in the *2001 DEIR*. At the time of the Frito Lay and McMillan purchases, the only question that remained for EBMUD was how to implement this internal decision to proceed while still somehow complying with the formalities of CEQA's environmental assessment process. As such, there does not appear to have been a proper legal basis for EBMUD to unilaterally excuse itself from compliance with CEQA in connection with the purchase of the Frito Lay and McMillan Properties because at that time the agency already had detailed information (in the *2001 DEIR*) on the "public project" for which these properties were intended to be used.

The connection between CEQA compliance and the acquisition of the Frito Lay and McMillan Properties was pointed out to EBMUD management as early as March 27, 2000, when Robert Jung sent a memo (see Exhibit E) to Kurt Ladensack expressing strong reservations about whether the agency could lawfully prepare a Negative Declaration for the narrowed Oro Loma Project that omitted environmental analysis of the broader plans for the central water treatment facility and well fields that the agency was also developing. In this memo Robert Jung stated: "...The appearance of piecemealing has not been satisfactorily resolved... Other issues for which questions raised by this document include accusations of **piecemealing should we purchase the adjacent parcel for expansion of the well fields or treatment system...**" (bold added.) Back in 2000, EBMUD heeded Robert Jung's caution that separating the Oro Loma Project from the acquisition of adjacent sites for the proposed treatment/well field project for purposes of environmental review would constitute piecemealing under CEQA. However, in taking the position in 2002 that no CEQA compliance was required for the acquisitions of the Frito Lay and McMillan Properties because these acquisitions could somehow be considered "separate" from the project proposed in the *2001 DEIR*, it appears that EBMUD embraced the very same segmentation approach (initially suggested for the Oro Loma Project) that it had earlier determined was legally untenable in late 2000. These considerations are addressed further in the following section on piecemealing, but are mentioned here as well because they provide further evidence of EBMUD's noncompliance with CEQA Guideline §§15004(b)(1).

In the weeks ahead, Heron Bay HOA will be sending EBMUD a California Public Records Act request to obtain additional documentation from the agency's files regarding the agency's decision to proceed with the purchase of the Frito Lay and McMillan Properties back in 2002.

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V. CEQA's Prohibition on Piecemealing/Segmentation

A. EBMUD's 2002 Acquisition of Frito Lay and McMillan Properties

As discussed in the previous section of this letter (Section IV), in 2002 EBMUD purchased the Frito Lay and McMillan Properties that had been identified in the 2001 DEIR as the proposed location for the Bayside Groundwater Project's central water treatment facility, well fields and aeration towers.

In the 2005 DEIR, however, EBMUD decided to take a different approach in its project description. Instead of specifically indicating its intention to proceed with the construction and operations of the central water treatment facility, well fields and aeration towers (as the agency had done in the 2001 DEIR), the 2005 DEIR states that these possible "Phase 2" components are project aspects that may or may not happen, and that at this point the agency simply can not tell at what locations these unknown "Phase 2" structures/facilities might be placed.

For example, Section ES.2.4 of the 2005 DEIR states: "...This Bayside Groundwater Project DEIR focuses on Phase 1, which is the immediate project EBMUD proposes to build and operate. At this time, EBMUD does not know whether it will pursue Phase 2, or, if it does, exactly what facilities would be necessary, where those facilities would be located... Therefore, although this DEIR contains some discussion of potential Phase 2 impacts, in-depth discussion of Phase 2 impacts is deferred until EBMUD proposes what, if any, Phase 2 facilities should be constructed and where. If and when EBMUD proposes Phase 2 facilities in the future, EBMUD will then complete a subsequent EIR." (bold added.)

As another example, Section 2.1 of the 2005 DEIR states: "...Phase 2 is the potential future expansion of project capacity... If the phase 2 expansion is pursued in the future, required facilities may be located in the same general area of San Lorenzo where Phase 1 facilities are proposed to be located, in portions of San Leandro or Oakland, or in some combination of these locations... Phase 1 is the focus of this DEIR. EBMUD has made no commitment to implement Phase 2... If EBMUD determines to implement Phase 1, EBMUD would at that time complete a subsequent EIR..." (bold added.)

Moreover, the 2005 DEIR takes the position that Phase 2 impacts cannot be discussed quantitatively, and can only be discussed in a general descriptive qualitative manner, because EBMUD simply does not know enough about what and where Phase 2 might be. Section 4.1.2 of the 2005 DEIR states: "Because the design and operation of the Phase 2 facilities cannot be identified until Phase 1 start-up operations are complete, potential Phase 2 impacts are discussed qualitatively." (bold added.) Section 4.2 of the 2005 DEIR states: "This section provides a qualitative evaluation of the potential impacts related to water quality, treatment and distribution for Phase 2 of the project." (bold added.) Section 4.3 of the 2005 DEIR states: "This section evaluates qualitatively the potential impacts on surface-water hydrology and water quality of Phase 2 of the project." (bold added.) Section 4.6 of the 2005 DEIR states: "This section qualitatively evaluates the potential impacts related to geology, soil, and seismicity for Phase 2 of the project." (bold added.) Section 4.6 of the 2005 DEIR states: "This section qualitatively evaluates potential impacts on air quality from Phase 2 of the project." (bold added.) The Phase 2 sections of the 2005 DEIR contain no reference to or acknowledgement of EBMUD's purchase of the Frito Lay and McMillan Properties in 2002, nor

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do the Phase 2 sections of the 2005 DEIR contain any reference to or acknowledgment of the detailed extensive facility descriptions and quantitative risk analysis of EBMUD's proposed central water treatment facilities, well fields, expanded storage and withdraw operations and aeration towers in the 2001 DEIR.

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CEQA prohibits the improper piecemealing/segmenting of larger integrated projects into smaller discrete project when it appears the agency is doing so to avoid disclosure and analysis of the adverse environmental impacts of the larger integrated project. CEQA Guideline §15165 (entitled Multiple and Phases Projects) provides: "Where individual projects are, or a phased project is, to be undertaken and where the total undertaking comprises a project with significant environmental effects, the lead agency shall prepare a single program EIR for the ultimate project... Where an individual project is a necessary precedent for action on a larger project, or commits the lead agency to a larger project, with significant environmental effects, an EIR must address itself to the scope of the larger project." (bold added.) The use of the word "or" (and not "and") in this provision is critical as it makes plain that so long as Phase 1 is a necessary precedent for Phase 2 of a larger integrated project, an agency is not relieved of its obligation to produce a single programmatic EIR that also encompasses Phase 2 simply because Phase 1 does not necessarily commit the agency to proceed with Phase 2. There is a long and consistent line of CEQA court decisions that have given full effect to the piecemealing/segmentation prohibition set forth in CEQA Guideline §15165.

In Natural Resources Defense Council v. City of Los Angeles (2002) 103 Cal.App.4th 268, the Court invalidated the City's EIR on piecemealing/segmentation grounds. In this case, the City had a three-phased project, and decided to conduct one EIR for Phase 1 and indicated its intention to later prepare a subsequent EIR before proceeding with Phase 2 and 3. While work on the Phase 1 EIR was still being prepared, however, the City had entered in a lease for real property to be used in Phases 2 and 3 of the project. The Court held: "Under the statute's plain language, the Guidelines adopted by the Resources Agency and binding on the City and the Port, and a long line of cases covering decades of CEQA enforcement, **this is segmentation of the project and per se violation of the statute.**" (bold added.) Like the lease entered into by the City of Los Angeles in this case, EBMUD's acquisition of the Frito Lay and McMillan Properties in 2002 evidences the agency's clear and present intention to proceed with what is referred to as "Phase 2" in the 2005 DEIR.

The decision in Natural Resources Defense Council v. City of Los Angeles is consistent with the CEQA piecemealing/segmentation analysis established by the California Supreme Court in the case of Laurel Heights Improvement Association v. Regents of the University of California (1988) 74 Cal.3d 376. In Laurel Heights, the California Supreme Court stated: "We hold that an EIR must include an analysis of the environmental effects of future expansion or other action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion will be significant in that it will likely change the scope or nature of the initial project or its environmental effects." (bold added.) This analytic framework has been adopted in numerous other CEQA piecemealing segmentation cases. City of Santee v. County of San Diego (1989) 214 Cal.App.3d 1438; See City of Carmel-By-the-Sea v. Board of Supervisors (1986) 183 Cal.App.3d 229; Citizens Association for Sensible Development of Bishop Area v. County of Inyo (1985) 172 Cal.App.3d 151; Bozung v. Local Agency Formation Commission (1975) 13 Cal.3d 263.

Response to Comment G7-23

See Master Response 7 — Project Phasing and response to comment G7-22.

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In terms of the piecemealing/segmentation analysis laid down by the California Supreme Court in Laurel Heights, the key question (which is a factual question) is whether the later phases of an integrated project are "foreseeable." Apparently recognizing the CEQA piecemealing/segmentation quagmire it might be stepping into by limiting the 2005 DEIR for the Bayside Groundwater Project only to Phase 1, EBMUD seems to hedge its bets by admitting that "Phase 2" is foreseeable but then asserting that the agency really has no idea what Phase 2 will be so it is unfortunately not in a position of offer any meaningful quantitative analysis. This position, however, is not born out by the facts. With the preparation of the 2001 DEIR, EBMUD has in fact set forth a detailed description the facilities that "Phase 2" is likely to cover, and with EBMUD's 2002 purchase of the Frito Lay and McMillan properties it is also quite foreseeable as to where the "Phase 2" facilities are likely to be sited. Moreover, for the reasons set forth in the section below, it also appears that EBMUD already knows the approximate size and scope of Phase 2 (because unless the project is a certain minimum size it will not meet EBMUD's needs). Taken together, these considerations all indicate that EBMUD is in a position to undertake a rigorous quantitative assessment of the environmental impacts of Phase 2 at this point in time, and that the reason it is refusing to do so is because this quantitative assessment will like raise the same public health and safety concerns that arose when the 2001 DEIR was released and circulated for public comment.

Moreover, the California Courts have also held that an agency cannot avoid a piecemealing/segmentation violation of CEQA simply by promising to do additional CEQA review before completing later phases of a larger integrated project. This argument was made, and expressly rejected, in Stanislaus Natural Heritage Project v. County of Stanislaus (1996) 48 Cal.App.4th 182. In this case, the County sought to approve an EIR that only covered Phase 1 of a multi-phase residential development. The Phase 1 EIR acknowledged that acquiring a long-term water supply might result in significant adverse impacts on water resources, but the County held that these impacts need not be considered in detail now because it promised that additional CEQA environmental review would take place later as part of these future phases. The California Court of Appeals responded to this "to be considered later" approach to CEQA compliance by invalidating the entire Phase 1 EIR. The approach taken by EBMUD in the 2005 DEIR is essentially the same approach as that taken by Stanislaus County in the above-referenced 1996 case, and if litigated EBMUD's CEQA document would be set aside as well.

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Finally, as noted above in the previous section, the connection between CEQA piecemealing violations and the acquisition of the Frito Lay and McMillan Properties was pointed out to EBMUD management as early as March 27, 2000, when Robert Jung sent a memo (see Exhibit E) to Kurt Ladensack expressing strong reservations about whether the agency could lawfully prepare a Negative Declaration for the narrowed Oro Loma Project that did not include comprehensive environmental analysis of the broader plans for the central water treatment facility and well fields that the agency was also developing. In this memo Robert Jung stated: "...The appearance of piecemealing has not been satisfactorily resolved... Other issues for which questions have been raised by this document include accusations of **piecemealing should we purchase the adjacent parcel for expansion of the well fields or treatment system...**" (bold added). Since the Oro Loma Project (as it was called back in 2000) and Phase 1 (as it is called in the 2005 DEIR) are essentially the same proposed agency action, and since the *potential* purchase that Robert Jung mentioned has now in fact occurred, the piecemealing comments in Robert Jung's March 27, 2000 memo apply to the current situation with even greater force.

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See responses to comments G7-2 and G7-22, and Master Response 7 – Project Phasing.

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B. Completing Phase 1 Without Phase 2 Would Not Meet EBMUD's Needs/ Objectives Concerning Additional Water Storage

Additional support for the conclusion that the deferred Phase 2 impacts analysis in the 2005 DEIR constitutes a violation of CEQA piecemealing/segmenting prohibition can be found by a comparison of how EBMUD changed the sections on "project objectives/need for project" in the more recent 2005 DEIR from those in the earlier 2001 DEIR.

Section S.2.1. (entitled *Project Objectives and Need*) of the 2001 DEIR states: "The objective of the Bayside Groundwater Project is to develop the East Bay Plain Groundwater Basin to provide 10,000 to 15,000 acre-feet of water supply per year during drought years... In order to meet 75 percent of normal customer demand during successive drought years, EBMUD requires an additional 185,000 acre-feet of high quality supply... The proposed project would deliver up to 25 percent of the supplemental water need..." (bold added.) In the 2001 DEIR, EBMUD therefore set forth precise and detailed quantitative parameters in terms of its water storage needs/objectives, and why the 15 mg project proposed in the 2001 DEIR would enable EBMUD to make a meaningful contribution towards achieving these quantitative water storage needs/objectives.

G7-25 With the 2005 DEIR, however, it is interesting to note that the quantitative description of project objectives and needs has all been removed. Instead, Section ES.2.1 (now entitled *Need for the Project*) provides: "In October 1993, EBMUD adopted a Water Supply Management Program (WSMP) that serves as a planning guide for the provision of water to the EBMUD service area through the year 2020. The WIMP demonstrated that EBMUD's existing water supplies are insufficient to meet current and future customer demand during droughts... Without additional near-term water supplies, EBMUD customers will experience potentially severe water shortages during prolonged droughts..."

Why was the quantitative data and statistics to support the need for and objectives of the Bayside Groundwater Project initially presented in the 2001 DEIR but then later omitted altogether from the 2005 DEIR? The reason would appear to be that the expanded 15 mg project proposed in the 2001 DEIR could meet these quantitative needs/objectives, while the greatly reduced 1 mg "Phase 1" project proposed in the 2005 DEIR would hardly make a dent in EBMUD's water storage problem. In fact, using the quantitative parameters laid out in Section S.2.1 of the 2001 DEIR, Phase 1 of the project described in the 2005 DEIR would only provide between 1%-2% of EBMUD's supplemental water need. A project this small hardly seems worth doing at all, and this is exactly the point in terms of piecemealing. The only way for the Bayside Groundwater Project to contribute in any meaningful way towards EBMUD meeting its acknowledged quantitative water storage needs and objectives is for Phase 2 of the project described in the 2005 DEIR to be completed. Without Phase 2 there would not be a Phase 1 because the two phases are inherently related projects, and this is why deferring substantive CEQA review of Phase 2 constitutes unlawful segmentation.

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See Master Response 7 – Project Phasing, Master Response 8 — Project Objectives, and Alternatives and Master Response 9 — Need for Project.

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VI. Additional CEQA Deficiencies with 2005 DEIR

CEQA Guideline §15151 is entitled *Standards for Adequacy of an EIR* and provides: "An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enable them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effect of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have not looked for perfection but for adequacy, completeness and a good faith effort at full disclosure." (bold added.)

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The basic disclosure standards set forth in CEQA Guideline §15151 were discussed in detail in *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692: "...CEQA requires an EIR to reflect a good faith effort at full disclosure...A prejudicial abuse of discretion occurs if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process." (bold added.) *Id.* at 712. The Court in *Kings County Farm Bureau* continued: "[The EIR] must contain sufficient detail to help ensure the integrity of the process of decisionmaking by precluding stubborn problems or serious criticism from being swept under the rug... Public Resources Code section 21005 provides noncompliance with the information disclosure provisions of CEQA may constitute a prejudicial abuse of discretion. When the failure to comply results in a subversion of the purposes of CEQA by omitting information from the environmental review process, the error is prejudicial. We conclude the discussion in the EIR in several respects omits substantial information about the use of natural gas, and the omissions subverted the purposes of CEQA." (bold added.) *Id.* at 733-734. The *Kings County Farm Bureau* Court further added: "The EIR must contain facts and analysis, not just the bare conclusions of a public agency. An agency's opinion concerning matters within its expertise is of obvious value, but the public and decision-makers, for whom the EIR is prepared, should also have before them the basis for that opinion so as to enable them to make an independent, reasoned judgment." (bold added.) *Id.* at 736.

A. Alternatives Analysis

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CEQA Guideline §15126.6 is entitled *Consideration and Discussion of Alternatives to the Proposed Project* and provides in pertinent part: "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effect of the projects and evaluate the comparative merits of the alternatives... The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives... The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination..." (bold added.)

Section 7.0 of the 2005 DEIR is entitled *Analysis of Alternatives* and identified some of the alternatives that EBMUD initially considered but later eliminated from further analysis because they were determined to be "infeasible." More specifically, Section 7.0 of the 2005

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Comment noted. The DEIR contains a sufficient degree of analysis to provide decision makers with information which enables them to make a decision that intelligently takes account of environmental consequences. EMBUD has complied with CEQA by providing detailed information regarding the impacts of Phase 1 presently proposed for approval. See Master Response 7 – Project Phasing.

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See Master Response 7 — Project Phasing; Master Response 8 — Project Objectives and Alternatives; Master Response 9 — Need for Project; and Master Response 11 — Environmental Justice. As documented in the *Regional Hydrogeologic Investigation, Outer Basins* (CH2M HILL 2001a), the Castro Valley Basin was omitted from further consideration because of low yield or storage potential and high susceptibility to groundwater contamination. The San Ramon Basin was found to be unsuitable for either irrigation or drinking water uses because of poor water quality. Table 7-2 has been revised for the San Ramon/Castro Valley alternative and is included in Section 4.3.1 in this document.

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DEIR includes Table 7-2 - *Fatal Flaw Screening of Water Supply Alternatives ("Fatal Flaw Table")*. The *Fatal Flaw Table* lists five specific "fatal flaw" criteria that EBMUD used to eliminate alternatives: (1) alternative cannot augment supplies to meet 2020 demands; (2) alternative supply cannot be in place for use during droughts; (3) alternative does not meet all proposed and existing water quality standards; (4) alternative cannot be implemented in less than five years; and (5) alternative cannot comply with permit and license conditions.

In the *Fatal Flaw Table*, in the section of the table labeled "Groundwater Storage," there is reference to "San Ramon/Castro Valley" as an alternative groundwater storage location that EBMUD initially considered but then eliminated. The *Fatal Flaw Table* provides, in regards to the San Ramon/Castro Valley groundwater storage alternative, that it was "unknown" to EBMUD whether the San Ramon/Castro Valley location ran afoul of the last four of the five fatal flaw criteria noted above. According to the *Fatal Flaw Table*, the San Ramon/Castro Valley groundwater storage alternative was eliminated because this location could not satisfy the first fatal flaw criteria due to its inability to augment water supplies to meet 2020 demands. Section 7.0 of the 2005 *DEIR* did not provide any quantitative information about what level of storage/supply was needed for this project to meet 2020 demands, nor did Section 7.0 of the 2005 *DEIR* provide any quantitative information about the water supply capacity of the alternative San Ramon/Castro Valley groundwater storage location.

There are two ways in which Section 7.0 of the 2005 *DEIR* appears to be inconsistent with CEQA's alternatives analysis requirements.

First, according to Robert Jung, the reason that EBMUD eliminated the San Ramon/Castro Valley groundwater storage alternative had nothing to do with storage/supply fatal flaw criteria and instead concerned the differences between the ethnic/economic demographics of the residents in the San Ramon/Castro Valley area and the residents in the San Leandro area. More specifically, as compared with the San Leandro residents, the residents of San Ramon/Castro Valley have less ethnic minorities, are more affluent, have higher levels education and are better connected politically. According to Robert Jung, these are some of the considerations that prompted EBMUD to eliminate the San Ramon/Castro Valley alternative and focus on San Leandro. Robert Jung explains: "In our weekly projects meetings during the late 1990's and early 2000, discussions included alternative sites such as the San Ramon area for the proposed groundwater storage project. These discussions included the affluence of the area, and the sophistication of potential antagonism to such a project. That was a factor in eliminating the San Ramon area from further consideration as a groundwater storage location. No further consideration was given to the San Ramon site as an alternative because EBMUD concluded there would likely be less public outcry with the San Leandro site given the nature of the surrounding community there."

Robert Jung's statement here is consistent with his earlier comments within EBMUD about how the ethnic and demographic mix of the San Leandro community was affecting the agency's environmental review process. As noted above, a March 30, 2000 email from Robert Jung to I-Pei Hodge observed: "... The 5,000 or 15,000 taps that are impacted are residents in 'working class' neighborhoods apparently with many apartment buildings. The residential mix includes many representatives of ethnic minority groups... If this project was located in an affluent neighborhood, I certainly doubt that the issues we bring up would be summarily dismissed..." (See attached Exhibit F).

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Under CEQA, an agency may eliminate an alternative if it determines that an alternative is not "feasible." However, CEQA's concept of "feasibility" does not permit an agency to eliminate an otherwise suitable alternative location on the basis that the residents where this alternative site is located are too affluent, too educated, too white and/or too well-connected to allow such an undesirable project to be sited in their community. The use of such criteria to eliminate otherwise feasible alternatives is inappropriate and moreover would constitute a violation of EMBUD Policy 71 which provides in pertinent part: "The District will... assure that the District adheres to the principles of environmental justice... Environmental justice assures that no community in the District bears an iniquitable environmental risk burden as a result of District facilities, operations or practices."

Second, it is significant to note that in its 2005 DEIR EMBUD identifies as a fatal flaw any alternative that does not "augment supplies to meet 2020 demands." If this fatal flaw criteria had been applied to Phase 1 of the Bayside Groundwater Project described in the 2005 DEIR, then it would appear that Phase 1 would not meet this criteria since (for the reasons discussed above) Phase 1 would only enable EBMUD to meet 1%-2% of the supplemental water supply needs identified in the 2001 DEIR. This points to two possible conclusions, both of which suggest that 2005 DEIR does not comply with CEQA. Either EBMUD is applying its fatal flaw criteria in Section 7.0 selectively and inconsistently (suggesting arbitrary and capricious agency decision-making) or EBMUD's position is that the Bayside Groundwater Project does in fact sufficiently "augment supplies to meet 2020 demands" if one considers Phase 1 in conjunction with Phase 2 providing up to 10 mgd (suggesting a piecemealing/segmentation violation).

At a minimum, the data presented in the 2005 DEIR's *Fatal Flaws Table* does not comply with the requirements of CEQA Guideline §15126.6 and King County Farm Bureau which required that EBMUD explain the basis for its conclusions regarding the respective ability of the San Ramon/Castro Valley site and Phase 1 of the Bayside Groundwater Project to "augment supplies to meet 2020 demands." The analysis above also suggests that EBMUD has not identified a proper basis for eliminating the San Ramon/Castro Valley site as a feasible alternative East Bay groundwater storage location.

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In the weeks ahead, Heron Bay HOA will be sending EBMUD a California Public Records Act request to obtain additional documentation from the agency's files regarding the agency's decision to eliminate the San Ramon/Castro Valley groundwater storage site as an alternative, regarding the evidence/data upon which EBMUD determined that the San Ramon/Castro Valley site would not augment supplies to meet 2020 water supplies, and regarding the evidence/data upon which EBMUD determined that Phase 1 and/or Phase 2 of the proposed Bayside Groundwater Project site would augment supplies to meet 2020 supplies.

B. Interim/Reoccurring Subsidence

1. Piecemealing/Segmentation and Phase 2 Analysis

Section 4.0 of the 2005 DEIR considered the hydrologic impacts of Phase 2 of the Bayside Groundwater Project. Section 4.0 of the 2005 DEIR includes a subsection entitled *Phase 2 Potential Impact 4.1-6. Land subsidence from exceedence of historic low water levels during Phase 2* that provides in pertinent part: "Drawdown as a result of increased groundwater pumping in the Deep Aquifer during Phase 2 could induce land subsidence... The extent and

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degree of subsidence would depend on the extent of the cumulative groundwater pumping from Phases 1 and 2 and the resulting change in the internal water pressure in the sediment pore spaces in the land overlying the Deep Aquifer... Whether land subsidence from exceedence of historic low water levels would occur during Phase 2 implementation cannot be identified at this time..."

There are two interrelated reasons why the analysis of Phase 2 hydrologic impacts in Section 4.0 of the 2005 DEIR is inadequate.

First, for the reasons noted above in the discussions of the 2002 acquisition of the Frito Lay/McMillan Properties and piecemealing/segmentation, the factual record does not support EBMUD's claim (in Section 4.0 of the 2005 DEIR) that it does not know whether it will proceed with Phase 2 and that it does not know the likely scope or location of Phase 2 operations and facilities. In fact, in light of the information presented in the 2001 DEIR, the agency's acknowledged supplemental water storage needs and the location of the recently-purchased Frito Lay/McMillan Properties, it is evident that EBMUD has a clear present intention to proceed with Phase 2 of the Bayside Groundwater Project and knows with a high degree of certainty where Phase 2 will likely be sited and how large Phase 2 will be. As such, EBMUD was in a position to provide a more rigorous, quantitative environmental analysis of the impacts of longterm subsidence resulting from Phase 2 operations.

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Second, putting aside the question of piecemealing/segmentation, Section 4.0 of the 2005 DEIR is also inadequate in that there is no discussion of the potential impacts of *interim/reoccurring* subsidence (as opposed to *long-term/permanent* subsidence) resulting from Phase 2 operations. More specifically, EBMUD's previously analysis had confirmed that when surface waters are dumped into or extracted from groundwater aquifer beneath San Leandro, this will cause the overlying land to rise and fall. The potential threat this poses to buildings located over the aquifer (and people who reside in these buildings) was detailed in the comment letter submitted by the Heron Bay Task Force on the 2001 DEIR (see Exhibit B): "On May 1, 2001, EBMUD representative and EBMUD's consultants, CH2M Hill, participated in a meeting with the members of the San Lorenzo Village Home Association. The purpose of this meeting was to discuss the proposed Bayside Groundwater Project. At this meeting, the issue of land-subsidence was addressed by John Anderson ("Mr. Anderson"), Chief Geotechnical Consultant with CH2M Hill. At this meeting, Mr. Anderson stated that CH2M Hill's analysis did not indicate that any *long-term land subsidence* would occur as result of the Bayside Groundwater Project. Mr. Anderson also stated, however, that CH2M Hill's analysis indicated that the Bayside Groundwater Project would likely result in reoccurring short-term land rising and subsidence of several inches. More specifically, Mr. Anderson stated that the land located above the groundwater aquifer would temporarily rise when large quantities of surface water were injected into the aquifer, and that the land above the aquifer would temporarily settle when large quantities of surface water were extracted from the aquifer. Mr. Anderson's statements about the likelihood of reoccurring short-term rising and subsidence were corroborated by materials which EBMUD distributed at the May 1, 2001 meeting... Although the likelihood of reoccurring short-term rising and subsidence was acknowledged in the statements of Mr. Anderson and in the documents distributed by EBMUD at the May 1, 200 meeting, the [2001] DEIR remarkably makes no mention of this impact. Instead, the [2001] DEIR section on Geology (§3.7) simply concludes that it is unlikely that long-term subsidence would occur... The [2001] DEIR's failure to acknowledge and analyze the adverse environmental impacts associated with

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Potential subsidence impacts from a Phase 2 project will be evaluated in a subsequent EIR, if and when EBMUD decides to move forward with implementation of a Phase 2 project. Also see Master Response 1 – Subsidence, and Master Response 3 – Monitoring Programs.

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See Master Response 1 – Subsidence, and Master Response 12 – Comments on 2001 DEIR.

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reoccurring short-term rising and subsidence is a glaring defect and omission under CEQA...A short-term rise or subsidence of several inches could result in significant property damage and personal injury. More specifically, this type of temporary movement could permanently fracture the foundation, crack the walls, and rupture the gas and electric lines in thousands of homes and other structures located above the groundwater aquifer proposed in the Bayside Groundwater Project... The [2001] DEIR's conclusion that the proposed Bayside Groundwater Project will have a 'less than significant' geologic impact because it is unlikely that there will be long-term subsidence is baseless. **This is the equivalent of stating that reoccurring earthquakes will have a 'less than significant' seismic impact because it is unlikely that there will be long-term land movement.** Just as with reoccurring short-term earthquakes, the damage that can result from reoccurring short-term groundwater rising and subsidence is significant and often permanent..." (italics in original; bold added.)

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In preparing the sections on Phase 2 of the Bayside Groundwater Project for the 2005 DEIR, EBMUD has unfortunately once again opted to simply omit any discussion or analysis of the impacts of interim/reoccurring subsidence. This decision was made after the need for analysis of this impact was squarely brought to EBMUD's attention through the public comments on the 2001 DEIR. In terms of CEQA compliance, this omission in the 2005 DEIR is as glaring and problematic as it was with the 2001 DEIR.

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2. Phase 1 Analysis

Section 3.0 of the 2005 DEIR considered the hydrologic impacts of Phase 1 of the Bayside Groundwater Project. Section 4.0 of the 2005 DEIR includes a subsection entitled *Phase 2 Potential Impact 3.1-6. Land subsidence from exceedence of historic low water levels during Phase 2* that provides in pertinent part: "...Land subsidence, or the lowering of ground surface elevations, can occur if groundwater pumping reduced the water pressure within the pore space of the saturated sediments, causing the sediments to compress... Under some conditions, this process would reverse when the groundwater is replenished and the pore pressure increases; this is know as elastic or temporary subsidence. This results in cycles of very small amount of compression and expansion that occur normally in response to alternating periods of groundwater drawdown and recovery. Under conditions of elastic subsidence, the compaction is relatively small and is reversed when pore pressure increase due to rising water levels, including during injection of groundwater... The amount of this elastic subsidence is a function of the amount of drawdown, and in the case of the Proposed Project is expected to range from about a quarter inch at the project site..." Section 3.0 of the 2005 DEIR does not include any discussion of or reference to the data or studies that provided the basis for EBMUD's conclusion that elastic subsidence at the Phase 1 project site is anticipated to be about a quarter inch, nor does this section indicate how often EBMUD anticipates that this interim quarter-inch rising and subsidence will occur.

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Regardless of whether this estimate of quarter-inch interim subsidence is accurate, what is noteworthy is that Section 3.0 of the 2005 DEIR provides no analysis of the impact of this reoccurring quarter-inch subsidence on the structures located above the aquifer. For the reasons presented to the agency in Heron Bay Task Force's 2001 comment letter on the 2001 DEIR (incorporated herein by this reference), EBMUD had been on notice for several years of the potential impacts of interim subsidence on overlying foundations, walls, gas lines and electric lines. Once again, just as with the 2001 DEIR, the Phase 1 sections of the 2005 DEIR omit all

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See Master Response 1 – Subsidence and Master Response 3 – Monitoring Programs.

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See Master Response 1 — Subsidence. The analysis provided in the 2005 DEIR in the discussion for Phase 1 Potential Impact 3.1-6 clearly supports the conclusion of the lead agency that the subsidence effects of Phase 1 are less than significant.

As discussed in Section 3.1.4.2 of the DEIR, a groundwater flow model of the SEBPB and the NCGWB was developed to evaluate the potential effects on these basins of Phase 1 operation. The model was used to calculate drawdown, which provided the basis for the elastic subsidence calculation.

As described in Phase 1 Potential Impact 3.1-6 on page 3.1-54 of the DEIR, elastic (temporary) subsidence would correspond with the pumping cycles. The elastic subsidence would completely reverse following each groundwater pumping cycle as water levels recover. The reversal of elastic subsidence would take approximately as much time as the decline.

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impact analysis in this regard. This is not a question of whether the impact analysis was adequate because there is none.

In the weeks ahead, Heron Bay HOA will be sending EBMUD a California Public Records Act request to obtain additional documentation from the agency's files regarding the agency's analysis and investigation of interim and long-term subsidence impacts related to Phase 1 and Phase 2 of the proposed Bayside Groundwater Project.

C. Groundwater Quality Impacts

1. Piecemealing/Segmentation and Phase 2 Analysis

Section 4.2 of the 2005 DEIR considered the water quality impacts of Phase 2 of the Bayside Groundwater Project. Section 4.2.2 of the 2005 DEIR is entitled *Effects Found to be Not Significant* and provides: "The following impacts were considered but were found to be not significant or not applicable to Phase 2 of the project; therefore, there is not further discussion of these impacts... Health-related Effects: Health-related effects from the introduction of a new water sources were found not to be significant for Phase 2... Sampling of native and recovered injection water showed that the concentration of only a few chemical constituents might be increased as a result of project operation and would still remain well below is MCL... Overall, the quality of water delivered to customers would cause not adverse health effects, given that no primary MCLs would be exceeded... Aesthetic effects on the quality of water delivered to customers will meet all secondary (aesthetic) standards... 4.2.3 Impacts and Mitigation Measures... Impact conclusions cannot be drawn at this time... If and when the District proceeds with the development of Phase 2, an evaluation of the current water quality standards at that time will be required to determine potential impact and, if necessary, appropriate mitigation measures... Impact Significance: Whether operation of Phase 2 could result in contamination of the deep aquifer... cannot be determined at this time... Specific impacts and mitigation measures cannot be determined until the District determines whether or not to proceed with Phase 2 and, if so, determine Phase 2 locations... Because the location and capacity of Phase 2 facilities are not known, it is not possible to model and evaluate the impacts to level of service that might be caused by Phase 2..." (bold added.)

There are at least six reasons why the analysis of Phase 2 water quality impacts in Section 4.0 of the 2005 DEIR is inadequate.

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First, for the reasons noted above in the discussions of the 2002 acquisition of the Frito Lay/McMillan Properties and piecemealing/segmentation, the factual record does not support EBMUD's claim (in Section 4.2 of the 2005 DEIR) that it does not know whether it will proceed with Phase 2 and that it does not know the likely scope or location of Phase 2 operations and facilities. In fact, in light of the information presented in the 2001 DEIR, the agency's acknowledged supplemental water storage needs and the location of the recently-purchased Frito Lay/McMillan Properties, it is evident that EBMUD has a clear present intention to proceed with Phase 2 of the Bayside Groundwater Project and knows with a high degree of certainty where Phase 2 will likely be sited and how large Phase 2 will be. As such, EBMUD is in a position to provide a more rigorous, quantitative environmental analysis of the impacts of water quality resulting from Phase 2 operations.

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See Master Response 7 — Project Phasing and the response to comment G7-22.

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Second, putting aside the question of piecemealing/segmentation, Section 4.2 of the 2005 DEIR is inadequate in that there is no analysis of the health effects of increased chemical concentrations in the groundwater resulting from the injection of surface water into the groundwater aquifer. Section 4.2 of the 2005 DEIR acknowledges that "Sampling of native and recovered injection water showed that the concentration of only a few chemical constituents might be increased" but then determines that there would be no potential adverse environmental effects of these increased concentrations because the concentrations of these constituents would still be below MCLs (Maximum Concentration Limitations). The impact methodology employed here does not appear to comply with CEQA's requirements. Even if chemical constituent concentration levels (resulting from Phase 2) do not increase to the extent such that they would constitute a violation of MCLs, that does not mean that these increased chemical concentrations may not have a significant adverse health impact on the residents. This approach would be the equivalent of reasoning that under CEQA an agency need not examine whether the destruction of an animal's habitat may have significant potential adverse impact so long as this destruction would not result in the animal's listing on the endangered species list. Contrary to EBMUD's methodology here, CEQA does not provide that an agency may conclude that there are no potential significant adverse impacts simply because it has determined that some other regulatory limit will not be exceeded. Rather, CEQA generally requires an actual analysis of the adverse impacts to determine whether or not they are potentially significant, and this is not something that EBMUD appears to have done in the 2005 DEIR in regard to water quality.

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Third, Section 4.2 of the 2005 DEIR bases its conclusion that Phase 2 will not have a potentially adverse aesthetic (taste, odor and color) impact on water quality on the following single sentence: "Groundwater delivered to customers will meet all secondary (aesthetic) standards." This sentence, however, does not identify these secondary (aesthetic) standards and offers no evidence or support for the determination that Phase 2 of the Bayside Groundwater Project will not result in violations of these secondary (aesthetic) standards, and these are the questions that are relevant in terms of CEQA impacts analysis. An agency does not satisfy CEQA's impacts analysis requirement by simply declaring – without reference to any criteria, data, analysis or plans – that it will make certain that no such significant adverse impacts occur.

Fourth, since Section 4.2 of the 2005 DEIR does not provide information as to how much surface water is actually proposed to be injected and mixed with the groundwater in Phase 2, it is altogether unclear how EBMUD was able to reach the conclusion that Phase 2 would not have potentially adverse health effects and aesthetic (taste, color and odor) effects relating to impacts on water quality. Put more plainly, how can EBMUD conclude that Phase 2 will not have potentially adverse health effects and aesthetic effects in terms of water quality while simultaneously taking the position that it really has no idea where or what Phase 2 will be? To the extent that EBMUD reached this conclusion for Phase 2 by simply referring back to its previous analysis for Phase 1, this impact analysis methodology would appear to be flawed and arbitrary.

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Fifth, Section 4.2 of the 2005 DEIR did not address the potential for abandoned groundwater wells in the San Leandro Plain to serve as vertical conduits for the spread of chemical contamination that could impact water quality during Phase 2. Section 4.2.3 of the 2005 DEIR acknowledges the following: "**Contaminants from the shallower aquifer could migrate to the deeper aquifer through vertical conduits such as old wells...**" (bold added.) After identifying this potential contaminant source, however, Section 4.2.3 of the 2005 DEIR

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MCLs are established to protect human health. By complying with these exposure limits in drinking water, EBMUD is acting to protect the health of its customers in accordance with the best science available to regulators and the water supply industry. CEQA Guidelines Section 15064.7(a) provides: “[a] threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.” Section 15064.7(b) provides that “thresholds of significance to be adopted for general use as part of the lead agency’s environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence.”

California Health and Safety Code §116365(a) requires the Department of Health Services (DHS), while placing primary emphasis on the protection of public health, to establish a contaminant’s MCL. The proposed MCL is released for a 45-day public comment period. “Post-hearing” changes made in response to comments have a subsequent 15-day public comment period. Once DHS completes this process, it submits the regulation package, including responses to public comments, to the Office of Administrative Law (OAL). OAL has 30 working days to review the regulation and approve or reject it. If approved by OAL, it is filed with the Secretary of State, becoming effective in 30 calendar days. The process of establishing MCLs meets the requirements of CEQA Guidelines Section 15064.7 in terms of providing an identifiable quantitative performance level based on potential health effects, supported by substantial evidence, developed through a public review process, and adopted by regulation. Therefore, the use of MCLs as a threshold of significance is appropriate.

With regard to chemical concentrations, Table 3.2-1 (included in Section 4.3.1 of this Final EIR) clearly indicates that for some constituents, concentrations will actually be improved by the introduction of treated water into native groundwater.

Although EBMUD does not know where Phase 2 facilities would be located, Phase 2 wells would be screened in the Deep Aquifer, as is the Phase 1 well. Due to the properties of the Deep Aquifer, groundwater quality in the Deep Aquifer is not expected to vary significantly within the aquifer. Likewise, surface water to be injected is not expected to vary substantially in quality from what will be injected during Phase 1. Therefore, the Phase 1 analysis allows for a qualitative evaluation of the potential impacts related to water quality, treatment and distribution for Phase 2 of the Bayside Project.

As described in Section 2.4.2.2 of the 2005 DEIR, treatment facilities would be included in Phase 2 if necessary to address water quality concerns for groundwater obtained at a particular location. As described in Section 4.2.2 of the DEIR, regular sampling of the monitoring wells, extracted groundwater, and treated project water would identify potential contamination issues or exceedances of secondary treatment requirements (for taste, odor, and color) before water reached customers. The Bayside Phase 1 production well will be analyzed for the full list of drinking water standards and constituents as required by the DHS; see Table 3.2-2 in the DEIR for a list of primary and secondary standards. EBMUD will only deliver water that meets the primary and secondary standards. See also Master

Response 7 — Project Phasing.

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As described in Master Response 5 — Groundwater Contamination, because of the properties of the Deep Aquifer, potential effects from vertical migration of contaminants during Phase 1 operation would be minimal. Mitigation measures have been proposed that will require all wells that could act as vertical conduits to be sealed or retrofitted. As a result, no significant impacts to the Phase 1 project water supply from contaminated sites are expected. See Master Response 3 – Monitoring Programs and DEIR Section 3.1-3 and Mitigation Measures 3.1-3A through 3.1-3d.

In general, these same aquifer properties analyzed in connection with Phase 1 would also apply to Phase 2. The analysis of potential impacts for Phase 1 considered potential contamination sources and wells throughout the entire area overlying the Deep Aquifer, which includes all potential areas for Phase 2 facilities. In addition, as described in Section 4.2.3 and in Master Response 7 — Project Phasing, if EBMUD determines to pursue a Phase 2 project, the potential drawing of contamination into the water supply would be evaluated in a subsequent EIR.

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provides no further information and analysis. This section does not provide any information about the likely number, location or condition of these abandoned groundwater wells, nor does it provide any substantive quantified analysis of the foreseeable impacts of these vertical conduits on water quality in the deep aquifer. In connection with the Bayside Groundwater Project, EBMUD has previously been provided with extensive information about these abandoned groundwater wells from its own environmental staff and from other agencies such as San Francisco Regional Water Quality Control Board ("RWQCB"), the United States Geological Survey ("USGS") and the Port of Oakland, and there is significant public information available on this question. For instance, in August 1999 the RWQCB released a study entitled *East Bay Plan Beneficial Use Evaluation Report* that concluded: "Improperly abandoned wells (vertical conduits) are included in this section on Groundwater Pollution Sources. While vertical conduits are not 'pollution sources' in the conventional sense, they can provide a potential pathway for contamination to migrate from shallow to deeper aquifers. In the East Bay Plain, it is likely that numerous historical wells drilled prior to the importing of Sierra water are potential vertical conduits." Similarly, as documented in the Heron Bay Task Force's 2001 comment letter (see Exhibit B), USGS Project Chief John Izbiki has indicated that between 1860-1950 there were approximately 1500 groundwater wells constructed in the East Bay Plan and that several of these wells extended down into the deep aquifer. Given the administrative record, additional consideration and analysis of this potential water contamination source was warranted in terms of Phase 2.

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2. Phase 1 Analysis

The 2005 DEIR's analysis of Phase 1 water quality impacts (in Section 3.2) is deficient for many of the same reasons note above (in the discussion of the 2005 DEIR's analysis of Phase 2 water quality impacts).

First, just as with the sections of the 2005 DEIR on Phase 2 water quality impacts, Section 3.2.6 of the 2005 DEIR does not provide a sufficient analysis of the potential for abandoned groundwater wells in the San Leandro Plain to serve as vertical conduits for the spread of chemical contamination that could impact water quality during Phase 1. This section simply provides: "Contaminants from the shallower aquifer could migrate to the Deep Aquifer through vertical conduits such as old wells..." This section does not provide any information about the likely number, location or condition of these abandoned groundwater wells, nor does it provide any substantive quantified analysis of the foreseeable impacts of these vertical conduits on water quality in the deep aquifer during Phase 1 operations.

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Second, just as with the sections of the 2005 DEIR on Phase 2 water quality impacts, Section 3.2.5 of the 2005 DEIR does not provide a sufficient basis to support its conclusion that Phase 1 will not have a potentially adverse aesthetic (taste, odor and color) impact on water quality. This section provides: "Aesthetic effects: Groundwater delivered to customers would meet all secondary (aesthetic) standards. Aesthetic standards are non-mandatory water quality standards set by the U.S. EPA for 15 contaminants. The EPA does not enforce these secondary MCLs; they are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at the secondary MCL." This information and explanation are off-point to the question of potentially significant aesthetic impacts, however, because they do not tell the reader anything about the potential impacts of Phase 1 of

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See Master Response 5 — Groundwater Contamination and Master Response 2 – Potential for Flowing Wells.

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As described in Section 3.2.5 of the DEIR, the groundwater delivered to customers would meet all secondary (aesthetic) standards; therefore, no significant aesthetic effects would occur. See Response to Comment G7-34 and Master Response 11 — Environmental Justice. See also Master Response 8 – Objectives and Alternatives for discussion of EBMUD's decision not to pursue the San Ramon/Castro Valley alternative.

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the Bayside Groundwater Project on the taste, color and odor of the water that will be supplied to San Leandro residents. This information and explanation also do not address the extent to which the aesthetic impacts of Phase 1 of the Bayside Groundwater Project on San Leandro groundwater are consistent with EBMUD Policy 71. As noted above, EBMUD Policy 71 provides in pertinent part "that the District adheres to the principles of environmental justice" and that "Environmental justice assures that no community in the District bears in inequitable environmental risk burden as a result of District facilities, operations or practices." (bold added.) Concerns have been expressed to the agency that (if the Bayside Groundwater Project is implemented) the residents of San Leandro may be provided drinking water that (as compared to more affluent areas served by EBMUD) is of inferior quality in terms of taste and odor, and that this consideration may have played role in eliminating the San Ramon/Castro Valley alternative groundwater storage location as an alternative. These concerns are supported and validated by the statements, emails and memos of former EBMUD employee Robert Jung.

As Robert Jung stated in his April 4, 2000 memo (see Exhibit G) to Kurt Ladensack regarding CEQA compliance issues for what was then called the Oro Loma Project (which is in essence Phase 1 of the project proposed in the 2005 DEIR): "...the discussion is silent about side-by-side-comparison between the existing Mokelumne water quality standards enjoyed by our customers and the departure from these standards and its impact on a limited number of customers. It can further be argued that, the effect is a potentially significant impact ... The document does not include analysis of environmental justice issues... A segmented population of District customers will be served water of lesser quality and increased health risk than that received by other customers..." (bold added.)

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In the weeks ahead, Heron Bay HOA will be sending EBMUD a California Public Records Act request to obtain additional documentation from the agency's files regarding the agency's analysis and investigation of the following water quality related matters related to Phase 1 and Phase 2 of the Bayside Groundwater Project: EBMUD's investigation of aesthetic impacts (taste, color and odor) pertaining to water quality; and EBMUD's investigation of the number, location and condition of abandoned groundwater wells in project area including EBMUD correspondence with the RWQCB, USGS, Port of Oakland and other agencies regarding this matter.

D. Air Quality

Section 4.6 of the 2005 DEIR considered the air quality impacts of Phase 2 of the Bayside Groundwater Project. Section 4.6 of the 2005 DEIR provides in pertinent part: "...If EBMUD proceeds with Phase 2, a subsequent EIR will be prepared to evaluate potential impacts associated with the specific locations for Phase 2 facilities... Depending on the treatment selected, issues such as radon or chloroform would be addressed as applicable. Further details would be presented as appropriate in a subsequent EIR if the District proposes to implement Phase 2 facilities that include a central treatment facility... Operational impacts are also dependent on the proposed treatment processes and the location of facilities relative to surrounding receptors. Therefore no impact conclusions can be drawn at this time regarding potential air quality impacts associated with operations of Phase 2 facilities..." (bold added.)

There are at least two reasons why the analysis of Phase 2 water quality impacts in Section 4.0 of the 2005 DEIR is inadequate.

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First, for the reasons noted above in the discussion of the 2002 acquisition of the Frito Lay/McMillan Properties and piecemealing/segmentation, the factual record does not support EBMUD's claim (in Section 4.6 of the 2005 DEIR) that it does not know whether it will proceed with Phase 2 and that it does not know the likely scope or location of Phase 2 operations and facilities. In fact, in light of the information presented in the 2001 DEIR, the agency's acknowledged supplemental water storage needs and the location of the recently-purchased Frito Lay/McMillan Properties, it is evident that EBMUD has a clear present intention to proceed with Phase 2 of the Bayside Groundwater Project and knows with a high degree of certainty where Phase 2 will likely be sited and how large Phase 2 will be. As such, EBMUD is in a position to provide a more rigorous, quantitative environmental analysis of the impacts of air quality resulting from Phase 2 operations.

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Second, Section 4.6 of the 2005 DEIR once again omits any discussion or acknowledgement of the results of the Geier & Geier chloroform air modeling report (referred to in the emails and memos from Robert Jung). In fact, and significantly, the Geier & Geier report is not even listed in the references for this section (just as the Geier & Geier report was not listed in the references for the 2001 DEIR). As discussed above, CEQA Guideline §15151 and Kings County Farm Bureau require full disclosure of disagreements among experts and information indicating a project's potentially adverse environmental impacts.

In the weeks ahead, Heron Bay HOA will be sending EBMUD a California Public Records Act request to obtain additional documentation from the agency's files regarding EBMUD's review or consideration of the Geier & Geier chloroform report in its preparation of Section 4.6 of the 2005 DEIR.

VII. Conclusion - A Flawed and Tainted Environmental Review from the Beginning

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For the reasons set forth herein, EBMUD's environmental review process for the Bayside Groundwater Project appears to be in violation of California law, including CEQA and the California Public Records, and the 2005 DEIR for the Bayside Groundwater Project falls far short of the documentation that CEQA requires. The environmental review process and 2005 DEIR also falls far short of meeting EBMUD's environmental justice policies. Beyond these violations, however, the information disclosed herein regarding what appears to be the deliberate withholding of environmental information by EBMUD staff is perhaps even more troubling. This withholding strongly suggests that EBMUD project staff altered and suppressed the findings of EBMUD's environmental staff to prevent public awareness of known air quality and water quality hazards associated with the Bayside Groundwater Project. Because this apparent alteration and suppression took place at the project level, Heron Bay HOA recognizes that it may not have come to the attention of EBMUD's Board of Directors until now.

Heron Bay HOA remains hopeful that once EBMUD's Board of Directors is made aware of the true situation, EBMUD's Board will take appropriate action to investigate these matters and insist upon full disclosure of all previously withheld information in connection with the proposed Bayside Groundwater Project. This information would include all documentation in the agency's files related to the following: the 2001 Geier & Geier chloroform studies regarding adverse air quality impacts on the surrounding community, the 2002 Frito Lay/McMillan property acquisitions for what the 2005 DEIR now refers to as "Phase 2"; the basis for EBMUD's

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See response to comment G7-22.

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As explained in the 2005 DEIR and Master Response 7 — Project Phasing, EBMUD has made no determination to proceed with Phase 2, and therefore has made no determination regarding the location, size or type of Phase 2 treatment facilities. Accordingly, EBMUD does not know whether Phase 2 would include aeration treatment facilities. Unless EBMUD determines to implement a Phase 2 treatment facility that includes aeration, Phase 2 is not expected to result in chloroform emissions. If EBMUD decides to implement Phase 2, the potential impacts to air quality, including chloroform, would be analyzed in a subsequent EIR. See comment G7-11 regarding the Geier & Geier (2001) report.

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Comment noted. The topics in this comment are addressed in the previous responses to comments in this letter.

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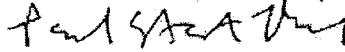
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elimination of San Ramon as an alternative groundwater storage location; and the basis for EBMUD's determination that the proposed Phase 1 of the Bayside Groundwater Project would in fact meet the agency's water supply augmentation needs. Consistent with and in addition to such disclosure, EBMUD's Board should also jettison the segmentation of the 2005 DEIR in favor of a CEQA-compliance approach that acknowledges and meaningfully (meaning quantitatively) analyzes the true scope and impacts of the project. Lastly, in light of the facts disclosed herein, Heron Bay HOA submits that, under the circumstances, EBMUD's abandonment of the Bayside Groundwater Project is the appropriate course of action. Given the manner in which the project has proceeded so far, and the flawed assumptions/criteria upon which the project was developed and selected, EBMUD's continued efforts to push this proposal forward would only be throwing good public money after bad, and would only serve to further erode public confidence and trust in the agency.

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Very truly yours,

FITZGERALD ABBOTT & BEARDSLEY LLP



Paul S. Kibel

CC: Heron Bay HOA Board of Directors
Shelia Young, Mayor of the City of San Leandro
Congressman Pete Star, United States House of Representatives (D-CA)
Senator Liz Figueroa, California State Senate

Attachments

- Exhibit A
- Exhibit B
- Exhibit C
- Exhibit D
- Exhibit E
- Exhibit F
- Exhibit G
- Exhibit H
- Exhibit I
- Exhibit J
- Exhibit K
- Exhibit L
- Exhibit M
- Exhibit N
- Exhibit O
- Exhibit P
- Exhibit Q
- Exhibit R
- Exhibit S
- Exhibit T
- Exhibit U

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Exhibit V
Exhibit W
Exhibit X
Exhibit Y
Exhibit Z
Exhibit AA
Exhibit BB
Exhibit CC

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NON

Heron Bay Homeowners Association, Inc

C/o 39899 Balentine Drive, Suite 102

Newark, CA 94560

G7-41

August 13, 2001

Heron Bay Homeowner

Re: East Bay Municipal Utilities District Bayside Groundwater Storage Project

Dear Homeowner:

This letter is a follow-up to our letter of June 11, 2001, regarding the East Bay Municipal Utility District ("EBMUD") "Bayside Groundwater Project." We are writing to you today to inform you that the Board submitted comments regarding the proposed Bayside Groundwater Project to EBMUD during the comment period established by EBMUD. As a courtesy, a copy of the Board's comments are enclosed for your review.

As a reminder, the Bayside Groundwater Project as proposed is a storage and treatment plant to be located directly across from Heron Bay on the south side of San Lorenzo creek. As part of the proposed project, EBMUD plans to inject water from its distribution system (the same water that comes out of your taps) into an underground aquifer located approximately 600 to 700 feet underground and then extracting water from the underground aquifer during drought periods. This aquifer is located under Heron Bay and the surrounding areas.

We look forward to seeing everyone at the monthly Board meetings held on the third Wednesday of each month at the Community Center located on Wicks Boulevard.

Sincerely,

Heron Bay Board of Directors

Heron Bay Homeowners Association, Inc.

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Responses to these attachments are included in responses G7-1 through G7-40 above.

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forum and by no means intend this Response to include all of their specific objections to the DEIR and the proposed Project, however, the issues listed are meant to advise the Board and staff of the East Bay Municipal Utility District that there are serious and fatal flaws in the DEIR and in the very concept of the project as proposed and as located.

For purposes of this response, the objections of Heron Bay to the DEIR and to the project in general are grouped as follows:

1. PROJECT ALTERNATIVES.

At the outset it is generally notable that the evaluation of project alternatives consists primarily of variations of the same project, i.e., the analysis considered alternative well sites and facilities locations. Although there is a description of other efforts made by EBMUD to develop additional water supply using a similar system there is no analysis of other options that might develop other capacity outside of the East Bay Plain (see Chapter 6, DEIR). As noted below within the discussion of the risks associated with subsidence, the East Bay Area, and its heavily residential areas, poses far greater risk of property damage than an agricultural setting such as San Joaquin County. The report contains far too little discussion of the favorable conditions that exist in said San Joaquin County where over-pumping activities have made replenishment a key component of the proposed project much more feasible. The location of the facility in yet other counties or in other agricultural venues is not even considered. A review and consideration of project alternatives is an important legal requirement regarding compliance which has been overlooked in the DEIR.

2. SUBSIDENCE.

The primary component of the Project is the anticipated extraction of ground water from a deep aquifer system. In order to accomplish this possible extraction, the project contemplates the construction, operation and maintenance of several wells, equipment necessary to accomplish the injection of surplus water, construction and operation of a centralized water treatment plant and the construction and use of pipelines and other associated facilities. Overall, the project represents a significant change in the use of the ground water basin and the surrounding area.

There is no question but that subsidence can occur as the result of ground water extraction activities. This subsidence is often associated with an imbalance of extraction versus replenishment over a period of time. This potential danger is recognized in the DEIR, however, the seriousness of the potential problem is not recognized and, therefore, not addressed in adequate fashion. As stated above, it is of particular concern to Heron Bay that the maps attached to the DEIR do not even show or account for the existence of 710 homes in the direct vicinity of the Project. It is conceivable and, therefore, of great concern that the DEIR did not consider the existence of the homes in question. Subsidence becomes a far more critical issue when considering the location of the subject homes than if the same project were being considered for a rural area. For the subject

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be as much as 200 feet. It is critical to note that all of the homes within Heron Bay are located within 10,000 feet of this well field. The resultant subsidence will potentially radically affect 710 homes. It should be further noted, that running along the Eastern Boundary of Heron Bay, and well within the potential affected area of the Ora Loma well field, are extensive railroad tracks which continue to be in heavy use. It does not take an expert to recognize the potential disastrous effects of soil movement on the rail system. A movement of a fraction of an inch, not effectively monitored, could result in a tragic loss of life and property damage both to train passengers and to the surrounding homeowners.

Furthermore, the Livermore-Amador Valley Water Management Agency ("LAVWMA") has recently announced plans to replace an existing pipeline and bypass water system with a new and more extensive 36" pipeline system, which system will run on the North and Easterly boundaries of the Heron Bay property. Again, the effects of subsidence from the proposed EBMUD project could result in major damage to the LAVWMA water system located within the effective area of the Ora Loma well field. Responding party is most disturbed that the DEIR apparently did not even consider the effects of subsidence on the railroad tracking system or the pipelines owned and operated by LAVWMA and the resultant effect on the owners of Heron Bay homes.

As further comment to the issue of subsidence and its consideration in the DEIR, it should be noted that time is a key factor with regard to subsidence. For example, normal fluctuations in water levels due to pumping activities typically do not cause subsidence as long as the pumping does not result in a long term lowering of the ground-water level. The subsidence mechanism of most concern in the project would be that associated with the dewatering of clay strata triggered by pumping activities that would persist over several years.

While the proposed project indicates that a water balance would be achieved over a historic 75 years of operation, there are no apparent project controls that would limit the period of time that the water levels could be depressed, i.e., there appears to be the potential that a significant draw-down in ground-water levels could exist for consecutive years under the proposed operating plan. Furthermore, due to the presence of clay strata, conditions exist within the project area for which subsidence can occur. At a minimum we would expect to see some elastic, or recoverable, land elevation changes during the extraction periods as the result of lowering the head well below historic levels. In the best case scenario, these changes might only be in the order of a fraction of an inch, however, it is conceivable that much more severe drops in land elevation, in the order of several inches to several feet, could occur based on the experience of several other areas of California including the neighboring Santa Clara Valley. As even a fraction of an inch can cause major damage to the residences within Heron Bay, additional analysis and response to these issues is warranted before the DEIR is presented or considered for certification.

It is very important to note that no mitigation measures are proposed in the DEIR for the potential impacts of subsidence. The DEIR only anticipates active monitoring of the

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of San Joaquin County for the proposed project. The concerns supporting those institutional barriers are far less serious than those that result from the creation of this project in a heavily residential area. Without this consideration, the analysis of project alternatives, which will be discussed forthwith, may be improperly based on the assumption that impacts would be less significant for this industrial setting in the East Bay. The problem stems from the fact that the proposed setting is not, and will no longer be, an industrial setting.

3. POTENTIAL SURFICIAL INFLUENCES OF EXTRACTION AND INJECTION OPERATIONS.

The aquifer materials targeted by the project for extraction and injection are described as hydraulically isolated deep aquifer systems. The assumption of hydraulic isolation has been used to support findings that certain impacts, such as inducing movement of shallow contaminant plumes or saltwater intrusion in shallow zones are insignificant. There are numerous other aspects of the hydro geological setting that appear to contradict the conceptual description. In particular, the primary source of natural recharge is apparently from a surficial source, i.e., rainfall. Such a recharge source would require a broad connection between the deep aquifer system and overlying units and would reflect a potential for greater surficial influences than that characterized in the DEIR. No mention is made in the DEIR of the effects of other jurisdictions that also may be utilizing the deep aquifer system or whose own deep aquifer systems may be in fact linked geologically to the system under consideration in the DEIR.

Of great concern to Heron Bay is the concept of sustained injection and resultant draw-up in the deep aquifer estimated to be tens of feet above the ground surface. It should be noted that the members of Heron Bay are of the opinion that their homes are located within a flood zone. They are aware that more than 3 feet of topsoil was imported in order to make the home pads workable. Any measurable rise in the surrounding water table, even for a short period of time, could well have disastrous effects on the Heron Bay homes.

It is legally and factually significant to note that there is no other project in existence that may be looked to to judge the merits of the finding that surficial impacts would be insignificant. There is simply no historical information that may be relied upon in the DEIR to make such a bold assumption. Of course, should the unfounded assumption prove to be in error and unsupportable, horrific resultant damage will have already occurred to the homes in Heron Bay. This is particular troublesome when one considers that the DEIR is devoid of viable mitigation measures.

The actual consequence of surficial impacts are that they could result in ground water flow under roadways, common areas, residences, railroad tracks and in the area of abandoned wells improperly sealed. The historical maps of the area indicate the potential existence of numerous abandoned wells, wells that were more than likely abandoned and not properly sealed. It can be assumed that these wells would not have surface seals as would be required in the vicinity of an injection project of the type proposed. In many

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c) Same page plus 3.10-9: The chart on this page shows other VOCs in addition to chloroform yet no accounting of additional elements due to allowable and existing VOCs is included in the calculations. The document should include notable allowances for MTBE, toluene ethylbenzene, etc. Consideration must be given to the addition of the new increased emission add to the lb/day in adding to the BACT trigger. The report contains no additional accounting of this fact.

d) Same pages: Chloroform alone, under additional loading, triggers BACT. One must assume that BACT is triggered once all VOCs present in water are released at the air stripper. There is no consideration of the effect of all of the VOCs, including those on the chart on 3.10-9 on sensitive receptors. The trigger of BACT will require carbon filtration of a polluted airstream at the stacks. None is provided.

e) There is no consideration of the effect on residents when wind patterns (not the averages) blow plumes directly on Heron Bay. Will these be critical health warning days? Will residents be notified to stay indoors if they are sensitive? Is there any early warning system provided for or even contemplated? Why are plumes of air toxics not shown over Heron Bay in the report? Plumes from point sources must show worst case scenario and show the closest proposed stacks.

f) In reference the above, 70 years of average exposure may be concentrated into several critical events. The report should account for high exposure days in making cancer assessments. This data must be added to any consideration as to the probability of cancer contraction in the community. Furthermore, the report must combine and account for possible synergistic effects of multiple VOCs, plus chloroform, plus radon, in order to obtain accurate statistics for toxic risks.

g) The DEIR does identify radon and chloroform as two emission constituents associated with the operation of the central treatment facility. The DEIR further proposes that there would be mitigation required for chloroform depending on the level of chlorination of water used for replenishment purposes. Without discussing the accuracy of anticipated levels, as questioned above, Heron Bay notes that the DEIR supposes that all such monitoring would be by Bay Area Air Quality Management District. There is no indication that BAAQMD would agree to such monitoring and no information whatsoever on the criteria that would be employed in such an effort.

5. ADEQUACY OF MODELING TOOL.

There are several potential issues regarding the adequacy of the computer model used to assess impacts of the project on the ground-water system. However, to a large extent questions about the modeling do not alter the conclusion that there are potential severe adverse impacts associated with the draw-down and draw-up of ground water levels during extraction and injection that are not adequately addressed in the DEIR as stated above. The model will also prove to be inadequate to define whether the basin can sustain EBMUD's projection of basin yield. It must also be noted that the model is not a tool that can be used to delineate the effects of subsidence or possible breaches in the

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GROUND WATER RESOURCES
REGULATORY • DEVELOPMENT • MANAGEMENT

AUG 02 2001

August 1, 2001
File No. 01-1-055

Ms. Susan Hoffman
Professional Association Services
39899 Balentine Drive, Suite 102
Newark, CA 94560

SUBJECT: COMMENTS ON BAYSIDE GROUNDWATER PROJECT

Dear Ms. Hoffman:

In response to your request and authorization, we have reviewed EBMUD's Bayside Groundwater Project DEIR with respect to concerns expressed by the Heron Bay Homeowners Association. Specifically, you requested that we focus on concerns over subsidence and air quality. These two issues are covered primarily in Chapters 3.8 and 3.12 of the DEIR document, respectively. As you are aware, we have also performed a detailed review of the subject document on behalf of the City of Hayward and the Alameda County Water District over more regional concerns with respect to ground water resources. As discussed below, impacts to ground-water supply appear to be potentially significant and are of particular concern to these agencies. For background and perspective, we have included a brief summary of the other significant issues associated with this project outside of Heron Bay as well as discussion of the issues which we believe would be of particular concern to residents within the area of influence of this project.

Background and General Impact Concerns

The primary component of EBMUD's proposed Bayside project is extraction of ground water from a deep aquifer system. Other elements associated with this project include construction and operation of wells, replenishment of the aquifer system through injection of surplus water,

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construction and operation of a centralized water treatment plant, and construction and use of pipelines and other associated facilities. Overall, the project represents a significant change in the use of the ground-water basin. Furthermore, the extraction and injection activities may cause significant adverse impacts including loss in well capacities, subsidence, and induced movement of contaminant plumes or seawater, all as described below.

Ground-Water Extraction - Extraction activities would result in a significant change in the ground-water basin by inducing a draw-down in ground-water levels locally and regionally in the deep aquifer system in the South East Bay Plain. The draw-down caused by pumping activities at the proposed Oro Loma well field is large in magnitude. A significant concern over such a draw-down is that it can impact wells operated by others. That is, well capacities can be adversely impacted due to a loss in head available for pumping purposes. Secondary impacts may also arise from the extraction activities including subsidence and induced movement of contaminant plumes that may exist in other strata. The City of Hayward and Alameda County Water District have interests in the ground-water basin which could be adversely impacted by the extraction activities particularly because they have the potential to reduce the capacity of existing municipal water supply wells and influence the movement of ground water across jurisdictional boundaries.

Injection Impacts - Ground-water replenishment through injection has the opposite effect of extraction. That is, the proposed injection would induce a rise in ground-water levels in the deep aquifer. For the proposed project, it is estimated that ground-water levels would rise on the order of tens of feet above the ground surface. By targeting only deep aquifer materials which are overlain by thick clay sequences, it is assumed (in the project analysis) that the rise in water levels would not have negative impacts at the ground surface. However, breaches in the confinement could exist in the form of existing unsealed wells or the draw-up could simply be propagated to shallower strata through the overlying geologic formations.

Adequacy of Modeling Tool - There are several potential issues regarding the adequacy of the computer model used to assess impacts of the project on the ground-water system. However, to a large extent questions about the modeling do not alter the conclusion that there are potential adverse impacts associated with draw-down and draw-up of ground-water levels during extraction and injection that are not adequately addressed under mitigation measures. On the other hand, the model may prove to be inadequate to define whether the basin can sustain EBMUD's projections of basin yield. This could have consequences to other users of ground water including the City of Hayward and Alameda County Water District. Additionally, it should be noted that the model is not a tool that can be used to delineate the effects of subsidence or possible breaches in the geologic confinement which controls the upward influences of extraction and injection activities.

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Project Alternatives - It is notable that EBMUD's evaluation of project alternatives consists primarily of variations of the same project, i.e., the analysis considered alternate well sites and facilities locations. Although there is a description of other efforts made by EBMUD to develop additional water supply (e.g., in San Joaquin County where significant overdraft of the ground-water system has occurred), there is no analysis of other options to develop water supply capacity outside of the East Bay Plain (see Chapter 6, Analysis of Alternatives). As noted below under the discussion of subsidence, the East Bay area poses greater risk of property damage than an agricultural setting such as portions of San Joaquin County. In addition, favorable conditions already exist in such areas due to historical over-pumping activities which make replenishment, a key component of the proposed project, much more feasible. The question of project alternative falls under the category of CEQA compliance and as such was not within the scope of LSCE's review.


Potential Concerns for Heron Bay

Considering the overall impacts that could arise as a result of the proposed project, there are some aspects that could be of particular concern to residents located within the area of influence of the project, particularly those who are close to the proposed well field and plant as discussed further below. These aspects include subsidence, surficial impacts caused by extraction and injection, and operation of the central treatment plant (i.e., impacts on air quality). Comments on these matters are itemized below.

Subsidence - Land subsidence can occur as a result of ground-water extraction activities and is often associated with an imbalance of extraction over replenishment over a period of time. Replenishment can occur naturally, called recharge, or artificially; for the Bayside project, natural recharge would be enhanced through injection of surplus water. For the subject project, subsidence would be evident as a drop in land elevation and would be caused by dewatering of clay strata and subsequent compaction of those units. The consequences of subsidence can be minor or may result in severe property damage including cracked roadways, ruptured pipelines, and stressed or broken building foundations. Subsidence is generally a slow and gradual process and, for certain conditions, may be irreversible. Some communities in California's Central Valley have experienced up to tens of feet of permanent land elevation drop as a result of pumping induced subsidence.

For the EBMUD project, ground-water levels in the deep aquifer would be lowered for a period of up to a few years during the extraction modes of the project. The DEIR contends that subsidence will be minimal because water levels would not drop below historic lows. However, the projected draw-downs around the Oro Loma well field are much lower than historic levels from the 1960's as presented in Figure 3.8-2. From Figure 3.8-2, the historic low water level change for the deep aquifer is on the order of 120 feet. Draw-down is greater than 120 feet within a 10,000- to 12,000- radius of the Oro Loma well field and, the immediate vicinity of the

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wells, the draw-down is projected to be as much as 200 feet. Thus, while on a regional scale it appears that extraction draw-down would be less than historic conditions, the area immediately around the project well field would appear to be susceptible to potentially significant impacts related to subsidence.


It should be noted that time is a key factor with regard to subsidence. For example, normal fluctuations in water levels due to pumping activities typically do not cause subsidence as long as the pumping does not result in a long-term lowering of ground-water levels. The subsidence mechanism of most concern in the project area would be that associated with dewatering of clay strata triggered by a water level depression (due to pumping) that persists over many years.

While the proposed project indicates that a water balance would be achieved over 75 years of operation, there are no apparent project controls which would limit the period of time that the water levels could be depressed; i.e., there appears to be the potential that a significant draw-down in ground-water levels could exist for consecutive years under the proposed operating plan. Furthermore, due to the presence of clay strata, conditions exist within the project area for which subsidence can occur and, at a minimum, we would expect to see some elastic, or recoverable, land elevation changes during the extraction periods as a result of lowering the head well below historic levels in the immediate area surrounding the project well field. Those minimal changes might be on the order of a fraction of an inch; however, more substantial drops in land elevation (several inches to a few feet) could occur based on experience in other areas of California including the Santa Clara Valley. Thus, it is our opinion that some additional analysis and response is warranted on this matter in the environmental documentation for the project.

It should be noted that there are no mitigation measures proposed in the DEIR for the potential impacts due to subsidence; under the mitigation description, only monitoring is cited. Thus, if subsidence were to occur (and it is detected through monitoring), it is possible that irreversible damaging impacts will have occurred with no mitigation measure in place; in such a case, no after-the-fact mitigation would be possible. Additionally, with respect to monitoring, there is no quantification presented in the DEIR of the amount of subsidence which would be considered significant and which might trigger curtailment of the project extraction activities.

As a final and important concern with respect to the assessment of potential subsidence impacts, it is noted that Heron Bay residences are not located on maps of the proposed project where the greatest draw-down impacts would occur. As such, neither the impact analysis nor the mitigation measures address the matter of a residential zone around the proposed well field and whether project activities (i.e., high capacity extraction) would be appropriate in such a setting. Of concern would be that a residential area is likely to be much more susceptible to damages from subsidence than, say, an agricultural or possibly an industrial area. Without this consideration, EBMUD's analysis of project alternatives may be improperly based on the assumption that impacts would be less significant for an industrial setting in the East Bay. Although EBMUD

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cited institutional barriers for dropping consideration of portions of San Joaquin County for the proposed project, conditions in that or similar areas of the Central Valley would have significantly less risk of subsidence and property damage than a residential area in the East Bay Plain.


Potential Surficial Influences of Extraction and Injection Operations - The aquifer materials targeted by the project for extraction and injection are described as an hydraulically isolated deep aquifer system. The assumption of hydraulic isolation has been used to support findings that certain impacts, such as inducing movement of shallow contaminant plumes or saltwater intrusion in shallow zones, are insignificant. However, there are numerous other aspects of the hydrogeologic setting which appear to contradict the conceptual description. In particular, the primary source of natural recharge is apparently from a surficial source: rainfall. Such a recharge source would require a broad connection between the deep aquifer system and overlying units and would reflect a potential for greater surficial influences than that characterized in the DEIR.

Of greatest concern to overlying property owners will be the sustained injection and resultant draw-up in the deep aquifer estimated to be tens of feet above the ground surface. First, it is notable that such a project does not exist today by which to judge the merits of the finding that surficial impacts would be insignificant (particularly with the associated lack of viable mitigation measures). The consequence of surficial impacts are that they could result in ground-water flow under roadways, buildings, and in the vicinity of any wells that are no longer active in the area and which do not have proper seals. On this point, it is important to note that many water wells would not have extensive surface seals as would be required in the vicinity of an injection project of the type proposed by EBMUD. Additionally, in many cases, there are no records that abandoned wells were destroyed in manner which would prevent unwanted flow through the wellbore.

The concern over draw-up is real and we have observed analogous cases where ground-water conditions have changed (i.e., water levels have risen) and the problems cited above have been experienced. Furthermore, very little draw-up in a shallow water table would be enough to cause problems in the East Bay area where the water level in the shallow aquifer is generally close to the ground surface.

As with the subsidence issue, the mitigation measures proposed in the DEIR on the matters of surficial impacts specify that monitoring be used to identify problems after which solutions would be developed. For example, if an abandoned well were found to be a conduit for flow to the surface, it would be capped, or destroyed, after the problem is detected. Of course, this process does not prevent damage but rather reflects speculation that problems could simply be fixed once they are detected.

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Air Quality - The DEIR identifies radon and chloroform as two emission constituents associated with operation of the central treatment facility. The DEIR indicates that radon emissions pose no significant impact and that there would be some mitigation required for chloroform depending on the level of chlorination of water used for replenishment purposes. Proposed mitigation for chloroform relies on oversight and analysis by the Bay Area Air Quality Management District.

For the purpose of assessing potential risk to residents in the vicinity of the plant, we found technical deficiencies in the analyses presented in the DEIR. The deficiencies are itemized in the memorandum by Gary Gruwell Engineering and are considered limiting enough to prevent making a reasonable determination of adequacy on this matter.

Concluding Remarks

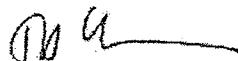
It is notable that the proposed project induces significant draw-down and draw-up of ground-water levels on the East Bay Plain region. The magnitude is large and would compare to the impacts expected from development of a municipal well field. However, the difference would be that a municipal well field is spread out and is developed over years in response to population growth. Thus, the concentrated and instantaneous initiation of the proposed project make it difficult to assess whether the important assumptions regarding basin yield or subsidence, for example, are valid. An additional concern should be the fact that mitigation of important potential impacts consists solely of monitoring followed by actions deemed appropriate by the operator. In other words, the DEIR lacks detailed descriptions of practical mitigation measures. This weakness appears to violate elements of CEQA and could be an area for further assessment by the Association.

To reiterate the concern over the mitigation process, impacts such as subsidence or surficial migration of ground water would develop gradually over time to the point that harm may occur after the time of detection; thus, monitoring, as proposed, may be of little consequence to those who are impacted.

Should you have any questions regarding our comments, please call.

Sincerely,

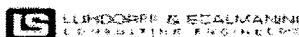
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Thomas D. Elson

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August 6, 2001

Via Hand Delivery

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 East Bay Municipal Utility District
 375 11th Street
 Oakland, California 94607

Mr. Mark Williams, Project Manager
 Bayside Groundwater Project
 East Bay Municipal Utility District
 375 11th Street
 Oakland, California 94607

Angela Knight, Administrative Assistant
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 375 11th Street
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ENVIRONMENTAL NATURAL RESOURCES
AND ENERGY GROUP

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RECEIVED
 AUG 6 2001
 WATER SUPPLY IMPROVEMENTS
 Angela Knight

Re: Heron Bay Interest Group's Comments on EBMUD's Draft Environmental Impact Report for the Bayside Groundwater Project

Dear Mr. Lampe, Mr. Williams and Ms. Knight:

This law firm represents Heron Bay Interest Group, an association of residents in the Heron Bay neighborhood of the City of San Leandro. Heron Bay Interest Group was organized in response to public health and safety, environmental impact, property damage, property rights and discrimination concerns regarding the Bayside Groundwater Project proposed by East Bay Municipal Utility District ("EBMUD").

In March 2001, EBMUD released a document entitled *Draft Environmental Impact Report for the Bayside Groundwater Project* ("DEIR"). Pursuant to the California Environmental Quality Act ("CEQA"), EBMUD has provided interested parties with an opportunity to submit public comments on the DEIR.

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Heron Bay Interest Group has undertaken a comprehensive review of the *DEIR*. As set forth below, this review has led to the conclusion that there are numerous legal deficiencies with the *DEIR* document, as well as with the procedures followed by EBMUD in preparing the *DEIR*. This letter does not provide an exhaustive list of the *DEIR*'s legal shortcomings, but instead focuses only on the most fundamental defects.

The legal deficiencies identified in this letter are so pervasive and widespread that they cannot be cured by EBMUD simply revising the *DEIR* and proceeding to a Final Environmental Impact Report. Rather, the current *DEIR* should be set aside, and a new draft *DEIR* should be prepared and recirculated for public comment.

I. Underlying Purpose of Project and Alternatives Analysis

CEQA Guideline 15124(b) provides that the "project description" for an Environmental Impact Report ("EIR") must include a "statement of objectives." CEQA Guideline 15124(b) also provides that "a clearly written statement of the objective will help the lead agency to develop a reasonable range of alternatives to evaluate in the EIR." The California courts have consistently and repeatedly held that when a project's objectives are defined too narrowly, an EIR's treatment of alternatives may also be inadequate. City of Santee v. County of San Diego ("Santee"), 214 Cal.App.3d 1438 (1989); Rural Land Owners Association v. City Council, ("Rural Land Owners") 143 Cal.App.3d 1013 (1983); County of Inyo v. City of Los Angeles ("Inyo"), 124 Cal.App.3d 1 (1981).

Section S.2.1 of the *DEIR* for the Bayside Groundwater Project is entitled *Project Objectives and Need* and provides "The objective of the Bayside Groundwater Project is to develop the East Bay Plain Groundwater Basin to provide 10,000 to 15,000 acre-feet of water supply per year during droughts." Section 1.1 of the *DEIR*, entitled *Project Background and Overview*, explains how EBMUD arrived at this objective: "On June 27, 2000, the EBMUD Board directed staff to initiate the technical and environmental analyses necessary to develop a conjunctive-use well field project in the East Bay Plain aquifer. The project would be capable of providing 10,000 to 15,000 acre-feet per years of additional water supply to District customers during the drought period and would be operational by July 2002." After narrowing the underlying purpose of the project to the storage of 10,000 to 15,000 acre-feet of water in the East Bay Plain aquifer, the *DEIR* then proceeds to analyze project variations that meet this narrow underlying purpose.

In essence, EBMUD has artificially limited the range of alternatives analyzed in the *DEIR* by providing an underlying objective that is so narrow that it is basically the same as the description of the proposed project. This approach is not permitted under Santee, Rural Land Owners and Inyo.

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Contrary to Section S.2.1 of the *DEIR*, the underlying objective of the Bayside Groundwater Project is not to store 10,000 to 15,000 acre-feet of water in the East Bay Plain aquifer. Rather, the underlying objective of the proposed project is to ensure that there is adequate water supply to meet the needs of East Bay water customers during periods of drought, and there is a broad range of alternatives that may be able to fulfill this objective. For instance, EBMUD could increase the storage capacity of its above ground water storage facilities. As another example, EBMUD could address the problem of pipe-leakage and stream-leakage that occurs in water transport. More specifically, EBMUD's consultants, CH2M Hill prepared a January 2000 report that concluded that EBMUD was losing 9,900 acre-feet per year to pipe-leakage and 6,400 acre-feet per year to stream-leakage (*Regional Hydrologic Investigation South East Bay Plan*, Section 2.4.1, January 2000 Report by CH2M Hill). Preventing the leakage of 16,300 acre-feet of transported water per year would greatly reduce the need to increase water storage. As a final example, EBMUD could evaluate the prospects of improved water conservation and water recapture/recycling programs as an alternative to increased water storage. All of these alternative approaches are consistent with a properly formulated underlying objective of meeting East Bay water customers's needs in periods of drought, yet none of these alternatives were analyzed in the *DEIR*.

Additionally, the *DEIR* analysis of the "No Project" alternative is also inadequate. CEQA Guideline 15126.6(e)(1) requires that an EIR evaluate the no project alternative along with other alternatives. Yet, the *DEIR* only provides the following brief evaluation of the no project alternative: "As a consequence of selecting the No Project Alternative, EBMUD would not secure a near-term water supply for drought relief by the year 2002, as described in Chapter 2, Section 2.1, Project Objective and Need. Customer rationing in excess of 25 percent could be required, depending on specific scenarios." This type of cursory no project alternative analysis was rejected in a recent California Court of Appeal decision involving water supply. Planning and Conservation League v. Department of Water Resources ("Planning and Conservation League"), 84 Cal.App.4th (2000). Much like EBMUD's proposed Bayside Groundwater Project, the Planning and Conservation League case involved an EIR for a Department of Water Resources' ("DWR") project to develop additional storage to avoid reductions of water promised to municipal customers. Due to the deficiencies of the no project alternative analysis, the Court set aside the DWR's EIR. EBMUD's *DEIR* for the Bayside Groundwater Project, if adopted, would suffer the same fate.

II. Reoccurring Short-Term Subsidence (Elasticity)

On May 1, 2001, EBMUD representatives and EBMUD's consultants, CH2M Hill, participated in a meeting with the members of the San Lorenzo Village Home Association. The purpose of this meeting was to discuss the proposed Bayside Groundwater Project. At this meeting, the issue of land-subsidence was addressed by John Anderson ("Mr. Anderson"), Chief Geotechnical Consultant with CH2M Hill. At this meeting, Mr. Anderson stated that CH2M Hill's analysis did not indicate that any *long-term land subsidence* would occur as a result of the Bayside Groundwater Project. Mr. Anderson also stated, however, that CH2M Hill's analysis indicated that the Bayside Groundwater Project would likely result in *reoccurring short-term land rising and subsidence* of

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several inches. More specifically, Mr. Anderson stated that the land located above the groundwater aquifer would temporarily rise when large quantities of surface water were injected into the aquifer, and that the land located above the groundwater aquifer would temporarily settle when large quantities of surface water were extracted from the aquifer. Mr. Anderson's statements about the likelihood of reoccurring short-term rising and subsidence were corroborated by materials which EBMUD distributed at the May 1, 2001 meeting, a copy of which is attached as Exhibit A to this letter. These materials stated:

Short Term Subsidence. All sand, gravel and clay soils experience some "elastic" immediate subsidence when drawdown occurs. This type of subsidence typically is on the order of inches and occurs as the load (drawdown) takes place. This type of subsidence is recovered/reversed when drawdown ceases.

Although the likelihood of reoccurring short-term rising and subsidence was acknowledged in the statements of Mr. Anderson and in the documents distributed by EBMUD at the May 1, 2000 meeting, the *DEIR* remarkably makes no mention of this impact. Instead, the *DEIR* section on Geology (§ 3.7) simply concludes that it is unlikely that long-term subsidence would occur because it is unlikely that groundwater levels would drop below historic levels.

The *DEIR*'s failure to acknowledge and analyze the adverse environmental impacts associated with reoccurring short-term rising and subsidence is a glaring defect and omission under CEQA. See California Public Resources Code § 21100(b)(1); CEQA Guidelines 15143, 15126(a), 15126.2(a). These CEQA statutory provisions and guidelines provide that a draft EIR must identify and focus on the possible significant environmental impacts of a proposed project. CEQA Guideline 15143 specifically provides that "the significant effects should be discussed with emphasis in proportion to their severity and probability of occurrence." The statements by John Anderson of CH2M Hill and the materials distributed by EBMUD, discussed above, evidence the probability of reoccurring short-term ground rising and subsidence. The information provided below, evidences the severity of the foreseeable effects of reoccurring short-term subsidence.

A short-term rise or subsidence of several inches could result in significant property damage and personal injury. More specifically, this type of temporary movement could permanently fracture the foundations, crack the walls, and rupture the gas and electric lines in thousands of homes and other structures located above the groundwater aquifer proposed in the Bayside Groundwater Project. Beyond the potential for extensive property damage, these effects also pose significance public safety hazards related to structural collapse, explosion and fire.

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In addition to structural damage and personal injury, the reoccurring short-term subsidence would also have a direct adverse impact on the value of the land overlying the groundwater aquifer. Once prospective purchasers are made aware of the subsidence/elasticity hazards associated with owning land and structures overlying the groundwater aquifer used in the Bayside Groundwater Project, the value of the land and structures will decrease. In fact, according to a residential real estate agent who is active in the Heron Bay community, uncertainties about subsidence related to the Bayside Groundwater Project are already having an adverse effect on the marketability of homes located over the aquifer.

California law is clear that a public agency is liable to property owners for damages related to land subsidence caused by an agency's actions. Agency-induced land subsidence presents a classic inverse condemnation property damage situation under California Constitution, Article 1, Section 19, e.g. Holtz v. San Francisco Bay Area Rapid Transit District, 17 Cal.3d 648 (1976). In addition, California Code of Civil Procedure §1036 provides that in inverse condemnation cases public agencies are required to pay plaintiff's attorneys', engineers' and appraisers' fees, even upon resolution of the cases through settlement. In the case of the proposed Bayside Groundwater Project, EBMUD's potential liability could therefore be extensive. For instance, it is quite foreseeable that reoccurring short-term subsidence could reduce the value of overlying homes by as much as \$50,000 a piece. There are over 700 homes in the Heron Bay community alone, which means EBMUD could face upwards of \$35,000,000 in liability to Heron Bay residents for reduced property values. After factoring in the property damage and personal injury that would likely result from the reoccurring short-term subsidence, and the attorneys', engineers' and appraisers' fees involved in bringing these claims, this \$35,000,000 figure could be even higher.

The *DEIR*'s conclusion that the proposed Bayside Groundwater Project will have a "less than significant" geologic impact because it is unlikely that there will be a long-term subsidence is baseless. This is the equivalent of stating that reoccurring earthquakes will have a "less than significant" seismic impact because it is unlikely that there will be long-term land movement. Just as with reoccurring short-term earthquakes, the damage that can result from reoccurring short-term ground rising and subsidence is significant and often permanent.

Section 21168.5 of CEQA instructs courts to set aside a lead agency's CEQA determination if this determination is not supported by "substantial evidence." For the reasons set forth above, there is not substantial evidence to support the *DEIR*'s conclusion that the geologic impacts of the proposed Bayside Groundwater Project would be less than significant.

III. EBMUD's Right to Store Surface Water in Groundwater Aquifer

The proposed Bayside Groundwater Project is based on the assumption that EBMUD has the legal right to inject and store surface water in the groundwater aquifer located beneath the East Bay Plain. As EBMUD states in a May 2001 document entitled *Bayside Groundwater Project - Draft Environmental Impact Report, Community Meeting Questions and EBMUD Answers*, "All overlying

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landowners have the right to pump underlying groundwater and put it to beneficial use on their property. Water services agencies like EBMUD are allowed to use aquifers within their service areas to provide water to their customers." EBMUD's unsubstantiated assumption here is incorrect.

Contrary to the statement from EBMUD quoted above, water agencies do not possess the right to store imported surface water in groundwater aquifers underlying third-parties' land. More specifically, this issue is currently the subject of a major groundwater litigation pending in Santa Clara Superior Court, involving numerous water agencies and hundreds of overlying landowners (Santa Maria Groundwater Litigation, Consolidated Case No. CV770214). In this case, a group of landowners have asserted that they own the groundwater storage space located beneath their properties, and that the water agencies are therefore not entitled to use this groundwater storage space without providing adequate compensation to overlying landowners. The water agencies filed a demurrer to the landowners' claim regarding ownership of groundwater storage space, and significantly, this demurrer was denied. To provide EBMUD with a sense of the legal uncertainty surrounding this question, below is an excerpt of the opposition filed by the landowners to the water agencies' demurrer:

Land Owner Group ("LOG") parties assert that they own, as part and parcel of their respective property overlying the basin, all groundwater storage space beneath that property, and have the right to possess, occupy and use that space. By their demurrers, City of Santa Maria ("Santa Maria") and Southern California Water Company ("SoCal") dispute LOG Parties' right to plead a claim of groundwater storage space ownership....Civil Code §829 states: "The owner of land in fee has the right to the surface and everything permanently situated beneath or above it."...The issue of ownership of subterranean groundwater storage space does not appear to have been directly decided by a California appellate court. However, federal decisions on this issue are instructive. In Emery v. United States (Cl. Cl. 1969), 412 F.2d 1319, 1232, the United States Court of Claims held that the United States did not have a right to use an underground geologic structure on leased property to store helium gas produced elsewhere. The Court of Claims held that, as ownership of the land includes everything in such lands, ownership also included geological structures beneath the surface that might be suitable for underground storage of substances. Therefore, the underground geologic formation which had value as storage facility belonged to the surface owner. Also, in United States v. Union Oil of California (9th Cir. 1977), 549 F.2d 1271, 1273, the Court of Appeal held that, in the context of the Federal Stock-Raising Homestead Act of 1916, porous rock strata is classified as a mineral and is subject to a federal mineral reservation in a grant.

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As evidenced by the denial of the water agencies' demurrer, the argument presented above was given serious consideration by the Court in Santa Maria Groundwater Litigation. EBMUD should therefore be aware that its proposed Bayside Groundwater Project could provide the basis for trespass, inverse condemnation and takings claims by the thousands of landowners who overlie the groundwater aquifer where EBMUD proposes to inject and store surface water. If these trespass, inverse condemnation and takings claims succeed, EBMUD could be required to provide appropriate compensation to each of these overlying landowners before the agency could lawfully inject and store surface water as proposed in the Bayside Groundwater Project.

IV. Scenic/Visual Resources

Section 3.3.4 of the DEIR states that "the facility would contain a concrete masonry building approximately 60 feet wide, 100 feet long and 18 feet high; 54-foot diameter tank approximately 30 feet high, four 12-foot diameter aeration units approximately 25 feet tall."

Section 3.2.2 of the DEIR acknowledges that the proposed project site for the facility is "bounded by the San Francisco Bay on the West." Yet, remarkably, none of the "environmental setting" photographs presented in the DEIR depict this currently uninterrupted, open westerly view of San Francisco Bay, and none of the scenic/visual analysis in the DEIR considers how the proposed masonry building, tank and aeration towers would block this current uninterrupted open westerly view of San Francisco Bay. For the reasons set forth below, the DEIR's omission of any acknowledgment, discussion or analysis concerning the existence and foreseeable loss of this uninterrupted open westerly view of San Francisco Bay is inconsistent with CEQA's requirements.

A. Analysis of Baseline Conditions/Description of Environmental Setting

CEQA requires that an EIR provide baseline information about the environmental setting of a proposed project. More specifically, CEQA Guideline 15125 provides that "An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time [] environmental analysis is commenced." CEQA Guideline 15125 further provides that this description must be sufficiently detailed to provide "an understanding of the significant effects of the proposed project" and that it "must permit the significant effects of the project to be considered in the full environmental context." By failing to describe or present (in photographs) the currently uninterrupted, open westerly view of San Francisco Bay, the DEIR did not provide a legally sufficient description of the existing scenic/visual setting of proposed project site. In particular, this omission fundamentally misrepresented the quality of the existing scenic/visual resources that would be affected by the project.

B. Significance Determination

Appendix G of the CEQA Guidelines provides a checklist for agencies to use to determine whether a proposed project will have a significant adverse impact on a particular resource. Appendix

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G provides that a proposed project is considered to have a significant effect on the environment if the project would "have a substantial, demonstrable negative aesthetic effect on a scenic view" or "substantially degraded the existing visual character or quality of the site and its surroundings." A determination as to whether a scenic view would be "substantially degraded" or subject to "demonstrable negative aesthetic" effects requires that an agency first make a determination as to the baseline quality of the existing scenic view. If the existing view is of limited scenic value (such as a site surrounded by other industrial buildings), then the proposed obstruction of this existing view is unlikely to have a significant aesthetic impact on scenic/visual resources. On the other hand, if the existing view is of great scenic value (such as an uninterrupted view of San Francisco Bay), then the proposed obstruction of this existing view is likely to have a significant aesthetic impact on scenic/visual resources.

In the case of the proposed site for the Bayside Groundwater Project, the *DEIR* fundamentally misrepresented the baseline quality of the existing scenic view, by suggesting that all of the views of the proposed project site were industrial in character, and by failing to disclose that many of the views of the proposed project site provided open uninterrupted views of San Francisco Bay. This misrepresentation of the quality of the existing scenic view permitted EBMUD to reach the erroneous conclusion that the proposed masonry building, tank and aeration towers would have a "less than significant" impact on scenic/visual resources.

Further, well-developed methodologies exist and are widely used by visual impact experts for conducting visual impact analysis for proposed facilities, including use of a visual modification classification system to determine visual impact intensity, evaluating visual sensitivity, and establishing viewer exposure. The *DEIR* does not employ such techniques and instead employs rudimentary, qualitative analysis.

As such, pursuant to Section 21168.5 of CEQA, there is not substantial evidence to support the *DEIR*'s conclusion that the scenic/visual impacts of the proposed Bayside Groundwater Project would be less than significant.

V. Air Pollution

A. Cancer Risks from Chloroform Inhalation

Section 3.12 of the *DEIR* estimates that, in connection with the proposed Bayside Groundwater Project, "annual air emission rates of chloroform would be approximately 1,900 pounds per year for distribution system and approximately 3,700 pounds per year for distribution system water that is subjected to additional chlorination." According to Section 3.12.2 of the *DEIR*, the United States Environmental Protection Agency has classified chloroform as a probable human carcinogen, and the Bay Area Air Quality Management District ("BAAQMD") considers chloroform to be toxic air contaminant.

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Section 3.12.3 of the *DEIR* concludes that the cancer risk associated with the emission of chloroform from the proposed Bayside Groundwater Project's aeration towers is "less than significant." This conclusion was apparently based on the results of a March 9, 2001 report prepared by EBMUD's consultant, CH2M Hill. The introduction to this report, entitled *Air Toxics Impact Analysis for San Lorenzo Air Stripper*, provides in pertinent part: "This technical memorandum presents the methodology and results of an analysis of incremental lifetime cancer risk for a proposed air stripper in San Lorenzo, California. The risk analysis was conducted using a dispersion model approved by the U.S. EPA, and health risk factors developed by the California Office of Environmental Health Hazard Assessment (OEHHA). The inhalation exposure pathway was assessed for a single compound, chloroform, which is release to the atmosphere through 4 identical stacks."

CH2M Hill's exposure pathway analysis for chloroform was based on an air dispersion model, which in turn was based on historical meteorological data for the vicinity of the proposed aeration towers. In its report, CH2M Hill states that BAAQMD requires 5 consecutive years of meteorological data to be used in air dispersion modeling. Yet, the CH2M Hill report concedes that its modeling for chloroform dispersion of the Bayside Groundwater Project was based on meteorological data for a single year - 1997. According to the CH2M Hill Report: "Four additional years (1993-1996) of meteorological data are currently on order with the National Climate Data Center; these data are expected shortly... Therefore, the results in the memorandum, which are based on 1 year of data, should be considered preliminary and approximate. The risk results could change by up to plus or minus 50%, should additional years of meteorological data be used in subsequent analysis." (Emphasis added.) As such, CH2M Hill concedes that the modeling approach used in its chloroform dispersion analysis is considered unreliable by BAAQMD, and that the results of this analysis could be off by as much as 50%.¹

Particularly given the proximity of the proposed stacks to densely populated residential areas, use of exposures calculated based upon a single year of data and which may vary by as much as 50% is impermissible. Instead, in the face of this uncertainty, EBMUD must do the following: first, make reasonable attempts to obtain the additional data that would resolve the scientific uncertainty, and; second, if this additional data cannot reasonably be obtained, summarize credible scientific data that indicates that adverse environmental impacts of a proposed action will be minimal, as well as credible scientific data that indicates the environmental impacts of a proposed action will be

¹EBMUD's files indicate that CH2M Hill submitted two air quality reports on March 9, 2001. The first report, reference above, relied on the "plus or minus 50%" figure throughout the text, while the second report relied on a "50% plus or minus" figure in some parts of the text and a "10% plus or minus" figure in other parts of the text. A footnote accompanying one of the "10% plus or minus" figures in the second report suggests that this figure was based on "input" from BAAQMD staff. CH2M Hill did not provide information regarding the basis for the "50% plus or minus" so it is impossible for the reader to evaluate whether this revision (if it in fact is a revision) is scientifically warranted.

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significant.² In the case of meteorological data necessary to analyze the air quality impacts of the proposed Bayside Groundwater Project, EBMUD did not comply with either of these requirements. More specifically, EBMUD did not provide a reasonable explanation why it could not wait to release the *DEIR* until after it received an analyzed meteorological data for the years 1993-1996 (which EBMUD indicated was expected shortly), and EBMUD only presented data and analysis that supported its conclusion that the proposed project's air quality impacts would be less than significant.

EBMUD's reliance on the March 9, 2001 CH2M Hill report is therefore inconsistent with Section 21168.5 CEQA, in that the report does not provide substantial evidence to support the *DEIR*'s conclusion that the cancer risk associated with the emission of chloroform from the proposed Bayside Groundwater Project's aeration towers constitutes a "less than significant" impact on public health.

B. Cumulative Impact Analysis

CEQA Guidelines 15130 and 15355 require that a lead agency consider past projects as well as present and reasonably foreseeable future projects that have or may contribute to the degradation of resources affected by the proposed project. These provisions have been aggressively and consistently enforced by the California Courts. For instance, in Whitman v. Board of Supervisors ("Whitman") 88 Cal.App.3d 397, 408 (1979), the Court of Appeal clarified that cumulative impact analysis of past, present and reasonably foreseeable project is necessary because "the full environmental impact of a proposed action cannot be gauged in a vacuum." See also Los Angeles Unified School District v. City of Los Angeles, 58 Cal.App.4th 1019, 1024-1025 (1997); Las Virgenes Homeowners Association v. County of Los Angeles, 177 Cal.App.3d 300, 306 (1986); Kings County Farm Bureau v. City of Hanford, 221 Cal.App.3d 692,720 (1990).

The *DEIR* provides some limited discussion of cumulative air pollution impacts related to construction of the Bayside Groundwater Project (See p. 3.12-8). The *DEIR*, however, does not provide any analysis of the cumulative air pollution impacts of the operation of the project, and in particular the emissions from the aeration towers (air strippers). Especially troublesome is the fact that the *DEIR* offers no cumulative air pollution impact analysis regarding the Ora Loma Water Treatment Plant, which is located adjacent to the proposed Bayside Groundwater Project site. According to BAAQMD's 1999 Annual Report, the Ora Loma facility emits 490 pounds per year of chloroform.

² The CEQA guidelines and caselaw do not deal specifically with the issue of scientific uncertainty. However, this issue of scientific uncertainty has been addressed in regulations and caselaw implementing the federal National Environmental Policy Act ("NEPA"), and California courts regularly look to NEPA for guidance in interpreting CEQA's provisions. See Council on Environmental Quality Regulation 1502.22; *Friends of the Earth v. Hall*, 693 F. Supp. 904(W.D. Wash. 1988).

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The *DEIR's* omission of any cumulative air pollution analysis regarding the operation of the proposed Bayside Groundwater Project, and in particular the omission of cumulative impact analysis relating to the operation of the Ora Loma Water Treatment Plant, constitute fundamental violations of CEQA.

VI. Water Quality

John Izbiki ("Mr. Izbiki") is a Project Chief with the United State Geological Survey ("USGS"), and currently preparing a USGS report entitled *Source Movement and Age of Groundwater in the San Leandro and San Lorenzo Alluvial Cones of the East Bay Plain Water System*. This report should be completed in 2002. In May 2001, Mr. Izbiki spoke on the phone with Melissa Cutter, a member of Heron Bay Interest Group. In this phone conversation, Mr. Izbiki stated that, from 1860-1950, there were approximately 1500 groundwater wells constructed in the East Bay Plain, many of which were not destroyed or removed. Mr. Izbiki also stated that while most of these wells were shallow, several extended down into the deep aquifer. Mr. Izbiki's statements were documented in a memorandum which Melissa Cutter prepared immediately following the phone conversation.

Mr. Izbiki's statements find confirmation in a August 1999 study published by the San Francisco Regional Water Quality Control Board ("RWQCB") and a January 2000 report prepared by EBMUD's consultants, CH2M Hill. As discussed below, the RWQCB study and the CH2M Hill report not only confirm the presence of these abandoned deep aquifer wells, but also confirm the significant role that these abandoned deep aquifer wells may play in contamination of the deep aquifer.

The August 1999 RWQCB study, entitled *East Bay Plain Beneficial Use Evaluation Report*, concludes: "Improperly abandoned wells (vertical conduits) are included in this section on Groundwater Pollution Sources. While vertical conduits are not 'pollution sources' in the conventional sense, they can provide a potential pathway for contamination to migrate from shallow to deeper aquifers...In the East Bay Plain, it is likely that numerous historical wells drilled prior to the importing of Sierra water are potential vertical conduits." Section 9.3 of RWQCB study.

The January 2000 CH2M Hill report, entitled *Regional Hydrologic Investigation for the South East Bay Plain*, states: "TCE [tri-chloride ethylene] contamination in this area may have migrated to deeper zones through improperly abandoned deep wells." Section 3.2 of CH2M Hill report. This report is cited as a reference at the end of the *DEIR's* section (§ 3.10) on water quality.

The *DEIR* section on water quality (§3.10), however, made no mention of the presence of these abandoned deep aquifer wells, and did not analyze how these abandoned deep aquifer wells could serve as vertical conduits to transport contamination to the deep aquifer. In fact, the *DEIR's* only mention of these abandoned deep aquifer wells is in Section 3.8-2 on Groundwater. Here the *DEIR* notes: "Abandoned and/or improperly destroyed wells screened across both the Deep Aquifer

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and overlying aquifer could provide a conduit for vertical contaminant migration. These conduits could lead to short-circuiting of the groundwater flow system and allow rapid transport of water vertically between aquifers." Although Section 3.8 of the *DEIR* concludes that the potential adverse effects of contaminant plume migration are "less than significant", the *DEIR* does not explain how it reached this conclusion in light of information regarding the ability of abandoned deep aquifer wells to serve as vertical contaminant conduits. To demonstrate that it was unlikely that there would be direct co-mingling of waters in the shallow and deep aquifers, the *DEIR* refers to testing indicating that the water levels in shallow aquifers would most likely not be affected by changes in the water levels of the deep aquifer. This testing, however, does not address the migration of contamination through vertical conduits.

Because the *DEIR* failed to analyze the plume migration potential created by these abandoned deep aquifer wells, there is not substantial evidence to support the *DEIR*'s conclusion that the water quality impacts of the proposed Bayside Groundwater Project would be less than significant.

VII. EBMUD's Notice to Persons Whose Property Rights Are Affected

The Heron Bay neighborhood is directly adjacent to the proposed project site for the Bayside Groundwater Project. As such, the residents of Heron Bay are likely to suffer the property damage discussed above. In particular, EBMUD's proposed Bayside Groundwater Project may cause reoccurring short-term rising and subsidence of land owned by Heron Bay residents, and may result in the unauthorized use of the groundwater storage space beneath Heron Bay residents' land.

More than 70% of the residents of Heron Bay are Asian-Americans, and the majority of the Asian-American residents of Heron Bay are Chinese. Many of the Chinese residents in Heron Bay are recent immigrants who do not read and speak English. Despite numerous complaints from the Heron Bay community, until May 2001, all of the CEQA documents (including the Notice of Preparation, the Initial Study, the *DEIR* and notices of public meetings) published in connection with the proposed Bayside Groundwater Project were published in English only. Since that time, only limited multi-lingual materials have been disseminated. Because EBMUD has refused to provide Chinese translations of these documents, and because EBMUD had refused to provide Chinese translators at public hearings, many of the Chinese-speaking residents of Heron Bay remain unaware and/or misinformed about the project.

CEQA does not expressly contain a requirement that lead agencies provide information in languages other than English, even when the lead agency is aware that a majority or large percentage of the community affected by a proposed project are non-English speakers. There are many CEQA provisions, however, which deal with a lead agency's obligations regarding public participation. CEQA Guideline 15002 provides that "The basic purposes of CEQA is to inform government decisionmakers *and the public* about the potential significant environmental effects of proposed activities" (emphasis added) and that "Under CEQA, an agency must solicit and respond to comments from the public and other agencies concerned with the project." CEQA Guideline 15201

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provides that "Public participation is an essential part of the CEQA process. Each public agency should include provisions in its CEQA process for wide public involvement, formal and informal, consistent with its existing procedures, in order to receive and evaluate public reactions to environmental issues related to the agencies' activities." CEQA Guideline 15087 provides that "(a) The lead agency shall provide public notice of the availability of a draft EIR... This notice shall disclose the following: (1) a brief description of the proposed project and its location; (2) the starting and ending dates for the review period during which the lead agency will receive comments; (3) the date, time and place of any schedule public meetings or hearings to be held by the lead agency on the proposed project; (4) a list of the significant environmental effects anticipated as a result of the project."

In the context of a project immediately adjacent to this population of residents, provision of language-appropriate communications is required by these CEQA Guidelines because the public cannot participate in the CEQA process if the public cannot understand the documents and meetings that comprise the CEQA process. EBMUD's refusal to provide Chinese-translations of CEQA documents, and its refusal to provide Chinese-translators at public meetings, constitute violations of CEQA Guidelines 15002, 15201 and 15087.

Quite apart from the CEQA process, there are other legal reasons why EBMUD was required to provide Chinese-translations for documents and meetings related to the Bayside Groundwater Project. In the case of Horn v. County of Ventura ("Horn"), 24 Cal.3d 605 (1979), the California Supreme Court held that CEQA's minimal notice requirements may be insufficient to satisfy constitutional due process mandates when constitutionally-protected interests are at stake. The Horn Court held that where fundamental interests may be substantially affected by a proposed project, "notice must be reasonably calculated to afford affected persons the realistic opportunity to protect their interests." Id. at 617. As discussed above, the proposed Bayside Groundwater Project's impacts on subsidence and groundwater storage space would substantially affect the property rights of Heron Bay residents, and property rights are entitled to constitutional due process protection. Pursuant to Horn, EBMUD therefore had a constitutional due process obligation to provide Chinese-speaking Heron Bay residents with notice that was reasonably calculated to provide such residents with a realistic opportunity to protect their property interests. In practice, this would mean providing such notice in Chinese as well as English.

VIII. Disproportionate Impacts on Asian-American and Chinese Residents

As discussed above, the Heron Bay community is immediately adjacent to the proposed site for EBMUD's Bayside Groundwater Project. More than 70% of the residents of Heron Bay are Asian-Americans, and the majority of the Asian-American residents of Heron Bay are Chinese.

In 1994, President Clinton issued Executive Order 12989, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Executive Order

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12989 requires that agencies develop a strategy to address disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations.

Title VI of the Civil Rights Act of 1964 provides in pertinent part: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Communities who maintain that they have been subject to disproportionate health and environmental risks because of their race may file an administrative complaint with the United States Environmental Protection Agency's ("EPA") Office of Civil Rights.

Given the environmental impacts of the project, as set forth above, the proposed site of EBMUD's Bayside Groundwater Project would subject the Asian-American and Chinese residents of Heron Bay to disproportionate adverse health and environmental risks. As such, the approval of the proposed Bayside Groundwater Project would be inconsistent with Executive Order 12989 and Title VI of the Civil Rights Act of 1964, and would provide proper grounds to file a complaint with EPA's Office of Civil Rights.

IX. Conclusion

Heron Bay Task Force believes that, if properly complied with, CEQA will provide the environmental information necessary to ensure that EBMUD officials, other public officials, and interested members of the public have complete and accurate information concerning the proposed Bayside Groundwater Project. Unfortunately, the *DEIR* does not comply with CEQA and does not provide the necessary information to properly evaluate the environmental impacts of the proposed projects. Preliminarily, the first step is therefore to revise and recirculate the *DEIR* to address the current document's numerous and significant CEQA-related deficiencies. Should EBMUD approve a final EIR that suffers the same legal deficiencies identified in these comments, Heron Bay Interest Group will take appropriate steps to have this approval set aside.

Quite apart from CEQA, however, EBMUD's approval and implementation of the proposed Bayside Groundwater Project raises other serious legal and public safety issues, including but not limited to the following: (1) implementation of the project will likely result in tens of millions of dollars in property damage to overlying owners, for which EBMUD will be liable; (2) implementation of the project may result in death and/or personal injury resulting from structural collapse, explosion or fire, for which EBMUD would be liable; (3) implementation of the project would result in the invasion of thousands of overlying owners' property rights regarding groundwater storage space, for which EBMUD would be liable; (4) EBMUD violated the constitutional due process rights of Chinese-speaking Heron Bay residents by refusing to provide Chinese-translations during the CEQA process; (5) the proposed project violates environmental justice requirements because it will have an overwhelmingly disproportionate adverse environmental impact on Asian-

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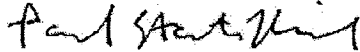
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American and Chinese-American residents in the Heron Bay neighborhood. Although these considerations may not bear directly on the legal adequacy of the *DEIR* under CEQA, they nonetheless bear heavily on the legality and wisdom of the proposed Bayside Groundwater Project.

Thank you for the opportunity to comment on the *DEIR*.

Very truly yours,

FITZGERALD, ABBOTT & BEARDSLEY LLP



Paul S. Kibel

Attorneys for Heron Bay Interest Group

Exhibit A: EBMUD public meeting handout re: short-term subsidence

cc: Larry Kolb, San Francisco Regional Water Quality Control Board
Mee Liang Tung, Alameda County Health Department
Alice Lai Bitker, Alameda County Board of Supervisors
Scott Hagerty, Alameda County Board of Supervisors
Nate Miley, Alameda County Board of Supervisors
Ellen M. Corbett, California State Assembly Representative
Pete Stark, Congressman, United States House of Representatives
Liz Figueroa, California State Senator
Mayor Roberta Cooper, City of Hayward
Mayor Shelia Young, City of San Leandro
Bob Glaze, San Leandro City Councilman
Dennis M. Diemer, EBMUD General Manager
Lynelle Lewis, EBMUD District Secretary
Katy Foulkes, EBMUD Board President and Director
Lesa R. McIntosh, EBMUD Director
John A. Coleman, EBMUD Director
David Richardson, EBMUD Director
Doug Linney, EBMUD Director
William B. Patterson, EBMUD Director
Frank Mellow, EBMUD Board Vice-President and Director
Joyce Chan, Singtao Newspaper
Carl Chan, Oakland Chamber of Commerce

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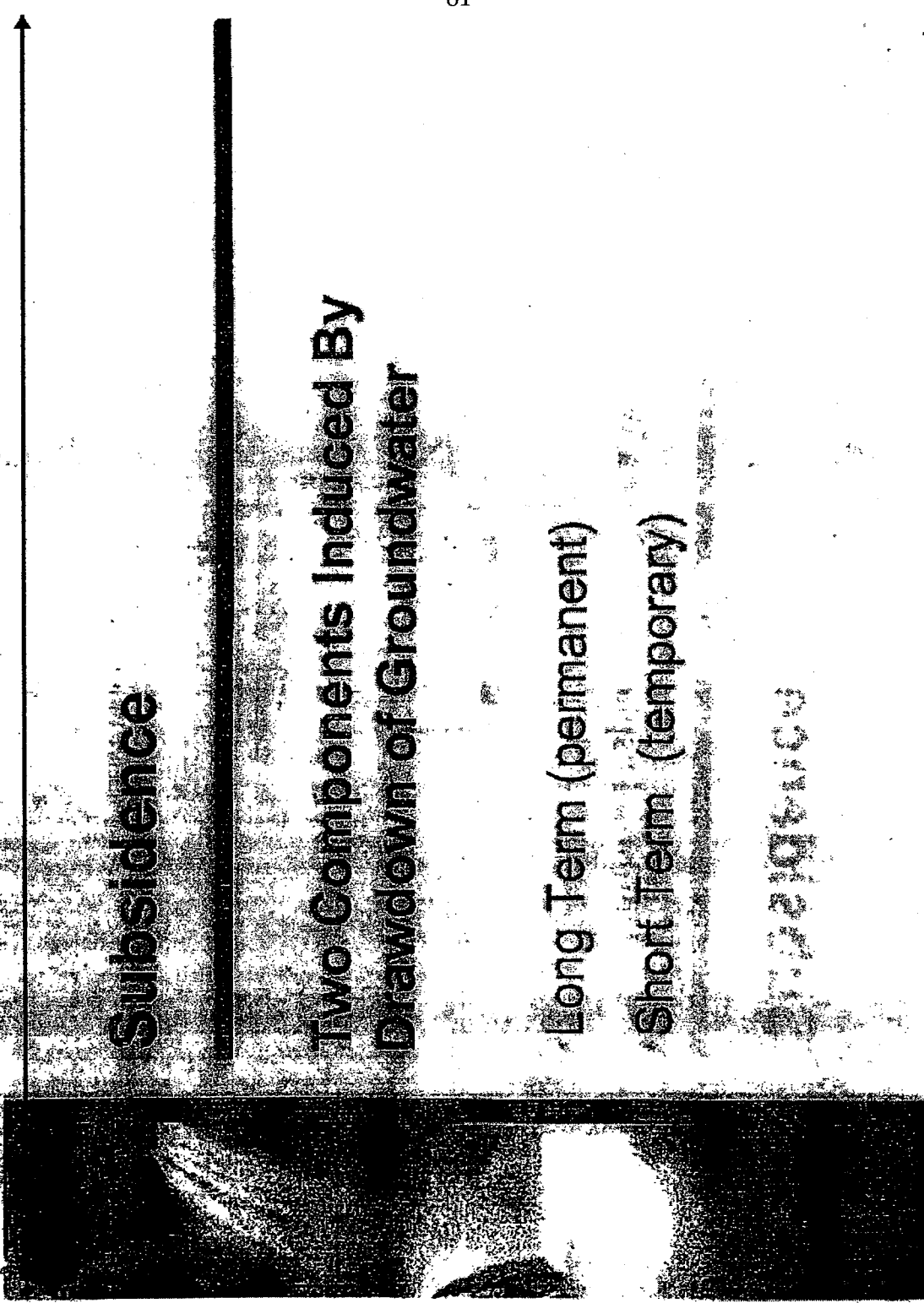
EXHIBIT A



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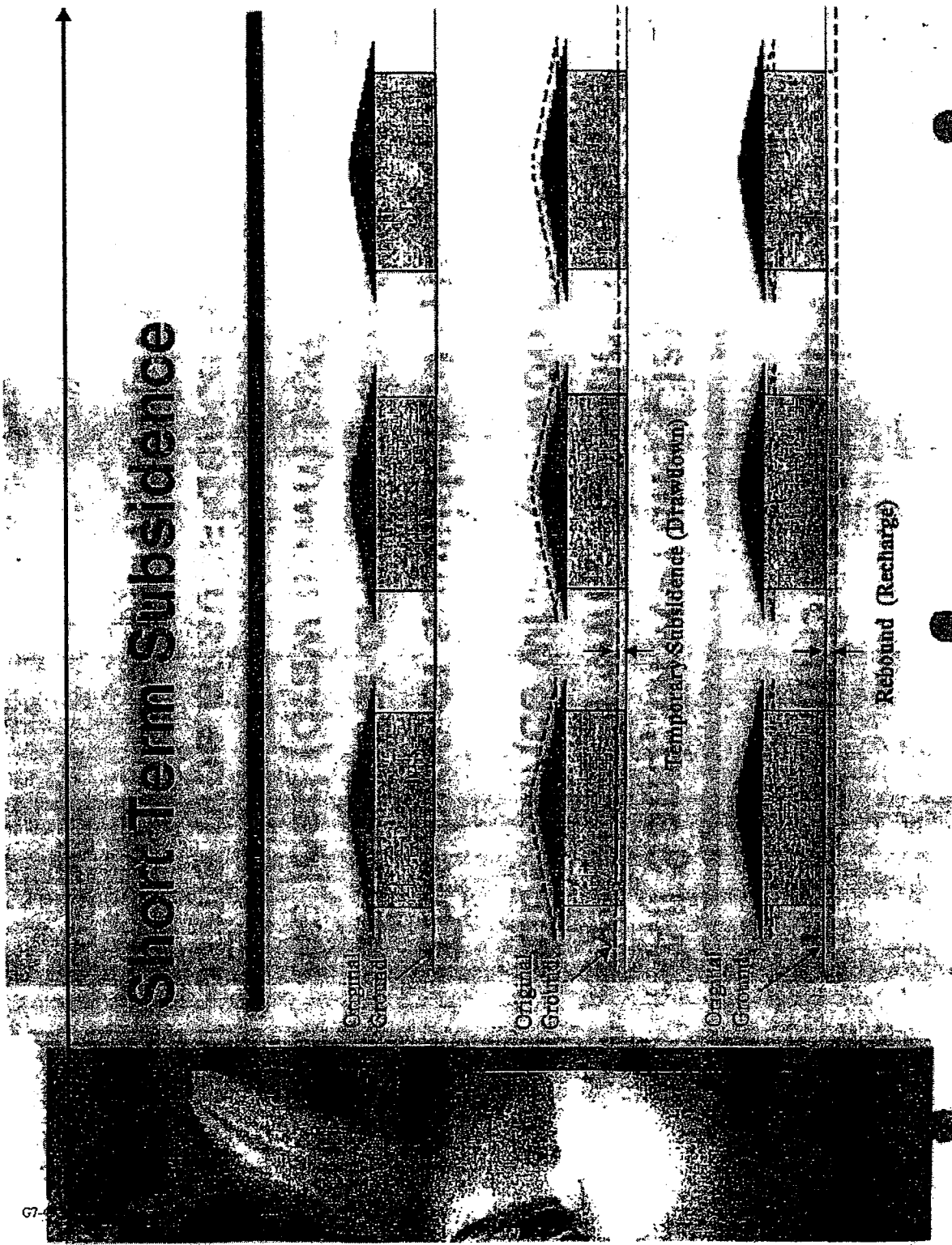
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Short Term Subsidence

- All Sand, Gravel and Clay Soils experience some "elastic" (immediate subsidence when drawdown occurs
- This type of subsidence typically is on the order of inches and occurs as the load (draw down) takes place
- This type of subsidence is recovered/reversed when drawdown ceases

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Ms. Irene Ip
15582 Baypoint Avenue
San Leandro, CA 94579

October 16, 2001

Angela Knight, Administrative Assistant
Bayside Groundwater Project
East Bay Municipal Utility District
375 11th Street
Oakland, CA 94607

Re: Public Records Act Request for Bayside Groundwater Project

Dear Ms. Knight:

I am writing on behalf of the Heron Bay Task Force ("Task Force"), which is comprised of several Heron Bay residents that live very near the proposed site for the Bayside Groundwater Project. Pursuant to the California Public Records Act (*California Government Code* §§ 6250 *et seq.*), we make this request (the "request") to East Bay Municipal Utility District ("EBMUD") to receive copies of the Public Records as specified below.

I. Pursuant to *California Government Code* §6253, Task Force requests that EBMUD provide copies of the following Public Records (as defined in *Government Code* § 6252(c)) that relate to the Bayside Groundwater Project:

A. All documents (including but not limited to memorandums, e-mails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Mark S. Williamson to EBMUD employee Mr. Robert A. Jung that occurred between January 1, 2000 and October 5, 2001, including *but not limited to* the following: e-mails dated March 29, 2001 and April 4, 2001.

B. All documents (including but not limited to memorandums, e-mails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Robert A. Jung to EBMUD employee Mr. Mark S. Williamson that occurred between January 1, 2000 and October 5, 2001, including *but not limited to* the following: e-mails dated March 19, 23 and 29, 2001, April 9, 12 and 17, 2001, and May 10, 2001; and memorandums dated August 3 and 23, 2000, and March 14, 2001.

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C. All documents (including but not limited to memorandums, e-mails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Mark S. Williamson to EBMUD employee Mr. Joaquin Cruz that occurred between January 1, 2000 and October 5, 2001.

D. All documents (including but not limited to memorandums, e-mails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Joaquin Cruz to EBMUD employee Mr. Mark S. Williamson that occurred between January 1, 2000 and October 5, 2001.

E. All documents (including but not limited to memorandums, e-mails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Robert A. Jung to EBMUD employee Mr. Joaquin Cruz that occurred between January 1, 2000 and October 5, 2001.

F. All documents (including but not limited to memorandums, e-mails, and letters) that relate to communications (written or oral) from EBMUD employee Mr. Joaquin Cruz to EBMUD employee Mr. Robert A. Jung that occurred between January 1, 2000 and October 5, 2001.

G. Document shown on the Master List for the Bayside Draft Environmental Impact Report (DEIR) reference materials that is identified as "not available" during the Bayside Groundwater Project public comment period, which is entitled "Initial Chloroform Modeling Results" and is given an EBMUD reference number 3.12-13.

H. All letters dated July 11, 2001, from the Port of Oakland to EBMUD that relates to the Bayside Groundwater Project.

I. All letters dated July 6, 2001, from the Bay Area Air Quality Management District to EBMUD that relates to the Bayside Groundwater Project.

II. If EBMUD is withholding from disclosure any Public Record responsive to this Request on the grounds that such Public Record is exempt from disclosure under express provisions of the California Public Records Act, or otherwise, please provide the following information for the withholding of each such Public Record as required pursuant to *California Government Code* § 6255:

A. The general nature and subject matter of the Public Record.

B. The identity (name, address and position) of the author(s), and, if applicable, the sender(s) of the Public Record.

C. The date on which the Public Record was prepared and, if applicable, the date(s) on which the Public Record was transmitted.

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D. The identity (name, address and position) of the addressee(s) and recipient(s) of the Public Record (including any copies of the Public Record).

E. The claimed basis for withholding the Public Record.

F. Other information sufficient to demonstrate the justification for withholding the Public Record.

III. For purposes of the time limits set forth in *California Government Code* § 6253(c), you should consider this a request to receive a copy of all Public Records responsive to this Request.

IV. We will pay appropriate costs for the direct duplication of the Public Records described in this Request provided that such costs do not exceed \$100.00 (one hundred dollars). If the costs of direct duplication exceed \$100.00 (one hundred dollars), please contact me before duplicating, as we may decide to first inspect these Public Records prior to authorizing duplication.

V. If EBMUD has any adopted regulations governing its procedures for compliance with the California Public Records Act, I request that you forward a copy of these regulations to me via mail or facsimile as soon as possible.

You may contact me at (510) 357-3083, if you have any questions regarding this Request. Thank you in advance for your timely cooperation.

Kind regards,

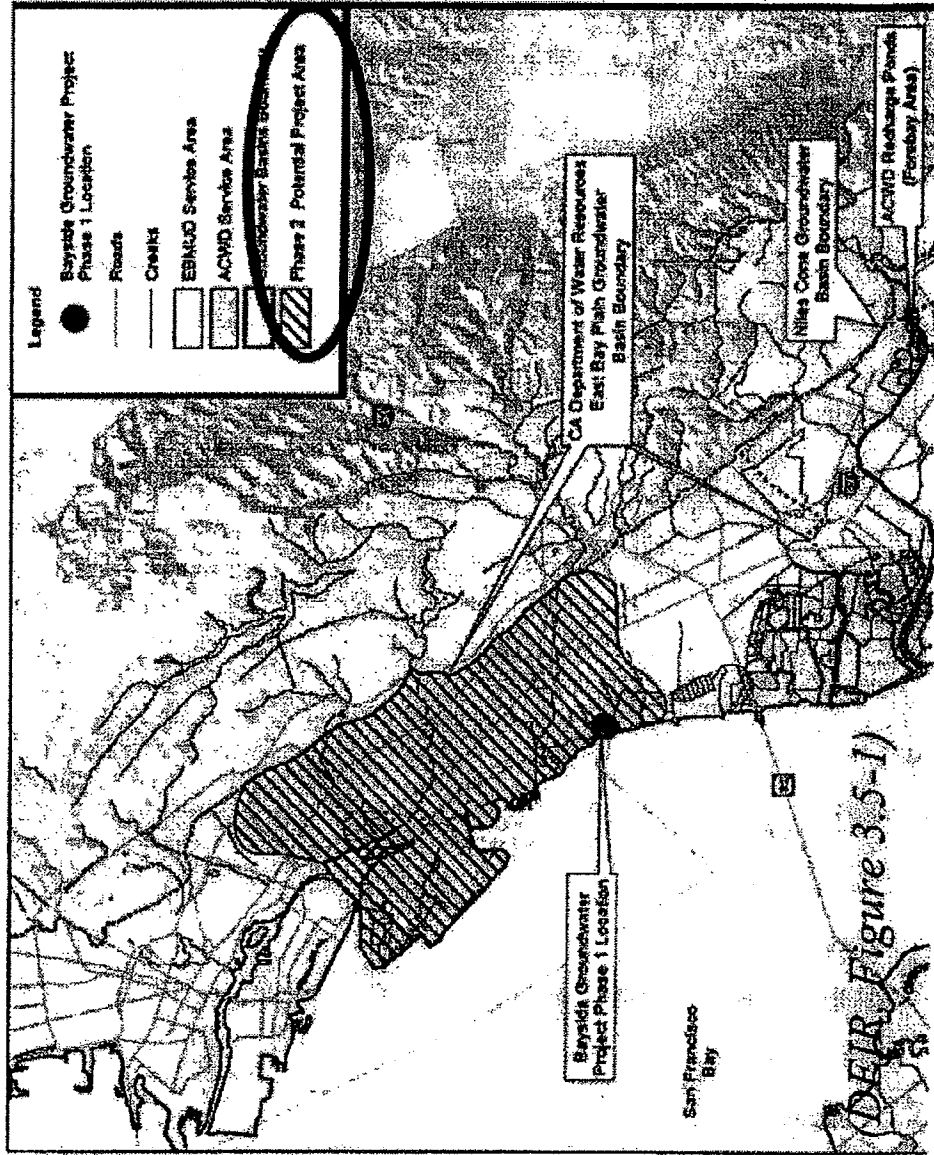
Heron Bay Task Force

By Irene Ip

cc: Mr. John Lampe, EBMUD
Mr. Mark S. Williamson, EBMUD
Mr. Robert A. Jung, EBMUD
Mr. Joaquin Cruz, EBMUD
Ms. Lynelle Lewis, EBMUD

Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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Special Note ... Phase Two



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Advocacy, not Assessment of the Bayside Project

- Bending numbers to get to “Much Needed Drought Supply”
- Skipping the hard questions: Aeration Towers
- Publishing what fits one view:
 - Radon
 - Subsidence
 - Flowing Wells
 - Water Quality
- Communicating what fits at the time.

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Bayside: Bending numbers to get to 'Much Needed Drought Supply'

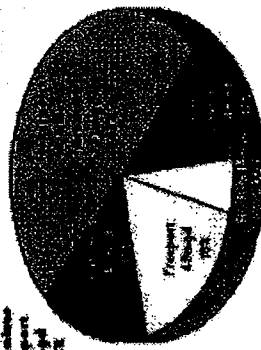
Description	MGD	MGD %
Annual MGD Demand	277	100%
Conservative	-14	-5%
Problem	-14	-5%
Reservoir supply balance required	229	83%
Arrowsmith at limit of storage	-151	-54%
Drought shortage allowances	38	14%
Resilience	-13	-5%
Need 3. Shortage release Reservoir	69	25%
Fireproof	-18	-6%
Need release Fireproof	8	3%

Description	MGD	MGD %
Severe Drought Year (assumed from 3 year norm)	MGD	MGD %
Reservoirs at limit of storage	17	6%
Conservative	34	12%
Problem	14	5%
Resilience	-43	-15%
Need release Fireproof	64	23%

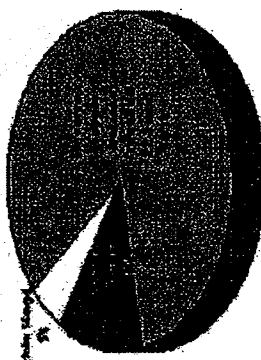
Description	MGD	MGD %
Normal Year (assumed from 3 year assumption)	MGD	MGD %
Reservoir supply balance required	229	83%
Conservative	34	12%
Problem	14	5%

MGD Required Calculations
 (TVA = 1000) / (83 + 34) = 325.8193 / 1000.000
 MGD calculated values are derived from the TVA value, which
 differs from the "City Waterflow from 2008-2012"

Severe Drought Year (assumed from 3 year assumption)



Non-Drought Year (assumed from 3 year assumption)

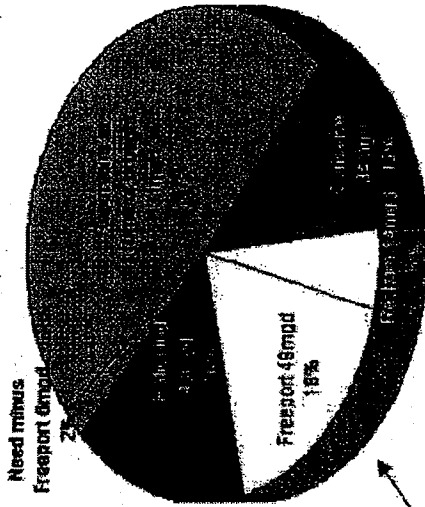


*HBTF converted CLG presentation to MGD, then used MGD values from DEIR

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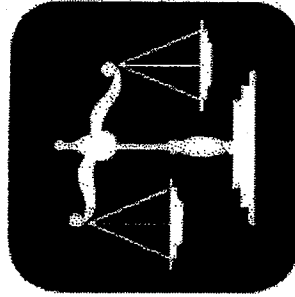
HBTF: Unbending the numbers

Severe Drought Year (Imputed from 3 year assumption)



Short Term Need?

Freeport comes on line in roughly the same timeframe as Bayside would.



- Severe drought year only requires 16% Rationing... (2010 and 2020 versions)
- EBMUD policies support up to 25% rationing!

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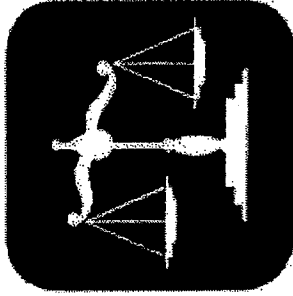
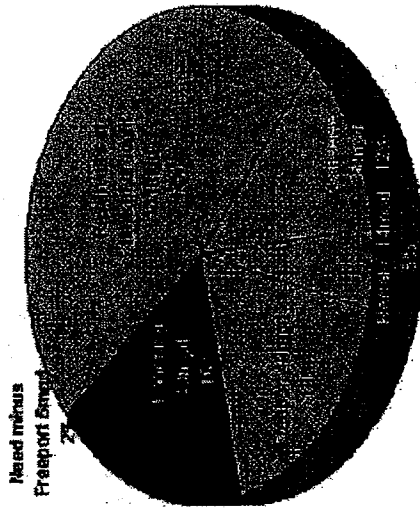
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HBTF: Unbending the numbers

Severe Drought Year (imputed from 3 year assumption)



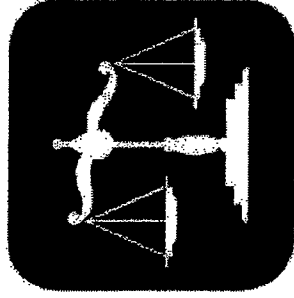
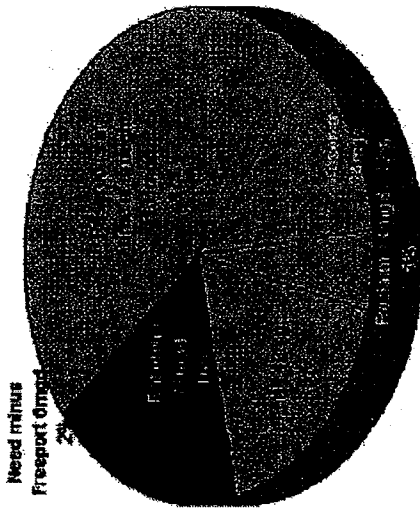
- Is 18% Rationing that much worse than 16%?
- EBMUD policies support up to 25% rationing!

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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

Unbending the numbers

Severe Drought Year (Imputed from 3 year assumption)



Alternatives to reduce rationing requirements

- East Contra Costa Groundwater (rural?)
- Desalination
- Repair Leaking EBMUD Pipelines



About 9.9 TAF per year (~ 3 MGD) wasted ...

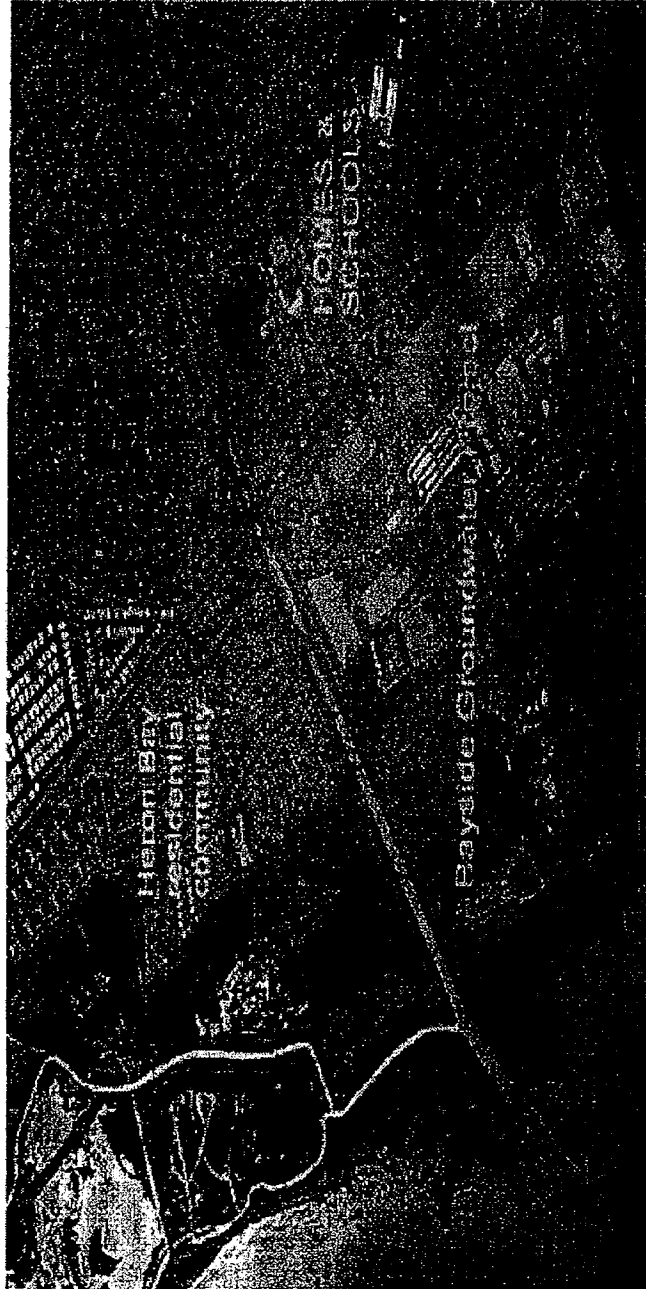
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Skipping the Hard Questions: Aeration Towers



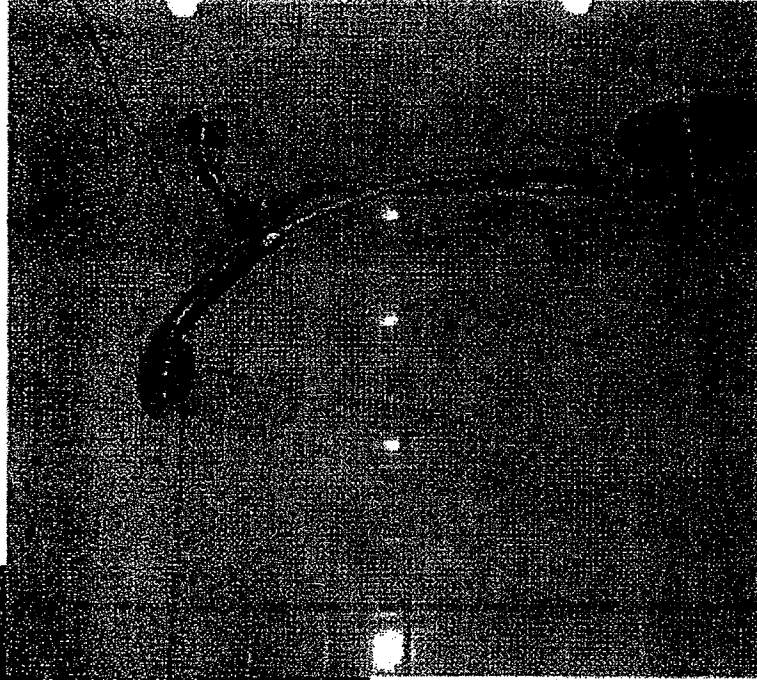
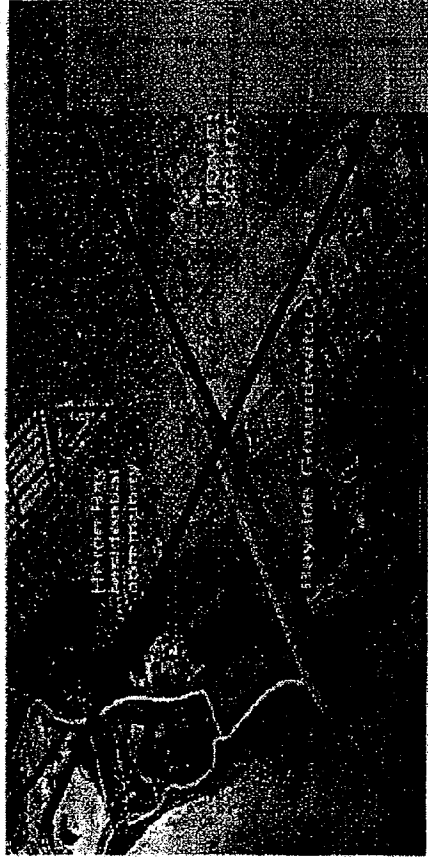
*HBTF Representation of Potential Chloroform Plumes, from 2001 EBMUD drawing ^{Slide 10/18}

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Skipping the Hard Questions: Aeration Towers



Instead,
we will have mini
Aeration towers in our
homes.

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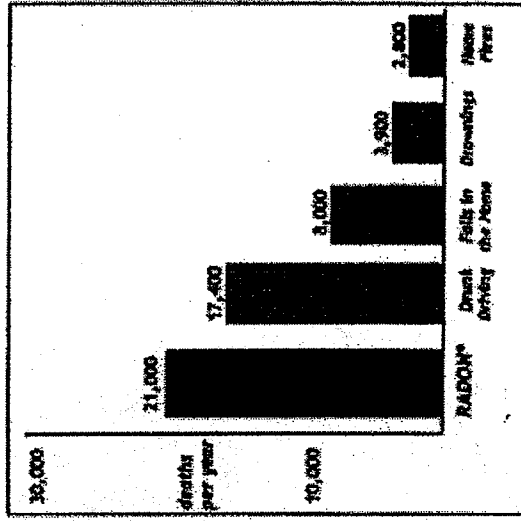
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Publishing what fits one view: Radon

Radon is estimated to cause thousands of lung cancer deaths in the U.S. each year.



* Radon is estimated to cause about 21,000 lung cancer deaths per year, according to EPA's 2003 Assessment of Risks from Radon in Homes (EPA #02-R-03-003). The numbers of deaths from other causes are taken from the Centers for Disease Control and Prevention's 1999-2001 National Center for Injury Prevention and Control Report and 2002 National Safety Council Reports.

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Publishing what fits one view: Radon

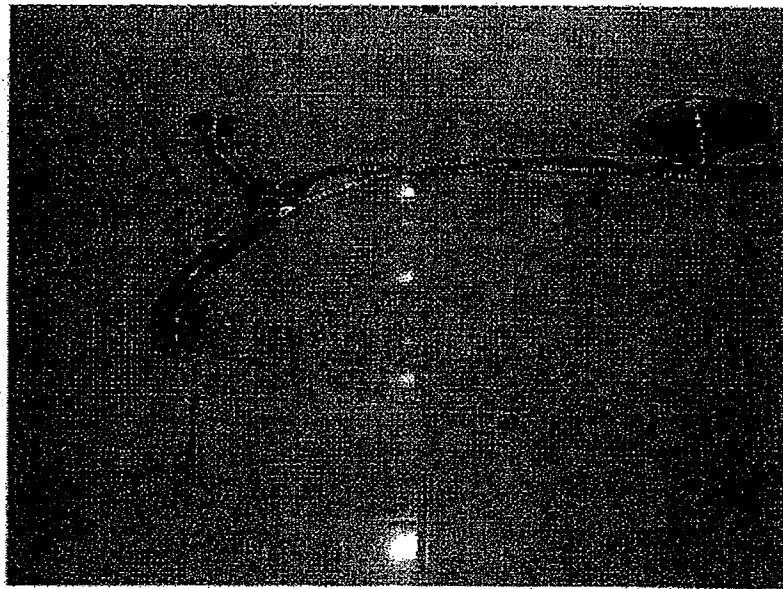
• “According to the proposed [federal] regulation, if ... radon concentration is less than 300 picocuries per liter, then the water will not need to be treated.” (DEIR, 3.2-11 para 5)

• Radon in Recovered Groundwater
470 – 700 picocuries per liter
(DEIR, Table 3.2-1)

• “When [approved], the standard is likely to be higher than radon concentrations at Bayside.”

(DEIR 3.2-11 para 6)

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Publishing what fits one view: Subsidence

...inelastic subsidence would not be expected (DEIR, 3.I-55)

... elastic subsidence ... is expected to range from about a quarter inch ... to about a tenth of an inch several miles [away] (DEIR, 3.I-54)

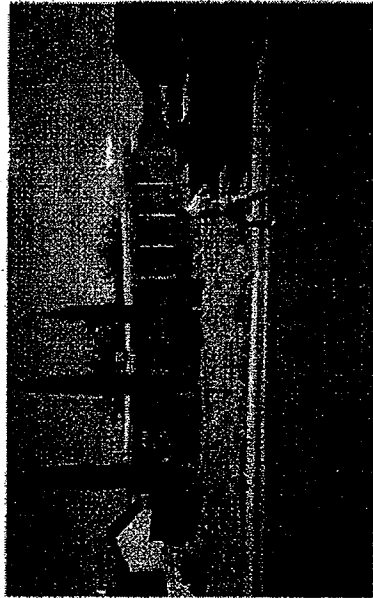


Figure 2. Photograph of house in Windsor Park subdivision in North Las Vegas

Photo by John W. Bell.



Figure 1. Photograph of Las Vegas Valley Water District Well No. 5 showing well-head protrusion caused by subsidence. Photo by John W. Bell. 1987.

Insurance won't cover subsidence or settlement.

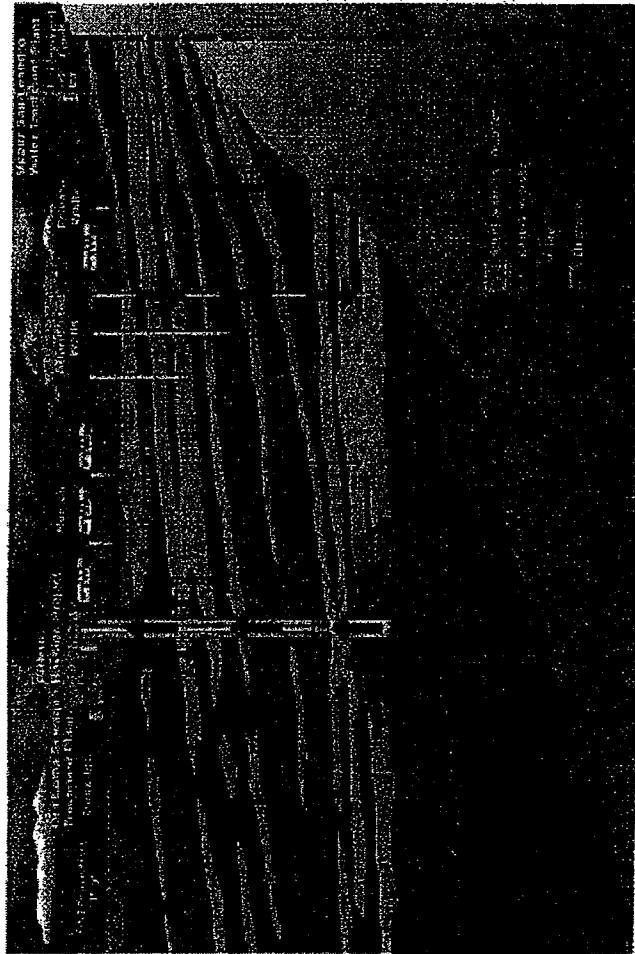
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Publishing what fits one view: Flowing Wells

- Called "Less than significant after Mitigation." (DEIR, 3.1-52, para 2)
- But, mitigation includes capping after identification of problem wells
... after damage has occurred and been identified.



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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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Publishing what fits one view: Water Quality

Meets the standards, but so did proposed Crematorium

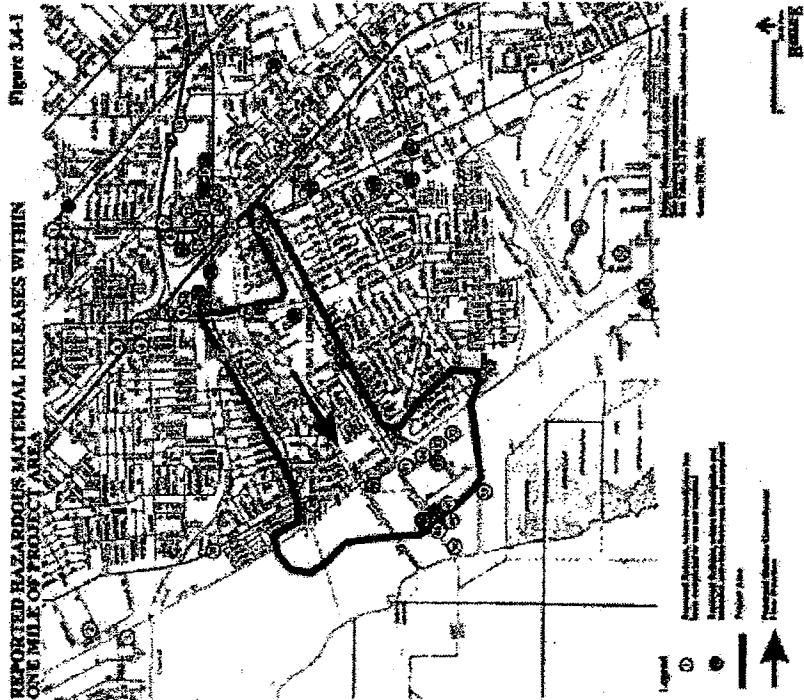


Figure 3.4-1

Lower quality water for drinking and usage for all San Leandro and San Lorenzo residents

- Higher levels of arsenic & radon (known carcinogens), manganese, etc. (DEIR,
- Potential for further contamination from shallow aquifer contaminant plumes (MTBE, waste oils, etc.)

... minimize public health risks by seeking the best available water source, protected from potential degradation ... (EBMUD Policy 81)

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Communicating What Fits at the Time.

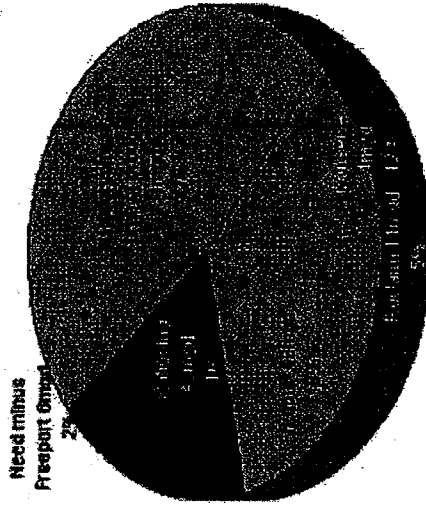
Regarding Freeport Project in Lodi News-Sentinel, May 31, 2001

"This is a drought project," said Charles Hardy, spokesman for EBMUD. "We have enough water to serve our customers now."

Statement in San Leandro Times, June 24, 2004

"The Freeport project was our main drought prevention project but it is not enough to eliminate all water rationing that would occur during a drought," says Hardy.

Severe Drought Year (imputed from 3 year assumption)



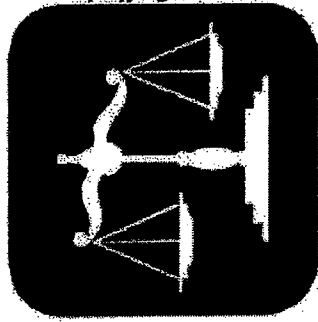
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EBMUD Bayside Groundwater Project



One half of One percent
of EBMUD's projected
customer demand in 2020.

INCREASED RISKS:

- **Ground movement** damaging our homes, schools or businesses.
- **Cancer** from known higher levels of **Arsenic and Radon** in our drinking supply.
- **Contamination** of our drinking supply from known plumes and spills
- **Flowing wells** damaging homes and property
- **Air Quality** pollution from Aeration in your home.

Board Members: Please vote 'no'.

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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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85**EAST BAY MUNICIPAL UTILITY DISTRICT**

DATE: March 27, 2000

MEMO TO: Kurt G. Ladensack

FROM: Robert A. Jung

SUBJECT: Formal Transmittal of Draft Oro Loma Injection/Storage/Recovery Well Project Initial Study

INTRODUCTION

As you have requested, we are taking the unusual step of formally transmitting the subject draft document to you prior to distribution for internal District review. As you know, the document is still subject to review by several District departments, including legal, operations and maintenance, environmental compliance, and water quality. Any assessment as to the ultimate legal adequacy of this document is premature or conjectural. You have requested that we provide an opinion as to the adequacy of this document to fulfill the obligations of the California Environmental Quality Act (CEQA). In the professional judgement of the regulatory staff, the draft document in its current form may meet the minimum statutory requirements for CEQA compliance, but does not meet the objectives of CEQA to disclose to decision makers and the public the significant environmental effects of proposed activities or enhance public participation in the planning process.

DISCUSSION

Several versions of the Oro Loma Injection/Storage/Recovery Well Project Initial Study were completed with the directive that EBMUD has discretionary powers for the amount of information released to public review as part of this document. The regulatory staff disagreed with project management on several accounts during this initial document review process, but incorporated comments as requested. The disagreement as to the appropriate level of detail to include in the document stems possibly from the objective of meeting the aggressive in-service schedule for the Oro Loma permanent facility and the concern that increased public scrutiny or alarm would delay the construction of the project. By incorporating the comments as directed, and changing checklist items from "less than significant with mitigation" to "less than significant impact" has not changed the project in any way, but serves only to lessen the perceived impact of the project.

Issues raised by the regulatory staff during the initial review process which were eliminated from consideration or documentation in the current version of the draft document include the following:

1. ~~The Oro Loma Injection/Storage/Recovery Well Project is independent of the planned and budgeted local groundwater projects (i.e., up to five well fields) and lack of analysis of their potential cumulative effects. The appearance of piece-mealing has not been satisfactorily resolved.~~

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2. Lack of a public meeting during the CEQA process for a project directly affecting the quality of water they will consume.
3. Lack of adequate specific analyses of why there are no impacts to the groundwater basin and to other groundwater users. A checklist item was changed from "less than significant with mitigation" to "less than significant impact" in this category.
4. Changing the water quality checklist from "less than significant with mitigation" to "less than significant impact" Management has provided direction that the significance criteria to be used to evaluate distribution water quality is regulatory drinking water standards. The regulatory staff contends that the significance criteria to be used should comply with a screening criteria used in the Supplemental Water Supply EIR (SWS EIR) to "allow EBMUD to maintain the high quality of both its raw and treated water supply while minimizing health risks and health risk uncertainties for EBMUD customers consistent with state and federal law and EBMUD's Policy 81" (pg. 2-25 of Draft Supplemental Water Supply EIR). An auxiliary to this criteria is the description in the Water Quality Evaluation Appendix of the SWS EIR that states, "If a poorer quality source than the American River is chosen as a supplemental supply, major capital improvements will be required to achieve the same quality that EBMUD customers expect. This is because EBMUD's treatment facilities were designed and built based on its high quality Mokelumne River source. A commitment to the continued high level of service to its customers led to the EBMUD Board of Directors establishing an objective to "maintain the high quality of EBMUD's water supply." (Updated WSMP FEIR, Vol. 1, pp. 6-4). The resulting underlying assumption in the programmatic EIR/EIS is that all alternative sources of supply would be treated to achieve a quality comparable to the Mokelumne Supply (updated WSMP FEIR, Response to Comment D14-3).

Other issues for which questions may be raised by this document include the changing project description (i.e., supplemental supply versus emergency use only); accusations of piece-mealing should we purchase the adjacent parcel for expansion of the well fields or treatment system; the water quality sphere of influence to certain consumers; environmental justice implications, and conformity to the most recent checklist revision.

In conclusion, the document as modified during the multiple draft stages within the Water Supply Improvements Division no longer reflects the sensibilities of the Environmental and Regulatory Section. We recommend that the review comments received from other departments within the District be given valid consideration and not perfunctorily dismissed, should the comments incorporate similar concerns as those identified above.

Attachment

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Sensitivity: Confidential

John,

On the issue of Oro Loma - our section developed an environmental document through considerable arm twisting by Kurt and others. We don't agree with the content, but have no choice but allow them to send it out. However, Kurt has insisted that we buy off on this document, but based on previous memorandums sent to him, we are not comfortable and cannot compromise our principles. For the record, my section is concerned that the document prepared is inadequate and there appears to be a rush to push this document through. We have not fully disclose information that may be detrimental to the project and particularly information that our customers should be aware of.

RAJ

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-----Original Message-----

From: Jung, Robert
Sent: Thursday, March 30, 2000 9:01 PM
To: Hodge, I-Pei
Subject: General

I-Pei,

I just want to reassure you that I have the utmost confidence in you and proud of your stance. I know it is not easy for you, but if you compromise your principles then you have nothing left. It is easy to let people bully you, but it takes an extraordinary person to stand up for themselves. You are that extraordinary person.

The 5,000 or 15,000 taps that are impacted are residents in "working class" neighborhoods apparently with many apartment buildings. The residential mix includes many representatives of ethnic minority groups. They are not likely to voice concerns unless we bring up the issues. It is our responsibility as public servants to bring up the issues. If this project was located in an affluent neighborhood, I certainly doubt that issues we bring up would be summarily dismissed.

I know that you are a caring person and this must certainly disturb your rest as it disturbs mine. We have already triumphed by presenting the inconsistencies. In the long run, we won't know how this plays out, but even if we get overruled, the effort was well worth it.

Don't worry, take care and have a good weekend.

R. J.

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: April 4, 2000
MEMO TO: Kurt G. Ladensack
FROM: Robert A. Jung
SUBJECT: CEQA Issues

Pursuant to your revised request in the e-mail dated March 30, 2000, this memorandum provides our response to the following issues:

- a) Identify the specific text of the current Draft IS that is, in our opinion, not in compliance with the requirements of CEQA and,
- b) For each so identified text to provide the applicable CEQA requirement that supports our opinion.

Many of these issues have been discussed in the March 27th and March 29th memorandums to you.

1a) A review of the revised checklist indicates that all questions regarding projects located adjacent to airports must be addressed in the document. The site is located within 2 miles of the Hayward Airport, which may pose environmental impacts related to noise and hazardous materials handling. These specific checklist questions and a description of any environmental impacts need to be added to the text.

A checklist item must be added to address the question: Does the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? Although transportation of hazardous materials will occur within ¼ mile of four schools, the storage of hazardous materials at the Oro Loma facility will not be within ¼ mile of any schools. Therefore, the added checklist item will indicate a less than significant impact.

1b) Statutory Justification

The checklist questions state:

- 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?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two mile of a public airport or public use airport, would the project expose people residing or working in the project are to excessive noise levels.

Section 21096 (b) of the Public Code stipulates that: A lead agency shall not adopt a negative declaration for a project described in subdivision (a) [within 2 miles of an airport] unless the lead

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April 4, 2000
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agency considers whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area.

Section 21151.4 of the Public Code addresses hazardous materials near schools.

2a). Treatment of the Oro Loma project as independent of the planned and budgeted local groundwater projects (i.e., up to five well fields) and lack of analysis of their potential cumulative effects. The EBMUD customer bill insert for March/April 2000 also talks of developing five well fields and, to the average reader, implies the facility is used only for emergency use. The Project Characteristics section should describe the groundwater well exploratory program, groundwater master plan, Regional and Basin Yield studies, and why the Oro Loma project is not considered a part of these studies. A discussion of cumulative impacts, or what we may know of cumulative impacts should be added in Mandatory Findings of Significance section.

2b). Statutory Justifications

Section 15164 of the CEQA Guidelines states that "Where individual projects are, or a phased project is, to be undertaken and where the total undertaking comprises a project with significant environmental effect, the lead agency shall prepare a single program EIR for the ultimate project as described in Section 15168. Where one project is one of several similar projects of a public agency, but is not deemed a part of a larger undertaking or a larger project, the agency may prepare one EIR for all projects, or one for each project, but shall in either case comment upon the cumulative effect."

According to Valerie Young, CH2MHILL CEQA consultant, "if the pilot well is not necessarily part of a larger project and has its own independent utility, then you can probably make the argument that no segmentation is occurring by moving forward with it and doing a CEQA document on it. However, as the above language states, the CEQA review for the pilot well should list the larger project among those projects that could have cumulative effects with the pilot well. To the extent that it is possible to forecast some of the likely features of the larger project and its impacts, these should be reviewed apart of the cumulative impact analysis of the pilot well. Otherwise, the CEQA review should make clear that it is speculative what the features of the larger project and its impacts may be." (e-mail sent on March 2, 2000 to M. Williamson, K. Ladensack, R. Jung, M. Tognolini, I. Hodge)

3a) Section 4. Hydrology and Water Quality. The checklist lacks an adequate description of the actions the District will take about radon and the health effects associated with radon in drinking water. The revised checklist lists a question f) Otherwise substantially degrade water quality?, which should be included in the CEQA document. The question does not explicitly use water quality standards as the significance criteria for determining whether water quality is

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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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substantially degraded. It can be argued that, given the District's current water quality, addition of the carcinogen radon and increased total dissolved solids does substantially degrade our water quality (the discussion is silent about the side-by-side comparison between the existing Mokelumne water quality standards enjoyed by our customers and the departure from those standards and its impact on a limited number of customers). It can be further argued that, the effect is a potentially significant impact (unless mitigated by treatment), as even radon concentrations in drinking water at 300 pCi/L (the proposed MCL) will cause 2 in 10,000 individual lifetime fatal cancer risks and at 500 pCi/L (the approximate concentration of radon in our extracted water) will cause 3.35 in 10,000 individual lifetime fatal cancer risks. (Data from EPA Proposed Radon Rule, Table VII.1-Evaluation of Radon Levels). The environmental effect of human fatal cancer risks should be clearly stated in the CEQA document, and if the determination is made that this effect is not significant, the reasons why should be stated.

An additional checklist question states that a) Would the project violate any water quality standards or waste discharge requirements? As there is no current radon standard, we could apply CEQA guideline (h) below and indicate that radon is not a significant effect on the environment. However, knowledge of the proposed standards constitute "other information presented suggesting that the discharge may cause a significant effect," which is why it is appropriate to evaluate radon in the document. The Guide to CEQA states that, "Agencies should strive to prepare initial studies that are sufficiently detailed to elucidate the agencies' environmental conclusions, particularly where those conclusions indicate that a negative declaration is appropriate." (M. Remy, 1999, p 204). The document does not describe how we will or will not meet the proposed radon MCL of 300 pCi/L and ways to reduce the impact to less than significant. The document does not describe how we will meet the proposed AMCL of 4,000 pCi/L with a multimedia campaign in place. The document should provide in the project description how the radon levels will be treated to meet the applicable regulations (i.e., as a project description or as a mitigation measure).

Learned today was the potential for a high rate of backwash water or other waters to be discharged into an existing drainage channel. The drainage channel may require fill to minimize erosion. Discussions on the state and federal permits required and potential mitigation need to be discussed.

3b) Statutory Justifications

Applicable CEQA Guidelines: Section 15064. Determining the Significance of the Environmental Effects Caused by a Project.

(g) After application of the principles set forth above in Section 15064(g), and in marginal cases where it is not clear whether there is substantial evidence that a project may have significant effect on the environment, the lead agency shall be guided by the following principle: If there is disagreement among expert opinion support by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR.

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PROJECT:AWWYEMHUBLOW#Peroleccaw03.doc

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court admonished the agency not to rely on post-approval mitigation measures that might be imposed through the design review process.

According to Guide to CEQA, (M. Remy, 1999, p 204), an initial study is supposed to "document [] reasons to support the finding" that the project under review will not have a significant effect on the environment. (CEQA Guidelines, 15071, subd. (d)). See also Statutory Justification 3b, CEQA Guidelines Section 15064.

5a) The document does not include analysis of environmental justice issues in the Mandatory Findings of Significance section. A segmented population of District customers will be served water of lesser quality and increased health risk than that received by the majority of other customers. Balancing this out is the beneficial aspect of the project in providing local emergency supply. It has not been analyzed whether there would be an economic impact to the property values either from the decrease in water quality or the increased reliability of water service during emergencies. It has not been analyzed whether the payment structure for the consumers affected will be changed to reflect the supplemental source of water. The document lacks a description of alternatives analysis to describe the decision-making process which determined how the facility will be designed and operated (e.g., operating for normal domestic supply vs. for emergency supply only, extracting native groundwater vs. extracting only a certain percentage of the injected water, evaluating the number of consumers affected during peak and low period demands, including expansion options for air stripping). The document does not address the "Need for Water" issues. Instead, the document minimizes the analysis and description of these qualitative, economic, and technical factors in order to minimize controversy about the selection of a mitigated negative declaration for this project. For example, a selection criteria was not discussed nor abandonment of the nearby Oakport site due to contamination issues.

5b) Statutory Justification

CEQA general legislative policies state that it requires "governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short term benefits and costs to consider alternatives to proposed actions affecting the environment." (Pub. Resources Code, §§21000, 21001.)

cc: IPHHodge

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PROJECT:\WP\ENV\ECN\Facsimile3.doc

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#1 << File: Impact 3.12-3 Chloroform.doc >> a formal memo is forthcoming

#2 Brian Bateman 3/13/01 ~ noon, he never said breakdown products need to be considered. You didn't ask that, you asked whether breakdown products are considered in the developing the chloroform emissions regulations and the answer is no.

-----Original Message-----

From: Williamson, Mark
Sent: Wednesday, March 14, 2001 8:33 AM
To: Jung, Robert
Subject: RE: Confirmation of our 3/12 Discussions

Bob, let's discuss this at our meeting today at 4:45. In general, I am looking for your recommendations and positive solutions. Please be prepared to discuss:

Re item #1. I am expecting you to redraft the chloroform section. At our 3/12 meeting we agreed that the section need say nothing more than: problem identified; consulted with Air District; determined probably could obtain permit but additional study/Air Board consultation necessary; project will not be operated without Air District permit. This is what my edits reflect, and based on our 3/12 discussion what I am expecting your re-draft to state. I am expecting your redraft for my review by close of business today. A memorandum stating what is wrong with this approach is not where you should be spending your time.

Re item #2. I do need written confirmation from you on your conversation with the Air District stating who told you that breakdown products must be discussed in the EIR. What other breakdown products are implicated in our project? Please bring your record of telephone conversation, and your written recommendation on how to proceed on this issue and be prepared to discuss today at 4:45.

Re item #4. Be prepared to brief me on the status of DEIR preparation, potential hang-ups, and your proposed solutions at our 4:45 meeting.

-----Mark S. Williamson, Acting Manager of Water Supply Improvements mwillmson@ebmut.com 510/287-1214 fax: 287-1285

-----Original Message-----

From: Jung, Robert
Sent: Wednesday, March 14, 2001 8:10 AM
To: Williamson, Mark
Cc: Cruz, Joaquin
Subject: FW: Confirmation of our 3/12 Discussions

Mark,

In response to your note.

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95**EAST BAY MUNICIPAL UTILITY DISTRICT**

DATE: March 15, 2001
 MEMO TO: Mark S. Williamson
 FROM: Robert A. Jung *RAJ*
 SUBJECT: Bayside Groundwater Project – Section 3.12 Air Quality (Chloroform Emissions)

After review and consultation with Geier and Geier, our air quality consultant, and review of the March 9, 2001 work of CH₂MHill, I have deep reservations concerning the approach to minimize their analysis as discussed in our morning meeting of March 12th. You should seek a legal opinion whether the approach compromises full disclosures issues required of an environmental documentation. Contrary to your 0833 hours, March 14th e-mail, it is necessary that the following be documented:

Geier and Geier Analysis

Geier and Geier assured me that their analysis reflects the information that was provided to them. They also indicated their analysis is consistent with that conducted for the radon emissions. They provided some minor changes to their original write-up that have minimal impacts on their conclusions. Their Screen3 computer model assumes that the nearest residential receptor is 150 feet away. Since their chloroform analysis mirrors the radon analysis, to not include their extensive chloroform work would be inconsistent with the rest of the environmental documentation, discounts their work, and is not recommended as it could be described as a lack of full disclosure.

Phosgene is a well-documented carcinogenic compound and a known by-product of chloroform emissions. It is also a toxic emission regulated by the Bay Area Air Quality Management District (BAAQMD). Geier and Geier analysis indicates that phosgene may not have any impact on nearby receptors based on its extended half-life. Geier and Geier feels that phosgene may be more of a global issue (such as ozone depletion) rather than a local one. This is information that will dispel potential local fears, should be reported, and not ignored.

CH₂MHill Analysis

CH₂MHill's work is described as preliminary as they did not consult or obtain the recommended exact parameters from the BAAQMD prior to conducting their analysis. They used an ISCST3 model similar to what the BAAQMD uses, but since they had only one year of data their analysis has a margin of error of ±50%. Their analysis, summarized with three figures, is based on specific chloroform concentrations provided to them and not necessarily on the worst-case basis. The analysis shows that location of the facility site is paramount to the cancer risk assessment.

The breakpoint chlorination indicates that the modeled site will have some impact on residential receptors. If it were increased by up to 50%, it would have a substantial impact on residential

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receptors. One can draw conclusions that it would be better to site a facility furthest away from any residential receptors and oriented it in an east-west direction. Again this is useful information and should be reported and not ignored

Other

In our meeting with BAAQMD, which we reported, they recommended that facility sites not be located near San Lorenzo Creek due to its proximity to nearby residences. One of the facility sites BB/CC is rated "most favorable". This and other sites should be reevaluated based on the chloroform emissions. The Ora Loma site FF is rated as "least favorable" yet it appears to be the only one with an east-west orientation and is furthest from residential receptors. Other facility sites may also need reevaluation. This new information should be factored into the screening analysis for the facility site and referenced, and, as such, I recommend that the analysis for Chapter 6 (Analysis of Alternatives) of the Bayside Groundwater Project's ADEIR be redone to account for this new information.

My recommendation for CH₂MHill to conduct a survey on potential abatement equipment was not taken. Since breakpoint chlorination will result in excess of 10#/day chloroform emissions, the BAAQMD expects us to do provide abatement equipment or documentation why it is not necessary. A preliminary analysis would be useful to determine whether breakpoint chlorination is feasible or whether other location or stack configurations are options. These may be considered a major change to the environmental document.

Our discussions also focused on potential BAAQMD permit conditions for limiting operations. Certainly, they will not accept our word that it is only a dry year facility. They may require us to find an independent measurable trigger that will forewarn them when we plan to operate.

The cursory reporting that was recommended may impact planning issues by the San Lorenzo community. For example, there are different risk levels for industrial or residential receptors. It appears that most of the impacts are within industrial sites. However, specific chloroform risk assessment emissions should be reported, as it may impact future planning such as industrial conversions to work loft units.

Before it is arbitrarily deciding to exclude certain information from the environmental document, these issues need to be considered. Failure to include this information may give the appearance of something to hide. If it is a decision not to include the specifics of either Geier and Geier's or CH₂MHill's work, then it will be a decision of conscious effort and not based on lack of information

cc. JBLampe

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-----Original Message-----

From: Jung, Robert
Sent: Friday, March 16, 2001 8:14 AM
To: Williamson, Mark
Cc: Lampe, John; Cruz, Joaquin
Subject: RE: Reassignment of Bayside Project BAAQMD Permitting

Pursuant to your oral request, I have transferred the the CH work and Section 3.12 to you for reassignment. Please have the assigned person update Section 3.12 ASAP.

I hope that the reassigned person has strong air quality permitting experience, interpersonal skills, and will be able to work with the BAAQMD. As confirmed by a conference call with CH, the Director of Permits can be extremely difficult to work with if he suspects we are not fully open with them. At this point, I am not going to question your decision even though I was not consulted beforehand, however, it is certainly not based on the fact that both Joaquin and I are experienced regulators and would have a better understanding of what conditions the air quality people could impose.

If your decision results in full disclosure of the modeling work conducted by both Geiger and Geiger and CH, then not all is lost.

RAJ

-----Original Message-----

From: Williamson, Mark
Sent: Thursday, March 15, 2001 6:02 PM
To: Schroeter, John; Lampe, John; Tognolini, Mike; Cruz, Joaquin
Cc: Costa, Alexander; Jung, Robert
Subject: Reassignment of Bayside Project BAAQMD Permitting

Effective immediately, I am reassigning responsibility for all permitting activities with the Bay Area Quality Management District required for the Bayside Groundwater Project to John Schroeter, Manager of Environmental Compliance.

--Mark S. Williamson, Acting Manager of Water Supply Improvements
mwillmson@ebmud.com <<mailto:mwillmson@ebmud.com>> 510/287-1214
fax: 287-1295

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-----Original Message-----

From: Jung, Robert
Sent: Thursday, March 22, 2001 9:00 AM
To: Lampe, John
Cc: Williamson, Mark; Etheridge, Fred
Subject: RE: Chloroform section of Draft EIR

John,

Just had an opportunity to review it and I realize it is too late. However, it has not changed much from the earlier version (Monday afternoon) and I don't agree with it then or now. This version chops off the Geier and Geier work and does not include the CH2MHill work. The original chloroform writeup mirrored the radon writeup, yet it was excluded. The new document adds a half of page of regulations discussion which may or may not be necessary. My main concern is the issue of full disclosure as stated in my 3/15/01 memo. We paid thousands of dollars for Geier & Geier and CH do conduct an air quality modeling analysis. Because the analysis shows that we may impact certain residential receptors, we are not going to use this information. There may be justification for this, but it certainly seems "odd". Sooner or later, someone will find out that we did this modeling work and not reported it. What would the San Leandro mayor or other political types think of our credibility?

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From: Jung, Robert
Sent: Friday, March 23, 2001 11:33 AM
To: Lampe, John
Co: Williamson, Mark; Etheridge, Fred
Subject: RE: Chloroform section of Draft EIR

John,

It is apparent by these exchanges of notes and past history that neither of us is going to be convinced by the other's position. However, let me comment on some of your points to clear up some misconceptions.

...money on analyses...

It is true that money spent on analyses does not automatically result in its inclusion in an environmental document. However, the chloroform analysis written by Geier and Geier followed the exact same format as the write-up for radon. We are willing to accept the radon write-up, but not the chloroform? Initially, we had some unexplained areas with the Geier and Geier's report and they had clarifications which was made available. We seem to be clinging to the earlier notion that we could not understand their work. Geier and Geier relooked at their work and reassured us that it was correct and consistent with how the radon work was done and were willing to meet with us.

My section did not manage the CH2MHill work. Since their work was a final and not a draft, it appears to be have been accepted. My concerns with their work are that it did not mirror the parameters that the BAAQMD would use. If it did mirror the parameters, then we can say with some accuracy that one site is better than an adjacent one. However, CH2MHill feels their work is an adequate generic representation of the ICST3 model which BAAQMD would use and as such would still be useful for planning. They summarized their work with three elliptical curves.

...nuclear what the modeling does show...

The three elliptical curves gives a useful representation of the greater than de minimis level cancer risks associated with two scenarios of chlorination and one scenario of breakpoint chlorination. These curves, if transposed to alternative facility sites, should help us plan facility location. Transposition indicates that it is best to locate the facility away from residential receptors and the Bay Elementary School and the abandoned Barrett School. These include the northern and eastern sites (AA, BB/CC (Frito Lay), DD, EE, JJ, II) sites. Though it was recommended that we factor these concerns into the existing site selection rankings, that recommendation was not taken. In addition, BAAQMD had recommended against site location near the northern border of our project.

...formal and appropriate process to vet the air quality issues...

It is true that permits will be obtained from the BAAQMD. However, permit review is not the same as an EIR disclosure. BAAQMD does not normally hold public meetings on permit applications. Therefore, residents may not have a full opportunity to comment on chloroform issues similar to an EIR process.

Other issues

The present chloroform write-up does not adequately address my concerns. In addition, there was a strong push to include specific references to the "41", "82", and "94" ug/l cited in the document, yet those references were not included. There is also an appearance of inequity when my section was summarily removed from managing the chloroform section and the air quality permitting when we were opposed to the approach used. If the modeling work were more favorable to our project, would we be more inclined to include it?

Without full disclosure, the appearance of inequity may be much worse than the inequity, magnified by chloroform as a carcinogen. Our opponents will surely bring up environmental justice as a reason we chose not to include this information

Recommendation

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Attachment 12

There is two - one rewrite the chloroform section to include full disclosure and send it out as an addendum. It is better to reassure the public of full disclosure rather than explain it later, after they discovered we had adequate information, but not provided it.

If we choose not to rewrite, then we need to thoroughly brief our public affairs staff on the various positions that could be taken by our opponents on this chloroform issue. They can then adjust accordingly, if blindsided by public officials or activists with a vengeance towards the District using this project as a rallying point.

RAJ

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Attachment 13

From: Jung, Robert
Sent: Thursday, March 29, 2001 1:13 PM
To: Williamson, Mark
Cc: Lampe, John; Schroeter, John; Cruz, Joaquin
Subject: RE: Reassignment of Bayside Project BAAQMD Permitting

Your final write-up completely ignores the Geier and Geier modeling study that was conducted similar to that conducted for radon. The 3/9/01 CH2MHill work that shows potential cancer risk impacts was also not included. Other than the statement "EBMUD conducted preliminary modeling of ...", neither of these modeling work was referenced at the end of the chapter. The statement "preliminary modeling results indicate that a permit can be obtained..." is not supported by these studies, particularly if breakpoint chlorination is being considered. Ignoring these issues could subject the environmental document to recirculation, particularly if discovered by astute reviewers.

RAJ

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Attachment 14

From: Jung, Robert
Sent: Thursday, March 29, 2001 4:19 PM
To: Williamson, Mark
Cc: Cruz, Joaquin
Subject: Your 3/15/01 comments to the Bayside EIR

Mark,

I take exception to several of your comments on the referenced subject (2nd administrative draft date March 2001). These are the following:

1. Section 3.4.2, page 3.4-10. You X-out the 5th paragraph concerning the hazardous wastes discovered at Oakport and its hydrogeological link to the Bayside Project. You had the comment - "Why is this highlighted when singer (sp?) & capillar (sp?) superfund sites are not mentioned."

As part of the local groundwater exploration, Oakport was a specific drilling site that we tested and discovered hazardous waste. It should be specifically mentioned to reassure readers that the site is not hydrogeologically linked to the Bayside Project. Since the section was removed, the only mention of it is buried in Section 1.1.7, page 1-8. Since you mentioned it, readers should be assured that all nearby hazardous waste sites, whether superfund or not, have been identified and a statement or statements made on whether there is hydrogeological link between the contaminated sites and their future drinking water. This was not done.

2. Section 1.1.8 Bixler Emergency Pumping Plant was also X-out with a comment "not relevant".

Bixler is relevant since it is the only physical site that we have depended on for drought relief. During the drought years, annual permits to operate Bixler were received on February 22, 1989, June 14, 1991, and December 15, 1992. A plan to obtain a long-term permit for Bixler was proposed, but was not pursued due to management's perception of its potential impact on the American River negotiations. There is no documentation in the Bixler file that concludes a permit could not be obtained during the next drought. We could be accused of selectively defining our project objective to rule out this option.

3. Impact 3.12-3 re Chloroform Emissions was substantially rewritten.

As I have discussed in recent e-mails and my 3/15/01 memorandum, the rewrite is inadequate. It fails to address two modeling studies that were conducted. One of the modeling studies shows potential cancer risk impact from chloroform emissions on residential receptors and a nearby school, depending on the site location. Pushing future analysis onto the Bay Area Air Quality Management District does not presently address potential concerns of citizens that reside in the impacted area, particularly their input on operating conditions and site locations to minimize cancer risk issues.

4. Central Facility Site Screening Criteria

When it was discovered that impacts on residential and industrial receptors from chloroform emissions were site dependent, it was recommended that the existing central treatment facility site screening criteria be reviewed. The modeling studies indicate that some of the sites had much more impact on residential receptors than others and should have been included. This was important information that would have adjusted the value of certain sites and improved the standing of the Oro Loma site. However our recommendation was ignored and X-out.

RAJ

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From: Jung, Robert
Sent: Thursday, April 05, 2001 12:05 PM
To: Tognolini, Mike
Cc: Pettee, Cookie; Williamson, Mark; Knight, Angela; Cruz, Joaquin; Etheridge, Fred
Subject: RE: EBMUD EIR and Chloroform

Mike,

Ed Chin is a scientist at Genentech -- SSF and a former member of the Board of Directors of Heron Bay. His main concern had to do with radon emissions and its 1/2 life. I walked him through the radon discussion and he feels satisfied that it is not a concern. When he asked about chloroform, I told him that level of detail that he is asking is not in the EIR but may be contained in the modeling studies mentioned, but not included or referenced. When he desired the information, I told him to direct his request to Angela via e-mail.

This is the Pandora's box that I forewarned by not providing full disclosure in the chloroform write-up. Rest assured that others will also want these modeling studies. I don't believe we have a legitimate right not to provide it. Any thoughts Fred?

RAJ

-----Original Message-----

Sent: Thursday, April 05, 2001 11:35 AM
To: Jung, Robert
Cc: Pettee, Cookie; Williamson, Mark; Knight, Angela
Subject: RE: EBMUD EIR and Chloroform

Bob,
 Do you have notes on your discussion with Mr. Chin from yesterday?
 -Mike

Mike Tognolini
 East Bay Municipal Utility District
 Phone: (510) 287-0125
 Facsimile: (510) 287-1913
 E-mail: mtognoli@ebmud.com

-----Original Message-----

From: Knight, Angela
Sent: Thursday, April 05, 2001 10:42 AM
To: Pettee, Cookie; Williamson, Mark; Tognolini, Mike
Subject: FW: EBMUD EIR and Chloroform

Angela Knight
 Water Supply Improvements
 X1213 MS #305
aknight@ebmud.com

-----Original Message-----

From: Edward Chin [<mailto:etc@gene.COM>]
Sent: Thursday, April 05, 2001 10:16 AM
To: aknight@ebmud.com

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From: Jung, Robert
Sent: Monday, April 09, 2001 11:19 AM
To: Williamson, Mark
Cc: Lampe, John
Subject: RE: Your 3/15/01 comments to the Bayside EIR

Mark,

This note responds to your 1807 hours, 3/29/01 e-mail entitled "Your 3/15/01 comments to the Bayside EIR."

1st paragraph - "Bob, your series of notes..."
 My notes document concerns that I had and still have about the environmental document.

2nd paragraph - "In our meeting the morning of..."
 My concerns in these areas are well known and have been stated many times to you, your staff, and in our Thursday staff meetings. I have yet to hear an acceptable explanation why those items are not considered and to claim that these issues have not been brought up is preposterous. Certainly, a resident in the impacted area should be given assurances that the groundwater aquifer is protected from potential contamination. The present environmental document does not offer that level of comfort.

3rd paragraph - "At our 3/12 meeting..."
 It is unknown what point you are trying to make. It appears to discuss your version on the events of the chloroform write-up in the environmental document. I take exception to your view then and now.

4th paragraph - "At no time prior to your 3/15..."
 See above comment. Removing my section from the air quality permitting or the chloroform discussion does not make the issues go away. Instead, it underscores the issues and questions whether the actions were punitive. My 3/15 memorandum, my 1133 hours, 3/23/01 e-mail, and private discussions offered constructive comments; these were ignored.

5th paragraph - "You continue to expend District time..."
 Based on the concerns of citizens at the public meeting of April 3rd and subsequent request for air quality information, it appears that my concerns may be legitimate. Contrary to your belief, my concerns echo the concerns of citizens impacted by the Bayside Project and discounting those concerns do not make them any less valid.

RAJ

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From: Jung, Robert
Sent: Monday, April 23, 2001 9:34 PM
To: Williamson, Mark
Cc: Cruz, Joaquin
Subject: Initial Administrative Record - completed 4/19/01

Mark,

Pursuant to your verbal request, we removed the reference (3.12-13) related to the chloroform SCREEN3 model conducted by our consultant, Geler and Geler, from the Initial Administrative Record. However, it should be noted that this document, or similar, is mentioned in the DEIR on page 3.12-17, first paragraph "...EBMUD conducted preliminary modeling of chloroform emission using two models.... SCREEN3..." An astute reader could spot that this information was not included in the Initial Administrative Record.

While conducting a final review of the documents before submission to the Secretary's Office, we discovered an inserted document that was troubling and cast suspicion on the integrity of our environmental process. This document was an unsigned memorandum dated April 17, 2001 from John Schroeter, Manager of Environmental Compliance to you entitled "Supporting Documentation for Evaluation of Chloroform Emission from Aeration Tower System, Bayside Groundwater Project". Several things are troubling and they include the following:

- 1) This document was inserted without our knowledge, and no reason has been provided our section with respect to this action.
- 2) We had to quickly redo our table of contents to reflect this insertion before submitting it to the Secretary's Office.
- 3) The document is a justification, after the fact, and we did not rely upon it for the Draft EIR. Its inclusion now and insertion after the publication of the March 22, 2001 DEIR appears suspicious.
- 4) There is an appearance of impropriety as the attachment was stamped "DRAFT" and the original technical 3/9/01 memorandum from CH₂M Hill did not arrive with a draft stamp.
- 5) The document refers to Tables 1 & 2 on SCREEN3 model assumptions. These tables are not included nor have we ever seen any SCREEN3 work except for those conducted by Geler and Geler.
- 6) The conclusion on the 3rd unnumbered page, "These risk contours do not appear to impact any residential areas..." is not entirely true. With a 50% error rate and relocation to other potential facility sites, there is likelihood that residential receptors are impacted.
- 7) The document makes suggestion that we plan to operate only 30%. This statement handcuffs the future negotiations with regulatory agencies by already limiting operations. Has this been agreed to by Operations? In our kickoff meeting, GM Dennis Diemer made it clear that he did not want operating restrictions on the operating permit.
- 8) The document states that based on the preliminary modeling work performed by CH₂M Hill, the aeration towers "can be designed, sited, constructed, and operated in a manner that would not require air emissions controls." It is not prudent to make this determination at this time without considering other, equally important criteria such as economic feasibility and similar regulated operations, to name but a few. Even if the District manages to demonstrate a low-cancer risk to the community, the BAAQMD retains full authority to require air emission controls.
- 9) The "draft" modeling work performed by CH₂M Hill's has been used to justify District positions in the DEIR, yet we failed to utilize the same information when ranking central treatment facility locations because it was deemed "unclear or not conclusive". For example, sites AA, BB/CC, and DD are ranked either 1 or 2, however, their close proximity with respect to air emissions to the resident populations should have been factored into our ranking process; physical residential proximity is not equivalent to the complexities governing air flow transport dynamics. The preliminary modeling indicates that we would exceed the 1 in a million cancer

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threshold if the cancer contours were superimposed onto these sites; this could have had an impact on the final site ranking values. This dual standard of relying on CH₂M Hill's modeling data to support positions beneficial to the District, on one hand, and ignoring the same data when not as favorable is not consistent.

The document should not have been included and its inclusion compromises the integrity of our process. We have been concerned about the issue of chloroform emissions and its lack of full disclosure. In an attempt to minimize attention to chloroform emissions (comparing the 2nd admin draft with the draft EIR), we have called further attention to it. These maneuvers provide further ammunition to critics concerning the credibility of our environmental process.

Are there any other documents that were inserted without our knowledge?

RAJ

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Attachment 19

From: Jung, Robert
Sent: Tuesday, May 01, 2001 8:21 AM
To: Williamson, Mark
Cc: Lampe, John; Cruz, Josquin
Subject: RE: Bayside Public Records Collection

Mark,

I believe that you missed the point in my memo. Your first paragraph is inaccurate and does not address why the SCREENS analysis conducted by Geler and Geler was removed. Any astute reader will see that as a discrepancy. Did you tell Legal that the SCREENS model was specifically mentioned in the DEIR? My point/points in the memo was the appearance of deception in manipulating the administrative record w/o my knowledge. You again inserted another memo dated April 20th to replace the April 17th memo w/o telling me. These memos were developed after submittal of the DEIR and should not have been included in the Initial Administrative Record. These also have the appearance of deception. We had talked about the need for credibility in our documentation, but it is apparent that is not the direction being taken.

Your last paragraph is way off based. We are responsible for inaccuracies in the environmental documentation and it is our obligation to point them out. Also it has been your inclusions that have been the subject of concern.

RAJ

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Origin: Message

Sent: Thursday, May 10, 2001 4:33 PM
To: Williamson, Mark
Cc: Cruz, Joaquin; Lampe, John; Petee, Cookie
Subject: Bayside Internet Site

05/10/01

Mark,

I am surprised at discovering the Bayside Project Air Impact Analysis on our internet. Specifically, it is the modified memorandum from CH2MHill addressed to John Schroeter dated March 9, 2001. It again causes unnecessary and adverse attention to chloroform emissions and further erodes public confidence in our environmental documentation. Specifically on page 3, second paragraph, last sentence, "the risk results could change by up to $\pm 10\%$..." The original memorandum used in the draft environmental report said " $\pm 50\%$ " and was changed by your advisors and now say " $\pm 10\%$ " with an attached footnote "...based on input from the Bay Area Air Quality District...". Unfortunately your advisors neglected to change the first page, second paragraph, last sentence which still reads " $\pm 50\%$ ".

The issue of manipulating information on chloroform emissions is troubling and has been documented in numerous e-mails to you. Specifically this latest selection is disconcerting due to the following:

- 1) The modified internet version is not the same version that was provided in the initial Administrative Record located in the Secretary's Office.
- 2) The change from $\pm 50\%$ to $\pm 10\%$ did not result in a new memorandum, but simply transpose these numbers using the original memorandum date of March 9, 2001.
- 3) It is inappropriate to use a footnote in a document dated after the document was generated.
- 4) Any modification should have been through a separate memorandum, as was performed with the same 3/9/01 memorandum in the initial Administrative Record.
- 5) The $\pm 10\%$ is a justification, after the fact, and we did not rely upon it for the Draft EIR. Its inclusion now and insertion after the publication of the March 22, 2001 DEIR appears suspicious.
- 6) The reference to BAAQMD is unclear without any other supporting evidence. It is presumed that you meant Mr. Brian Bateman's alleged oral statement at the May 1st public meeting (there was no official transcriber documenting statements during this public meeting). It also presumed that you consulted with the BAAQMD before using this statement and obtained the following:
 - A) Mr. Bateman and his supervisor, Mr. Bill deBoisblanc, Director of Permits, expressly allowed this statement on our internet site
 - B) The BAAQMD has reviewed the CH2MHill work and agrees that the modeling is representative of their modeling parameters.
 - C) The $\pm 10\%$ is not taken out of context and is specifically applies to the CH2MHill work.
 - D) BAAQMD also retracted their oral recommendation not to site a facility near San Lorenzo Creek.

From the onset, we have been concerned about the issue of chloroform emissions and its lack of full disclosure. The last few weeks we have shown our Achilles heel and appear to be reactionary without any well-developed plan on disseminating chloroform emission information to the public. This has resulted in suspicion and casts further doubt on the rest of the environmental documentation.

I recommend that you and your air quality advisors formulate a plan on how to address the issue of trust and credibility on the chloroform emissions, not only with the public but also with the BAAQMD, before your actions erode our environmental integrity.

RAJ

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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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3. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES
GROUNDWATER HYDROLOGY AND QUALITY

Attachment 4

District-Proposed Mitigation

Measure 3.8-1a: The District will implement a water-quality monitoring program to obtain and analyze samples of recharge water during injection. The monitoring program will ensure recharge water quality continues to meet RWQCB basin plan objectives and state and federal MCLs. This monitoring may be based on water treatment plant effluent data unless other sources are introduced into the system that might be injected. If this were to occur, samples from these other sources and/or wellhead samples will be obtained and analyzed for regulated constituents. Injection will be discontinued if an exceedance occurs and will not resume until the cause of the exceedance has been addressed and water quality brought back into compliance with regulatory requirements.

Measure 3.8-1b: The District will implement a water-quality monitoring program for pumped groundwater to ensure continued compliance with State of California and federal MCLs. If an exceedance occurs production will be discontinued until pumped groundwater quality can be brought into compliance with state and federal MCLs. The cause of potential exceedances will be assessed to ensure future compliance with these regulations.

Impact Significance After Mitigation: Less than Significant. Water will not be injected or produced that does not meet relevant regulatory criteria.

Residual Impact: None. System will be monitored and operated to ensure no adverse water-quality impacts.

Impact 3.8-2: Extraction and injection of water may adversely affect contaminant plume migration. ~~Less than Potentially Significant after mitigation and Unmitigable.~~

Groundwater injection and production at the Bayside Groundwater Project will cause water levels changes in the Deep Aquifer on the order of 200 of drawdown and 100 of drawup in the vicinity of the wellfield. If these operations significantly change water levels in the shallow aquifer, where groundwater contaminant plumes are locally present, then these plumes might be caused to migrate in an adverse manner.

Abandoned and/or improperly destroyed wells screened across both the Deep Aquifer and overlying aquifer units provide a conduit for vertical contaminant migration. These conduits could lead to short-circuiting of the groundwater flow system and allow rapid transport of water vertically between aquifers.

District-Proposed Mitigation

Measure 3.8-2a: Groundwater modeling indicates that water levels in the shallow aquifer will not be significantly affected by injection and extraction operations in the Deep Aquifer. Injection and pumping tests conducted to date at the Bayside Well No. 1 confirm this analysis, as do historical water level data (Figure 2). To monitor response of the system under full-scale operations the District will implement a water level monitoring program in and around the Bayside Groundwater Project area. This program will monitor

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3. ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES
GROUNDWATER HYDROLOGY AND QUALITY

water levels in the various aquifer units, including the shallow aquifer. If shallow water levels are observed to change during injection and production activities, then their potential to adversely affect plume migration will be evaluated.

Measure 3.8-2b: The District will implement a well identification program to identify wells screened across both the Deep Aquifer and overlying units near the Bayside Groundwater Project. Areas of known poor water quality and contamination will be given special emphasis. The need to modify these wells or destroy them will be assessed and implemented in cooperation with the well's owner.

Measure 3.8-2c: The District will implement a well destruction program to destroy abandoned wells near the Bayside Groundwater Project that are screened across both the Deep Aquifer and overlying units. The wells will be destroyed in accordance with state regulations and standards.

Impact Significance After Mitigation: ~~Less than Potentially Significant with Mitigation and Unmitigable. Some wells screened across the Deep Aquifer and overlying units will be properly destroyed units might not be located during the District's well identification program. These Additional wells identified during operation will be properly destroyed. The monitoring program will identify potential movement of contaminated water before it impacts the wellfield, may remain as vertical conduits for contamination. The wellfield System will be monitored and operated to ensure no adverse water-quality impacts to well users.~~

Residual Impact: ~~Less than significant after mitigation. Unidentified wells may remain as vertical conduits for contamination.~~

Impact 3.8-3: Extraction of groundwater may impact operation of other users of the Deep Aquifer in the area. ~~Less than Significant with Mitigation.~~

Operation of the Bayside Groundwater Project will cause a decrease in water levels in the area during pumping. Groundwater modeling indicates drawdown impacts of as much as 200 feet in the Deep Aquifer near the Bayside Groundwater Project. Available data indicate that even when Bayside Groundwater Project impacts are the greatest, local wells will generally have more than 100 feet of water above the tops of the uppermost well screen. This should be adequate to prevent cascading of water into the well. In addition, most wells screened in the Deep Aquifer are also screened in upper aquifer, thus buffering drawdown impacts. Deep Aquifer wells located north of the southern portion of Bay Farm Island will likely not be impacted because the Deep Aquifer appears to be thin and poorly transmissive in this area.

District-Proposed Mitigation

Measure 3.8-3: The District will implement a water level monitoring program for active Deep Aquifer wells in the basin. If drawdown impacts from the District's wells prevent these wells from meeting the owners' historical needs, then the District will remedy the

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ERM/JD Bayside Groundwater Project EIR
Section 3.8 Groundwater Use and Quality
3.8-13
Section 3.8 Groundwater Use and Quality

DRAFT

1/2/01

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~~3. ENVIRONMENTAL SETTING, IMPACTS & MITIGATION MEASURES~~
GROUNDWATER HYDROLOGY AND QUALITY

Attachment 5

into discussions with affected well owners to assess whether the wellheads could be modified to allow for pressurization. Wellheads may be modified accordingly, and injection rates increased.

Measure 3.8-5b: The District will implement a well identification program to identify active and inactive Deep Aquifer wells near the Bayside Groundwater Project. Inactive wells will be sealed and destroyed according to State standards. During injection, if water level monitoring program data indicate that Deep Aquifer water levels are about to rise above ground surface, then increased monitoring of water levels and surficial surveys will be conducted in these areas to assess if any abandoned or destroyed Deep Aquifer wells are flowing at the surface wells. If these wells are found to be flowing then injection rates will be decreased to stop the overflow. Injection rates will not be increased until overflow conditions have been stopped.

Impact Significance After Mitigation: Less than Significant with Mitigation

Residual Impact: Some wells screened across the Deep Aquifer and overlying units might not be located during the District's well identification program. These wells may remain as flowing wells until identified and modified.

Impact 3.8.5-6: Extraction of water may lead to seawater intrusion. Less than Potentially Significant with and Without Mitigation.

Groundwater production at the Bayside Groundwater Project will cause water level changes in the Deep Aquifer on the order of 200 of drawdown in the vicinity of the wellfield. During ASR operations, the long-term net change in groundwater storage will be near zero, and therefore provide little opportunity for seawater intrusion. If a pumping-only scheme is adopted, then seawater intrusion remains a possibility. If long-term pumping significantly lowers water levels in the shallow aquifer, then seawater from the San Francisco Bay may be induced to leak into the aquifer.

Abandoned and/or improperly destroyed wells screened across aquifer units provide a conduit for vertical contaminant migration. These conduits could lead to short-circuiting of the groundwater flow system and allow rapid transport of water vertically between aquifers.

District-Proposed Mitigation

Measure 3.8-6a: Groundwater modeling indicates that water levels in the shallow aquifer will not be significantly affected by extraction operations in the Deep Aquifer. Injection and pumping tests conducted to date at the Bayside Groundwater Project confirm this analysis, as do historical water levels (Figure 2). To monitor response of the system under full-scale operations the District will implement a water level monitoring program in and around the Bayside Groundwater Project area. This program will monitor water levels in

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3. ENVIRONMENTAL SETTING, IMPACT AND MITIGATION MEASURES
GROUNDWATER HYDROLOGY AND QUALITY

the various aquifer units, including the shallow aquifer. If shallow water levels are observed to change during injection and production activities, then their potential to cause seawater intrusion will be evaluated.

Measure 3.8-6b: The District will implement a well identification program to identify wells screened across both the Deep Aquifer and overlying units near the Bayside Groundwater Project. The need to modify these wells or destroy them will be assessed and implemented in cooperation with the well's owner.

Measure 3.8-6c: The District will implement a well destruction program to destroy abandoned wells near the Bayside Groundwater Project that are screened across both the Deep Aquifer and overlying units. The wells will be destroyed in accordance with state regulations and standards.

Impact Significance After Mitigation: Less than Significant with Mitigation. Wells screened across the Deep Aquifer and overlying will be properly destroyed during the District's well identification program. Additional wells identified during operation will be properly destroyed. The monitoring program will identify potential movement of contaminated water before it impacts the wellfield. The wellfield will be monitored and operated to ensure no adverse water-quality impacts to well users.

Residual Impact: Less than significant after mitigation.

~~**Impact Significance After Mitigation: Potentially Significant and Unmitigable.** Some wells screened across the Deep Aquifer and overlying units may not be located during the District's well identification program. These wells may remain as vertical conduits for seawater intrusion. System will be monitored and operated to ensure no adverse water-quality impacts to well users.~~

~~**Residual Impact: Unidentified wells may remain as vertical conduits for seawater intrusion.**~~

Impact 3.8-7: Injection of water into the groundwater basin may cause overpressurization of the aquifer and hydrofracturing of overlying units. **Less than Significant with Mitigation.**

Groundwater modeling and calculations based on results of pumping and injection tests indicate that drawups of as much as 100 feet may occur in the Deep Aquifer near the Bayside Groundwater Project during injection. This might lead to over pressurization and hydro fracturing of units. Water leakage may then occur into overlying units and/or to the surface.

District-Proposed Mitigation

Measure 3.8-7: It is commonly assumed that aquifers may be pressurized to maximum values of: $0.22 \times (\text{depth to top of aquifer} + \text{depth to water})$ (see Huisman and Olsthoorn,

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EBMUD: Bayside Groundwater Project EIR
Section 3.8 Groundwater re:7.doc Section 3.8 Groundwater re:7.doc Section 3.8 Groundwater re:7.doc

3.8-16

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1/3/01

Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

Handwritten notes: "ground AND", "well screens", "EBMUD's OTHER WATER SUPPLY", "TRAFS = MSW 3/9", "CASH", "RAJ", "TO THE INJECT SOURCE", "82M", "pish-m", "scam model", "CITATION", "WHAT IS THIS NUMBER?", "18 mg/l / 10?", "48 mg/l @ 30:1 air:water @ 10% = 0.18 mg/l = 11.2"

Chloroform Emissions

Impact 3.12-3: Operation of the central treatment facility would have the potential to generate chloroform emissions. Potentially Significant.

As a result of chloramine reaction with organic matter in the subsurface, chloroform is formed and contained in the distributed water at a concentration of 60 micrograms per liter (µg/L). To reduce excess biological fouling of equipment, "breakpoint chlorination" could be required to remove ammonia as a food source for bacterial growth. Breakpoint chlorination involves adding additional chlorine to the distributed water causing chloroform formation at a concentration of 64 µg/L. Prior to distribution to EBMUD customers, the water would pass through a set of four air-stripping towers in order to remove naturally-occurring radon from the extracted groundwater. During the radon removal, chloroform would also be released. Based on a volume of 15 million gallons per day (mgd) at the central treatment facility, EBMUD estimates an emission rate of approximately 2,200 pounds per year of chloroform. If breakpoint chlorination is utilized, 4,300 pounds per year would be released. Such projected chloroform emission levels would exceed the BAAQMD's toxic air contaminant trigger level of 36 pounds per year. When the trigger level is exceeded, the project would be required to complete the BAAQMD risk screening procedure. As part of its program to control toxic air contaminant emissions, the BAAQMD has established standardized procedures for estimating the risk associated with exposure and the BAAQMD will conduct a risk-based assessment for this project using their established model. Factors that determine acceptability include the presence of controls on the rate of emissions as well as the site's proximity to residential areas and schools.

For purposes of this EIR analysis, a screening-level health risk analysis was conducted using EBMUD's estimated chloroform emission rates associated with the air stripping process. The dispersion estimates developed for the radon emissions were applied to the chloroform emission rates and two chlorination scenarios ("normal" and "breakpoint" chlorination) were analyzed.

Chloroform is a suspected carcinogen. The risk associated with chloroform inhalation depends upon the lifetime exposure "dose." Risk to downwind receptors depends upon how much chloroform is released at times when they are present downwind of the release point, and the degree of atmospheric mixing during the episode. The adopted chloroform risk factor is an excess cancer risk of 5.3 in one million for each one µg/m³ inhaled over a 70-year lifetime, 365 days per year, 24 hours per day, outside one's residence.

The risk calculation was based upon the worst single hour of the year producing the highest ground level concentration. The annual average exposure was presumed to be 10 percent of the single peak height. This assumption is a worst-case screening level calculation that underestimates the variation in both turbulence and wind direction, as well as assumes that people spend their whole life on their front porch. When these overpredictive assumptions are applied to the proposed air stripping operation, the following predicted public chloroform exposure would result at the nearest residence:

Maximum annual chloroform exposure (normal) = 4.8 µg/m³ (T/70)
 Maximum annual chloroform exposure (break-point) = 9.2 µg/m³ X (T/70)
 (where T is the total number of years of air stripper operations in the next 70 years)

The public health risk is calculated as follows:

RISK = EXPOSURE X 5.3 x 10⁶

The screening level health risk as a function of air stripper operations is conservatively estimated in Table 3.12-6 as a function of chlorination level.

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*Preliminary modeling
has 10 million for best fit
and 1 million for the analysis
will be conducted with a specific facility
TABLE 3.12-6*

*All Air District
requirements will be
addressed to.*

Years of Operation	Normal Chlorination	Breakpoint Chlorination
1	0.4	0.7
7	2.8	4.9
14	5.1	9.8
35	12.7	24.4
70	25.4	48.8

*ISN'T THIS THE
SAME AS
(I.E. 1-10 A-4)
AS WHAT OUR
OTHER AIR DISTRICT
SAYS?*

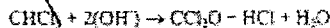
SOURCE: Geer & Geer Consulting, Inc. (2003)

A predicted risk of less than one in a million is considered a "de minimis" health risk. Risks of less than 10 in a million are considered "acceptable" under BAAQMD risk guidelines. Risks exceeding ten in a million are potentially significant. The above screening calculations show that the risk would be potentially significant in 15 years of system operation using breakpoint chlorination and in approximately 30 years of operation under normal chlorination. Based on these estimates, a detailed risk assessment will be required.

Chloroform Breakdown

Chloroform ultimately is broken down in the atmosphere by direct ultraviolet (UV) dissociation, or by attack from hydroxyl (OH) radicals. Because ultraviolet light intensities are very low in the lower atmosphere, the reaction rate is slow. The average lifetime of a chloroform molecule in the lower atmosphere is 0.55 year (almost 7 months) between generation and destruction (Seinfeld & Pandis, 1998). Under strong UV light, the process is much faster. Even highly stable halocarbons such as "freon" are rapidly photodissociated under intense UV such as in the stratosphere where they contribute to the "ozone hole." At the earth's surface, however, the chloroform released by the stripping tower will have made several revolutions around the earth before it is destroyed.

The byproducts of this destruction are generally free chlorine atoms, which recombine with hydrogen to form hydrochloric acid (HCl). A simplified breakdown reaction for chloroform (CHCl₃) is as follows:



where CCl₂O is phosgene, a nerve gas developed during World War I. Several chemical laboratory accidents involving chloroform have been reported recently because of a change in the stabilizer used to package the material. Phosgene gas has been produced inside the chloroform dispensing bottle after many months of storage at much higher concentrations of thousands of parts per million. The phosgene produced from the release of chloroform from the air strippers, however, would be present in much lower concentrations (parts per quadrillion or quintillion) by the time the atmospheric breakdown process is finished. Therefore, chloroform breakdown byproducts such as phosgene would not be a local health issue because of the slow breakdown reaction time (6+ months).

District-Proposed Mitigation

Measure 3.12-3: Pursuant to Regulations 2-1-301 and 2-1-302, an Authority to Construct Permit and Permit to Operate will be required from BAAQMD. Regulation 2-2-301 stipulates that the trigger threshold for installation of Best Available Control Technology (BACT) abatement technology is 10 pounds per day. Initial District calculations demonstrate an exceedance of this trigger using breakpoint chlorination, while under normal chlorination, this threshold would not be

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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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exceeded. ~~The above screening level health risk analysis indicates potentially significant impacts in 15 years of system operation using breakpoint chlorination and in approximately 30 years of operation under normal chlorination. Based on these estimates, a detailed risk assessment will be required consistent with BAAQMD requirements. Prior to submittal of an application to the BAAQMD, EBMUD proposes to conduct an independent health risk assessment using parameters suggested by BAAQMD. When actual meteorological data are applied in this assessment (rather than the above worst-case assumptions), risk levels could be less than significant. This risk assessment will also specify design measures such as flow rates, stack heights, and air-water mixtures to ensure that project-related emissions are reduced to and maintained at a less-than-significant risk level (including an appropriate safety factor).~~

The risk assessment will review appropriateness of BACT. For air stripping, the BACT is granular activated carbon (GAC). ~~However, it is incumbent on the District to demonstrate that GAC is not a practicable abatement technology due to the high flow and low concentrations of the emitted toxic air contaminant. EBMUD must also conduct an extensive review of similar systems to determine whether any abatement technology has been successfully applied, and if it would be appropriate for this project.~~

Impact Significance Before and After Mitigation: Less than significant since the permits will not be granted by the BAAQMD until EBMUD can demonstrate that health risks associated with project emissions would be less than significant.

Residual Impacts: None

Atmospheric Chemistry & Physics

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116EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: November 21, 2001
 MEMO TO: Fred S. Ethenidge, General Counsel's Office
 FROM: Robert A. Jung, Regulatory Compliance Division
 SUBJECT: October 16, 2001 Public Information Request of Ms. Irene Ip - Bayside Project

Pursuant to the public information request of Ms. Irene Ip, attached are the following documents:

- 1) A 5-page index of the submitted materials
- 2) Twenty-eight (28) separate documents from my outlook next file.
- 3) Seventy-nine (79) separate documents from my outlook received file
- 4) Twenty-two (22) separate written documents
- 5) A 5-page chronological summary of oral communications

Specific requests of Ms. Ip, which include e-mails dated March 19, 23, and 25, 2001, April 9, 15 and 17, 2001, and May 14, 2001, and memorandums dated August 3 and 23, 2000, and March 14, 2001, have been included. Since permission was not granted to review and seek information from the WSID files nor their "W" drive, other potential pertinent public documents were not reviewed or obtained.

Pursuant to your 09/23/01 e-mail, it appears some of the information that was supplied earlier this year to the Secretary's Office, under another public information request, may be digitized. However, since I no longer have access to that information, confirmation is not possible.

Please note that Mr. Mark Williamson and/or Mr. Joaquin Cruz have been parties to all documents identified in the index.

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April 15, 2005

VIA FACSIMILE TRANSMISSION
& OVERNIGHT MAIL

Board of Directors
East Bay Municipal Utility District
375 11th Street
Oakland, Ca. 94607

RE: Heron bay Homeowners Association re:
Environmental Impact for the Bayside Groundwater Project

Gentlepersons:

As you may be aware, we are the attorneys for the Heron Bay Homeowners Association. In the past we have been in contact, both orally and in correspondence, with Ms. Angela Knight. The last such contact was on November 18, 2004. Heron Bay Homeowners Association is comprised of more than 600 individual single-family homes and town homes and represents more than 1,500 residents all of whom are potentially affected by the proposed Groundwater Project.

The purpose of this correspondence is to formally request an extension of the time period for public comment to the New Draft Environmental Impact Report (NDEIR). It is our understanding that the public comment period is set to expire on April 28, 2005, a mere 45 days from issuance of the notice of the right to comment. As you may recall, the Association, on August 6, 2001, filed a Response to the Draft Environmental Impact Report that was previously published for comment for this project. That response was the product of extensive scientific effort and research. Since that time more than two and one-half years have passed during which engineers and consultants for EBMUD have presumably been working on the current version of the NDEIR. The Association considers it completely unreasonable that they are expected to now review this massive document, which is complex and highly scientific in nature, in a mere 45 days. Furthermore, the mechanics of distributing such a document; notifying homeowners who have a vested interest in the project and its viability and design, keeping in mind that the majority of those owners do not speak English or are not fluent in English; and gathering a consensus opinion for the public response is nearly impossible.

It goes without saying that this is an extremely important project to the owners of homes in the Heron Bay complex. The past history of this project clearly suggests that there was and is an overwhelming public interest in the project as originally designed. There is no reason to suspect that that interest will be any less for the current suggested design. As the residents of Heron Bay feel that their homes and, in most cases, their most valuable

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assets are potentially being dramatically and negatively affected by the construction of this project, it would be unreasonable for the Board to deny or overlook this simple request for additional time. The Association is asking for an additional 90 days from April 28, 2005 for their public comment to the NDEIR. The Association will have to expend considerable time and expense even to meet this deadline should it be granted. Again, we would submit that considering that the District had more than two years to develop this amended document that equity would dictate that this very reasonable request be granted. If your Board fails to grant this request, we will have only a few remaining days to respond. Should the Association be forced to prepare and respond to a document that potentially affects their homes and property values in a manner that denies them due process, the Association reserves it's right to raise this issue in a Court of competent jurisdiction.

We would appreciate a response to our request not later than April 21, 2005. . Thank you for your anticipated cooperation in this request. If you have any questions with any of the above, please do not hesitate to call the undersigned.

Very truly yours,

A. Alan Berger
AAB/ceb

CC: Ms. Angela Knight
Heron Bay Homeowners Association
via Professional Association Services

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City of San Leandro
Civic Center, 835 E. 14th Street
San Leandro, California 94577



Office of the Mayor 510-577-3356
Fax 510-577-3340

April 12, 2005

Ms. Angela Knight
East Bay Municipal Utility District
375 11th Street, MS 407
Oakland, California 94607

Re: Request for Extension of the Comment Period on the EBMUD Bayside Groundwater Storage Project New Draft Environmental Impact Report

Dear Ms. Knight:

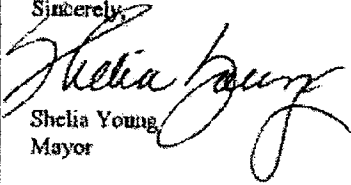
Respectfully, the City of San Leandro requests that the comment period for the new Draft Environmental Impact Report on the EBMUD Bayside Groundwater Storage Project be extended by 120 days.

We have heard concerns from the community regarding the project and residents have asked for more time to review and comment on this lengthy technical document. City staff would appreciate additional review and comment time as well.

Please extend the comment period on the new Draft EIR for 120 days to allow adequate time for everyone to respond. Also, please notify the City of San Leandro in writing by April 25, 2005 of your decision regarding our request for the 120-day extension.

Thank you for your consideration of this important matter.

Sincerely,


Shelia Young
Mayor

cc: City Council
EBMUD Board Member Frank Mellon
EBMUD Board Member Doug Limnev

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Hazardous Waste Incinerator in Kettleman City

By Luke Cole

In 1988, Chemical Waste Management, Inc. (Chem Waste) proposed the construction of a toxic waste incinerator 3.3 miles from Kettleman City, a predominantly Latino community of 1,100 residents in Kings County, in California's San Joaquin Valley. Though none knew it at the time, this proposal would spark one of the defining struggles of the early days of the Environmental Justice movement, in which a small farmworker town ultimately used CEQA provisions to take on the largest toxic waste company in the world—and won.

Since the 1970s, Kettleman City has been host to one of the largest toxic waste dumps in the U.S.,

owned and run by Chemical Waste Management, Inc (Chem Waste). It was built without the community's knowledge or consent. It was not until the early 1980s—after

multimillion-dollar environmental fines were levied against the Chem Waste facility—that residents became aware of its existence. At that late date, they saw few ways in which they could challenge the dump. Things changed, however, when they learned of the proposed incinerator.

Perhaps unsurprisingly, the residents of Kettleman City heard about this proposal not from Chem Waste, nor from Kings County or state officials, but from a Greenpeace organizer in San Francisco. They were shocked to learn that the incinerator would burn up to 108,000 tons—216,000,000 pounds—of toxic waste each year. This translates to 5,000 truckloads of waste per year *in addition* to the hundreds already passing through their community daily.

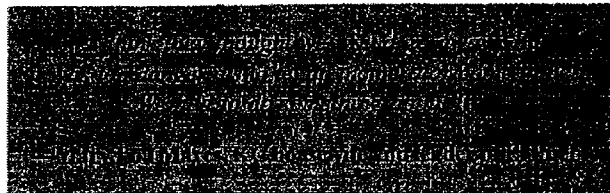
A new community group, El Pueblo para el Aire y Agua Limpio (People for Clean Air and Water), quickly organized and involved itself in the permitting process. However, Kettleman City is 95 percent

translated into Spanish so they could participate in the environmental review process. The county, however, was unresponsive. After significant pressure, Chem Waste issued a scant, five page executive summary in Spanish.

About 200 Kettleman City residents attended the sole public hearing on the incinerator proposal. Hoping to testify before the Planning Commission, they brought their own translator. However, the Commission refused their request, stating that translation was only allowed in the far back of the room and not during testimony. Residents testified anyway, in Spanish, from the front of the room.

The Planning Commission voted to approve the incinerator, and an appeal of this decision to the Kings County Board of Supervisors also failed. It seemed that the

County—already receiving \$7 million dollars per year in revenue from Chem Waste's existing dump—had too much to gain from the project. The incinerator promised to almost double the tax revenue that the County received from the toxic waste dump. With the incinerator, the County would have ended up receiving about one-



Latino, with 70 percent speaking Spanish at home, and 40 percent monolingual in Spanish. Thus, language became a critical issue.

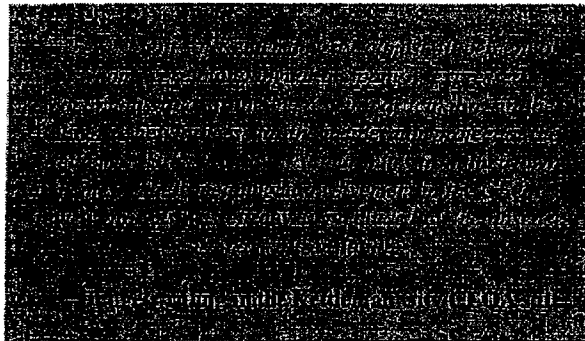
When Kings County published a 1,000 page, CEQA-mandated Environmental Impact Report (EIR), city residents urged that the highly technical document be

Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

sixth of its annual revenue from this single company.

Finally, the residents filed a lawsuit under CEQA. The lawsuit ultimately

by this time, the press had picked up the story and Kettleman City's struggle had become a national struggle, and part of the growing national Environmental Justice



mately succeeded. The presiding judge ruled that the EIR had not sufficiently analyzed the toxic waste incinerator's impacts on air quality and on agriculture in the San Joaquin Valley. Just as importantly, the judge ruled that the residents of Kettleman City had not been meaningfully included in the permitting process.

As the Court eloquently stated, "The residents of Kettleman City, almost 40 percent of whom were monolingual in Spanish, expressed continuous and strong interest in participating in the CEQA review process for the incinerator project at the Kettleman Hills Facility, just four miles from their own homes. Their meaningful involvement in the CEQA review process was effectively precluded by the absence of Spanish translation."

Rather than go back and do the environmental study right, Chem Waste appealed the decision. But

Movement. Finally, in September of 1993, Chem Waste announced that it was withdrawing its application. The town's residents had come together to protect the community welfare and, with the aid of the California Environmental Quality Act, had won.

Luke Cole is an environmental justice and civil rights lawyer, and Director of the Center on Race, Poverty & the Environment in San Francisco. Mr. Cole has represented Kettleman City residents in various environmental justice disputes for the past fifteen years, including their successful struggle against the toxic waste incinerator.

Delegates to the First National People of Color Environmental Leadership Summit held in Washington DC in 1991, drafted and adopted 17 principles of Environmental Justice. The first five principles are:

1. The sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.

2. The right to a safe, healthful, and ecologically balanced environment. We demand that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.

3. The right to ethical, balanced, and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.

4. The right to protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons, and nuclear testing that threaten the fundamental right to clean air, land, water, and food.

5. The right to political, economic, cultural and environmental self-determination of all peoples.

Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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AGENDA NO. 111
MEETING DATE May 28, 2002

**TITLE ACQUISITION OF 4.7 ACRES OF REAL PROPERTY AT 2539 GRANT AVENUE,
SAN LEANDRO - FRITO LAY**

MOTION RESOLUTION 33003-02 ORDINANCE

RECOMMENDED ACTION

Authorize purchase of 4.7 acres of improved property from Frito Lay for \$1,735,000.

SUMMARY

The District has an opportunity to purchase one of the alternative sites for the Bayside Groundwater Treatment Facility from Frito Lay. The business is relocating and has placed its 4.7-acre property on the market for sale. Frito Lay has agreed to sell the property to the District for \$1,735,000. The property is improved with a 14,342 square foot warehouse.

The acquisition would be in advance of project approval. The District would make no change in the use or level of use prior to completion of the appropriate CEQA documentation for a project. In the event the Board selects another site for the treatment facility when the project is approved, the District could sell the Frito Lay site as surplus real estate or potentially use the site for other District purposes.

DISCUSSION

The District commissioned a real estate appraisal of the property. The recommended purchase price is 2% (\$35,000) higher than the appraised value of \$1,700,000. Since placing the property on the market for sale, Frito Lay has received at least two other offers. If the District does not elect to make this opportunity purchase, the property will likely be sold to another business. A purchase price of \$1,735,000 is warranted. Since Frito Lay is initiating their move from this location, the District is not liable for relocation expenses. If the District's project were dislocating this business, relocation expenses could exceed \$50,000.

The community input received to date regarding the Bayside Groundwater Project indicates a strong neighborhood preference that the treatment plant be located as far as possible from residential areas to

Funds Available FY:		Budget Code: WSC3260275220/5501	
DEPARTMENT SUBMITTING:	DEPARTMENT MANAGER or DIRECTOR:	APPROVED:	
Customer & Community Services	<i>Rebecca L. Lamoreaux</i> Rebecca L. Lamoreaux	<i>Thomas M. Kamin</i> General Manager	

Submit original and two copies to the Secretary's Office by Noon on Friday two weeks before the Board meeting.
(List one item only. Attach background material if required)

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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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Acquisition of 4.7 Acres of Local Property at 2539 Grant Avenue, San Leandro - Frito Lay
May 28, 2002
Page 2

allow for maximum dispersion of any contaminants. Of the alternative sites identified, the Frito Lay property is the closest site to the residential area.

The Board will have the opportunity to consider all the site alternatives and their impacts, as well as the community input during the environmental review process for the project. The purchase of this property now maintains all of the Board's options for siting the project, and since the property has strong resale value, the District is accepting a low-level financial risk.

Under the purchase terms proposed by Frito Lay, the District must make a \$100,000 deposit after Board approval and prior to close of escrow. If the District does not proceed with the purchase, the District would forfeit the \$100,000 deposit.

GENERAL PLAN CONFORMANCE

On May 9, the City of San Leandro found the District's proposed acquisition of the Frito Lay property to be in conformance with the City's General Plan.

CEQA

The property is currently used by Frito Lay as a distribution warehouse facility. There are approximately 50 delivery vans that make use of the warehouse on a daily basis in addition to the larger distribution semi-trailers that import food items 5-10 times a week to the warehouse facility. Consistent with the provisions of CEQA, the District's use of the property will be restricted pending completion of the environmental documentation for the Bayside Groundwater Project. The District will not increase the level of the warehouse use above its existing level and will not use the property for any other type of use, without first complying with CEQA by completing and approving CEQA documentation.

FISCAL IMPACT

Funds have been appropriated in the Bayside Groundwater Project capital budget for the purchase of this property.

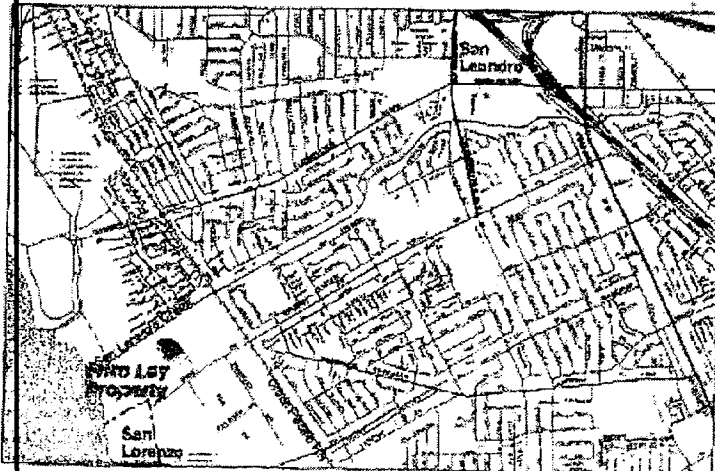
ALTERNATIVES

The District could decline to proceed with the purchase. This alternative is not recommended. The District's purchase of this property now will not in any way limit the Board's site selection alternatives in the environmental process since the Frito Lay site is very marketable and can be re-sold at a future time.

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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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**Frito Lay
Property Purchase**



G7-41

Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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AGENDA NO. 11.2
MEETING DATE MAY 28, 2002

TITLE ACQUISITION OF 6.27 ACRES OF REAL PROPERTY ON GRANT AVENUE, SAN LORENZO - MCMILLAN

MOTION RESOLUTION 30044-02 ORDINANCE

RECOMMENDED ACTION

Authorize purchase of 6.27 acres of unimproved real property located on Grant Avenue, San Lorenzo for \$1,660,000 from Carleton McMillan.

SUMMARY

The District has an opportunity to purchase one of the alternative sites for the Bayside Groundwater Treatment Facility. Carleton McMillan has decided to place his entire 6.27 acre unimproved property on the market, but has given the District first opportunity to purchase it. Mr. McMillan has agreed to sell the property to the District for \$1,660,000.

The acquisition would be in advance of project approval. The District would make no change in use or level of use prior to completion of the appropriate CEQA documentation for a project. In the event the Board selects another site for the treatment facility when the project is approved, the District could sell the McMillan site as surplus real estate or potentially use the site for other District purposes.

DISCUSSION

Over the past year, District staff and Mr. McMillan have engaged in discussions on how best to site a treatment facility on a portion (2-2.5 acres) of his property while allowing him to proceed with his plans for building and operating a metal re-bar plant. Due to a change in his business plans, Mr. McMillan has very recently decided to dispose of his entire property and has given the District the opportunity to purchase the site prior to listing it with a real estate broker. Mr. McMillan has indicated that should the District elect not to purchase the site, he will proceed to offer the property for sale on the open market.

Funds Available FY:		Budget Code:
DEPARTMENT SUBMITTING:	DEPARTMENT MANAGER or DIRECTOR:	APPROVED:
Customer & Community Services	<i>Rebecca Lamoreaux</i> Rebecca Lamoreaux	<i>Dennis M. Danni</i> General Manager

Submit original and two copies to the Secretary's Office by Noon on Friday two weeks before the Board meeting. (List one item only. Attach background material if required)

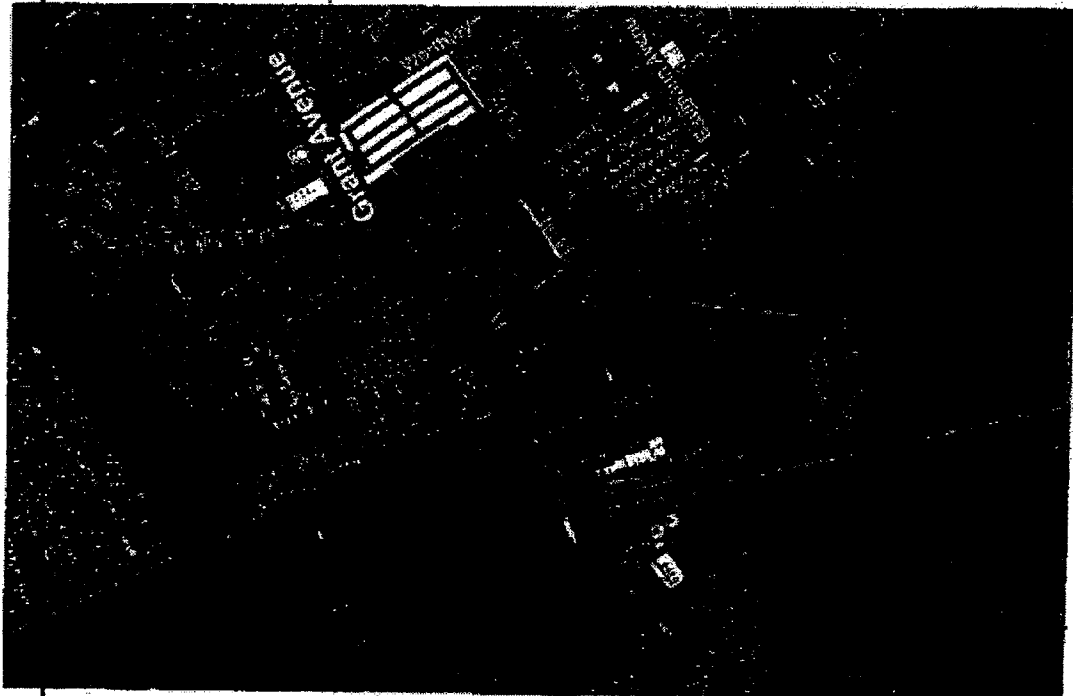
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Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).

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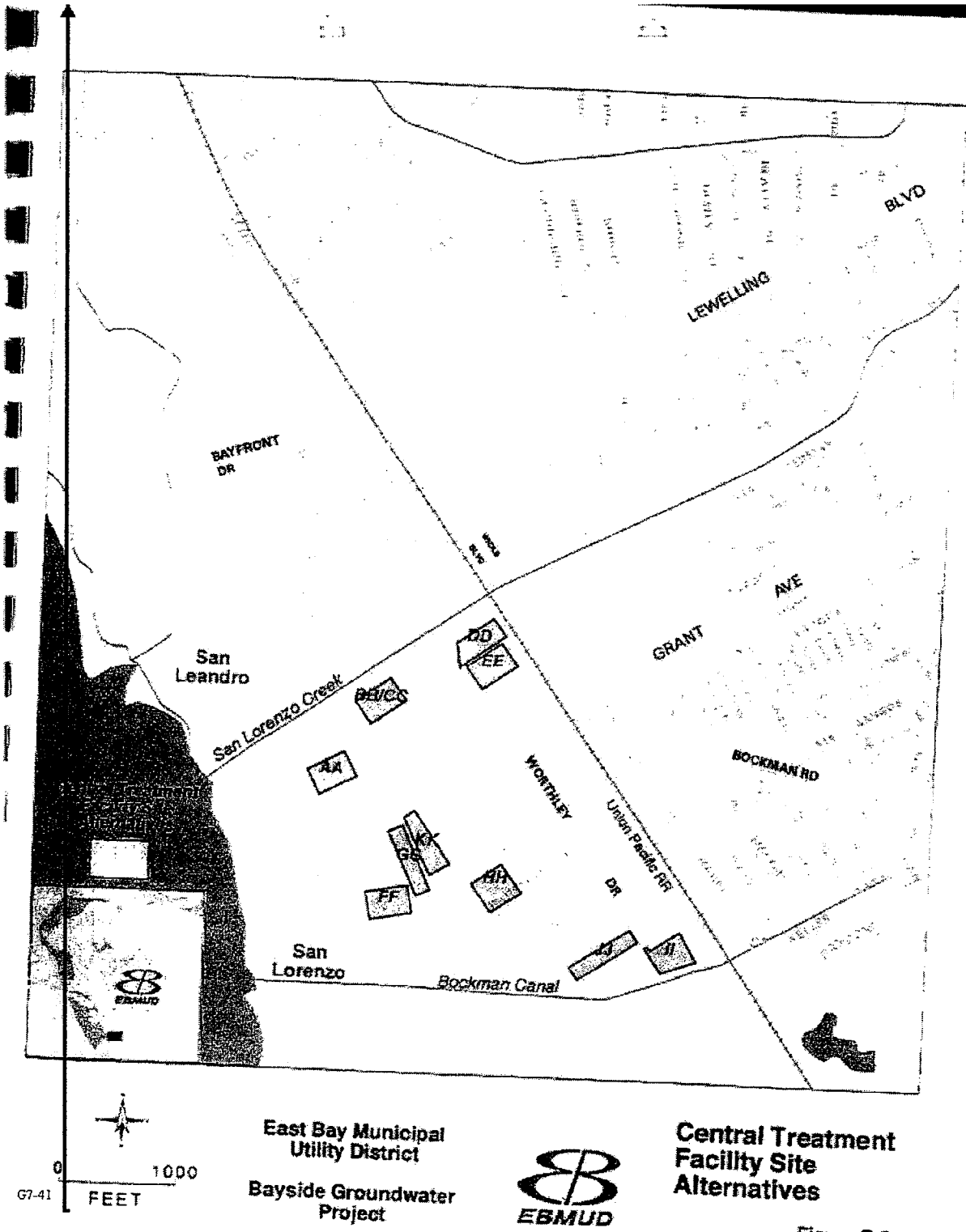


**McMillan
Property Purchase**



G7-41

Letter G7. Heron Bay Homeowners Association (Fitzgerald Abbott & Beardsley).




5.4 Comments and Responses for Citizens

5.4	Comments and Responses for Citizens	5-479
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Letter C1. Christopher M. Malloy.

CL-1

 **SPEAKER CARD** Date: 10/15/11

Would you like to address the Board of Directors on the following topic(s):

Public Forum

Agenda No. (s)

Subject: Public Contract Renewal Extension

PLEASE PRINT

NAME: Christopher M. Malloy

AFFILIATION: Malloy Consulting

ADDRESS: 10000 N. 15th Ave

CITY: Scottsdale STATE: CA ZIP: 85257

REPRESENTING (OPTIONAL): _____

TELEPHONE (OPTIONAL): _____

Please do not include any confidential information. No guarantee of response is made.

Response to Comment C1-1

See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Letter C2. Gail Schino.

Knight, Angela

From: gail schino [schino@sbcglobal.net]
Sent: Sunday, April 17, 2005 12:06 PM
To: Knight, Angela
Subject: Bayside Groundwater Project

- C2-1 [I hope EDMUD rethinks this project. I strongly urge you NOT to go forward. If EBMUD needs more storage as a result of new customers in more recently developed areas, store their water in underground aquifers—how about out near the Lawrence Lab!
- C2-2 [If this goes forward, I will be walking San Leandro neighborhoods to help educate my neighbors about the potential risks as have been identified for EBMUD by other public and quasi-public entities, some of which have recommended against this plan.
- [Don't think that the objections come from only those residents in housing developments near the proposed storage site.

4/18/2005

Response to Comment C2-1

Comment noted. All District customers create demand for water service, not just those in newly developed areas. The Lawrence Livermore Laboratory area is located outside of EBMUD's service area and is not located near EBMUD's existing distribution system. Therefore, conveying water from that area to EBMUD's existing distribution system would prove to be much less cost-effective than alternatives that are easily connected to existing infrastructure.

Response to Comment C2-2

Comment noted.

Letter C3. Ophelia Wray.

----- Original Message -----

From: Knight, Angela
To: ophelia wray
Sent: Monday, April 25, 2005 7:31 AM
Subject: RE: Request for Board Meeting Materials

Hi Ophelia. It was nice talking to you at the meeting on Wednesday. Your e-mail to me has been entered into the record. Your questions and concerns will be addressed in the final document. Thank you for taking time to comment. If you need anything at all, feel free to call me anytime. 510-287-1213.

Thank you,
Angela Knight

From: ophelia wray [mailto:owray@sbcglobal.net]
Sent: Thursday, April 21, 2005 1:58 PM
To: Knight, Angela
Subject: Request for Board Meeting Materials

Hello Angela,

I talked with you briefly at the Board of Directors special meeting last night in San Leandro. I would like to get a copy of the recent letter that Mayor Young sent to the Board of Directors regarding the Bayside Groundwater Project. You thought it would be available to the public.

C3-1 [It would be helpful to read the letter especially after hearing Mayor Young's comments at the meeting last night. She urged the Board to give 120 days extension on this project. However, her statement "as you move into phase 2" (this is not an exact quote) gave me the impression the Board plans to approve phase 1 and delay the implementation by 120 days. This would certainly please the Mayor. In my discussion with a few other residence in Heron Bay, this would only be another win-\$\$-win for EBMUD Board of Directors.

In all honesty, I came to the meeting very reluctantly. But, I am also glad I was there to hear the comments and sincere opposition of the homeowners in this community-- and I agreed with every speaker that opposed this project.

C3-2 [Prior to moving to San Leandro two years ago, I worked on numerous City and Community projects. Many of the meetings were shams/attempts to avoid lawsuits and/or win votes (I know it's different in Alameda County). And my years of experiences and background knowledge of the 'workings of the Board of Directors' and many City officials flashed before me as I sat through the meeting last evening. I came away from the meeting confident the community's issues and concerns had been presented clearly in the limited time allowed by the Board. I am also confident as a homeowner in Heron Bay our efforts to oppose this projects as late as last evening, were in vain.

Response to Comment C3-1

All letters received from members of the public or local agencies in response to the DEIR are provided in this Final EIR. In particular, letters from Shelia Young are included in Section 5.2 of this document. Also see Master Response 10 – Public Outreach and Notice, and DEIR Review.

Response to Comment C3-2

Comment noted.

Letter C3. Ophelia Wray.

Page 2

C3-3

I believe the Board of Directors made the decision to move forward on phase 1 and 2 of the project prior to the meeting on April 20, 2005. I would be a surprise if this Board proves me wrong. Unfortunately, those of us currently residing in the community will have to live with the increased risks as results of a decision made in haste by the EBMUD Board of Directors, if I am right.

Thanks for taking the time to read this message. I look forward to receiving a copy of the letter, if available.

Have a great day.
Ophelia

Response to Comment C3-3

EBMUD has been studying the feasibility of a groundwater project in the general Bayside area since 1997. Many studies have been conducted and numerous public outreach efforts have been made by EBMUD to inform the public of the Proposed Project's benefits and to ensure that it will operate in a manner that is safe and that minimizes or avoids impacts to the neighboring community and environment. See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Letter C4. Edward Mejia-Sarate.

Knight, Angela

From: Edward Mejia-Sarate [edwardms@sbcglobal.net]
Sent: Thursday, April 28, 2005 11:58 PM
To: Knight, Angela
Subject: Public Comment on the Bayside Groundwater Project

4-28-05

Dear Ms. Knight,

- I'm writing this letter to state my oppositon to the Bayside Groundwater Project (BGWP). I oppose it beccause in East Bay Municipal Utility District's (EBMUD) own words it's UNNECESSARY, will lead to subsidence (property damage to nearby homes), and will release both airborne and waterborne contaminants/toxins!
- EBMUD has gone on the record stating that the Rfleeport Regional Project will fully meet it's drought needs. So, why build it if we don't need it? Did you know that San Lorenzo and San Leandro is littered with homes that have private wells? Wouldn't the BGWP actually lead to increased consumption when the public becomes aware of a new 'FREE' water supply? How would EBMUD gurantee that it could keep the public from tapping into the aquifier during a drought?
- Did you know that 90% of the San Francisco Bay has been filled in? Subsidence is a problem in my neighborhood (former wetlands) -the Marina Fairs area of San Leandro. In fact many of my neighbors have replaced their sewer line because they "back up" due to subsidence.
- EBMUD's own Draft Environmental Impact Report (DEIR) states that up to 3,700 lbs./yr. of chloroform could be released. Did you know that chloroform is cancerous? Furthermore: the DEIR goes on to state that the BGWP would be built above known contaminants in the shallow groundwater and adjacent to a sewage treatment plant. So, these contaminants could pollute the BGWP's water supplu via migration to deeper zones!
- Did you know that within a 10-15 mile radius of the proposed BGWP there are a slew of other sites/sources of pollution? For example; a former landfill near the Oakland airport is currently being monitored because it leaked and still could leak pollutants into the Bay, Heron Bay itself is built on a former dynamite plant that was said to have been "cleaned up" according to government standards, and the soil and groundwater in my own neighborhood is being monitored because of contaminants/toxins found a few years ago.
- Why would the public want to okay the BGWP that it's not fully informed of ? Did you know that a Phase II may or may not be pursued, but EBMUD wants the okay up front for both Phase I and Phase II!
- Lastly; I think that the voters would be quite upset if they knew that EBMUD:
1. Hasn't responded to even one of the public's comments submitted in writing three yrs. ago!
 2. That the public notices that went out, only went out in English!
 3. That there's only a 45 day public comment period for the new DEIR; even though EBMUD had over three yrs. to review the public comments submitted back in Aug. 2001!
- I believe that their should be a minimum of a 120 day review period for the new DEIR and that EBMUD should use various media sources in several dominant languages to notify the affected community about the BGWP.

Sincerely,
 Edward Mejia-Sarate

Response to Comment C4-1

See Master Response 1 – Subsidence, Master Response 5 – Groundwater Contamination, Master Response 6 – Radon and Chloroform, and Master Response 9 – Need for Project.

Response to Comment C4-2

Master Response 9 – Need for Project provides detailed information of EBMUD's current and future needs in the event of a drought.

Response to Comment C4-3

Because of the significant expense to install and operate a well in the Deep Aquifer (approximately 400 to 600 deep), it is not expected that individual homeowners will be installing wells into the Deep Aquifer. EBMUD will work with other users of the Deep Aquifer, such as Alameda County Water District, to manage the basin in a sustainable manner and avoid overdraft conditions.

Response to Comment C4-4

Problems with sewers could potentially be related to differential settlement, which can occur in areas of fill if improperly compacted. However, differential settlement is distinct from elastic or inelastic subsidence, as described in Master Response 1 – Subsidence. Settlement is not expected to occur as a result of the Bayside Groundwater Project.

Response to Comment C4-5

The figure quoted in the comment, 3,700 lbs of chloroform, was taken from page 3.12-16 of the March 2001 DEIR. That EIR describes a project that has been abandoned. Chloroform emissions related to the 2001 project were associated with an aeration facility which is no longer proposed as part of the Bayside Groundwater Project. See Master Response 6 – Radon and Chloroform for additional information on chloroform, and Master Response 7 – Project Phasing.

Response to Comment C4-6

See Master Response 5 – Groundwater Contamination.

Response to Comment C4-7

EBMUD is not seeking any approvals at this time for any facility which may be required for Phase 2. See Master Response 7 – Project Phasing.

Response to Comment C4-8

See Master Response 10 – Public Outreach and Notice, and DEIR Review. EBMUD published a number of notices in English and Chinese, including newspaper advertisements, and provided translators at public meetings. EBMUD not only listened to the comments from 2001, but changed the project to a smaller phased approach directly in response to the concerns expressed at that time. See also Master Response 7 – Project Phasing.

Letter C5. Howard Kerr.

Mr President, and members of the Board

April 20, 2005

My name is Howard Kerr, a 55 year resident of Washington Manor and past President of Washington Manor Home Owners Association.

I have been a student of Northern California water supplies since my youth. I was raised in upper Sacramento Valley where we had floods in winter, but ran out of irrigation water in August.. I wondered, why couldn't there be a balance to save water to be used when needed? We now call it BANKING. That was before Shasta, Oroville and Folsom dams. Where would California be today without those storage facilities?

I have the greatest admiration for EBMUD'S forefathers who had the foresight to give us one of the finest supplies of good quality water that we all enjoy today.

For over 55 years your Board has tried to get various sources of supplemental water supply. Most efforts have been costly and yet unsuccessful.

Over 20 years ago I served an EBMUD committee called WAPAC (Water Action Plan Advisory Committee) whose main advice to the Board was to aggressively pursue a much needed supplemental supply for dry years.

*HERB CROWN
CHAIR*

When Mike Tognolini first proposed this underground project I had all the same questions about subsidence and environmental questions we've heard for the past 4 years and that have been adequately answered in the DEIR.

Objections to the project have mainly come from residents who were not here during the 2 multi-year droughts where we were compelled to let landscaping die and limit water usage to a trickle, and "water cops" patrolled against unlawful use of water. Those years were not pleasant.

CS-1 [My biggest disappointment with the Bayside Groundwater Project is that it has been scaled back from 15 MGD to only 1 MGD, meaning a delay of years before full implementation,

CS-2 [I strongly urge your Board to proceed with this project to provide your customers with a much needed safety net of water supply without delay.

Response to Comment C5-1

Comment noted.

Response to Comment C5-2

Comment noted.

Letter C6. Public Meeting Transcript.

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**BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT**

Wednesday, April 20, 2005
SPECIAL MEETING
(To Receive Public Comment on the
Bayside Groundwater Project
Draft Environmental Impact Report)

Washington Manor Elementary School
1170 Fargo Avenue
San Leandro, California

CERTIFIED COPY

**REPORTER'S TRANSCRIPT OF PROCEEDINGS
BY: JOANNA BROADWELL, CSR 10959**

**CLARK REPORTING
2161 SHATTUCK AVENUE, SUITE 201
BERKELEY, CALIFORNIA 94704
(510) 486-0700**

Letter C6. Public Meeting Transcript.

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APPEARANCES:

Board of Directors:

- William B. Patterson
- Katy Foulkes
- Doug Linney
- Frank Mellon
- Dennis M. Diemer
- Robert C. Helwick

Secretary: Lynelle M. Lewis

Presenters:

- Laura Harnish
Water Resources Planner
- CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, California 94613
- Michael T. Tognolini
Senior Civil Engineer
East Bay Municipal Utility District
375 11th Street
Oakland, California 94607

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Letter C6. Public Meeting Transcript.

Page 3

Page 3

1 BE IT REMEMBERED that on Wednesday, April 20, 2005,
2 commencing at the hour of 7:15 p.m. at 1170 Fargo Avenue,
3 San Leandro, California, JOANNA BROADWELL, a duly qualific
4 Certified Shorthand Reporter, License No. 10959, in and for
5 the State of California, reported the following proceedings.

6 --o0o--

7 PROCEEDINGS

8 MR. PATTERSON: May we have your attention, please?
9 For those of you who are still coming in, if you would
10 kindly take a seat. I'd like to, at this time, welcome you
11 to the Special Meeting of the East Bay MUDD board. Could
12 we have it quiet in the back, please? Thank you very much.
13 I appreciate it.

14 Welcome to the Special Meeting of the East Bay
15 Municipal Utility District's Board of Directors. At this
16 time I would like to call the meeting to order. May we
17 have roll call, please?

18 MS. LEWIS: Directors: Coleman? Not present.
19 Foulkes?

20 MS. FOULKES: Here.

21 MS. LEWIS: Linney?

22 MR. LINNEY: Here.

23 MS. LEWIS: McIntosh? Not present. Mellon?

24 MR. MELLON: Present.

25 MS. LEWIS: Richardson? Not present. President

Letter C6. Public Meeting Transcript.

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1 Patterson?

2 MR. PATTERSON: Present.

3 Would you stand and join me in the Pledge of
4 Allegiance, please?

5 (Pledge of Allegiance)

6 MR. PATTERSON: Before we begin, I would like to,
7 on behalf of East Bay MUD and the Board of Directors, thank
8 you, the San Leandro Unified School District, and the
9 Washington Manor Middle School for allowing us to use their
10 facility for this meeting.

11 We have called this special meeting for the purpose
12 of conducting a public hearing on the Bayside Groundwater
13 Project Draft Environmental Impact Report. East Bay MUD is
14 the lead agency under the California Environmental Quality
15 Act for this project, and CEQA rules established a 45-day
16 public review period. The Bayside Project draft EIR was
17 published on March 14th, 2005. And the 45-day public
18 review period ends on April 28th.

19 The purpose of tonight's meeting: The Bayside
20 Groundwater Project is a very important project to East Bay
21 MUD to improve water supply reliability for our customers.
22 This project will allow East Bay MUD to store water in the
23 ground during wet years so it can be used during dry years
24 to supplement other water sources during drought.
25 1.3 million East Bay customers face water supply shortages.

1 (Pages 1 to 4)

Letter C6. Public Meeting Transcript.

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1 Our agenda tonight will begin with presentations by
2 the East Bay MUD staff and the consultants that prepared
3 the EIR. I will invite members of the public to offer
4 comments following the presentations. If you would like to
5 speak, please fill out one of the blue speaker cards and
6 give to it the secretary, Ms. Lynelle Lewis. This meeting
7 is an opportunity for the public to provide their input on
8 the Bayside Project.

9 As your representatives, we are here to listen to
10 your comments. We will not be making a decision about the
11 project or responding to questions at this time. Responses
12 to all of the comments will be published in the final EIR.
13 At this time I would like to bring the general manager of
14 East Bay MUD, Dennis Diemer, who will introduce staff who
15 will do presentations.

16 MR. DIEMER: Thanks, President Patterson. I would
17 like to ask Michael Tognolini, civil engineer for East Bay
18 MUD, to start the presentation. Laura Hamish with the
19 consulting firm will also assist Mike.

20 MR. TOGNOLINI: Thank you, Dennis. President
21 Patterson, members of the Board, I am pleased to be here
22 tonight to provide you with a presentation on the Bayside
23 Groundwater Project. Tonight we are going to break the
24 presentation into two parts. I am going to give the first
25 part of the presentation discussing the project

Letter C6. Public Meeting Transcript.

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1 description, need for the project, context and setting for
2 the project as well as how the project has been revised
3 since it was first proposed in 2001.

4 Laura Hamish from CH2M HILL will then get up and
5 discuss the contents of the environmental impact report and
6 discuss the EIR schedule and process. These are the key
7 points that I would like to make tonight related to the
8 Bayside Groundwater Project. As was mentioned, the Bayside
9 Project is a drought supply project. The capacity of the
10 project has been reduced from the originally proposed
11 project from 15 million gallons per day down to a
12 one-million-gallon-per-day project. And importantly, it
13 uses no potable drinking water for injection. There is no
14 wastewater injection involved in this project at all.

15 The EIR finds that there will be no permanent
16 subsidence, no air emissions related to water treatment,
17 and the water will meet the state and federal drinking
18 water standards. The EIR also discusses a future phase two
19 project, an optional phase two of the 10 MGD capacity,
20 which would require a new environmental impact report and
21 full public review.

22 Again, the purpose of the project is drought
23 supply. This is a photograph of Pardee Reservoir in 1977
24 during one of our most severe draughts. The reservoir was
25 nearly empty at this time. Since that time East Bay MUD,

Letter C6. Public Meeting Transcript.

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1 as you know, has developed a drought management program
2 that includes aggressive water conservation, recycling and
3 supplemental water supply projects such as the Bayside
4 groundwater project as well as the Freeport Regional Water
5 Project.

6 In addition to that it's the District's policy to
7 ration customers at a maximum of 25-percent rationing, and
8 that would occur over the designed three-year drought. And
9 the way that would occur is that when a drought occurs, we
10 would implement an education program and slowly ramp up so
11 that by the third year of drought we reach a maximum
12 rationing of 25 percent. The average over that three-year
13 period works out actually to something that is in the range
14 of 16 percent.

15 Just to give you a summary of Bayside projects then
16 and now, looking at the 2001 proposal versus the current
17 2005 proposal, the project concept is unchanged. The idea
18 is that for drought supply to take excess water from our
19 system, from our drinking water system in wet periods,
20 inject that water down in a well, and store the water
21 underground where it would remain until a drought occurred.
22 When the drought occurs we would pump that water back out
23 of the ground, treat it, and deliver it to our customers.

24 Again, the capacity has been reduced from
25 15 million gallons per day down to 1 million gallons per

Letter C6. Public Meeting Transcript.

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1 day. The injection rate has also been reduced from eight
2 MGD down to one MGD, and the number of wells proposed
3 reduced from seven to ten in 2001, now relying on the one
4 existing demonstration well.

5 Treatment is also changed. While we'll still
6 require chlorinization, fluoridation and PH adjustment,
7 manganese removal would be on "as necessary" basis, and
8 aeration is no longer proposed or necessary. The pipeline
9 element of the project no longer requires a two-mile
10 pipeline to connect with the main part of the East Bay MUD
11 transmission system, but rather simply a 600-foot pipeline
12 to connect from the project site to our distribution lines
13 in Grant Avenue in San Lorenzo. Monitoring would be
14 unchanged. Although we have reduced the capacity
15 dramatically, we would still be monitoring ground levels,
16 water levels, and water quality.

17 Just to give you some sense of project context and
18 setting, this technique that we are talking about,
19 injection storage and recovery from a single well, is known
20 as aquifer storage recovery, ASR. It's an acceptable local
21 and regional resources management tool. This type of
22 project is operating throughout the United States, and I
23 have a map to show you. East Bay MUD identified this
24 basin, particularly the San Lorenzo and San Leandro area,
25 as ideal for ASR because underlying this basin is a deep

2 (Pages 5 to 8)

Letter C6. Public Meeting Transcript.

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1 aquifer, about 500, 600 feet below the ground surface, that
2 is very well isolated from any shallow sources of
3 contamination or shallow well owners. In addition, we've
4 extensively tested that aquifer and found that it contains
5 no contamination.

6 The total amount of storage in that deep aquifer
7 currently is about 460,000 acre-feet. That's over an area
8 of 60 square miles from Oakland down to Fremont. So there
9 is a massive amount of water in the ground already.
10 Compare that to the amount of extraction that we are
11 proposing for this project, about 1120 acre-feet during any
12 particular drought year, and that works out, if you average
13 it over all years, to about 354 acre-feet annual average,
14 which is significantly less than our injection, which is
15 expected to occur in about four years out of ten at an
16 average annual rate of 468 acre-feet per year.

17 This is the map I mentioned showing ASR projects
18 throughout the country. There are 60 active ASR operations
19 in the United States and about 100 additional sites
20 currently under development. They range in capacity from
21 one MGD all the way up to as high as extraction rates of 80
22 MGD and have been operating successfully in the United
23 States for more than 15 years.

24 Just to give you an idea about the amount of
25 groundwater activity currently going on in the basin, this

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1 map is a scattered plot showing well locations in the East
2 Bay Plain. In red is the database from the East Bay MUD.
3 Green is the database from Alameda County. You combine
4 those and you see that there are vast separate wells that
5 are already in existence in the East Bay Plain. And that
6 leads right into this graphic which shows the amount of
7 historic groundwater pumping that has occurred in the
8 southeast Niles Cone groundwater basin. This is the
9 combined area between Oakland and Fremont. You see that
10 the historic pumping was as high, as in the 1960s -- 1965,
11 as high as 45,000 acre-feet per year of extraction.

12 Over time that has decreased as agriculture is
13 converted to urban land uses and water supplies, but it's
14 since leveled out about 30,000 acre-feet per year annual
15 extraction. If you look very closely in the last bar there
16 is a little red bar. That represents the amount of
17 additional extraction that would occur from the Bayside
18 Groundwater Project, phase one, if we were to implement it.

19 This is the project location. To orient you, this
20 is San Francisco Bay on the west. The project area is
21 bounded on the east by the Union Pacific Railroad, the
22 north by San Lorenzo Creek, and the south by the Bockman
23 Canal. You can see San Lorenzo Village in the area, Heron
24 Bay to the north, and San Leandro right here. The project
25 consists of utilizing existing wells, installing the

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1 treatment facility and pipeline to connect to the
2 distribution system as well as this pink shaded area
3 representing an extensometer field where we would monitor
4 ground levels as a way to gather data to support any future
5 project that developed.

6 Phase one operation, as I mentioned, the injection
7 would occur at a rate of one million gallons per day in wet
8 normal years. That would occur four years out of ten. The
9 extraction would occur in dry years for drought use at a
10 rate of about three years in ten. Our maximum production
11 would be about 1120 acre-feet per year. Compare that with
12 the amount of production going on in the basin right now,
13 about 30,000 acre-feet per year.

14 And the way we would achieve that is by pumping
15 during the peak summer period at a rate of two MGD for a
16 rate of approximately six months. We would max out as soon
17 as we hit the 1120 acre-feet per year, which works out to a
18 one MGD average annual. In terms of the water budget we're
19 injecting significantly more than we would be pulling back
20 out of the basin, about 30 percent more injection than
21 extract.

22 The draft EIR also discusses a potential phase two
23 project. In order to proceed with that the phase one data
24 evaluation would be the basis of the decision to proceed
25 with the phase two draft EIR. A new EIR would be required

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1 for phase two with, again, full public review. And the
2 capacity of that project would be up to 10 MGD, and it
3 could perhaps be phased.

4 And just to summarize our public outreach efforts,
5 as part of the process of notifying the public about the
6 Draft Environmental Impact Report we have mailed out over
7 1700 postcards to residents and interested parties. We
8 have included advertisements in English and Chinese
9 newspapers. We've made the draft EIR project fact sheet
10 and a "frequently asked questions" available on the
11 Internet and, in fact, the fact sheet and frequently asked
12 questions have been available tonight at the table for
13 those who are in the room. Tonight we are also offering
14 Chinese language questions and answers in the back of the
15 room for those that may not be comfortable listening to the
16 discussion in English.

17 And finally, I wanted to mention the establishment
18 of the Bayside Community Liaison Group. This was a group
19 that was actually proposed by the San Lorenzo Village Home
20 Association, and we thought it was a very good idea. It
21 consists of 14 community representatives that have been
22 appointed by homeowners associations, elected officials,
23 and agencies as a way to really facilitate the information
24 exchange between East Bay MUD and the community.

25 The group has been meeting and we've been sharing

3 (Pages 9 to 12)

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1 information about the project with the CLG. And the intent
2 of this group would be to continue to have the CLG meet
3 over the course of design, construction and operation so
4 that we would be able to share our monitoring and operating
5 data with the CLG so they could have a way to track whether
6 East Bay MUD is meeting its commitments.

7 So at this point I would like to introduce Laura
8 Harnish from CH2M HILL. She's the product manager
9 responsible for production of the Environmental Impact
10 Report.

11 MS. HARNISH: Thanks Mike, and thanks, President
12 Patterson and members of the Board. I am very pleased to
13 be here. My name is Laura Harnish with CH2M HILL. We are
14 an environmental engineering consulting firm. We've been
15 working on environmental impact reports since the inception
16 of the California Environmental Quality Act in 1972. And
17 we prepared literally hundreds of environmental impact
18 reports on a variety of projects, including some similar to
19 this one.

20 What I wanted to do is give you a brief
21 introduction to the EIR that we prepared. It's obviously
22 an extensive document, so I can't provide a lot of detail,
23 but I am going to focus on a few of the areas that I know
24 are of concern to the community and areas that I think are
25 most important. So the EIR, I think you each have a copy

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1 of and have had a chance to look at already. The
2 introduction of the EIR includes a summary of the project
3 and the purpose of the project and the context of East Bay
4 MUD's overall water supply. Chapter two includes a
5 detailed project description including layout of the
6 specific project facility and exactly where they will be,
7 how the project will be operated, and how construction of
8 the project would be completed.

9 The analysis of phase one of the project is
10 included in Chapter 3. And Chapter 3 includes a subsection
11 on each of the resource areas required to be evaluated
12 under CEQA like groundwater hydrology and water quality,
13 biology, air quality -- all of those areas are addressed in
14 Chapter 3 for phase one. The potential impacts, to the
15 extent that they were known, are included in Chapter 4.
16 That's where we have addressed the phase two impact. So we
17 separated phase one and phase two to allow you to clearly
18 see the differences.

19 The remainder of the document includes sections
20 required by CEQA including an analysis of the cumulative
21 effects of the project as well as an analysis of project
22 alternatives. And then there is a few appendices that
23 include some details, the comments that were received on
24 the previous EIR, and also details on the alternative
25 analysis.

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1 Our overall findings can be summarized pretty
2 simply. Phase one results in no significant impacts after
3 the mitigation measures that have been required and the EIR
4 implemented. Phase two will require an additional EIR if
5 East Bay MUD decides to pursue phase two once the facility
6 locations and operation sites of the phase two projects are
7 determined.

8 I wanted to talk about groundwater hydrology. It's
9 obviously one of the more significant issues related to
10 this project in the EIR. And I wanted to let you know that
11 to evaluate the impact of the groundwater, CH2M HILL worked
12 closely with the Alameda County Water District to first
13 develop a model of the Southeast Bay Plain and the Niles
14 Cone Groundwater Basin and then to use that model to
15 simulate the effect of the project. Additionally, East Bay
16 MUD conducted the extensive injection and extraction tests
17 on the groundwater basin to understand how the basin would
18 respond to the project.

19 So the result of those investigations led us to
20 conclude that there would be no significant impacts on
21 native groundwater quality in the study area, and also
22 there would be no impact to groundwater levels or users in
23 the Alameda County Water District for the Niles Cone
24 Groundwater Basin or the South East Bay Plain.
25 Additionally no significant impacts are expected to the

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1 city of Hayward emergency wells, and no salt water
2 treatment would be expected in either the South East Bay
3 Plain or the Niles Cone Groundwater Basin.

4 The mitigation measures required to ensure there is
5 no impact to these groundwater resources include the well
6 inventory in areas where groundwater levels could be
7 affected by the project, ongoing water level monitoring in
8 the deep-zone wells within the region and then well
9 retrofits to any wells that could be affected to ensure
10 adequate ongoing operation of those wells.

11 I also want to spend a little time talking to you
12 about subsidence. There has been a significant amount of
13 concern and interest in the possibility of the project
14 resulting in subsidence, and I wanted to clarify that our
15 EIR found that there would be no permanently subsidence
16 resulting from phase one of the project. The reason we
17 feel so confident in making such a claim is that the
18 pumping related to subsidence is a fraction of the historic
19 pumping in the basin.

20 You saw in Mike's bar chart, a little red dot at
21 the end showing that the amount of pumping is just a
22 fraction of what's been done historically in that space,
23 and the water levels in the project would never be below
24 historic low levels. That's when you get subsidence, when
25 you were pumping below historic low levels in an area and

4 (Pages 13 to 16)

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1 you see that kind of response.

2 Actually, I meant to start out this slide by
3 explaining the difference between elastic subsidence and
4 inelastic subsidence, elastic being temporary and
5 recoverable and inelastic being permanent. What I just
6 described was there would be no permanent subsidence.
7 There is a possibility that there would be a small amount
8 of elastic or temporary subsidence on a seasonal basis, and
9 that would be about a quarter of an inch at the well site
10 to about a tenth of an inch several miles away.

11 And this would be a very gradual subsidence that
12 would recover every year during the injection and
13 extraction of the drought year when the project is in use.
14 To put that in context, Santa Clara Valley, where they do a
15 significant amount of groundwater pumping, sees one to two
16 inches of elastic temporary subsidence on a regular basis.
17 It does not result in sidewalk cracking or dents to
18 foundations. It's a uniform subsidence, different than
19 settlement.

20 Let me take a drink of water here. We have
21 required mitigation measures in the EIR to be sure that
22 there wouldn't be any significant impact associated with
23 the site. Mike showed you on the site layout that there
24 would an extensometer field directly adjacent to the
25 Bayside well, and that extensometer field is going to be

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1 able to measure any ground elevation changes at .001
2 millimeters, which is less than a hair. So very, very
3 subtle changes in groundwater elevation would be observed,
4 and that monitoring would be continuous. So the moment
5 that any changes are observed, East Bay MUD can respond by
6 shutting down the project if that's what they decide to do.
7 In addition, the first year of the project, the startup
8 protocol will have a gradual ramp-up. They'll be able to
9 monitor continuously and notice any changes that might
10 occur.

11 I wanted to talk briefly about water quality
12 treatment and distribution related to the project. This is
13 in Section 3.2 of the EIR. All the project water in phase
14 one would meet all drinking water standards. There are
15 permits required from the California Department of Health
16 Services and EPA that are required for injection of
17 groundwater and use of the ground water for drinking
18 supply. So those regulatory requirements will ensure those
19 standards are met. There are some plumes in the shallow
20 aquifers in the area. And a significant amount of work has
21 been done to clarify there is no conduit between the
22 shallow aquifer and the deep zone that is going to be used
23 for the water supply for this project. There is no
24 contamination in the deep zone. It's been shown there is
25 not a connection between the shallow aquifer and the deep

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1 aquifer where this water will be drawn from.

2 One of the reasons we know this is that the deep
3 aquifer has 9,000-year-old water, which proves that there
4 hasn't been vertical migration between the shallow and the
5 deep.

6 There is some additional mitigation measures such
7 as making sure that the water quality is protected, and
8 that is to retrofit or destroy any deep wells within 200
9 feet of a known plume if there is determined to be
10 potential conduits of contamination. There will also be an
11 ongoing monitoring program of water quality for multiple
12 wells within the area potentially affected by the project.
13 And there is also -- DHS has a well protection program to
14 make sure that the actual Bayside well area is protected
15 from any potential contamination.

16 Under phase one there is no air quality impact, or
17 very minor. There are no operational air quality impacts.
18 There is no aeration proposed for phase one, which was a
19 source of potential air quality in the earlier iteration of
20 the project. That portion of the project has been
21 eliminated. There will be some very minor construction
22 emissions which are typical of any time you construct
23 anything and dig a trench. And those can be fully
24 mitigated with pretty standard mitigation measures which we
25 have described in the EIR.

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1 For phase two, our findings are qualitative in
2 nature because we don't know what the facilities might be,
3 and therefore we can't be conclusive because we don't know
4 how long the pipeline might be or where it will be or how
5 many wells, so we were very qualitative. The monitoring
6 data, as Mike described from phase one, will help decide if
7 they want to do phase two. If they do, if you decide to
8 pursue phase two subsequent to the EIR, more public review
9 would be required before you can proceed with that.

10 This approach of phasing a project and addressing
11 just the phase one in the EIR at a project level and the
12 detail level and phase two at a qualitative level is
13 consistent with the California Environmental Quality Act.
14 We feel that is a sensible approach.

15 Just briefly to review the EIR process, the EIR was
16 published March 14th. And we are in the midst of our
17 45-day public comment period which tonight being our public
18 meeting. The final EIR is anticipated to be published in
19 June with an East Bay MUD Board certification tentatively
20 scheduled for August. At that meeting with certification,
21 I think the project approval would be for phase one only.
22 So any certification and project approval would just be for
23 phase one and phase two, again, I just want to make sure
24 everyone knows, would require subsequent EIR. Thank you
25 very much.

5 (Pages 17 to 20)

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1 MR. PATTERSON: Thank you very much, both Mike and
2 Laura, for your presentation. At this time we will move
3 towards the public comment. And I would like to reiterate
4 that the purpose of the meeting is to elicit public input
5 on the draft EIR for the Bayside project. Public comments
6 will be recorded and responded to in the final EIR. Please
7 limit your comments to three minutes.

8 The first comments are to be provided by
9 representatives of the Heron Bay community. We will allow
10 ten minutes for this presentation with the expectation that
11 it will summarize the comments of others in the Heron Bay
12 Homeowners Association. Out of consideration for others in
13 the audience, we ask that you please try and avoid
14 repeating comments made by others. If you agree with their
15 comments, you can simply say that you agree with them and
16 go on to cite the different things that you want to present
17 as it relates to your presentation.

18 I want to thank you in advance for your courtesy
19 and your cooperation. And at this time I assume the Heron
20 Bay folks are ready. For any of the people in the front
21 who would like to sit, there are lots of chairs -- I'm
22 sorry -- in the back, there are lots of seats in the front
23 if you would like to come down and have a seat. You don't
24 have to stand up. Come on down. There is seating to both
25 your left and right. All right. I think we have people

This page intentionally left blank.

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d 1 about settled in now. You may begin.
2 MR. MALLOY: Good evening. My name is Chris
3 Malloy, and I'm hear to address the Board. If I could
4 start with the audience. I'm a homeowner, a resident. I
5 happen to be part of a group. We put together a PowerPoint
6 presentation. They've given us ten minutes, but I would
7 encourage all of you that have items to bring up or feel
8 very strongly about anything we bring up to please fill out
9 a public comment card and give your comments to the Board
10 They're here to listen to you. I would encourage you to do
11 that.
12 Board members, I do want to thank you for coming.
13 I think by coming here -- I think your board meeting
14 requested that the full Board come as instead of just one
15 Board member, as happened several years ago with the first
16 EIR, to have the full Board here, I think that you've shown
17 you have come here and are ready to listen. To bring my
18 bottom line up front, I hate to make it this clear, but I
19 think if you want to show that you are ready to hear, then
20 you need to vote "no" on this project. I appreciate you
21 being here and ready to listen. I hope you are ready to
22 hear and I hope you vote "no."
23 You see on this slide? We think there is a
24 balance. We think there is a choice to be made. There are
25 benefits here. Drought supply, we still haven't gotten a

C6-1

C6-2

Response to Comment C6-1

Comment noted.

Response to Comment C6-2

See Master Response 9 – Project Objectives and Alternatives.

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C6-2

1 commitment that this will only be used for drought supply.

C6-3

2 We put a question mark there. And the water will meet the

3 standards. We think there are increased risks, ground

C6-4

4 movement, damage to our homes, schools and businesses,

5 increased cancer risks. All of these things are increased

6 risk.

7 We understand that nobody on the East Bay MUD Board

8 is going to come over with a syringe and inject us with

9 cancer. We understand that no one at East Bay MUD is going

10 to come with a sledge hammer to our home. It's not a

11 definite. It's just a risk. But we don't want to live

12 with those risks. We don't want you to add those risks to

C6-5

13 our lives: Ground movement, damaging our homes, increased

C6-6

14 risk of cancer, increased risk of contamination to our

C6-7

15 drinking water, increased risk of flowing wells, damaging

C6-8

16 our homes and properties and increased risk of air quality

17 pollution.

18 We think when you take all those risks and you

19 balance them against what does Bayside's one million

20 gallons per day really represent, less than one-half of

C6-9

21 1 percent of the total for East Bay MUD's demand per year

22 this represents. So you take that little tiny thing, you

23 balance it against these risks. We think there is only one

24 decision to be made. Next slide.

25 Who we are. Homeowners, a group of homeowners that

Response to Comment C6-3

Comment noted.

Response to Comment C6-4

See Master Response 1 – Subsidence, and Master Response 6 – Radon and Chloroform.

Response to Comment C6-5

See Master Response 1 – Subsidence.

Response to Comment C6-6

See Master Response 5 – Groundwater Contamination, and Master Response 6 – Radon and Chloroform.

Response to Comment C6-7

See Master Response 2 – Potential for Flowing Wells.

Response to Comment C6-8

Potential short-term, construction-related air quality impacts for Phase 1 are discussed in Section 3.6 of the DEIR. The DEIR found no long-term air quality impacts for Phase 1. By following local air quality district construction best management practices, impacts to air quality would be less than significant after mitigation.

Response to Comment C6-9

Comment noted.

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C6-10

1 have been interested and involved since 2001, studying
2 everything that East Bay MUD has put out, asking for
3 additional stuff and public information requests. And we
4 think that after all that time that to approve the project,
5 the East Bay MUD Board would be demonstrating that they've
6 allowed advocacy to replace assessment and to allow a
7 minority of their customers to bear the burden. And we
8 think a minority in neighborhoods that are apparently
9 overrepresented in seniors and immigrant populations to
10 carry a burden for the rest of the East Bay MUD's
11 customers, we don't think is that right.

12 Advocacy. What am I trying to say there versus
13 assessment? We are trying to say that Johnny Cochran's
14 spirit got into this. We wanted those consultants to do
15 assessment. What's the positive, what's the negative,
16 what's the balance. We think the spirit of Johnny Cochran
17 got in. Johnny Cochran was an advocate for O.J. Whatever
18 you think about O.J., he was an advocate. He wanted one
19 thing to happen for O.J., for him to be found innocent.

20 We think that assessment involves that it could be
21 innocent, it could be guilty, it could be yes, it could be
22 no. We think that has disappeared. Over \$2 million has
23 been expended in consulting fees, over 10 million total to
24 our understanding on this project already, \$2 million in
25 consulting fees. And, frankly, it seems like the

6 (Pages 21 to 24)

Response to Comment C6-10

See Master Response 11 – Environmental Justice.

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1 consultants are delivering what they think you want to
2 hear. They think you want to vote "yes" on this project.
3 We think there ought to be fair assessment. Next slide.

4 Talking about a minority of customers, again,
5 repeating the statement of who is going to be involved. If
6 you can see on the left here, the entire East Bay MUD
7 area -- hit return again -- and one more -- okay, back --
8 so what -- left side is all of East Bay MUD. Right side is
9 the area affected. You can see phase one and the larger
10 area, phase two. Again, we think a minority of customers
11 are going to be asked to carry undue burden, undue risk in
12 order to meet the potential needs of all of the customers.

13 East Bay MUD Policy 71 says that no community in
14 the District should bear inequitable risk burden as a
15 result of facilities, operations or practices. We think
16 the Bayside project does that. If you vote for that we
17 think you are violating Policy 71. Next slide.

18 Phase two, a special note. Phase one and phase
19 two. Phase one is going to be one well now, one area over
20 by the Heron Bay. It's easy to say, "Oh, this is a Heron
21 Bay issue. Just those guys in those homes are concerned
22 about themselves." It's not true. Hit the slide. Phase
23 two is that larger gray area. If you can tell on the map,
24 that's all with way up to Alameda sticking out on the left,
25 going into all of San Leandro, any of the area. This is

C6-11

Response to Comment C6-11

See Master Response 11 – Environmental Justice. All Phase 1 impacts, both short- and long-term, are mitigated to a less than significant level. The project does not present an undue burden or risk to any community.

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1 what phase two now says. There can be well heads, well
2 distribution channels, anything in all of that area, not
3 just Heron Bay anymore. And it won't be. Next slide.

4 Advocacy. Johnny Cochran instead of balance and
5 assessment. We think there has been some bending of
6 numbers to get to the statement "much needed drought
7 supply." We think hard questions have been skipped this
8 time around. Aeration towers, we think what got published
9 fits one view, one view, "Let's pass this project." It
10 takes a singular view of radon, subsidence and water
11 quality, and we think what's been communicated from East
12 Bay MUD has been said as what fits at the time. Next
13 slide.

14 I am not going to try to take you through this, but
15 basically this map -- and Board members and staff, I invite
16 you to follow up on our map later. We took a community
17 liaison group, a presentation that was done by East Bay MUD
18 in thousand-acre feet. We converted it to millions of
19 gallons per day because that's what's in the DEIR, so we
20 can make a comparison. We're looking at drought and
21 non-drought three-year periods. Go to the next slide.

22 That bottom right draft would bring it up to the
23 top now. What we are looking at is what water is
24 available, what water can be made available through
25 conservation or no need for it through conservation. There

This page intentionally left blank.

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1 is a Freeport project and for rationing, we get into that.
2 First thing is one of the items that gets talked about at
3 Bayside is we need to hurry up and do that. It's a
4 short-term need. We need to do it. The thing is that
5 there is already a project called Freeport that's been
6 approved and will come on line. What are we rushing
7 Bayside for? We don't think that is right. We think in a
8 severe drought year there is only 16-percent rationing --
9 hit return. Sorry. Back up -- there is only requirement
10 when you do all that math, and you go back through all of
11 those numbers, which we did, it only requires 16-percent
12 rationing. East Bay MUD policies allow for and prepare the
13 public for 25-percent rationing. Next slide.

C6-12

14 That little tiny sliver, that 2 percent that is now
15 colored that you see is rationing, the dark blue in the
16 left corner, if you add the 2 percent that that 6 million
17 gallons a day of shortfall represents, you only get to
18 18 percent. Again, East Bay MUD allows for 25 percent
19 rationing. Next slide.

20 There are alternatives. Why not look at the
21 alternatives? East Contra Costa, desalinization and repair
22 leaky pipes. Hit the slide. If you can see this, this is
23 a billboard over by Oakland. It talks about "Don't have
24 leaks in your house." We would suggest if East Bay MUD
25 could spend the money we would not have leaks in the pipes.

C6-13

Response to Comment C6-12

In the presentation, the commenter erroneously calculated that the total anticipated rationing from a 3-year drought is only 16 percent. To calculate the amount of rationing required during a drought, one must take the total saved by rationing and divide by demand after conservation and recycling. Therefore, the 3-year drought savings is 146 thousand acre-feet (TAF)/771 TAF or 19 percent. As stated in the public meeting on April 20, 2005, the reason that less than 25 percent is achieved over 3 years is that it takes time to implement a rationing program through education and media campaigns. By the third year, the target rationing is achieved so that the average over the 3 years is somewhat less. Master Response 9 – Need for Project provides further information on EBMUD's approach to planning for a drought and accounting for needed future water supplies.

Response to Comment C6-13

See Master Response 8 – Project Objectives and Alternatives.

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C6-14 1 And we would save up to 3 million gallons per day.
2 Remember, the phase one Bayside was 1 million gallons per
3 day. We suggest we could fix pipes and save 3 million
4 gallons per day. We wouldn't need Bayside. Why aren't we
5 doing that? We think it's because of the money and it's
6 expensive, and it would be expensive to customers. We
7 understand. But, again, we would rather pay dollars up
8 front rather than taking the risk of cancer, of damage to
9 our house, the biggest investment most of us have. Next
10 slide.

C6-15 11 That's where we talk about the three million
12 gallons per day. Next slide. Aeration towers. There are
13 no aeration towers noted in phase one of this project.
14 This is a representation of a previous EIR, our
15 representation of the chloroform plume. Next slide. There
16 aren't going to be any aeration towers in this project.
17 Instead we are going to each have our own mini aeration
18 tower because the radon and the things that are going to be
19 in the water, we are going to have our own personal mini
20 aeration tower in our homes. The radon, instead of being
21 aerated into the air and going over our house will be in
22 the water and coming into our homes. Next slide.

23 21,000 deaths a year from radon. Again, you are
24 going to have your own personal mini aeration tower. Next
25 slide. We are concerned, again, that if you look at what's

7 (Pages 25 to 28)

Response to Comment C6-14

It is important to understand that pipe leaks are a universal condition throughout all water supply systems and can never be completely controlled. EBMUD's ongoing efforts have reduced system water loss from pipe leaks, but cannot eliminate them. Also see Master Response 8 – Project Objectives and Alternatives for further information on water loss prevention.

Response to Comment C6-15

See Master Response 6 – Radon and Chloroform.

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1 in the DEIR statement it says that there is a certain
2 amount of radon that is going to be in Bayside. The
3 current standards would say that's too much. We need to do
4 something. The expectation, when approved, the standard is
5 likely to be higher than the radon concentrations at
6 Bayside. This is the kind of example we are saying that
7 what is being published is what fits only a single view.
8 Why assume that? And why allow any radon into our water
9 and into our homes? Why not have zero? Why not have what
10 we have now? Next slide.

C6-15

11 Subsidence. Any lasting subsidence or permanent
12 subsidence would not be expected. All right. We'll give
13 you that. Elastic subsidence, up to a quarter of an inch
14 where the pumping is occurring, a tenth of an inch away,
15 further away, several miles away. The problem with
16 subsidence, whatever you think is -- the reason I am here
17 is I called my insurance company when somebody told me
18 about subsidence. You can't cover it. We can choose to
19 get earthquake insurance or not. Some of us pay for it;
20 some of us don't. And we are all going to take that risk.
21 But the truth is you can't get insurance for subsidence or
22 settlement. Next slide.

C6-16

23 Flowing wells. There are 15,000 -- again, from the
24 DEIR, up to 15,000 wells historically have been drilled
25 since 1869, I think it was. 4500 of them were identified

Response to Comment C6-16

See Master Response 1 – Subsidence.

Letter C6. Public Meeting Transcript.

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1 in the data bases that were talked about earlier. Where
2 are the other wells? What if they are under your home?
3 What if they are under your property? And what if they
4 start flowing? What's the damage? Again, you can't get
5 insurance for that happening.

C6-17

6 The DEIR talks about -- it's less than significant
7 for the project after mitigation. Mitigation is if the
8 well starts to flow and East Bay says they'll come to fix
9 it. Why do you want it in the first place? Why do you
10 want it under your house in the first place? I say we
11 don't. Next slide.

C6-18

12 Water quality. Meets the standards. But let me
13 tell you, so did the crematorium that was proposed for San
14 Leandro a couple of months ago. It met standards. We
15 don't want to meet the standards. We want better than the
16 standards. We want the water quality that we have got now.
17 There will be lower water quality with higher levels of
18 known carcinogens if we pump that water into the ground
19 where it is being proposed.

20 MR. PATTERSON: Mr. Malloy, would you summarize
21 please? We're running out of time.

22 MR. MALLOY: Would you allow me two minutes, sir?

23 MR. PATTERSON: How about one and a half?

24 MR. MALLOY: I appreciate your cooperation. I've
25 been going fast.

Response to Comment C6-17

See Master Response 2 – Potential for Flowing Wells.

Response to Comment C6-18

Comment noted. See Master Response 6 – Radon and Chloroform.

Letter C6. Public Meeting Transcript.

1 MR. PATTERSON: We can always relinquish time from
2 other speakers if you like. We'll keep to the rules.

3 (Disruption from the audience.)

4 MR. PATTERSON: Do you want to hear Mr. Malloy? Do
5 you want to hear him?

6 MR. MALLOY: I am going to finish. Trying to go
7 fast. I respect your time. Thank you for this
8 opportunity. East Bay MUD Policy 81 requires East Bay MUD
9 to minimize public health risk by seeking the best
10 available water sources protected from potential
11 degradation. This drawing, taken from the earlier DEIR,
12 talks about wells, talks about spills, talks about the
13 plume that was spoken of, of contaminated groundwater. It
14 all exists. Why do we want to operate in an area close to
15 that?

16 We talk about no vertical connection. How do we
17 know? We don't know 100 percent. Why do we want to put
18 that risk in our water quality? Next slide. Two quotes
19 here from the East Bay MUD spokesman. I don't know if he
20 is here, but we took them straight out of the sources
21 noted. 2001, Freeport covered our needs. 2004, all of a
22 sudden Freeport doesn't cover our needs. Again, we would
23 say 18 percent rationing is okay. It's less than the
24 policy. Why aren't we living within that? Could you go
25 back up one slide?

C6-19

C6-20

Response to Comment C6-19

EBMUD is as concerned as members of the local community that the contaminants in the shallow aquifer be prevented from entering the water supply. Contamination of the Bayside Groundwater Project water supply would shut the project down and eliminate this supplemental water supply, which is needed during periods of drought. However, no evidence of any fuel residues has been found in the deep aquifer from which Phase 1 will extract water. EBMUD will continue to test the recovered groundwater during operation to be sure that it stays free of chemical contaminants and will fully support the ongoing work of the Department of Toxic Substances Control to continue to monitor the location and extent of contamination. Master Response 5 – Groundwater Contamination provides extensive information on the existing contamination and describes the ongoing monitoring activities.

Response to Comment C6-20

Table 3-3 in Master Response 9 – Need for Project indicates that EBMUD requires more water to meet multiple-year drought demand than can be supplied even if EBMUD obtains full entitlements from the Freeport Project.

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1 I lost a point here, if I could. It talks about
2 9,000-year-old water was found when the sampling was done.
3 I would just make the point that's 9,000 years without East
4 Bay MUD pumping anything in or doing anything to change it
5 Prior history doesn't predict the future in all cases. The
6 mutual fund company tells you that all the time. Just
7 because there has been 9,000 years safe doesn't mean we
8 start doing something different, it is not going to become
9 unsafe or lower quality water. Next slide.

C6-21

10 Again, to summarize, and here on the left Board
11 members, I appreciate your time. I would ask you to vote
12 "no." That's my bottom line. I would ask you to not
13 approve this project. I would ask you that if you don't
14 let advocacy -- if you don't let Johnny Cochran's spirit
15 replace true assessment of the risks versus the potential
16 benefits, if you don't do that you will vote "no." I would
17 ask in closing for members of audience, if these risks
18 bother you, if you oppose the project and you are ready to
19 insist the Board vote "no" on this project, please stand
20 with me quietly. Thank you for your time.

C6-22

21 MR. PATTERSON: At this time we will have
22 individual speaker comment. I would like to start with --
23 I believe it's Mr. Bryan McNulty. By the way, a reminder,
24 three minutes and the clock is running as we start.

25 MR. MCNULTY: Thank you for letting me speak. My

8 (Pages 29 to 32)

Response to Comment C6-21

The older groundwater age suggests that the deep aquifer is isolated from surface sources of recharge and associated water quality. The isolation from the shallow aquifer makes the project site desirable to develop the proposed aquifer storage and recovery project. The injected and extracted water will meet drinking water standards.

Response to Comment C6-22

Comment noted.

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C6-23

1 name is Bryan McNulty. I live off of 1990 Via Perot in San
2 Lorenzo, and, basically, Grant Avenue is where my backyard
3 is. So I would be utterly opposed to this project because
4 of the construction involved and also because of the risk
5 involved in the project that the speaker before me said.
6 But I want my opinion noted, that it's on the record. And
7 I'm totally opposed to this project. Thank you for letting
8 me speak.

9 MR. PATTERSON: Thank you. Next speaker would be
10 Charles Bass. Would the next speaker stand by as well? I
11 believe it's Rem Gallagher, I believe. I'm sorry,
12 Gallagher.

C6-24

13 MR. BASS: Members of the Board, I'm glad all of
14 you are here tonight. I guess the time that Chris needed
15 to finish up has been taken from the first speaker. I
16 would remind you that you are here for our benefit, not for
17 yours. But with that I do appreciate your being here. To
18 the extent it's necessary, as a resident of Heron Bay, as a
19 member of the Board of Directors, I hereby incorporate all
20 of the prior public comments that we've made to the former
21 DEIR into this DEIR to preserve our administrative
22 remedies.

C6-25

23 This project was flawed from the beginning. It was
24 flawed in 2001. It's flawed today. I would highly
25 recommend that you extend the public commentary period to

Response to Comment C6-23

Comment noted.

Response to Comment C6-24

See Master Response 12 – Comments on 2001 DEIR.

Response to Comment C6-25

See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Letter C6. Public Meeting Transcript.

1 120 days. We had that much time for the prior EIR. You
2 have already made some points tonight about the fact that
3 there are a large number of non-English speaking residents
4 who will be affected by it, who would have none of the
5 opportunity to review it, and to have a reasonable
6 opportunity to comment on it.

C6-25

7 All of the points that Chris made I incorporate in
8 by reference, and I would also add that the water to be
9 consumed as a result of this project would be water
10 consumed solely within San Lorenzo and San Leandro. And
11 the only people to bear any of burden of this project are
12 in San Leandro and San Lorenzo. And that is not in
13 accordance with East Bay MUD Policy 71. It should be borne
14 by East Bay MUD at large. This project is entirely San
15 Leandro and San Lorenzo.

C6-26

16 You also failed to mention the possibility of
17 hydrofracturing. And that is something that should be
18 addressed. It has not been addressed. And the fact is
19 that this project, again, is only borne by us. I highly
20 recommend that you extend the period to 120 days. I highly
21 recommend that you vote "no" on this project. It is not
22 good for San Leandro. It is not good for San Lorenzo. It
23 will ultimately not be good for East Bay MUD.

C6-27

C6-28

C6-29

C6-30

24 You have failed to adequately address alternatives.
25 Some have been mentioned already. You have not addressed

C6-31

Response to Comment C6-26

See Master Response 11 – Environmental Justice.

Response to Comment C6-27

“Hydrofracturing” is a phenomenon that could occur during injection in groundwater if pressures build up in an aquifer that exceed the overburden pressure (pressure from overlying sediments) minus static pore pressure (pressure exerted by water in pore spaces). When this condition is met, it is possible for water to fracture overlying units, allowing vertical upward flow of injected water.

As discussed in the report *East Bay Plain Phase 1 ASR Investigation* (CH2M HILL 1997), hydrofracturing is not expected to occur unless the water level rise in the aquifer during injection exceeds 120 feet. Based on the model results, and calculations using specific capacity data from the well, water level rise in response to a 1-mgd injection at the Bayside Well No. 1 is expected to be less than 30 feet. This expected rise is much less than the 120 feet at which hydrofracturing may occur. Therefore, hydrofracturing is not expected to result from Phase 1 of the project.

Response to Comment C6-28

See Master Response 11 – Environmental Justice.

Response to Comment C6-29

See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Response to Comment C6-30

Comment noted.

Response to Comment C6-31

See Master Response 8 – Project Objectives and Alternatives.

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C6-31 1 the fact that there are other areas that can be used for
2 this in-ground storage, if that's what you want. And the
3 fact is this area you are working in is a former industrial
4 area. The plume that has been referenced is a moving
5 plume, and the fact there is no direct connection of the
6 deep aquifer at this juncture in time doesn't mean there
C6-32 7 can't be through movement of the plume and direct
8 connection, especially if through hydrofracturing we have
9 upwelling of contaminated water that can then get into the
10 deep ground aquifer. The water got there somehow. It
11 didn't just appear by magic. Thank you.

12 MR. PATTERSON: I see there is another name here.
13 Fina Perez. Ms. Perez?

14 MS. PEREZ: Yeah, that's me. I'm Fina Perez.

15 MR. PATTERSON: This will be followed by Ming Ng.

16 MS. PEREZ: I have a couple of concerns, and I have
17 a question to East Bay MUD. My two concerns that I have,
18 the first concern is in reference to economics. It's in
19 reference to property prices. One of things we talked
C6-33 20 about is health, but the other issue is property prices.
21 And my question and my concern is we have to disclose this
22 potential risk to potential buyers. And I wonder what the
23 impact of that is as far as potentially lowering San
24 Leandro and disaffected areas.

C6-34 25 The other concern that I had was in reference to

Response to Comment C6-32

See Master Response 5 – Groundwater Contamination and response to comment C6-27.

Response to Comment C6-33

A reliable and local water supply could be considered to benefit property values. However, CEQA Guidelines Section 15131 provides that economic effects of a project shall not be treated as significant effects on the environment. Given this, an EIR is not required to assess the impact of a project on property values.

Response to Comment C6-34

See Master Response 1 – Subsidence.

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1 the map that was shown by East Bay MUD. It referenced 15
2 years, I believe, of what was in place already. And to me
3 that just doesn't seem like it's enough time to really take
4 an assessment of any risks. And my question is what
5 guarantees are in place for homeowners, because what if
6 East Bay MUD is wrong, basically? What if they are wrong
7 and there is damage? What kind of guarantee as far as
8 monetary warranties are going to be in place for us as
9 homeowners for any damage that we may incur? Because if
10 they do -- if they are saying there is no risk, well, put
11 the money there. Show us that there is some guarantee for
12 us homeowners in case there is a problem. Thank you.

C6-34

13 MR. PATTERSON: Mr. Ng will be followed by -- I
14 think it's Shudony Zhen, the next speaker.

15 MR. NG: Hi. Actually, I don't know of this
16 project too long ago. I note -- I just note that two weeks
17 ago, and then I come to this meeting, and then I hear about
18 subsidence, that subsidence is no event at all. But I
19 think about that. You think about putting that much water,
20 that much water under the ground, right, and then the
21 ground freezing up. When some outside force comes in like
22 an earthquake, and then you guarantee it is not move? I
23 don't think so. Seems like the water -- you sit and
24 somebody pushes you and then you fall on the ground, right?
25 And then you give the house more damage. How can you prove

C6-35

Response to Comment C6-35

See Master Response 1 – Subsidence, Master Response 3 – Monitoring Programs, and Master Response 4 – Liquefaction. The project area is not subject to ground freezing.

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1 out this damage is not be causing if you put the water
2 under the ground and then get more damage to my house?

3 And then can you guarantee that, and then even my
4 house during an earthquake, my house gets more damage, and
5 then I have no evidence. I say East Bay MUD make my house
6 fall down. And then what do I do? I do the bankruptcy. I
7 could be homeless, right? And then you need to make sure
8 everything is sure, no problems. But I don't think you put
9 that much water under the ground, lubrication, freezing up
10 the ground like on the water in the ocean, and nothing
11 happens? That's unbelievable.

12 MR. PATTERSON: Next speaker will be followed by --
13 I think it's Kac Weng Cheng.

14 MR. ZHENG: My name is Shudony Zheng. I've been
15 hearing this project since 2001, a couple of years back.
16 My question is, like, other groups or entities like city of
17 Hayward, there was a strong opposition group to this
18 project. Now it seems like the city of Hayward dropped the
19 opposition. I am wondering, is that because, as stated in
20 the DEIR, the management was paid \$50,000 and supplied
21 water to Hayward? I'm wondering if that's a common
22 practice for EB MUD to pay people or a group so that they
23 can drop their opposition.

24 My other comment is -- I still have time. Chris
25 says we have so many known or unknown wells everywhere. It

C6-36

C6-37

Response to Comment C6-36

See Master Response 3 – Monitoring Programs and Master Response 4 – Liquefaction.

Response to Comment C6-37

As described on page 3.1-52 of the DEIR, potential groundwater impacts from Phase 1 on the Hayward Emergency Supply Wells will be mitigated in part through additional emergency capacity for Hayward's well system or other improvements that will mitigate impacts to the system. EBMUD will provide up to \$50,000 of funding to the City of Hayward to help meet the costs of these measures. The decision was made to provide monies to Hayward so that they could make the appropriate upgrades to their system, as they are in a better position to determine the improvements that are required. The provision of funds from one agency to another to compensate for the cost of mitigation measures is a typical practice. The City of Hayward requested that the provision for funding be documented in the DEIR.

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C6-38

1 could be in my backyard or under my bedroom. If those
2 water -- water from the wells is flooding my home, and then
3 EB MUD says it's going to fix the well, but the fixing the
4 well when the damage is made, is that a mitigation they are
5 talking about? Thank you very much.

6 MR. PATTERSON: This speaker will be followed by
7 Mr. Benny Lee.

C6-39

8 MR. CHENG: I have two comments here. On the
9 Chapter 3 to Chapter 7, they showed us the number of radon
10 to the well we used, underground waters going to be 470 to
11 700 or something. But the show here is no standard of the
12 regulations. What means no standard? No standard means
13 they have no harm? That means not going to hurt anybody or
14 health? So if they have something like 470 and 700 radon
15 on the water, you guys have to prove it, to prove that it's
16 no harm. You have to do more tests, more investigation to
17 prove this number is safe. Without proving this number is
18 safe, this project is not supposed to be submitted.

C6-40

19 And the second number is here. On the chloroform,
20 the federal standard is 80 micrograms per liter. On this
21 underground water they show it can add up to 71 micrograms
22 per liter. What does that mean? That means the maximum 80
23 micrograms in water is not safe. We are going to have
24 cancer. We know chloroform causes cancer. The underground
25 water shows 71 micrograms. With that much coming from that

Response to Comment C6-38

See Master Response 2 – Potential for Flowing Wells.

Response to Comment C6-39

See Master Response 6 – Radon and Chloroform.

Response to Comment C6-40

See Master Response 6 – Radon and Chloroform. During the 2001 pilot test, injected water was found to contain total THMs ranging from 38 micrograms per liter ($\mu\text{g}/\text{L}$) to 71 $\mu\text{g}/\text{L}$. Since 2001, total THMs in the treated water from the same treatment plants has been reduced to 17-47 $\mu\text{g}/\text{L}$, which is currently served to customers in the area. The THM concentration in recovered groundwater from the Bayside Groundwater Project would also be expected to be lower than in 2001 and would mirror the THM levels at the treatment plant, during initial extraction. Over periods of extended extraction, as injected water blends with native groundwater, THM concentrations would be even lower in extracted water than elsewhere in the distribution system. Section 4.0, Errata, in this document presents an updated Table 3.2-1 (from the 2005 DEIR) to reflect that the water quality data shown for the Orinda WTP and the Upper San Leandro WTP are 2004 data, not 2000 data as indicated in the DEIR.

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C6-40

1 do we think it is safe? I want to you prove to me this 71
2 goes to the level of the harm of cancer for my health.
3 That has to be stopped. We cannot accept it.

C6-41

4 Another question. I hear the news last night,
5 Channel 26. East Bay MUD said, "We're not going to have
6 subsidence problem. We are going to monitor everywhere.
7 As soon as the problem happens, we will stop it." Wait a
8 minute. Why do you monitor it? That means there is a
9 potential there for the problem. It is a potential there
10 for a problem. When you stop it, it is too late. It is
11 too late. Just like underground, when it happens they stop
12 it. I don't want it to happen. Why we have to do that?
13 If there are potential problems, we should think about
14 something else. We don't want this.

15 Another question is we spent so much on the 2001
16 EIR, 15 a day will cause a lot of problem for four years.
17 You couldn't get any answer, any results, detailed down to
18 1 million gallons a day. And you say it's safe, but still
19 it doesn't prove anything one minute to tell you like if
20 you smoke and you get cancer, but just one cigarette a day
21 for four years. We can try one pack per day? That is not
22 right. That is totally wrong. I think you guys need to
23 try something else. Go somewhere and find something else.
24 So many things we can think of. Thank you very much.

25 MR. PATTERSON: Mr. Lee will be followed by Irene

Response to Comment C6-41

See Master Response 1 – Subsidence.

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1 Ip.

2 MR. LEE: My name is Benny Lee. I have resided in
3 San Leandro for the last several years. My wife and I
4 selected San Leandro from many other communities because of
5 its charm, community and great atmosphere. I have opposed
6 this project due to its lack of merit and many unasked and
7 unanswered questions of the Draft Environmental Impact
8 Report, the DEIR. The DEIR knows that USDS estimates more
9 than 15,000 wells were drilled in the San Leandro and San
10 Lorenzo area over the past -- up to 1950 for the southeast
11 Bay Plain Basin, the key aquifer for this project. There
12 are 4,500 wells in the East Bay Plain. This is for, one of
13 many other areas in the DEIR a serious material weakness.
14 There is no accounting for where any of these wells are or
15 an accounting of how much it could cost to destroy these
16 wells. Furthermore, there could be hundreds of these wells
17 which can serve as conduits from the deep aquifer to the
18 shallow aquifer where there are horrible contaminants.

19 The DEIR notes this as an insignificant risk. Many
20 homes, possibly hundreds, may have been built on top of
21 improper wells which can gush and cause severe disruption
22 to lives of families. The DEIR also tells us this is an
23 insignificant risk. Trojan Powder Works, a company which
24 produced munitions and poisonous gases for World War I with
25 the purpose of killing people and explosives for the

10 (Pages 37 to 40)

Response to Comment C6-42

Comment noted.

Response to Comment C6-43

See Master Response 2 – Potential for Flowing Wells.

Response to Comment C6-44

See Master Response 5 – Groundwater Contamination.

Response to Comment C6-45

See Master Response 2 – Potential for Flowing Wells.

Response to Comment C6-46

See Master Response 5 – Groundwater Contamination, and response to comment L1-6.

Response to Comment C6-47

Comment noted.

Response to Comment C6-48

Comment noted.

Response to Comment C6-49

See Master Response 5 – Groundwater Contamination.

Response to Comment C6-50

Comment noted.

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1 Mr. Harold Perez.

2 MS. IP: My name is Irene Ip. What I am going to
3 say is similar to what Benny Lee said. So I will try to
4 make it fast. So I understand East Bay MUD has spent more
5 than \$10 million on preparation of this project. And I
6 want to ask the Board how much more money are you willing
7 to spend on construction of this project. And looking at
8 this project brings so little benefits to the community but
9 a lot of harm. So I don't think the Board should spend any
10 more of the customer's money on this project, and I
11 personally am opposed to this project. And I ask to Board
12 to vote "no" on this project. Thank you.

13 MR. PEREZ: My name is Harold Perez.

14 MR. PATTERSON: Mr. Perez, hold it a second. You
15 will be followed by Howard Perez -- okay. Go ahead.

16 MR. PEREZ: Hi. My name is Harold Perez from the
17 Davis West Neighborhood Group. I am complaining about this
18 because nobody seems to know about this. You've got three
19 sewer plants, you've got Oro Loma pumping out 490 pounds of
20 chloroform. You've got one from the valley, pumping out
21 42,000 gallons a day of sewer water into our Bay. We have
22 San Leandro, and you guys just passed, last week, to put
23 two more plants of wastewater in the City of San Leandro by
24 Monarch Bay. Are they are going to be over by the old
25 existing waste management or are they going to be next to

C6-51

C6-52

Response to Comment C6-51

Comment noted.

Response to Comment C6-52

Comment noted.

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1 the golf course? If it is going to be next to the golf
2 course, this will be another problem for Heron Bay. You
3 are already talking about 450 pounds of chloroform coming
4 out of Oro Loma. How much wastewater is going to be put
5 out?

6 You guys have in here 400 pounds pumping out to
7 clean this water up and this -- it has a page in this
8 thing -- the whole section of it is telling what a cancer
9 risk this is. You are going to be pumping this stuff out
10 in the air. Like I said, we are off towards the airport.
11 We've got the airport flying over us, dumping all that
12 pollution. We're the dumping ground of the Bay Area,
13 anything down there, anything down there -- and if you
14 don't believe me, look at the problem you guys are having
15 trying to get little wastewater plant right there on
16 MacArthur. That whole city come up, "No, we don't want
17 this in our neighborhood." Take this right here and tell
18 Bayo Vista or the Sacramento White House that they have to
19 drink this water. Stop those things from going on into the
20 valley. Let us have the water.

21 I get so tired of just being dumped on, of all
22 these pollutions out there. I just wish that, like I said,
23 you guys would come through. I've talked to the East Bay
24 MUD when they were over at the (inaudible), and the guy
25 says, "One thing we don't want to do, we don't want to pump

C6-52

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1 it." How are you going to get it down from down there to
2 the Bay, the lowest point? Why not get it up at Fairfield
3 and have Solano County dig a hole over there and put all
4 water and let it flow down there. And I just hope you guys
5 are listening to these people. Look at these people in
6 here. I wish we could get people like this on all these
7 things together. This is what we need for you guys to
8 listen to us, because this is a horrible project, because I
9 know I am going to drink this stuff. That's why I don't
10 want it here.

C6-52

11 MR. PATTERSON: Mr. Perez, your time has expired.
12 We now have Ms. Sheila Young, who is Mayor Young.
13 Would you come up, please? She will be followed by Patrick
14 Ledesma.

15 MAYOR YOUNG: Thank you, Mr. Patterson. I do
16 appreciate you allowing me to come before whoever I am in
17 front of.

18 MR. PATTERSON: Someone relinquished their time.

19 MAYOR YOUNG: I appreciate that. I have been in
20 Oakland this evening, working on other issues for San
21 Leandro, including airport noise. I apologize for being a
22 little bit late. That meeting is still going on. But I am
23 here now. I want to do a couple of things. I want to
24 thank you for coming to San Leandro with your entire Board
25 meeting.

11 (Pages 41 to 44)

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1 We think that is important because we haven't had a
2 chance for the community to address the entire Board in a
3 forum where there was enough room for them all to be.
4 Secondly, I will not say a lot because I want to go back
5 and listen to the comments from my community again. We
6 have put these issues in front of you many, many times
7 before. And apparently there are still some very
8 unanswered questions for our community.

9 I wanted to specifically, tonight, point out to
10 each of you, if you have not received my letter, I have
11 extended a formal letter to the Board requesting a 120-day
12 extension on behalf of Heron Bay and the City staff to
13 respond to this latest very thick document that we
14 received. That is my only reason for asking to speak to
15 you this evening. I do want to hear the comments from the
16 community. I know each of you -- I think I know almost all
17 of you personally, and I do appreciate your coming out here
18 this evening. I know it's difficult.

19 It is very warm in here tonight. Perhaps we can
20 open some of these doors and get some air in this room. I
21 would also extend to you the opportunity to use any of our
22 public facilities in San Leandro for additional meetings
23 because I think it may be appropriate for you to come back
24 for this community again with some responses and to allow
25 more people to speak to you. It's a very deep and involved

C6-53

C6-54

C6-55

Response to Comment C6-53

Comment noted.

Response to Comment C6-54

See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Response to Comment C6-55

See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Letter C6. Public Meeting Transcript.

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1 subject matter.

2 And I also serve on the Bay Area Air Quality
3 Management District Board. And I have asked them to give
4 me a copy of their response or their documents that they
5 might have or may have filed with you on the DEIR. So we
6 will be following it very closely. And I would hope that
7 when the second round of phase two comes through, that
8 there will be much more opportunity for more comments on
9 the second phase if, in fact, the first phase ever gets off
10 the ground.

11 Thank you for allowing me to speak. It's nice to
12 see all of you in San Leandro.

13 MR. PATTERSON: Thank you, Mayor Young.
14 Mr. Ledesma followed by Jack Chan.

15 MR. LEDESMA: Patrick Ledesma. I am on the
16 homeowners association board for Santa Rosa Village Homes.
17 I want to thank you, President Patterson and the Board, for
18 coming tonight. And just to share some comments quickly,
19 because I have a lot of them, in general, I actually
20 support the project personally, and I think the
21 recommendation to the homeowners' association on my behalf
22 would be to support the project. I am in the groundwater
23 protection industry and recognize the problem of water
24 supply and in California, in particular, and am concerned
25 with that in my backyard. I have also attended and tried

C6-56

C6-57

Response to Comment C6-56

If EBMUD decides to proceed with Phase 2, EBMUD would prepare an EIR in full compliance with CEQA, including public comment during circulation of the DEIR. EBMUD would also continue to work with the Community Liaison Group during planning and operation of Phase 2, should it occur. See also Master Response 7 - Project Phasing.

Response to Comment C6-57

Comment noted.

Letter C6. Public Meeting Transcript.

1 to educate myself.

2 My background is in shallow groundwater and
3 contamination. I am not much of an expert in deeper water
4 aquifers, but I have tried to educate myself recently by
5 going to ASR workshops and learning more about it. The
6 overall thing that I have learned is that this is a very
7 responsible and proactive measure to find water supply in
8 the place where many people are tugging at the same limited
9 resources. But it is also something that does merit a lot
10 more on the water quality side, particularly the chloroform
11 and the byproducts of treated groundwater into a pristine
12 aquifer. But I favor that over drinking the water from the
13 valley.

C6-58

C6-59

14 Very quickly, I think some of the disappointment
15 you are hearing from the public right now, particularly
16 from the Heron Bay region that I represent, is mostly
17 stemming still from not being expert in the field and maybe
18 misinformation or misunderstanding on the education side of
19 it. I think East Bay MUD should take a larger role in
20 helping to try to get the public including and myself to
21 understand that better.

C6-60

22 I think I saw some of this earlier as far as trying
23 to attempt some of that. I recognize that. But spending a
24 little more time on the preparing in other areas regarding
25 pumping and the effect on aquifers. Seems like the major

Response to Comment C6-58

Comment noted.

Response to Comment C6-59

See Master Response 6 – Radon and Chloroform.

As discussed in 3.2.3.2 of the DEIR, trihalomethanes (THMs) are the primary disinfection byproducts of interest for EBMUD. THM concentrations detected in the aquifer during the distribution system injection pilot studies were at or slightly below those in the injected water, indicating that THMs are not formed after injection. Possible explanations for potential decreases of THM concentrations include mixing with native groundwater or biodegradation. It is also worth noting that since the pilot studies were conducted, due to modifications in treatment operations, THM levels in EBMUD water from both the Orinda WTP and the Upper San Leandro WTP have decreased and are well below the maximum contaminant level (MCLs) (see Section 4.3.1, Table 3-2.1). Lower levels in injected water would result in lower levels in the extracted water than was observed during the pilot study. The concentration of THMs in recharge water is well below MCLs, and work to date (injection of more than 200 million gallons) has shown that concentrations in the aquifer are stable or decreasing. Accordingly, there is no indication that THMs are forming in the aquifer under injection conditions anticipated for the project, and therefore THMs are not expected to increase in concentration with an increase in volume of injection or extraction.

Chloride, a conservative (non-reactive) constituent, was used as a tracer during the study to assess potential gains and losses of THM from injected water. Observed THM concentrations generally paralleled those of the chloride, indicating that THM levels were relatively stable and constant in concentration and did not exhibit significant breakdown, accumulation or degradation during the 8-month testing period.

Studies at some ASR sites have indicated that THM concentrations may decrease with increasing lengths of storage (Pyne 1995, AWWA Research Foundation 2005). It is currently uncertain whether this will occur at the Bayside Groundwater Project site with increasing periods of storage, up to several years at a time.

Response to Comment C6-60

See Master Response 10 – Public Outreach and Notice, and DEIR Review for the list of community involvement opportunities provided by EBMUD during the CEQA process.

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C6-61

1 issue is still subsidence. In my opinion subsidence is one
2 of the least issues. It's water quality and the
3 infrastructure and the quality of the current
4 infrastructure from how this new project might affect that
5 in the future. But maybe a little bit more information on
6 helping us understand how this happens would benefit the
7 Heron Bay area in particular. That being said, I realize I
8 don't live there either.

C6-62

C6-63

9 I had some comments that I'll probably try to
10 minimize now that I only have 25 seconds. There are some
11 table figures that could better illustrate some of the
12 facts in there. And I would like to recognize and actually
13 get the public to also recognize some mitigation measures
14 that happen before we even get into the DEIR such as
15 scaling the project down to 1 gallon per day initially to
16 see what happens, putting in an extensometer field to look
17 at and evaluate subsidence. I hope that that would happen.

18 MR. LINNEY: For folks that are not able to
19 complete all their comments, we are looking at written
20 comments, and you are welcome to submit those and anything
21 else in writing that you think of later or weren't able to
22 get through tonight.

23 MR. PATTERSON: Mr. Chan will be followed by Wafau
24 Aborushed, I believe.

25 MR. CHAN: I need to address the Board. I have a

12 (Pages 45 to 48)

Response to Comment C6-61

Comment noted.

Response to Comment C6-62

Comment noted.

Response to Comment C6-63

Comment noted.

Letter C6. Public Meeting Transcript.

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1 couple of questions I would like to ask the Board. One is
2 that when I read the environmental report, what I did is
3 the weight of the draining water -- and I did not hear
4 anything about injecting the water into the ground. One of
5 concerns that I have is we all know if you're putting a lot
6 of -- when you put a lot of water injected into high speed
7 you cause erosions to the ground. We all know that because
8 we see that in the San Francisco area. That's where all
9 the landslides are coming from. It is because a lot of
10 water injecting at fast rates. So I would like to
11 understand what kind of impact it would have on the ground
12 when you inject all this water. And we are causing a lot
13 of loose soil and other things. What kind of thing is
14 impacting on the environment?

15 The second question that I have is when I look at
16 that environmental report, there is an alternative to
17 selecting (inaudible). And in the important steps it was
18 not the solution because of the problem (inaudible) what
19 makes that different than over here? I would like to
20 understand what kind of impact it is for land use. Why do
21 you think that it is less important -- less impact to this
22 area than Contra Costa County? And the third thing I would
23 like to add is the feeling I am not comfortable about this
24 project. Are you willing to take this risk? And I would
25 like to ask how many people on your Board are there that

C6-64

C6-65

C6-66

Response to Comment C6-64

Injection operations conducted 600 feet below the ground surface will have no effect on surface soils. The only potential occurrence of soil disturbance for Phase 1 would be during construction; Mitigation Measure 3.3-1 presented in the 2005 DEIR reduces this potential impact to a less than significant level. See also Master Response 4 - Liquefaction.

Response to Comment C6-65

See Master Response 8 – Project Objectives and Alternatives.

Response to Comment C6-66

Comment noted.

Letter C6. Public Meeting Transcript.

1 are living in that area and are feeling so comfortable that
2 you would vote "yes" on this. So thank you very much.

3 MR. PATTERSON: Ms. Aborushed. She will be
4 followed by Howard Beckman.

5 MS. ABORUSHED: My name is Wafau Aborushed. Jus
6 to give you a clarification, I would like to place in the
7 record all of the conversation of the presentation that was
8 done by the first speaker, the second speaker, Benny Lee
9 and Harold Perez. I am not going to reiterate some of the
10 things they said, but I want to make sure that that is
11 placed as my comments. I want to also ask for
12 clarification on what is the zone versus the aquifer. I
13 would like to also have you go back into the comments that
14 were represented to East Bay MUD on August 6th, 2001, Page
15 8. The risk of cancer is on Section 3.12. Chloroform is a
16 toxic air contaminant. Radon kills people. You know, what
17 is really amazing is every time we get an EIR report or a
18 DEIR report, it seems like its okay to have cancer imposed
19 on people that live in this area. We read the EIR report
20 for Oakland airport, they have emissions, and it's
21 acceptable.

22 Is a human being's life worth anything anymore?
23 Are you willing to continue to sacrifice us because of
24 greed? We need to go back and be balanced here. These are
25 people that live here. They have children that live here.

C6-67

C6-68

C6-69

C6-70

Response to Comment C6-67

Comment noted.

Response to Comment C6-68

See Master Response 12 – Comments on 2001 DEIR.

Response to Comment C6-69

See Master Response 6 – Radon and Chloroform.

Response to Comment C6-70

See Master Response 6 – Radon and Chloroform.

Letter C6. Public Meeting Transcript.

C6-71

1 You need to realize that we do not want you to vote on this
2 as "yes." We need you to vote "no." We live here. You
3 want our vote for it? Come and live here and breathe the
4 air that you are going to put in our homes. Thank you.

5 MR. PATTERSON: Mr. Beckman will be followed by
6 Mr. Ben Mintor.

C6-72

7 MR. BECKMAN: My name is Howard Beckman, and I'm
8 speaking tonight from two perspectives. One is a member of
9 the Bar with some expertise in California environmental
10 law. I am also as a resident of San Lorenzo. So first I
11 want to say that I object to the practice of tying in one
12 discussion of consideration of the project and the EIR.
13 This concern has raised a movement in Sacramento to correct
14 this practice. And that risks loosening some of the
15 protections of CEQA.

C6-73

16 About the EIR, phase one is a foot in the door. I
17 think we all recognize that. And that alone is grounds for
18 objecting to the project. The discussion of alternatives
19 is inadequate and dismissive. The tone of the entire EIR
20 in discussing the alternatives and some other aspects is
21 certainly an advocacy document rather than a balanced
22 analysis. The EIR does not describe a compelling necessity
23 for near-term development for water supply. And it's this
24 near-term development that is used as an excuse for not
25 analyzing alternatives.

C6-74

Response to Comment C6-71

Comment noted.

Response to Comment C6-72

Comment noted.

Response to Comment C6-73

See Master Response 8 – Project Objectives and Alternatives.

Response to Comment C6-74

See Master Response 8 – Project Objectives and Alternatives.

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1 Phase two will almost certainly occur, and yet the
2 EIR is coy about its prospects and uses the impacts of
3 phase one for not analyzing the impacts of phase two. We
4 ought to know what phase two represents in concept and what
5 some of those impacts might be. If we look at the history
6 of the project, we certainly know that phase two is a
7 certainty.

C6-75

8 Finally, the growth-inducing impact is not
9 analyzed. Here I think the EIR is most dismissive and most
10 objectionable. There is no guarantee that stored water
11 will be used only in emergency drought conditions, and, in
12 fact, the language of the DEIR doesn't hide the fact that
13 the new supplies would be used for new users. In the end
14 the DEIR says rather disingenuously on Page 5-2 that the
15 project would, quote, "only contribute to effects
16 associated with planned and approved population growth and
17 that local governments would have the responsibility for
18 any negative impacts for the project." That's called
19 passing the buck.

C6-76

20 Finally, as a resident of San Lorenzo, I want to
21 say I have a concern about the land uses in the western
22 part of San Lorenzo in the present industrial zone. I and
23 others fought for a planning and zoning study which the
24 County did, which has not yet reached public release and
25 discussion. We are concerned about a sustainable future in

C6-77

13 (Pages 49 to 52)

Response to Comment C6-75

See Master Response 7 – Project Phasing.

Response to Comment C6-76

See response to comment C9-7.

Response to Comment C6-77

Comment noted.

Letter C6. Public Meeting Transcript.

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1 San Lorenzo, and this does not contribute to that.
2 Finally, I want to quote an old California proverb. "Go
3 looking for water and you will find corruption."

4 MR. PATTERSON: Mr. Mintor will be followed by
5 Mr. Tim Holmes. I think that's correct.

6 MR. MINTON: My name is Tim Minton. I'm a
7 homeowner in San Lorenzo just about two blocks from the
8 tracks. The United States geographic survey predicts there
9 is going to be a major earthquake on the Hayward fault
10 sometime within the next 30 years. And the homes that we
11 all have during the instant of that earthquake are subject
12 to liquefaction. Are you familiar with liquefaction?
13 That's where the ground turns to mush because of the water
14 that is underneath. Right now we are sitting on solid
15 ground. During an earthquake it turns to liquefaction. So
16 is the injection of more water underneath the table -- is
17 that going to make our homes safer, less subject to damage?
18 Most of us can't even afford to buy earthquake insurance
19 these days. So that is my question to you. What is the
20 impact of injecting the water going to be in an earthquake?
21 We are supposed to bolt our houses down and all this sort
22 of thing. So what is -- have you addressed that concern?
23 And is this -- are the -- the second issue would be
24 are the wells limited? On the map it shows as one thing.
25 Are we sure that putting the water down isn't going to, in

C6-78

Response to Comment C6-78

See Master Response 4 – Liquefaction.

Letter C6. Public Meeting Transcript.

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C6-79

1 one area, be to pushing the water up underneath our homes,
2 maybe not the drinking water but the other water? Is that
3 in the water table? Anybody can drill a well right now, 20
4 or 30 feet and can strike water. You are putting more
5 water down there is certainly going to put pressure on the
6 water underneath your home, again, adding to what certainly
7 is going to come sometime in -- what is subject to
8 liquefaction. So please consider that.

C6-80

9 MR. PATTERSON: Mr. Holmes will be followed by Mr.
10 Frank Hsieh.

C6-81

11 MR. HOLMES: Hi. My name is Tim Holmes. I'm a
12 resident of San Leandro in the north area, vice president
13 of the Broadmore Neighbor Association and local business
14 owners. First I would like to state that I agree with many
15 of the speakers, particularly with the Heron Bay task
16 force. I would also like to strongly agree with the
17 Mayor's request to extend the public comment to 120 days as
18 a show of good faith, certainly on this project.

C6-82

19 I would also like to request that you vote "no" on
20 this project. I am concerned about the lack of response to
21 the comments and requests to the original first DEIR
22 several years ago and their repeated claims of this being a
23 one-million-gallon-per-day project when EB MUDD also has
24 stated it has every intention of going to the full
25 10-million-gallon-per-day in phase two. One of your panel,

C6-83

Response to Comment C6-79

See Master Response 2 – Potential for Flowing Wells and Master Response 4 – Liquefaction.

Response to Comment C6-80

See Master Response 4 – Liquefaction.

Response to Comment C6-81

See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Response to Comment C6-82

Comment noted.

Response to Comment C6-83

See Master Response 7 – Project Phasing and Master Response 12 – Comments on 2001 DEIR.

Letter C6. Public Meeting Transcript.

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1 Frank Mellon, came and spoke to our Broadmore Neighborhood
2 Association meeting and was asked that specific question,
3 whether you had the intention and expectation to get the
4 full 10 million, and he said yes.

5 The only thing phasing this project does is attempt
6 to fool people into seeing it as a smaller project than it
7 really is and as less impactful and made all these people
8 go through all the trouble again when it comes to phase
9 two, with even less expectation that you will listen to
10 their complaints and listen to their objections.

11 Finally, if you do end up approving this project,
12 despite what all has been put forth here tonight, I would
13 at least ask you to put in a requirement that it will only
14 be used in drought, which was requested at the neighborhood
15 association meeting where we met with Frank Mellon, and he
16 said he would find out if it was possible. I don't believe
17 that is in the current DEIR that just came out. I do
18 appreciate the sign of respect you've shown by coming down
19 here, and I hope what you heard tonight has had some impact
20 and has raised some new questions for you, perhaps. Thank
21 you.

22 MR. PATTERSON: And the speaker following Frank is
23 Sun-Hua Chao.

24 MR. HSIEH: Good evening, ladies and gentlemen. My
25 name is Frank Hsieh. I am a homeowner of Heron Bay, and I

C6-84

C6-85

Response to Comment C6-84

See Master Response 7 – Project Phasing.

Response to Comment C6-85

As described in DEIR Sections 1.1, Need for Project, and 2.3, Project Objectives, the purpose of the Proposed Project is to provide a local supplemental water supply for use during a drought.

For dry years, extraction can occur when October reservoir storage is projected to decline below 500,000 AF, as stated in Table 2-1 of the DEIR. This is the criterion that EBMUD uses to determine drought conditions. However, EBMUD will not automatically begin extraction when October reservoir storage is projected to decline below 500,000 AF. EBMUD anticipates that the storage criteria will trigger potential extractions in approximately 30 percent of years.

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1 I am also a senior project contractor engineer for Carson
2 Infrastructure. And everybody got a little bit excited, so
3 I try to calm down. I don't try to talk about engineering,
4 and I try to talk about money. Of course the EIR report
5 presented by CH2M HILL will be as to what the customer
6 wants. At the same time, \$2 million can provide an
7 engineer for one year's salary, so that's pretty good
8 money. I like the money too. So I thought I would try to
9 say tonight that I want to present the interests of the
10 homeowners and try to mention some interest for East Bay
11 MUD.

C6-86 12 My point is this not a smart project for East Bay
13 MUD to do. Since we meet here and we just want an
14 appropriate company, there is PUC. They have a huge water
15 resource project now. Their project is in the next 50
16 years, the water supply to the Bay Area. So I believe if
17 the East Bay gets some water supply from PUC they might be
C6-87 18 more economic, and they can reduce your cost and reduce our
19 cost. We don't even have to try to figure out what is the
20 hazard material and treat the well in the area. That's a
21 whole bunch of hassle. So that might be a good solution.
22 That might be a low-risk situation. That's my first point.

C6-88 23 Number two, if we talk about the phase one, I don't
24 think that is a very logical solution. Basically, phase
25 one will solve the water supply problem, but you have to

Response to Comment C6-86

Comment noted.

Response to Comment C6-87

The commenter suggests that EBMUD consider the alternative of obtaining water from the San Francisco Public Utilities Commission (SFPUC) Sierra supply (Hetch-Hetchy). The sale of water by SFPUC to EBMUD is unlikely because SFPUC has a limited supply of water and is pursuing additional dry-year supplies for its own customers (SFPUC September 6, 2005 Notice of Preparation of EIR for Water System Improvement Program). EBMUD does not consider this to be a feasible alternative.

Response to Comment C6-88

See Master Response 7 – Project Phasing.

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1 spend maybe 30 or 40 percent of all project money. You
2 have to have a real estate imposition. You have to open
3 the street and take it out. And if you screw up the
4 street, the pipeline is over there and that will create a
5 lot of hassle. And for us you have to do phase two. You
6 have to start again. You have to start in this kind of
7 public hearing, and nobody got very good sleep at night.
8 So I think about that and not really justify the whole
9 thing. So that's my comment. Thank you very much.

C6-88

10 MR. PATTERSON: Mr. Chao will be followed by
11 Mr. Mike Mahoney.

12 MR. CHAO: Ladies and gentlemen of the Board, first
13 I would like to thank you for showing your commitment to
14 the community for coming out here. I applaud you for
15 coming and listening. Being a good manager, sometimes the
16 thing to do is to take the hardest situation and make a
17 hard decision not to push the project that does not look
18 promising forward, but step back and decide that the
19 project does not show promise. The money and the resources
20 probably are better to spend somewhere else.

C6-89

21 I am in the pharmaceutical business as a chemist.
22 We know a lot about projects not moving forward. Otherwise
23 we would have millions of drugs by now. So we only have a
24 limited number of drugs because of various reasons, on
25 balance, that there is not a good idea for the public to

Response to Comment C6-89

Comment noted.

Letter C6. Public Meeting Transcript.

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1 consume.

2 On the specifics I have two questions. First is
3 how did we decide the age of the water is 9,000 years old.
4 That's kind of like -- how do I know the bottle of water I
5 got from the shelf is one month old or ten years old. I
6 would like to know a little bit more of detail about how we
7 actually arrived at that conclusion.

8 Second of all, as a non-engineer, I would have to
9 ask what is the difference between an elastic subsidence
10 and a non-elastic subsidence. And isn't there some point,
11 to take a layman's term, you can only stretch and contract
12 a rubber band so many times before it is not a rubber band
13 anymore? The shape of the rubber band changes. So that is
14 sort of a layman's question in terms of what are we asking
15 for.

16 And overall, I think we have several known serious
17 issues that is a possibility to start on this project and
18 actually put a lot of liability and pressure on the Board
19 later on if any of these mitigations should have to happen.
20 And on the up-side of the project, for phase one we are
21 looking for one million gallons per year. That seems like
22 a very low amount for a very high-price project.

23 And if our goal is actually to have -- go to phase
24 two and have this huge impact, that has already been
25 established that we have a lot of issues that we have to

C6-90

C6-91

C6-92

Response to Comment C6-90

The age estimate of the water is based on radiocarbon (Carbon-13 and Carbon-14) techniques. The U.S. Geological Survey (USGS) analyzed samples taken from the existing Bayside Well No. 1 using radiocarbon techniques (Carbon-13 using mass spectrometry and Carbon-14 using accelerator mass spectrometry) to assess the water's age. Samples were taken between 1997 and 2000 from Bayside Well No. 1 as well as 10 other wells in the vicinity of Bayside Well No. 1. Preliminary results of the analysis indicate that the water sampled from these wells is approximately 9,000 years old (*South East Bay Plain Groundwater Model Calibration* [CH2M HILL 2001b]). The age estimate reflects the time it takes for water molecules to physically travel from the surface (initially as infiltration) to the Deep Aquifer. The age of the water was also estimated using the groundwater model; the resulting estimate, 8,750 years, is consistent with the radiocarbon results. The preliminary radiocarbon results were confirmed in the final USGS study; see *Hydrogeology and Geochemistry of Aquifers Underlying the San Lorenzo and San Leandro Areas of the East Bay Plain, Alameda County, California* (USGS 2003).

Response to Comment C6-91

See Master Response 1 – Subsidence.

Response to Comment C6-92

Comment noted.

Letter C6. Public Meeting Transcript.

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C6-93

1 sort out. So we are actually buying -- spending a lot of
2 money for a small portion of the project. And we know that
3 there is going to be a larger cost for the phase two. And
4 that sort of reminds me of are we looking at another East
5 Bay bridge. I hope we are not going down that road. Thank
6 you very much.

7 MR. PATTERSON: Thank you.

C6-94

8 MR. MAHONEY: Good evening. Thank you for allowing
9 me to speak this evening. I am Mike Mahoney. I am not an
10 attorney and not an engineer, just a rate-payer like most
11 of the people in the room. I have a couple of questions.
12 The Regional Water Board today requires us as
13 municipalities or trades-people to remove the chlorine from
14 the water before it flows into our storm drain system. I
15 have a little bit of problem trying to figure out why we
16 would inject treated water into a virgin aquifer with those
17 other requirements in place.

C6-95

18 It's been said tonight that this project so far has
19 cost \$10 million. We lose an average of 3 million gallons
20 per day from our current infrastructure in the way of
21 leaks. Would that money not be better spent replacing our
22 aging infrastructure? If we are losing 3 million gallons a
23 day, and we are only supposed to pump a million gallons a
24 day into the aquifer, I think that would be a better return
25 on our money as rate-payers.

Response to Comment C6-93

Comment noted.

Response to Comment C6-94

Discharge of chlorine to surface waters is regulated to protect aquatic organisms, such as fish, from potentially harmful effects. Chlorine added to drinking water in regulated doses is required to protect human health and also controls biological growth and plugging in the injection well.

Response to Comment C6-95

See response to comment C6-14.

Letter C6. Public Meeting Transcript.

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C6-96

1 I think this is bad science. Like I said, I am not
2 a scientist, but as a young man I remember you have a
3 foreign land and somebody telling me, "Don't worry about
4 that. That just kills some plants." And now we have
5 numerous cases of cancer from the veterans from the Agent
6 Orange. That's just bad science. Don't try to sell us
7 something we don't need. Thank you.

8 MR. PATTERSON: Thank you. That completes our
9 speakers. And I would like to thank everyone for coming
10 out tonight to provide your comments. The next step in the
11 process are to complete the public comment periods and to
12 respond to all comments and to the requests made here
13 tonight.

14 Following that there will be a final EIR. The
15 notification letter will be sent to the community
16 participants letting you all know both our determination
17 and where the final EIR, when it is done, can be reviewed.
18 It will also be posted on our website. At this time I
19 would like to officially adjourn the meeting.

20 (The proceedings were adjourned at 8:51 p.m.)

21 --o0o--
22
23
24
25

Response to Comment C6-96

Comment noted.

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Letter C7. Public Meeting Speaker Cards.



SPEAKER CARD

Date 4/20/05

C7-1

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject Deik Bay Side Water Project

PLEASE PRINT	
NAME	<u>Mike Manning</u>
AFFILIATION	<u>Resident</u>
ADDRESS	<u>15700 Hamilton St.</u>
CITY	<u>San Leandro</u>
REPRESENTING (OPTIONAL)	
TELEPHONE (OPTIONAL)	

50-005-1-007

Please give this card, and any written statements, to Secretary of the District before the meeting convenes.

Response to Comment C7-1

This section includes copies of each of the speaker cards received at the public hearing for the DEIR held on April 20, 2005. Responses to comments made by the speakers are included in the responses to the transcript for that meeting contained in document C6.

Letter C7. Public Meeting Speaker Cards.

Page 2



SPEAKER CARD

Date Apr 20, 2005

I would like to address the Board of Directors on the following topic(s):

- Public Forum Boyside Groundwater Project
- Agenda No. (s) _____

Subject Justification of Boyside Groundwater Project
- Base solution ?
- Phase one economical ?

PLEASE PRINT	
NAME	<u>Frank Hsieh</u>
AFFILIATION	_____
ADDRESS	<u>2329 Spinnaker Court</u>
CITY	<u>San Leandro</u> ZIP <u>94579</u>
REPRESENTING (OPTIONAL)	_____
TELEPHONE (OPTIONAL)	_____

Please give this card, and any written statements, to Secretary of the District before the meeting convenes.



SPEAKER CARD

Date 4/20/2005

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject 1) How was the age of the aquifer water determined ?
2) When would an elastic subsidence become permanent subsidence.

PLEASE PRINT	
NAME	<u>Sam-Hua Chao</u>
AFFILIATION	_____
ADDRESS	<u>2303 Overbrook Ct.</u>
CITY	<u>San Leandro, CA</u> ZIP <u>94579</u>
REPRESENTING (OPTIONAL)	_____
TELEPHONE (OPTIONAL)	_____

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Letter C7. Public Meeting Speaker Cards.

Page 3



SPEAKER CARD

Date 4-20-05

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) DEIR

Subject An earthquake on Hayward Fault predicted within 30 years = LIQUEFACTION would increase DAMAGE? Does "The WELL" extend under homes?

PLEASE PRINT	
NAME	<u>BEN MINTON</u>
AFFILIATION	<u>HOMEOWNER</u>
ADDRESS	<u>16033 VIA CATHERINE,</u>
CITY	<u>SAN BERNARDINO</u> ZIP <u>94580</u>
REPRESENTING (OPTIONAL)	_____
TELEPHONE (OPTIONAL)	_____

Please give this card, and any written statements, to Secretary of the District before the meeting convenes.



SPEAKER CARD

Date 4/20/05

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject Groundwater Project

PLEASE PRINT	
NAME	<u>Tim Holmes (BNA)</u>
AFFILIATION	<u>Broadmoor Neighborhood Association / Zocalo Coffeehouse</u>
ADDRESS	<u>659 Broadmoor Blvd. #</u>
CITY	<u>San Leandro</u> ZIP <u>94577</u>
REPRESENTING (OPTIONAL)	<u>BNA</u>
TELEPHONE (OPTIONAL)	<u>510-639-0828</u>

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Letter C7. Public Meeting Speaker Cards.

Page 4



SPEAKER CARD

Date 4-20-05

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject _____

<small>PLEASE PRINT</small>	
NAME	<u>Wafan Atoashed</u>
AFFILIATION	<u>Davis West Neighborhood GRP</u>
ADDRESS	<u>672 Tudor Rd</u>
CITY	<u>SL</u>
ZIP	<u>94577</u>
REPRESENTING (OPTIONAL)	<u>DWNG</u>
TELEPHONE (OPTIONAL)	<u>510-562-8390</u>

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SPEAKER CARD

Date April 20/05

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject Bayside Groundwater Project

<small>PLEASE PRINT</small>	
NAME	<u>Howard Beckman</u>
AFFILIATION	_____
ADDRESS	_____
CITY	<u>San Lorenzo</u>
ZIP	_____
REPRESENTING (OPTIONAL)	_____
TELEPHONE (OPTIONAL)	_____

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Letter C7. Public Meeting Speaker Cards.



SPEAKER CARD

Date 4/20/05

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject _____

PLEASE PRINT

NAME Patrick Ledesma (Le-des-ma)

AFFILIATION San Lorenzo Village Home Association

ADDRESS 632 Via Alamo

CITY San Lorenzo ZIP 94580

REPRESENTING (OPTIONAL) Self and SLVHA

TELEPHONE (OPTIONAL) 510-520-5965

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SPEAKER CARD

Date _____

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject Alternative 4 - East Contra Costa Groundwater Div

PLEASE PRINT

NAME Jack Chen

AFFILIATION ~~Self~~ no affiliation

ADDRESS 15188 Shining Star Lane

CITY San Leandro ZIP 94579

REPRESENTING (OPTIONAL) _____

TELEPHONE (OPTIONAL) _____

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Letter C7. Public Meeting Speaker Cards.

Page 6



SPEAKER CARD

Date _____

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject _____

PLEASE PRINT

NAME Narciso Perez

AFFILIATION DWWA

ADDRESS 2052 Vestal Ct

CITY SL ZIP _____

REPRESENTING (OPTIONAL) _____

TELEPHONE (OPTIONAL) 638-9153

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SPEAKER CARD

Date 4-20-05

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject _____

PLEASE PRINT

NAME MAYOR SHELIA YOUNG

AFFILIATION CITY OF SAN LEANDRO

ADDRESS _____

CITY _____ ZIP _____

REPRESENTING (OPTIONAL) _____

TELEPHONE (OPTIONAL) 577-3355

Please give this card, and any written statements, to Secretary of the District before the meeting convenes.

C7-1

Letter C7. Public Meeting Speaker Cards.

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SPEAKER CARD

Date 4/20/05

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject Comments on the DEIR

PLEASE PRINT

NAME Benny Lee

AFFILIATION _____

ADDRESS 2238 Mariner Way

CITY San Leandro ZIP 94579

REPRESENTING (OPTIONAL) _____

TELEPHONE (OPTIONAL) _____

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SPEAKER CARD

Date 4/20/05

I would like to address the Board of Directors on the following topic(s):

- Public Forum _____
- Agenda No. (s) _____

Subject Money spend on Bay Side Ground Water Project

PLEASE PRINT

NAME IRENE IP

AFFILIATION _____

ADDRESS 1582 Baypoint Ave

CITY San Leandro ZIP CA 94579

REPRESENTING (OPTIONAL) _____

TELEPHONE (OPTIONAL) (510) 357-2083

Please give this card, and any written statements, to Secretary of the District before the meeting convenes.

Letter C7. Public Meeting Speaker Cards.

Page 8



SPEAKER CARD

Date _____

I would like to address the Board of Directors on the following topic(s):

Public Forum _____

Agenda No. (s) _____

Subject Comments on BaySide Groundwater Project

PLEASE PRINT

NAME Shudong Zheng

AFFILIATION Resident

ADDRESS 2332 Riverside Et

CITY San Leandro CA ZIP 94579

REPRESENTING (OPTIONAL) _____

TELEPHONE (OPTIONAL) _____

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SPEAKER CARD

Date 4/20/05

I would like to address the Board of Directors on the following topic(s):

Public Forum _____

Agenda No. (s) _____

Subject Comment

PLEASE PRINT

NAME KAC WENG CHENG

AFFILIATION _____

ADDRESS 2347 Fiji Way

CITY SAN LEANDRO ZIP 94577

REPRESENTING (OPTIONAL) _____

TELEPHONE (OPTIONAL) _____

Please give this card, and any written statements, to Secretary of the District before the meeting convenes.

Letter C7. Public Meeting Speaker Cards.

Page 9



SPEAKER CARD

Date _____

I would like to address the Board of Directors on the following topic(s):

Public Forum _____

Agenda No. (s) _____

Subject Water quality & mitigating factors
measures in place to mitigate potential land problems, or zoning

PLEASE PRINT	
NAME	<u>Ena Perez & Rem Gallegos</u>
AFFILIATION	<u>Partner</u>
ADDRESS	<u>2452 Bermuda</u>
CITY	<u>San Leandro</u> ZIP <u>94527</u>
REPRESENTING (OPTIONAL)	_____
TELEPHONE (OPTIONAL)	_____

5-601-698

Please give this card, and any written statements, to Secretary of the District before the meeting convenes.



SPEAKER CARD

Date 4-20-2008

I would like to address the Board of Directors on the following topic(s):

Public Forum _____

Agenda No. (s) _____

Subject _____

PLEASE PRINT	
NAME	<u>MING NG</u>
AFFILIATION	_____
ADDRESS	<u>1112 ENDICOTT ST</u>
CITY	<u>SAN LEANDRO</u> ZIP <u>CA 94579</u>
REPRESENTING (OPTIONAL)	_____
TELEPHONE (OPTIONAL)	_____

5-601-698

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C7-1

Letter C7. Public Meeting Speaker Cards.



SPEAKER CARD

Date 4-20-2005

I would like to address the Board of Directors on the following topic(s):

Public Forum _____

Agenda No. (s) _____

Subject The Project

PLEASE PRINT

NAME Royan McNulty

AFFILIATION Resident

ADDRESS 1990 Via Barnett

CITY San Lorenzo, CA ZIP 94510

REPRESENTING (OPTIONAL) Myself

TELEPHONE (OPTIONAL) 510-317-9980

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SPEAKER CARD

Date 4/20/05

I would like to address the Board of Directors on the following topic(s):

Public Forum _____

Agenda No. (s) _____

Subject _____

PLEASE PRINT

NAME Charles Bass

AFFILIATION Heron Bay

ADDRESS _____

CITY _____ ZIP _____

REPRESENTING (OPTIONAL) _____

TELEPHONE (OPTIONAL) _____

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Letter C8. Howard Kerr.

RECEIVED

MAY 13 2005

WATER SUPPLY IMPROVEMENTS

HOWARD W. KERR

15388 NORTON STREET
San Leandro, CA 94579-2129

EMAIL hwkerr@aol.com

PHONE (510) 352-1000
FAX (510) 614-7240

Angela Knight, E.B.M.U.D.
Water Supply Improvement Division
375 - 11th Street MS407
Oakland, CA 94607-4240

May 12, 2005

Comment response to Draft EIR on Bayside Groundwater Project

Dear Ms. Knight:

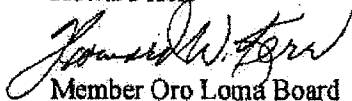
Aquifer storage and recover (ASR) is a proven method of banking excess and "wasted" water for later use when in dire demand, and is a very logical and necessary project to proceed toward alleviating future shortages in the East Bay.

CS-1

California is an arid state that historically experiences cyclical droughts that create severe water shortages and hardships on businesses, industry, residences, and farming.

Those of us that survived previous droughts want you to proceed toward gaining supplemental supplies of available emergency water post haste, and underground storage is a logical method with least detrimental impact on the community.

Howard Kerr



Member Oro Loma Board
Former City Councilman & Vice Mayor of San Leandro
Former President, Washington Homeowners Association
Vice President, Fargo Senior Center Board

Response to Comment C8-1

Comment noted.

Letter C9. Robert C. Hawkins.

LAW OFFICES OF ROBERT C. HAWKINS

April 27, 2005

Via Facsimile, E-Mail and U.S. Mail

Angela Knight
Water Supply Improvements Division
East Bay Municipal Utility District
375 11th Street, MS 407
Oakland, California 94607

**Re: East Bay Municipal Utility District's Draft Environmental Impact Report
("DEIR") for the Bayside Groundwater Project (the "Project")
(SCH No. 2000092044)**

Dear Ms. Knight:

Thank you for the opportunity to comment on East Bay Municipal Utility District's ("EBMUD" or the "District") DEIR for the captioned Project. We represent individuals and groups in and around the Project area and overlying the South East Bay Plain Basin.

On behalf of these clients, and in the hopes of improving the Final Environmental Impact Report, we offer the following comments on the DEIR.

I. Summary of Concerns and Recommendations.

C9-1

We recommend that the District reconsider and revise the DEIR and/or respond to the following concerns during the public review process for the DEIR. Because of these concerns listed below are significant, important and require new and additional information, we believe that the District should revise the document and re-circulate the revised document for public review and comment.

We make these recommendations based on the following concerns:

- (1) The DEIR fails to explain how the Project (Phase 1) accomplishes the Project's objectives and how the District is not committed to the completion of the full Project (Phase 2).

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Newport Beach, California 92660
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Fax: (949) 650-1181

Response to Comment C9-1

Comment noted. Responses to these topics are provided in the responses to the subsequent detailed comments in this letter.

Letter C9. Robert C. Hawkins.

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Angela Knight

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April 28, 2005

- (2) The DEIR fails to describe the Project fully and accurately, thereby undercutting the public's and decision maker's ability to understand the Project, determine impacts of the Project and evaluate mitigation measures.
- (3) The DEIR fails to discuss the levels of analysis in the DEIR for Phases 1 and 2 of the Project and fails to refer to the appropriate types of EIRs allowed under the CEQA Guidelines.
- (4) The DEIR improperly segments the unified conjunctive use Project and fails to analyze adequately the environmental impacts of both phases;
- (5) The DEIR fails to discuss the unified Project's impacts on the rights of overlying landowners.
- (6) The DEIR fails to analyze and discuss adequately cumulative and growth inducing impacts and fails to provide adequate mitigation.

C9-1

II. Introduction: EIR Standards.

An EIR constitutes the heart of the California Environmental Quality Act, Public Resources Code sections 21000 et seq. ("CEQA"): An EIR is the primary environmental document which:

"... serves as a public disclosure document explaining the effects of the proposed project on the environment, alternatives to the project, and ways to minimize adverse effects and to increase beneficial effects."

CEQA Guidelines section 15149(b). See California Public Resources Code section 21003(b) (requiring that the document must disclose impacts and mitigation so that the document will be meaningful and useful to the public and decision makers.)

Further, CEQA Guidelines section 15151 sets forth the adequacy standards for an EIR:

"An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith attempt at full disclosure."

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Letter C9. Robert C. Hawkins.

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Angela Knight

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April 28, 2005

Further, "the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions." Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Association (1986) 42 Cal. 3d 929 (Emphasis supplied.).

In addition, an EIR must specifically address the environmental effects and mitigation of the Project. But "[t]he degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR." CEQA Guidelines section 15146. The analysis in an EIR must be specific enough to further informed decision making and public participation. The EIR must produce sufficient information and analysis to understand the environmental impacts of the proposed project and to permit a reasonable choice of alternatives so far as environmental aspects are concerned. See Laurel Heights Improvement Association v. Regents of the University of California (1988) 47 Cal. 3d 376.

Also, to the extent that an EIR proposes mitigation measures, it must provide specific measures. It cannot defer such measures until some future date or event. "By deferring environmental assessment to a future date, the conditions run counter to that policy of CEQA which requires environmental review at the earliest feasible stage in the planning process." Sundstrom v. County of Mendocino (1988) 202 Cal. App. 3d 296, 308. See Bozung v. Local Agency Formation Com. (1975) 13 Cal. 3d 263, 282 (holding that "the principle that the environmental impact should be assessed as early as possible in government planning."); Mount Sutro Defense Committee v. Regents of University of California (1978) 77 Cal. App. 3d 20, 34 (noting that environmental problems should be considered at a point in the planning process "where genuine flexibility remains"). CEQA requires more than a promise of mitigation of significant impacts: mitigation measures must really minimize an identified impact.

"Deferral of the specifics of mitigation is permissible where the local entity commits itself to mitigation and lists the alternatives to be considered, analyzed and possibly incorporated in the mitigation plan. (Citation omitted.) On the other hand, an agency goes too far when it simply requires a project applicant to obtain a biological report and then comply with any recommendations that may be made in the report. (Citation omitted.)"

Defend the Bay v. City of Irvine (2004) 119 Cal. App. 4th 1261, 1276.

C9-2

As discussed above, the DEIR fails to satisfy many of these standards.

III. Section II: Project Description.

Under the California Environmental Quality Act ("CEQA"), Public Resources Code section 21000, the project description is one of the key parts of any environmental document. As the Court of Appeal in County of Inyo noted long ago,

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Response to Comment C9-2

See response to comment C9-1.

Letter C9. Robert C. Hawkins.

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Angela Knight

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April 28, 2005

"Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, **consider mitigation measures**, assess the advantage of terminating the proposal (i.e., the 'no project' alternative) and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR."

County of Inyo v. City of Los Angeles (County of Inyo) (1977) 71 Cal. App. 3d 185, 199 (bold emphasis supplied; italics in original). In addition, the CEQA Guidelines section 15124 requires that an environmental document describe the project "in a way that will be meaningful to the public, to the other reviewing agencies, and to the decision-makers." Discussion, Guidelines section 15124.

Section II of the DEIR provides the Project description including a discussion of the Project needs and objectives as well as how the Project accomplishes these goals. The Project objectives include:

"The District's overall objectives for the Bayside Groundwater Project are:

- To reliably provide more water for customer use during drought periods than would be available from current water supplies alone,
- To make beneficial use of local water resources, and
- To provide water that complies with state and federal drinking water standards while maintaining or enhancing basin water quality.

"Additional project objectives are:

- To initiate EBMUD groundwater use within the SEBPB to prepare for both near-term (less than five years) and future drought conditions, and
- To collect data to inform decision making regarding (1) whether it is appropriate to implement a Phase 2 larger-capacity facility and, if so, (2) how to design it."

The DEIR states that Project will be divided into two phases: Phase 1 will be "the initial project with 1 mgd annual capacity using the existing 1997 demonstration well and constructing associated facilities adjacent to the existing well in the San Lorenzo area." However, under Phase 1, production will not exceed 1,120 acre feet per year (AFA). Phase 2 includes the "potential future expansion of groundwater facilities to between 2 and 10 mgd average annual capacity." Phase 2 may also include facilities in other areas including San Lorenzo, San Leandro, and/or Oakland.

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Letter C9. Robert C. Hawkins.

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Angela Knight

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April 28, 2005

C9-3 Given the limited production of Phase 1, Phase 1 can meet neither the District's overall objections nor the Project objectives (other than providing data for Phase 2). Although the DEIR is replete with representations that "EBMUD has made no commitment to implement Phase 2," the
 C9-4 Project/Program is the Phase 2 portion of the Project. That is, the real Project is Phase 2. The DEIR fails to present and discuss this analysis in any detail.

C9-5 Article 11 of the CEQA Guidelines outlines various types of environmental impact reports. See CEQA Guidelines sections 15160 through 15170. Section 15161 discusses the standard project level EIR which: "

"examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation."

Section 15167 discusses staged EIRs covers projects which require various approvals and may take over two years before construction may begin. Section 15168 discusses program EIRs which may be prepared on a series of actions that can be characterized as one large project and are related in various ways including being phases of a unified project.

The DEIR fails to use any of this terminology. The Introduction notes that, because the District is unsure whether or if it will develop Phase 2,

"... this EIR only addresses Phase 2 qualitatively. In-depth discussion of potential impacts of Phase 2, if implemented, would be analyzed in a subsequent EIR that would be prepared when details became available on Phase 2 operation and facilities."

Neither the CEQA Guidelines nor CEQA discusses EIRs which evaluate projects qualitatively. Presumably and the language of the CEQA Guidelines, the DEIR is attempting to analyze Phase 1 on the project level, see CEQA Guidelines section 15161, and Phase 2 on a programmatic level, see CEQA Guidelines section 15168.

However, it is unclear that the CEQA Guidelines authorize the use of such a blended document or approach. More importantly, sound practice and the purpose of CEQA advise against such an approach: because an EIR is supposed to be an informational document, moving between levels requires the District and the public to engage in significant and complicated mental gymnastics in order to follow, understand, comment on, respond to comments and certify the document. Rather, sound practice and the spirit of CEQA advises against the blended approach and argues for the following approach:

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Response to Comment C9-3

See Master Response 9 – Need for Project. The Phase 1 Project meets the project objectives.

Response to Comment C9-4

See Master Response 7 – Project Phasing.

Response to Comment C9-5

Because the Phase 1 results may or may not substantiate the feasibility of a Phase 2 project, implementation of Phase 1 does not commit EBMUD to completion of Phase 2. However, EBMUD's goals in selecting the approach to environmental review of the revised project were to fully comply with the requirements of CEQA, evaluate Phase 1 at a sufficient level of detail to provide for project approvals, and to fully disclose the potential for development of Phase 2 at a future time. Therefore, EBMUD decided to evaluate and disclose the potential impacts associated with the implementation of Phase 2 to the extent possible, given the limited data available regarding the design and operation of Phase 2. Given those goals, EBMUD prepared an EIR that describes the overall project as having two phases and clarifies that data developed during Phase 1 will be used to design Phase 2 and, most importantly, that a separate EIR will be required before Phase 2 can be developed. This approach discloses to the stakeholders that approval of Phase 1 may lead to a second phase, and also provides the stakeholders with a subsequent opportunity to provide input into Phase 2.

See also Master Response 7 – Project Phasing.

Letter C9. Robert C. Hawkins.

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- Prepare a program level EIR for the entire conjunctive use Project under CEQA Guidelines section 15168. This analysis will include the qualitative analysis of the entire project and discuss the phases of the Project;
- Prepare a project level EIR for each phase of the Project under CEQA Guidelines section 15168, each of which will address the details of each phase, the impacts of such phase and any mitigation.

We encourage the District to revise the DEIR as a programmatic document and follow the outlines above.

The two phased analysis leads to another problem which would be avoided by the approach suggested above: Under CEQA, the entire project must be analyzed. The DEIR's phased approach fails to analyze the entire Project with the same level of analysis. The DEIR impermissibly attempts to segment the Project and the Project Description. Since its inception, CEQA has forbid "piecemeal" review of the significant environmental impacts of a project. Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 391, fn. 2. This prohibition stems in part from CEQA itself: Public Resources Code section 21002.1(d) requires that an environmental document "consider[] the effects, both individual and collective, of all activities involved in [the] project." Courts have recognized that:

"A curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal ... and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR."

Sacramento Old City Assn. v. City Council (1991) 229 Cal.App.3d 1011, 1023, original italics; Stanislaus Natural Heritage Project v. County of Stanislaus (1996) 48 Cal.App.4th 182, 201.

Further, CEQA Guidelines Section 15165 provides that:

"Where individual projects are, or a phased project is, to be undertaken and where the total undertaking comprises a project with significant environmental effect, the lead agency shall prepare a single program EIR for the ultimate project as described in Section 15168 . . ."

Under the Guidelines, the term "project" is defined as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably indirect physical change in the environment . . ." Id. at CEQA Guidelines section 15378(a). At the other end of the

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C9-5

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Letter C9. Robert C. Hawkins.

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April 28, 2005

spectrum, long-range planning proposals are exempt from EIR requirements: "A project involving only feasibility or planning studies for possible future actions which the agency, board, or commission has not approved, adopted, or funded does not require the preparation of an EIR" CEQA Guidelines section 15262.

C9-5 As indicated above, rather than the DEIR's piecemeal and confusing approach, the better approach is for the District to prepare a program level EIR which would analyze the entire conjunctive use program; then prepare separate project level EIRs for each phase of the Project. This would avoid the impermissible segmenting of the Project.

IV. Sections III and IV: Project Impacts.

CEQA Guidelines section 15126 requires that an EIR address:

"All phases of a project must be considered when evaluating its impact on the environment: planning, acquisition, development, and operation."

C9-6 The DEIR fails to complete this analysis. Specifically, the DEIR fails to analyze and provide any necessary mitigation for the use of basin storage and groundwater rights both of which are owned by overlying property owners. See Civil Code section 829 (stating in full that "The owner of land in fee has the right to the surface and to everything permanently situated beneath or above it.")

As indicated in the Project description, the full Project and each phase will affect overlying landowners rights, both storage and groundwater. The Project proposes to store surface water in the basin for later recovery. However, because water on the surface or in the ground will mix with other native waters, the Project also proposes to recover both stored water and native groundwater. However, because such rights—storage and overlying groundwater—are rights of the overlying landowner, the DEIR must discuss and analyze the Project's impacts on such rights.

It may be that the District claims to have a public servitude for water and water conservation purposes. See Niles Sand and Gravel Company, Inc. v. Alameda County Water District (1971) 37 Cal. App. 3d 924. However, the DEIR fails to discuss this servitude.

Moreover, it is unclear that the District has the benefit of such a servitude under Niles Sand and Gravel. There, the District was formed for among other things conserving waters in the Niles Cone Groundwater Basin. Further, one of the District's express powers was to preserve the basin by all reasonable means from degradation including from salt water intrusion. Id. at 928. Here, the DEIR fails to discuss the District's powers regarding such replenishment and protection activities.

In addition, in Niles Sand and Gravel, the overlying landowner made no claim to either storage or groundwater, but simply sought to be relieved of flooding of its mining operations. Here, the Project proposes to exercise dominion over both storage and native groundwater. As indicated

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Response to Comment C9-6

Overlying landowners in California have a right to withdraw water and put it to beneficial use on their property. Overlying property rights allow anyone in California to build a well and extract their correlative share of groundwater, which is not defined until the basin is adjudicated. The SEBPB has not been adjudicated. In addition, an agency, including a municipal water district such as EBMUD, is authorized to utilize the water it has stored in a groundwater basin and provide water for beneficial uses (see the Groundwater Resources Association's *California Groundwater Management*, 2005, Chapter 6). The injection and extraction of water into the SEBPB by EBMUD does not compromise the right of overlying property owners.

Letter C9. Robert C. Hawkins.

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above, these are rights owned by overlying landowners. The DEIR must address the impacts to such rights and any necessary mitigation.

C9-6 The DEIR should be revised to address this legal issues, discuss the Project's impacts of the rights of overlying landowners, and any necessary mitigation.

V. Sections 5 and 6: Growth Inducing and Cumulative Impacts.

Section 5 addresses the growth inducing impacts of the unified Project qualitatively; Section 6 addresses the cumulative impacts of only Phase 1 of the unified Project. Both discussions are inadequate.

As indicated above, the CEQA Guidelines do not contemplate various levels of analysis, e.g. quantitative or qualitative. Rather, the CEQA Guidelines propose types of EIRs with various levels of analysis. As suggested above, the District should revise the DEIR into a programmatic EIR for the unified Project and then draft separate EIRs for the various Project phases.

C9-7 Moreover, it is unclear whether the Phase 1 analysis allows for such quick and dirty changes between quantitative and qualitative levels of analysis. Indeed, because the DEIR attempts to analyze Phase 1 impacts fully, the level of analysis for it should be consistent and not drift between levels of analysis.

As to Section 5's analysis of growth inducing impacts, it fails. The analysis fails to discuss how much water the unified Project will generate and how that water will increase supplies. Because of this omission, the DEIR cannot adequately analyze the growth inducing impacts of the Project. Likely, such impacts will be significant. Moreover, it appears that the District cannot mitigate those impacts.

C9-8 For instance, Section 5 recognizes that the Project will facilitate growth. It proposes to mitigate this impacts by:

"Mitigation Measure 5-1. To assist local governments in mitigating the growth-related impacts of their land use decisions, the District will:

- Participate in efforts to improve regional planning in the Bay Area;
- Encourage local land use planning agencies to coordinate land use planning functions and provision of utility services; and
- Encourage cities and counties to adopt General Plans and zoning ordinances that favor high-density development and urban infill (which tends to minimize per-capita water use as well as costs and environmental impacts of water delivery systems); provide incentives for more housing near public

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Response to Comment C9-7

The level of analysis provided for cumulative and growth-inducing impacts is adequate and consistent with the requirements of CEQA. The discussion of cumulative impacts does not need to be as detailed as the discussion of a project's direct effects (CEQA Guidelines Section 15130(b)). The cumulative analysis may use a list of past, present, and probable future projects producing related or cumulative impacts in order to provide an adequate discussion of significant cumulative impacts. This list was created for the Proposed Project by contacting the local agencies and utilities in and near the project area, as described in Section 6.1 of the 2005 DEIR. As described in CEQA Guidelines Section 15130(a), where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, the lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

The growth-inducing effects of the Proposed Project are analyzed in Section 5 of the DEIR, and that analysis meets the requirements of CEQA. As indicated in that analysis and in response to comment L5-28, the project is not expected to have growth-inducing impacts because it would provide drought protection for existing users, not new capacity for new users. EBMUD's current water sources are sufficient to meet anticipated demand in normal water years through 2020, based on growth projections derived from data from the Association of Bay Area Governments, the California Department of Finance and local government agencies. The project is designed to avoid the need for water rationing in consecutive dry years, which would otherwise (i.e., in the absence of the project) be expected to occur no more often than in 30 percent of future years. It is hypothetically possible that some planned growth might be inhibited, in the absence of the project, by developers' concern about the specter of possible water rationing. This possibility, however, is highly speculative, as are the types and locations of growth that might result if the hypothetical developers' concerns were ameliorated. Therefore, no further discussion is required, per Guidelines Section 15145.

Nevertheless, in an abundance of caution, Section 5 of the DEIR includes a qualitative general discussion of this hypothetical possibility plus an associated Mitigation Measure (5-1).

To clarify: no growth-inducing impacts are expected; the only potential growth-inducing impacts identified are too speculative for consideration under CEQA; therefore, growth-inducing impacts are insignificant without Mitigation Measure 5.1, which is included in an abundance of caution although not legally required.

It should also be noted that, as explained in DEIR Section 5.4, the decision to approve growth is not EBMUD's, but rather is made by cities and counties within EBMUD's service area in the context of each jurisdiction's General Plan. Each General Plan includes policies and programs for the avoidance or mitigation of significant effects on the environment from planned growth and development. Each community would continue to determine the development pattern and timing of growth - and mitigate the associated environmental impacts, as appropriate - through its respective land use planning and approval processes. Any proposal to increase growth beyond city- or county-approved projections would require further analysis and environmental review by that community.

See also Master Response 7 - Project Phasing regarding the comment that a programmatic EIR should be prepared.

Response to Comment C9-8

Contrary to this comment, Section 5 of the DEIR does not recognize that the project will facilitate growth. See response to comment C9-7.

Instead, as noted in response to comment C9-7, Section 5.3 of the DEIR, in an abundance of caution, discusses the speculative possibility that drought protection achieved by the project might indirectly induce growth by ameliorating developers' concerns about water rationing. Also as noted in response to comment C9-7, no growth-inducing impacts are expected; the only potential growth-inducing impacts identified are too speculative for consideration under CEQA. Therefore, growth-inducing impacts are insignificant without Mitigation Measure 5.1, which is included in an abundance of caution although not legally required.

All findings required by CEQA will be made by EBMUD's Board when, and if, it decides to approve the Phase 1 project. Findings and Statements of Overriding Consideration are not part of this Final EIR.

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Angela Knight

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April 28, 2005

transit; and adopt ordinances that conserve open space, protect wildlife habitat, and conserve energy and water resources."

That is to say, the District will simply cheerlead local agencies and municipalities in dealing with their growth problems. That is not mitigation.

Moreover, because the real mitigation— local plans and zoning restrictions— are in the hands of other agencies, e.g. county and municipalities, it is unclear that such mitigation measures are even feasible or effective.

The DEIR should be revised to propose adequate mitigation measures to the growth inducing impacts. If the District cannot formulate effective and feasible mitigation measures, the it must admit that such impacts cannot be mitigated and attempt to adopt a Statement of Overriding Considerations. See CEQA Guidelines Section 15121.

C9-8

As for Cumulative Impacts, Section 6 completely eliminates any analysis for Phase 2 because "... the location and design of Phase 2 facilities are not known at this time." However, this omission is fatal. At the very least, Section 6 should attempt to perform some sort of analysis, e.g. qualitative, on the sorts or types of cumulative impacts the public may expect from Phase 2. Indeed, while the location of the Phase 2 facilities may be unknown, the type of facilities are known and those facilities likely may have generic impacts regardless of location.

C9-9

Further, this omission again harkens back to the problem with the DEIR: it should be a programmatic document for which such an analysis is expected and accepted.

C9-10

Moreover, Section 6's cumulative impacts is improperly truncated. CEQA Guidelines section 15130(a) provides:

"... a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR."

C9-11

Section 6 improperly interprets this to mean analyze only water related projects. This is improper. For instance, a residential project within the City of Hayward may have impacts on water quality and water supply which could exacerbate the Project's impacts.

The DEIR should be revised and re-circulated as a programmatic EIR with project level EIRs for the various phases. These documents should analyze all growth inducing of the entire unified Project. In addition, these documents should analyze all cumulative impacts including non-water based projects which may have impacts similar to the Project.

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Response to Comment C9-9

As stated on page 6-1 in Section 6.1 of the DEIR, the Cumulative Impact section of the DEIR only addresses Phase 1 of the Bayside Groundwater Project. A thorough cumulative impact analysis for any project requires a full understanding of the impacts of a project (or in this case, a phase of a project) AND knowledge of reasonably foreseeable projects whose impacts, when added to the impacts of the project, could be cumulatively significant. It was determined that an assessment of cumulative impacts for Phase 2 would be too speculative to be meaningful at this time.

This decision was based on two factors. The first was that the location and nature of facilities such as wells and pipelines (and, if required, treatment facilities) for Phase 2 are unknown. The impacts associated with Phase 2 would most likely be associated with temporary construction impacts for facilities; therefore, without knowledge of where these would be located, a useful analysis of construction impacts is not possible. In addition, there is the potential that there could be impacts to groundwater levels under Phase 2; however, until the location, distribution and operation of Phase 2 wells is determined, the extent and location of potential impacts on groundwater cannot be modeled or evaluated. Moreover, as described in Master Response 8 – Project Objectives and Alternatives and Master Response 3 – Monitoring Programs, as part of the Phase 1 project, groundwater quality and levels will be monitored, and the data collected will be used to inform EBMUD regarding whether it is appropriate to implement Phase 2, and if so, how it should be designed.

Secondly, to conduct a thorough and defensible cumulative impact analysis, the lead agency must develop a current list of reasonably foreseeable projects which could have similar impacts to the proposed project. Because many of the impacts would be construction-related, the location of facilities as well as the timing of construction is crucial. Therefore, until the timing of Phase 2 is known, a cumulative assessment of potential construction impacts from Phase 2 and other reasonably foreseeable projects cannot be conducted. Once the timing of a potential Phase 2 is known and the facilities are known, EBMUD would conduct a subsequent EIR which would include a cumulative impact assessment of Phase 2 and a thorough list of reasonably foreseeable projects anticipated at that time. Completing this analysis in a subsequent full EIR on Phase 2 will have the added benefit of using the data collected under Phase 1 to more accurately analyze and project the effects of Phase 2.

Response to Comment C9-10

See Master Response 7 – Project Phasing.

Response to Comment C9-11

The Cumulative Impacts section of the DEIR did not improperly interpret the requirements of CEQA pertaining to identification of reasonably foreseeable projects. The projects included were identified by contacting state and local public agencies and utilities and reviewing environmental reports completed for actions within the Phase 1 project area. Although the majority of the projects identified are by coincidence water-related, that was not a criterion for their inclusion.

Letter C9. Robert C. Hawkins.

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VI. Miscellaneous Issues.

C9-12 [Although we requested copies of the printed DEIR on April 21, 2005, as of this date, we have yet to receive the printed copy. If the District's web site contained a complete copy, this would not be a significant problem. However, the version on the web site is incomplete and crucial sections, e.g. Section 3.1, cannot be downloaded. Although the District staff (Ms. Knight) helpfully provided an electronic copy by e-mail, it did not have the graphics. Further, Section 2 regarding the Project description was incomplete.

VII. Conclusion.

C9-13 [As indicated above, the DEIR should be revised as a program EIR with two project level EIRs for each phase. In addition, these documents should discuss the Project's impacts on overlying landowners' rights for storage and groundwater.

Again, thank you for the opportunity to comment on the DEIR. Please provide us with a copy of the Final EIR (comments and responses to comments) as well as notices of any upcoming hearings on the Final EIR so that we may fully and fruitfully participate in the review process.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

OFFICES OF ROBERT C. HAWKINS



By: Robert C. Hawkins

RCH/kw

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Response to Comment C9-12

Comment noted. See Master Response 10 – Public Outreach and Notice, and DEIR Review.

Response to Comment C9-13

Comment noted. These topics are addressed in the responses to comments delineated elsewhere in this letter.

Letter C10. Alfred Kwok.

15204 Beatty Street
San Leandro, CA 94579

April 22, 2005

RECEIVED
APR 25 2005
WATER SUPPLY IMPROVEMENTS

East Bay Municipal Utility District
Water Supply Improvements Division
P.O. Box 24055, MS#407
Oakland, CA 94623

Attention: Angela Knight

BYSPECIAL DELIVERY

Re: PROPOSED BAYSIDE GROUNDWATER PROJECT

Dear Angela:

At a Special Meeting on April 20, 2005 in Washington Manor Elementary School, Ms. Shelia Young, Mayor of the City of San Leandro requests the Board of Directors of EBMUD to grant an extension of 120 days pertaining to the above-mentioned project.

We, citizens of San Leandro fully and without any reservation support our Mayor's request by appending our names, addresses and telephone numbers on the attached sheets of paper. We feel that the Mayor's request is extremely reasonable and we are confident that our request will not be trashed but acceded to.

Thank you very much.

Sincerely,


Alfred Kwok

cc: Mayor Shelia Young
San Leandro City Hall
835 E. 14th Street
San Leandro, CA 94577

Tony Santos
Councilmember
San Leandro City Hall
835 E. 14th Street
San Leandro, CA 94577

C10-1

Response to Comment C10-1

Comment noted. See Master Response 10 - Public Outreach and Notice, and DEIR Review.

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KEITH TSUI	15186 DISCOVERY ROAD San Leandro	895-1579
STEVE	15186 DISCOVERY Rd San Leandro	867-9083
ANDES LEUNG	15329 Elvina Dr. San Leandro	614-5769
ANDRE LEUNG	15329 Elvina Dr. San Leandro.	614-5769
Mr. Long Ho	227 Peralta Ave. San Leandro	633-1225
Yuen Yung Wong	227 Peralta Ave San Leandro	633-1225
Sam Ho	227 Peralta Ave, San Leandro	633-1225
Simon Ho	227 Peralta Ave, San Leandro	633-1225
Vaison Ho	227 Peralta Ave, San Leandro	633-1225
JIM IP	509 DOLORES AVE, SAN LEANDRO	357-5195
MARGARET LUK	509 DOLORES AVE., SAN LEANDRO	357-5195
ALICE LAU	1630-142 nd Ave, San Leandro CA	94878 483-6340

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Rosalind Chan	706 CROCUS San Leandro	510-895-0425
GILBERT CHAN	706 CROCUS DR San Leandro	" " "

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C10-1

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Yun Shya Cheng	2347 FIJI WAY S.L.	614 8256
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Heinrick So	15027 Zinnia St S.L.	352-8246
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Wong Chan	1606 Silver Leaf Dr, San Lorenzo	276-2281
Jerome Chan	1606 Silver Leaf Dr, San Lorenzo	276-2281
Hoi Xam Chan	1606 Silver Leaf Dr, San Lorenzo	276-2281

C10-1

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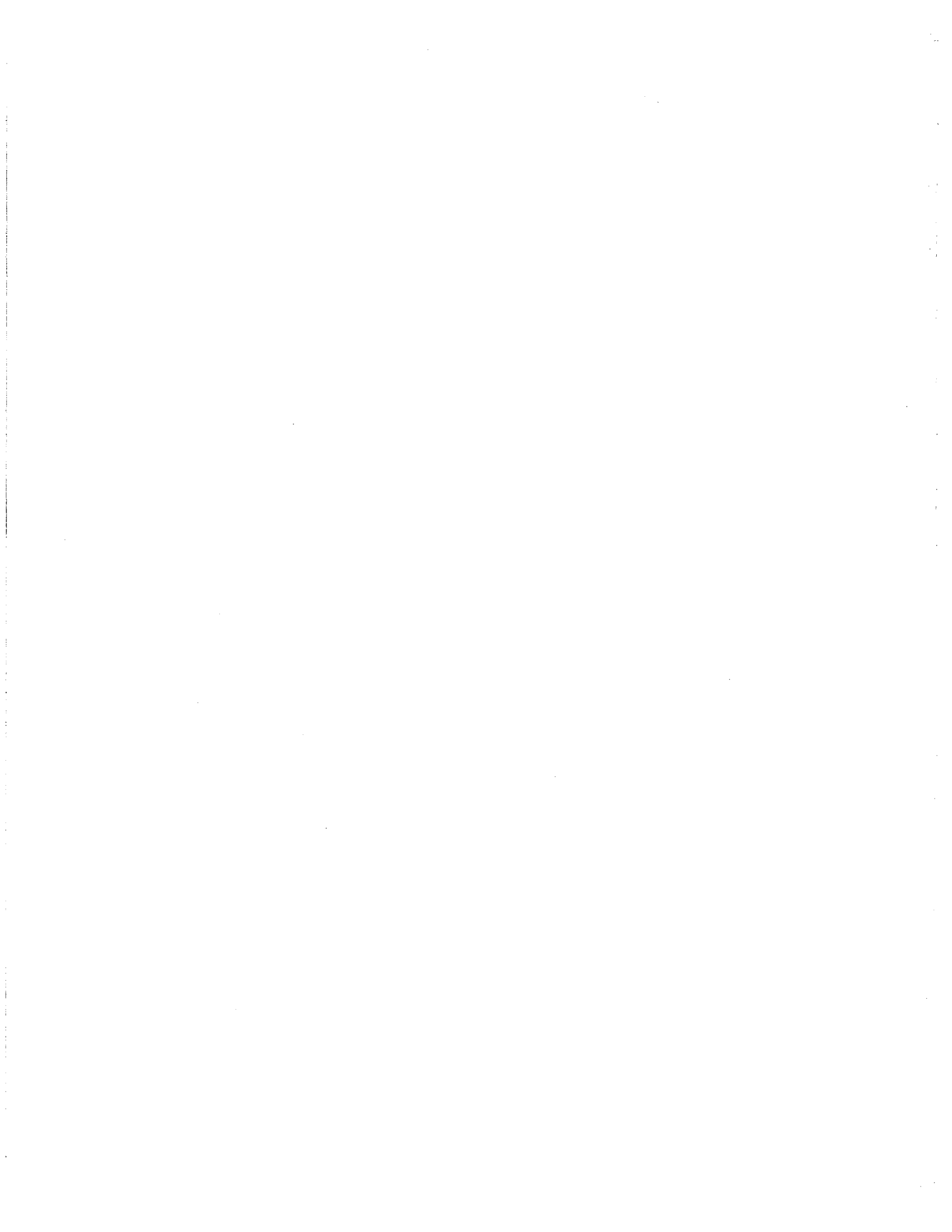
C10-1

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Wang W. G.	1226 Amber Ct San Leandro	(415) 633-2486
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C10-1



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Attachment A
Technical Memorandum: A Summary of
Operating Aquifer Storage and Recovery
Case Systems

East Bay Municipal Utility District, April 7 2005.

TECHNICAL MEMORANDUM

A Summary of Operating Aquifer Storage and Recovery (ASR) Systems

1.0 INTRODUCTION

Aquifer Storage and Recovery (ASR) projects have been developed to address the supply needs of water utilities and their customers throughout many regions of the United States. The purpose of this Technical Memorandum (TM) is to document the location of operating ASR projects and to provide system details if available. The TM also gives specific attention to projects that are similar or of interest relative to East Bay Municipal Utility District's (EBMUD) proposed Bayside Groundwater Project. Projects of interest include those located along the west coast of the US and those with injection and extraction rates of several mgd or greater. It is likely that there are projects that are not included in this study since the use of ASR technology is rapidly expanding.

Research conducted to prepare this TM included reviews of agency web sites and of available technical reports (e.g., studies, research papers, magazine articles, etc.). Telephone calls were also placed with utility representatives in an effort to gain additional insight into their ASR operations. In addition, personal conversations took place with various utility representatives as well as with ASR technical experts to further develop this TM.

2.0 ASR USE IN THE UNITED STATES

In the US, ASR wells have been used as a means to store water since the late 1960's.¹ EBMUD has identified over 60 active ASR operations in the US (See ASR location Map, Figure 1). This number is a sharp increase from the 3 that were documented as being in operation in the early 1980's.² In addition, approximately 100 new ASR facilities are thought to be in development.¹

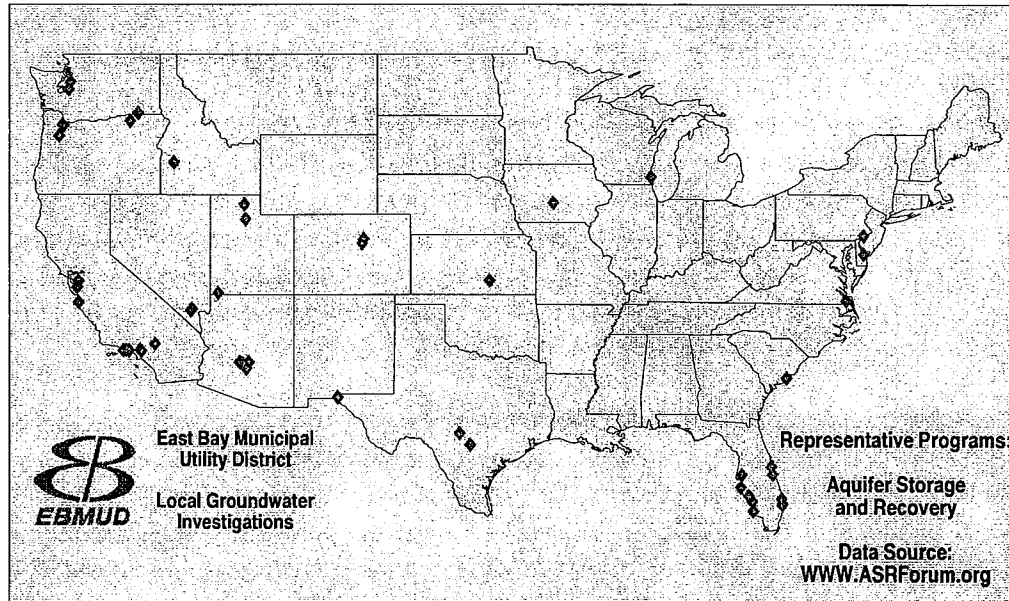
As shown on Figure 1, ASR sites are primarily found in growing regions of the US. Examples include the Florida coast (both the Gulf and Atlantic), Arizona (metro Phoenix and Tucson), Nevada (Las Vegas), Texas (El Paso and San Antonio) and the west coast (the Cities of Seattle and Portland, and numerous California locations). There are also a number of sites located in and adjacent to New Jersey.

Research in the ASR field has expanded over time. Studies have shown that generally speaking, ASR projects lead to water quality improvements and do not negatively impact the groundwater.²

¹ ASRForum.org website, Pyne, R. David G., ASR Systems LLC, March 2005

² "Aquifer Storage and Recovery", Awwa Research Foundation, March 2001

Figure 1
ASR Projects
US Location Map



3.0 ASR PROJECTS OF INTEREST

3.1 Las Vegas Valley Water District and Associated Agency Programs

Within the Las Vegas Valley groundwater basin, the Las Vegas Valley Water District and the City of North Las Vegas artificially recharges unused Colorado River water into the primary aquifer through the use of recharge wells that operate during the winter months. Since the program began in 1987, Southern Nevada has stored about 280,000 acre-feet of water in the local groundwater basin for future use. Southern Nevada Water Agency (SNWA) purveyor members are allowed the ability to bank Colorado River water in the future, utilizing unused and surplus Colorado River water as available.

In addition, the SNWA also performs recharge on behalf of the Las Vegas Valley Groundwater Management Program. This recharge is not intended for recovery, but to assist in managing the groundwater aquifer for the benefit of well users. As of 2004, the SNWA has provided about 9,000 acre-feet of recharge under this program.

Water stored in the aquifer is used to provide emergency summer supplies. 89 wells are in place. Of the 89, 60 are currently used in recharge and recovery operations. A portion of the 60 wells (26 total) are recharge only. Withdrawal rates are a function of a particular well, but in total range in the 800 to 4,000 gpm (approximately 1 to 6 mgd). In

total, the LVVWD has the ability to extract groundwater up to a maximum rate of 80 mgd.³

The LVVWD ASR project has been in operation for over 15 years, during which time the agency has been able to develop extensive ASR experience. Their system is typically mentioned as an example of a successful, large-scale program which enables drought contingency planning, results in basin recharge, creates no adverse environmental impact, and meets the water quality needs of the customer base.

3.2 Operating ASR Projects in California

Table 1 provides details regarding several ASR projects that are currently in operation in California. Projects that are of greater interest are described in the paragraphs that follow the table.

³ Telephone Conversation with Erin Cole, LVVWD, Monday March 14, 2005.

Table 1
Operating ASR Projects in California

Location / Owner	Description / Details
City of Pasadena	The City began operation in 1992. 2 wells are in place. Water is sourced from the Metropolitan Water District of Southern Cal. (Met. WDSC).
City of Oxnard	The City began operation of the ASR project in 1991. 4 ASR wells are in operation with an 11 mgd recovery capacity. Water is sourced from Met. WDSC. During the period of 1989 through 1995, the City injected approximately 11,800 AF of water into the local groundwater basins with a similar amount extracted for distribution in the Oxnard Water System as part of the City's seasonal water storage program. ⁴
Goleta Water District	The District began ASR operations in 1978. 9 ASR wells are present (as are several additional injection wells). The capacity of the wells vary but on average can extract at a rate of 1 to 2 mgd. Water is sourced from the Cachuma Reservoir.
Calleguas Municipal Water District	The District began ASR operations in 1992. In 1994 2 ASR wells were in operation. 4 additional wells have since been constructed. Plans are to expand the system by as many as 14 additional wells. Water is sourced from Met. WDSC. The extraction capacity of each well is approximately 2 mgd.
City of Camarillo	Operated an ASR system (by converting an existing well into an ASR operation). Shut down that operation recently with plans to construct a new ASR system. Water is sourced from the State Water Project
Zone 7 Water Agency, Pleasanton	ASR project consists of a retrofit of a single existing high capacity well. The well has not been used of late. Zone 7 technical staff supports the development of an ASR program and expects to begin the planning effort in the near future. ⁵
Santa Clara Valley Water District, San Jose, California	1 ASR well in operation. This well injects at a rate of approximately 0.4 mgd. Extraction wells are adjacent to the injection well. ⁶
Monterey Peninsula Water Management Dist.	1 ASR well in operation as a "demonstration" project. Injection limited by current permit to 1.4 mgd rate (350 Acre FT. max volume). Extraction at a max rate of 2.5 mgd (to not exceed Cal. Water's distribution system limits). Plans in place to request permit to inject up to a max. total volume of 7,000 Acre Ft / Year. ⁴

⁴ www.oxnardwater.org/documents/plans/uwmp-report.htm, February 28, 2005.

⁵ Telephone Conversation with David Lunn of Zone 7 Water Agency, Tuesday March 22, 2005.

⁶ Telephone Conversation with Steve Tanner of Padre Associates, Inc., Monday March 28, 2005.

Projects in Southern California are of interest, due to the fact that they have either been in place for a longer period of time, or because their design and/or operational characteristics are close to those of the Bayside Groundwater Project. The project by Monterey Peninsula Water Management District is in relative close proximity to the Bayside region and illustrates that such a facility can be successfully operated, with no subsidence and water quality problems observed.

Details of two Southern California efforts, that of the Calleguas Municipal Water District and of the Goleta Water District, are provided for illustrative purposes.

3.2.1 Calleguas Municipal Water District ASR Project

In an effort to improve water supply reliability for existing and future Ventura County water users, the Calleguas Municipal Water District began implementing the Las Posas Basin ASR Project in the late 1990's.

The project's intended purpose is to provide for the long-term storage of drinking water imported from California's State Water Project. Ultimately, up to 300,000 acre feet of water, or roughly a three (3) year supply for the service area, will be stored in the Las Posas groundwater basin through the program.

Together with other projects currently being implemented by the District, the Las Posas program is intended to "virtually drought proof the Calleguas service area and ensure an adequate drinking water supply in the event of outages of state water facilities due to earthquakes or other emergencies".

The project includes the construction of 26 wells and approximately 30 miles of pipeline (connecting the wells to the District's existing distribution system). The District anticipates that the project will be completed by 2008.

According to George Mulligan, the District's ASR operations manager, they have not experienced water quality or subsidence issues over time. Similarly, other impacts to landowners have not been observed (e.g., artesian / flowing wells, etc.). Operational information learned by staging the construction has enabled them to adjust their designs to improve system performance.⁷

3.2.2 Goleta Water District ASR Project

As noted in Table 2, the Goleta Water District has had an operating ASR project since the late 1970's, with a more significant operation in place since the late 1990's. During the system's more recent operational period, the wells that are in place have primarily been used to inject and store water in the aquifer.

⁷ Telephone conversation with George Mulligan, Calleguas Municipal Water District, March 4, 2005.

As stated in the Goleta Water District's 2005 Water Supply Update, groundwater and in particular the ASR effort has served to back-up the District's water supply. This water has not been drawn upon in 10 years. The District estimates that it could take as much as 1/3 of its supply from groundwater for ten straight years if necessary (long term demand is estimated to be 173,000 Acre-Ft/Yr).

Since the District has not been withdrawing water, the primary concern of local residents has been on the creation of artesian conditions. However, due to the nature of the aquifer (storage volume available, hydraulic properties, etc.), that condition has not been observed.⁸

3.3 Other Projects of Interest

As stated previously, ASR projects can now be found throughout many regions of the US. Areas where rapid growth is occurring correspond to the location of the greatest number of projects.

Florida has projects that ring their coastline (both along the eastern Atlantic Coast as well as along the Gulf Coast). For the purposes of this TM, a review of these projects indicates that those that can be found in the southwestern portion of the State have elements that are of interest to EBMUD, and hence some time has been devoted to a description of those efforts in this TM.

3.3.1 Recent Southwest Florida ASR Developments

The following summary of recent ASR developments in Southwest Florida is based on information presented at a technical conference held by the American Groundwater Trust in 2004.⁹

Of the numerous projects, the City of Tampa's effort to use its ASR project as a drought supply is similar to EBMUD's Bayside Groundwater Project. The following section details the City's efforts

3.3.1.1 City of Tampa ASR project

Since the late 1990's, the City of Tampa has embarked upon an ASR project to address the City's rapid growth combined with its limited water supplies (in particular the limits of their current supply during times of drought). Details of the Tampa ASR facilities are provided in Table 2 below:

⁸ Telephone conversation with Kevin Walsh, General Manager, Goleta Water District

⁹ "Recent ASR Developments in Southwest Florida", Mark McNeal, P.G., CH2M HILL, American Ground Water Trust, Aquifer Storage Recovery IV Conference Proceedings, 2004.

Table 2
City of Tampa
Existing ASR Facility Details¹⁰

Project Element	Details
Wells	8 Existing ASR Wells
System Injection / Recovery Rates	Combined rate of 8 wells = 10 mgd withdrawal (withdrawal sustainable for a period of 100 days = their expected length of drought period / when surface supplies would not be available)
Maximum Aquifer Storage Volume	1 billion gallons
Misc. System Elements	Conveyance Pipeline to direct recovered water to existing treatment plant

The ASR project implemented by the City faced the following challenges:

- Numerous domestic well owners
- The potential for sinkhole development in Florida's limestone geologic environment
- The potential for response in nearby lakes
- Impacts to urban wetlands
- Withdrawal challenges (the need to design a system that allowed withdrawals in dry years and recharge in wet years)
- Water quality challenges (the need to design for fluctuating chloride concentrations)

The results of the implementation and operation of Tampa's ASR system has shown that the above issues can be successfully addressed. Based on system operation since prior to 2000, the system has been shown to:

- Be able to co-exist with residents
 - No impacts to private well owners have been encountered
 - No sinkholes occurred that were attributed to ASR pumpage
 - No ASR-related impacts occurred within the surrounding neighborhood
- Lake level response was deemed to be insignificant

¹⁰ www.tampagov.net

- The system was able to provide approximately 15% of the City of Tampa's water supply during the 2000-2002 drought (the average daily demand is approximately 78 mgd, hence the system supplied approximately 10 mgd during drought months).

3.3.1.2 Other Southwest Florida ASR Projects

Aside from the City of Tampa's efforts, 6 other Southwest Florida water providers have potable water projects. Of those, Manatee County was the first to install and operate ASR wells (as of 1983). Their operation was recently expanded to 6 wells with a total capacity of 10 mgd. Other operations in the region include the Peace River Facility (21 ASR wells, 24 mgd capacity). The remaining communities have smaller ASR programs, yet are planning to expand their efforts greatly over the upcoming years.

Although each of the respective 7 southwestern Florida agency program has had its challenges, ASR is viewed as a very cost effective, safe alternative water supply option of significant importance to the region's water supply.

3.3.2 Projects in the Western US (other than California and Nevada)

Aside from projects that have been constructed in California and Nevada as previously detailed, there are ASR projects operating in several other western states. Table 3 has been prepared to briefly detail efforts underway in Arizona, Oregon and Washington.

Table 3
Operating ASR Projects in the Select Western US States
(not including the States of California and Nevada)

State	Location / Owner-Operator	Description / Details
AZ	Sun Lake City; Pima Utility	The ASR program began operation in 1998. 3 ASR wells are in place with a capacity to store 2.4 mgd of reclaimed water (recovery of water for use as ag. irrigation water)
	Chandler; Municipal Utilities Dept.	The ASR program began operation in 2001. 4 operating ASR wells are in place to receive reclaimed water from the Ocotillo Water Reclamation facility. 5 op. ASR wells are in place - receive water from the Airport Water Recl. Fac.
	City of Fountain Hills	The City operates 3 ASR wells to store reclaimed water.
	City of Glendale	4 ASR wells are in operation. The wells are located at the Arrowhead WWTP. Their purpose is to store reclaimed water.
OR	Salem; City of Salem Public Works Dept.	The ASR system began operation in 1996. 6 ASR wells have been installed. The water is sourced from the North Santiam River.
	City of Beaverton	The ASR system began operation in 1998. 4 ASR wells have been installed.
	Beaverton; Tualatin Valley WD	The ASR system began operation in 1999. 2 ASR wells were installed. Water is sourced from the Bull Run Watershed.
	City of Pendleton	The ASR system began operation in 2003. 2 ASR wells have been installed. The system capacity is 5 mgd. Water is sourced from the Umatilla River.
	City of Tigard	The ASR system began operation in 2003. 1 ASR well is in place. The well's capacity is 1 mgd. Water is sourced from the Trask River.
	City of Portland	The ASR system began operation in 2003. 2 ASR wells are in place. The system's capacity is 3 mgd. Water is sourced from the Bull Run Watershed.
WA	Federal Way; Lakehaven Utility District	The ASR system began operation in the early 1990s. 1 ASR well is in place. The water source is untreated groundwater from the shallow aquifer, stored in the deeper aquifer.
	Seattle; Seattle Water Dept.	The ASR system began operation in 1992. 3 ASR wells are in place. Water is sourced from the Cedar River.
	City of Walla Walla	The ASR system began operation in 2000. 2 ASR wells are in place. The system's capacity is 4 mgd. Water is sourced from Willow Creek.

4.0 PLANS FOR NEW ASR PROJECTS IN CALIFORNIA

In order to meet the challenge of a growing population coupled with limited water supplies (in particular supply shortfalls that occur during times of drought), many of California's water agencies are looking at developing an ASR program or expanding their existing programs. Table 4 notes several programs that are underway or are planned.

Table 4
A Partial Listing of Proposed ASR Projects / Efforts Underway in California

Agency	County	Project Proposals / Plans
Crescenta Valley Water District	Los Angeles	CVWD is evaluating the potential to develop a recharge and conjunctive use program in the Verdugo Basin. Inject and extraction rates will be among the technical issues evaluated.
San Bernardino Valley Water Conservation District	San Bernardino	SBVWCD is constructing two monitoring wells in the San Bernardino Valley to evaluate recharge operations and groundwater levels and flows. Results of this effort will be used to plan for future program(s).
Monte Vista Water District	San Bernardino	MVWD will construct two ASR wells as part of a program to increase recharge operations / reduce basin overdraft. Well plans have not been finalized, but are anticipated to allow operation in the 2-4 mgd range.
Calleguas Municipal Water District	Ventura	CMWD has an expansive ASR program (including distribution pipeline construction elements and ASR well construction components). CMWD is in the process of obtaining permits and financing. Wells constructed that will be used in this operation can inject and extract at a rate of approximately 2 mgd.
City of Roseville	Placer	The City is developing an ASR well for use in augmenting their water supply needs. Currently they are in the permitting stage and have completed pilot testing. The City's well can inject at a rate of approximately 2 mgd and extract at a rate of approx. 4 mgd.
City of Tracy	San Joaquin	The City is developing an ASR well for use in augmenting their water supply needs. Currently they are in the permitting stage and hope to begin pilot testing following agency approval to begin the field effort. Plans call for injection at a rate of approximately 1.4-1.7 mgd, and extraction at a rate of approx. 2.9-3.5 mgd. The City hopes to seasonally store up to 4,600 AF/Y of drinking water.
Monterey Peninsula Water Agency-	Monterey	MPWA is in the process of obtaining permits to operate an ASR facility that will recharge up to 7,000 AF / Yr (based on the positive experience of their demonstration ASR project). The well that would be used for recharge purposes operates at rates ranging from 1.4 to 2.5 mgd.
Zone 7 Water Agency	Alameda	Zone 7 is in the process of evaluating the potential of an ASR program. The rate of injection / extraction will be determined as the program progresses.
Numerous California Water Agencies	NA	Numerous California Water agencies are involved in projects that include surface basins used to recharge the groundwater, and wells constructed for extracting stored water. These programs over time may also include injection wells, as dependent on the growth and expansion of the particular program. Extraction wells on avg. operate in the several mgd range (dependent on facility).

5.0 CONCLUSION

EBMUD's Survey shows that ASR projects are in use throughout the United States. They are a tested and relied upon method of water supply, particularly in the role of providing citizens with much-needed supplemental and/or drought supply.

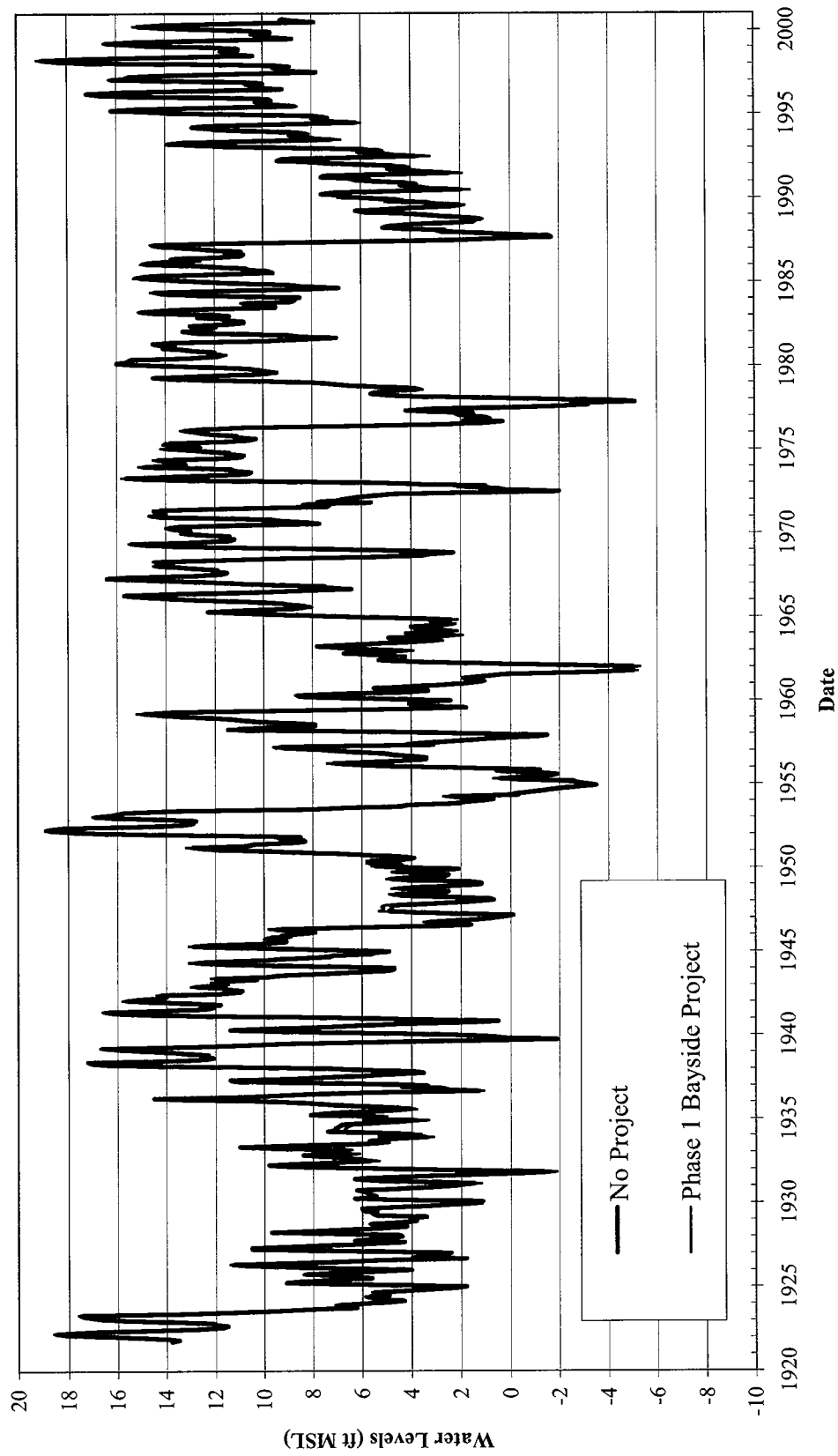
As urban water needs become more pressing, ASR projects are becoming more and more common. Some ASR projects are quite large, with injection rates ranging up to 80 mgd and total volume of water stored over time approaching 300,000 AF¹¹. By comparison, the Bayside Groundwater Project is small, with the currently proposed Phase I having an injection rate of 1 mgd and a 391 AF / year average annual project yield.

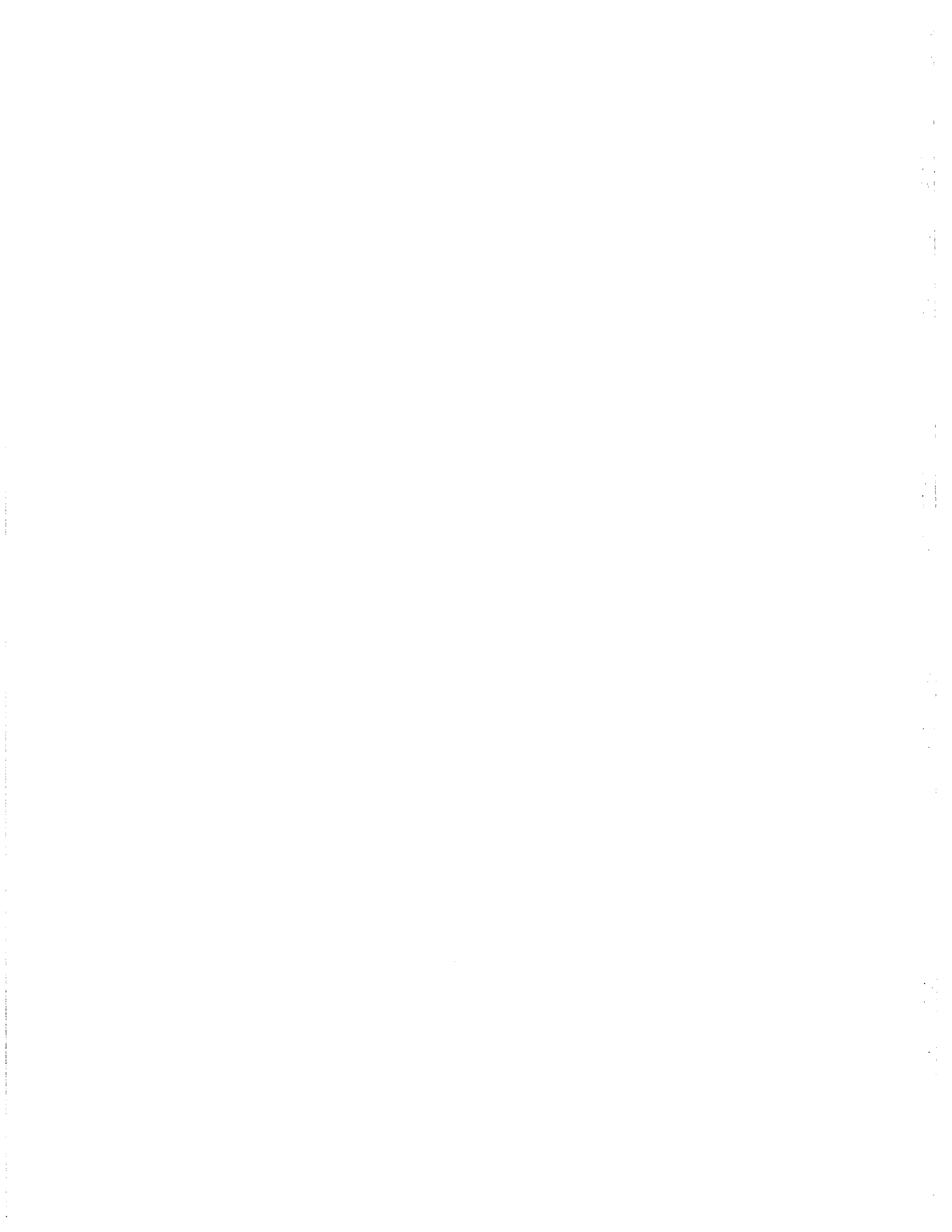
¹¹ "Aquifer Storage and Recovery", data for the Las Vegas Valley ASR project, Awwa Research Foundation, March 2001

Attachment B
Figure 13: Simulated Water Levels
at Niles Cone Indicator Well

From *Technical Memorandum, Bayside 1-MGD Groundwater Project – Evaluation of Project Effects*. CH2M HILL, February 2005.

Figure 13: Simulated Water Levels at Niles Cone Indicator Well





Attachment C

Technical Memorandum: Chloroform Health Risk Memorandum

Source: Geier and Geier 2001. Prepared for EBMUD.

Please note that this document was used during preparation of the 2001 DEIR.
It is not applicable to the 2005 DEIR because aeration is not included as part of the current
Proposed Project.

CHLOROFORM HEALTH RISK

A screen level health risk analysis was conducted for the chloroform emissions that will result from the air stripping process. The dispersion estimates developed for the radon emissions were applied to the chloroform emission rate developed by EBMUD staff for two chlorination scenarios ("normal" and "break point" chlorination).

Chloroform is a suspected carcinogen. The risk associated with chloroform inhalation depends upon the lifetime exposure "dose." Risk to downwind receptors depends upon how much chloroform is released at times when they are present downwind of the release point, and the degree of atmospheric mixing during the episode. The adopted chloroform risk factor is an excess cancer risk of 5.3 in one million for each one $\mu\text{g}/\text{m}^3$ inhaled over a 70-year lifetime, 365 days per year, 24 hours per day, outside one's residence.

The radon calculation was based upon the worst single hour of the year producing the highest ground level concentration. The annual average exposure was presumed to be 10 percent of the single peak height. This assumption is a worst-case screening level calculation that underestimates the variation in both turbulence and wind direction, as well as assuming that people spend their whole life on their front porch. When these overpredictive assumptions are applied to the proposed air stripping operation, the following predicted public chloroform exposure results at the nearest residence:

$$\text{Maximum annual chloroform exposure (normal)} = 4.8 \mu\text{g}/\text{m}^3 \times (T/70)$$

$$\text{Maximum annual chloroform exposure (break-point)} = 9.2 \mu\text{g}/\text{m}^3 \times (T/70)$$

where T is the total number of years of air stripper operations in the next 70 years.

The public health risk is calculated as follows:

$$\text{RISK} = \text{EXPOSURE} \times 5.3 \times 10^{-6}$$

The screening level health risk as a function of air stripper operations is conservatively estimated as follows as a function of chlorination level:

<u>Years of Operation</u>	INDIVIDUAL RISK (per million)	
	<u>Normal</u>	<u>Break-Point</u>
1	0.4	0.7
7	2.5	4.9
14	5.1	9.8
35	12.7	24.4
70	25.4	48.8

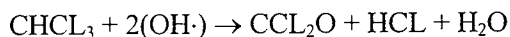
A predicted risk of less than one in a million is considered a "de minimis" health risk. Risks of less than 10 in

a million are considered "acceptable" under BAAQMD risk guidelines. Risks exceeding ten in a million are potentially significant. The above screening calculations show that the risk would be significant in 15 years of system operation at "break-point" chlorination and in around 30 years of operation with "normally" chlorinated water. A refined risk assessment using actual meteorological data instead of synthetic worst-case assumptions may show that the risk never reaches significant levels under any operational scenario.

CHLOROFORM BREAKDOWN

Chloroform ultimately is broken down in the atmosphere by direct ultraviolet dissociation, or by attack from hydroxyl (OH) radicals. Because ultraviolet light intensities are very low in the lower atmosphere, the reaction rate is slow. The average lifetime of a chloroform molecule in the lower atmosphere is 0.55 year (almost 7 months) between generation and destruction (Seinfeld & Pandis; Atmospheric Chemistry & Physics, 1998). Under strong U.V. light, the process is much faster. Even highly stable halocarbons such as "freon" are rapidly photodissociated under intense U.V. such as in the stratosphere where they contribute to the "ozone hole." At the earth's surface, however, the chloroform released by the stripping tower will have made several revolutions around the earth before it is destroyed.

The byproducts of this destruction are generally free chlorine atoms which recombine with hydrogen to form hydrochloric acid (HCL). A simplified breakdown reaction for chloroform (CHCL₃) is as follows:



where CCL₂O is phosgene, a nerve gas developed during World War I. Several chemical laboratory accidents have been lately reported in using chloroform because of a change in the stabilizer used to package the material. Phosgene gas has been produced inside the chloroform dispensing bottle after many months of storage in concentrations of thousands of parts per million. The phosgene produced from the release of chloroform from the air strippers, however, will be present only in parts per quadrillion or quintillion by the time the atmospheric breakdown process is finished. Chloroform breakdown byproducts such as phosgene are therefore not a local health issue because of the slow breakdown reaction time (6+ months).

Attachment D

Air Toxics Impact Analysis for San Lorenzo Air Stripper (revised)

Please note that this document was used during preparation of the 2001 DEIR.
It is not applicable to the 2005 DEIR because aeration is not included as part of the current
Proposed Project.

Air Toxics Impact Analysis for San Lorenzo Air Stripper

PREPARED FOR: John Schroeter/EBMUD

PREPARED BY: John Castleberry/CH2M Hill
Keith McGregor/CH2M Hill

COPIES: Jay Witherspoon/CH2M Hill

DATE: March 9, 2001

Introduction

This technical memorandum presents the methodology and results of an analysis of incremental lifetime cancer risk for a proposed air stripper in San Lorenzo, California. The risk analysis was conducted using a dispersion model approved by the U.S. EPA, and health risk factors developed by the California Office of Environmental Health Hazard Assessment (OEHHA). The inhalation exposure pathway was assessed for a single compound, chloroform, which is released to the atmosphere through 4 identical stacks.

The results of this risk analysis are considered approximate because they are based on modeling a single year of meteorological data. Our preliminary discussions with a meteorologist at the Bay Area Air Quality Management District (BAAQMD) indicate that up to 5 years of meteorological data may be required in the model. Because of the delay in acquiring meteorological data from the National Climatic Data Center, the additional 4 years of data are not yet ready for use. Our experience suggests that the risk results from using 1 year of meteorological data could differ from the 5-year results by as much as ± 50 percent.

The following 3 operating scenarios were analyzed in this study:

- 41 $\mu\text{g/L}$ influent chloroform concentration, 25-foot release height
- 50 $\mu\text{g/L}$ influent chloroform concentration, 25-foot release height
- 82 $\mu\text{g/L}$ influent chloroform concentration, 25-foot release height

Results of the risk analysis are presented in the form of risk contours shown over a map of the project vicinity.

Source Description

The proposed air stripper will be located near the intersection of Worthley and Grant Streets, within an area bounded by San Lorenzo Creek to the north, Bockman Slough to the south, the bay mudflats to the west, and the railroad tracks to the east. The exact location of

the stripper has not yet been determined. As a result, the stripper was arbitrarily modeled in the approximate geographic center of the project area. Because the terrain is relatively flat, the risk contours would simply follow the stripper to its actual location with no significant change in size or shape.

Stack Parameters

The air stripper was modeled as a series of 4 identical stacks arranged along an east-west axis with an 18-foot center-to-center distance between stacks. Each stack was represented with the following parameters in the dispersion model:

Release height	25 feet
Exhaust port diameter	36 inches
Diameter of towers	12 feet
Exhaust flow rate	10,500 cfm per stack
Exhaust velocity	25 feet/sec
Exhaust temperature	65°F

The aerodynamic effects of the 12-foot diameter towers on plume dispersion were accounted for in the model.

Emissions

Emissions were calculated by assuming all of the chloroform present in the influent water would be released to the atmosphere through the exhaust ports without abatement. A water influent rate of 15 million gallons per day was assumed. The following emission rates were used in the risk analysis:

Influent Chloroform Concentration ($\mu\text{g/L}$)	Chloroform Emission Rate, All 4 Stacks Combined (lb/yr)
41	1,874
50	2,285
82	3,747

Modeling Approach

Annual average concentrations of chloroform in the project vicinity were predicted using the Industrial Source Complex - Short Term (ISCST3, v. 00101) dispersion model. ISCST3 is approved by the EPA for modeling a wide variety of stationary industrial facilities. The following options were selected in ISCST3:

- Rural dispersion coefficients
- Regulatory default features
- Flat terrain

Meteorological data from the Oakland International Airport were used in ISCST3. The data consists of 1 year of consecutive hourly parameters (such as wind speed, wind direction, temperature, mixing height, and atmospheric stability) for the year 1997. The BAAQMD

considers Oakland Airport data as representative of the project site (Jim Cordova, personal communication, March 5, 2001).

Four additional years (1993-1996) of meteorological data are currently on order with the National Climatic Data Center; these data are expected shortly. For a formal submittal, the BAAQMD may require up to 5 consecutive years of meteorological data to be used in the dispersion modeling. Therefore, the results in this memorandum, which are based on 1 year of data, should be considered preliminary and approximate. The risk results could change by up to ± 10 percent¹, should additional years of meteorological data be used in a subsequent analysis.

Chloroform concentrations were calculated by ISCST3 over a grid of receptor points spaced at 100-meter intervals. The grid extended approximately 2.5 km in all directions from the stripper.

Risk Assessment Approach

Incremental lifetime cancer risk (ILCR) is calculated by multiplying the OEHHA-approved cancer unit risk factor by the average chloroform concentration in air over an individual's 70-year lifetime. In this study, the 1-year average chloroform concentration (as predicted by ISCST3) was assumed to be representative of a lifetime concentration. The unit risk factor for chloroform is presented in the following table.

Compound	Unit Risk Factor ($\mu\text{g}/\text{m}^3$) ⁻¹
Chloroform	5.3×10^{-6}

A unit risk factor of 5.3×10^{-6} , for example, means that an individual's risk of contracting cancer is 5.3 in one million if he is exposed to the compound at an average lifetime air concentration of $1 \mu\text{g}/\text{m}^3$. Exposure is assumed to be continuous for a 70-year period. This risk is in addition to the risk of contracting cancer from all other factors, which is about 1 in 3.

Risk Results

Individual lifetime cancer risks were calculated at every receptor point in the grid modeled by ISCST3. The risk values were plotted by a contouring routine and are presented in the attached figures. Figures 1, 2, and 3 show the risks associated with influent concentrations of 41, 50, and 82 $\mu\text{g}/\text{L}$, respectively. In all 3 scenarios, the maximum risk levels lie to the east of the stripper, in response to the predominant wind direction at the project site.

In Figure 1, which reflects an influent concentration of 41 $\mu\text{g}/\text{L}$, the 1-in-one-million risk contour extends approximately 575 meters to the east of the stripper.

In Figure 2, which reflects an influent concentration of 50 $\mu\text{g}/\text{L}$, the 1-in-one-million risk contour extends approximately 650 meters to the east of the stripper.

¹Based on input from the Bay Area Air Quality Management District (BAAQMD), this number was changed from the estimate used in the previous draft. May 2, 2001

In Figure 3, which reflects an influent concentration of 82 µg/L, the 1-in-one-million risk contour extends approximately 900 meters to the east of the stripper.

Attachment E
EBMUD Board of Directors Planning Committee
Agenda and Minutes (February 22, 2005 meeting)



**BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT**

375 – 11th Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

**AGENDA
Planning Committee
Tuesday, February 22, 2005
8:00 a.m.
Training Resource Center**

(Committee Members: Directors Foulkes {Chair}, Coleman and Richardson)

ROLL CALL:

PUBLIC COMMENT: The Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

DETERMINATION AND DISCUSSION:

1. Pre-Treatment of Water from the Freeport Regional Water Project (Alcott & Wallis)
2. Bayside Groundwater Project Update (Alcott)
3. Bay Area Clean Water Agencies (BACWA) Regional Biosolids Facility (Williams)
4. Lamorinda Water System Improvements Plan (Miller)
5. Water Quality Program Semi-Annual Update (Sykes)
6. Regulatory Compliance Semi-Annual Report (Wallis)
7. WATERSMART™ Toilet Replacement Program Update (Dawson)

ADJOURNMENT:

If you require a disability-related modification or accommodation to participate in an EBMUD public meeting, please call the Office of the Secretary (510) 287-0404. We will make reasonable arrangements to ensure accessibility. Some special equipment arrangements may require 48 hours advance notice.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: March 3, 2005

MEMO TO: Board of Directors

THROUGH: Dennis M. Diemer, General Manager *DM*

FROM: Cheryl A. Farr, Special Assistant to the General Manager *Cheryl*

SUBJECT: Planning Committee Minutes – February 22, 2005

Chair Katy Foulkes called to order the Planning Committee in the Training Resource Center at 8:05 a.m. Directors John Coleman and David Richardson were present. Staff present included: General Manager Dennis M. Diemer, Director of Wastewater David R. Williams, Director of Engineering and Construction Marilyn L. Miller, Director of Operations and Maintenance Michael J. Wallis, Manager of Water System Richard G. Sykes, Engineering Manager Eileen White, Senior Civil Engineer Maura A. Bonnarens, Senior Civil Engineer Michael T. Tognolini, Engineering Manager William R. Kirkpatrick, Manager of Water Quality Ronald B. Hunsinger, Manager of Regulatory Compliance Michael Ambrose, Special Assistant to the General Manager Cheryl Farr, and Acting Secretary of the District Rema Randle-Jones.

Public Comment. None.

WATERSMART™ Toilet Replacement Program Update. Director Foulkes noted that staff was available to respond to questions on this subject. There were no questions. General Manager Diemer affirmed that the staff's intent, as reported in the staff memo, would be to modify the rebate program to focus on high efficiency toilet replacement.

Pre-Treatment of Water from the Freeport Regional Water Project. Engineering Manager Eileen White reviewed the water treatment issues related to incorporating Sacramento River water into EBMUD's existing supply. She noted that the Sacramento River supply has different characteristics that require treatment consideration and is of good quality. The two options suggested were pre-treatment before delivery into the District's aqueducts, or direct delivery into terminal reservoirs with treatment as the water is drawn from those reservoirs for use. The latter was recommended because the direct delivery option will save an estimated \$106 million in the 5-year Capital Improvement Plan and is not expected to affect water quality. It was noted that this decision would not preclude building a pre-treatment plant in the future if needed.

There was discussion about water quality and rate impacts related to the two alternatives. Staff was asked to provide clarification on the rate impacts and savings, and General Manager Diemer said that information would be provided to the Board.

Bayside Groundwater Project Update. Senior Civil Engineer Michael T. Tognolini discussed the Bayside Project and the Environmental Impact Report that is soon to be released. He noted that while the supply from the first phase is small (1 MGD), it will provide near-term drought supplies, enables the District to be responsive to local concerns

about potential project impacts and will provide operational information useful in considering the larger Phase II Project of 2-10 MGD. There was discussion of how the water would be discharged safely during testing, and staff reported that the water would be appropriately treated and released through storm drains. Director Richardson asked if the costs and benefits of the phases rise together, and staff responded that they did. General Manager Diemer also noted that 1 MGD from this project costs about \$3.5 million as compared to approximately \$20 million for recycled water, and that this project is important in meeting the need for water beyond what the Freeport project will provide.

Jay Morgan, President, AFSCME 2019, asked about the intended use of the water. Mr. Tognolini responded that Phase I is an EBMUD-only project and all water from the project will be used by EBMUD.

Bay Area Clean Water Agencies (BACWA) Regional Biosolids Facility. Senior Civil Engineer Maura A. Bonnarens briefed the committee on regional biosolids issues and ongoing work to explore building a regional facility. The Committee encouraged further exploration, particularly of a Joint Powers Agreement opportunity, and supported continuing to include EBMUD's Main Wastewater Treatment Plant site as one of the options to explore.

Lamorinda Water System Improvements Plan. Engineering Manager William R. Kirkpatrick discussed the need for system improvements and preliminary staff findings regarding the alternative approaches to achieving the project goals. The Committee raised concerns regarding the community impacts of an alternative that would eliminate the Lafayette Treatment Plant, and expressed an interest in seeing the plant maintained for emergency redundancy. Following discussion, the Committee directed staff to further review the rankings of the alternatives as the next step in the process.

Water Quality Program Semi-Annual Update. Manager of Water Quality Ronald B. Hunsinger summarized the staff report submitted regarding water quality. He noted that the District continues to provide excellent water that meets or exceeds water quality goals. He discussed a September 2004 taste and odor event precipitated by draining the Claremont Tunnel for quality water. There was discussion of an emerging disinfection by product, NDMA, and District efforts to ensure we can meet anticipated future regulations, and to optimize the system to protect public health. There were no further questions on his report.

Regulatory Compliance Semi-Annual Report. Manager of Regulatory Compliance Michael Ambrose provided a brief overview of the staff report submitted to the committee. There were no questions on his report.

Adjournment. Director Foulkes adjourned the meeting at 9:47 a.m.