
Final Environmental Impact Report

East Bay Municipal Utility District Bayside Groundwater Project

Prepared for
East Bay Municipal Utility District
375 11th Street
Oakland, California 94607

SCH No. 2000092044

October 2005

Prepared by
CH2MHILL
155 Grand Avenue
Oakland, California 94612

In Association with Orion Environmental Associates

Contents

Acronyms & Abbreviations	vii
1.0 Introduction	1-1
1.1 Purpose of the Final EIR.....	1-1
1.2 Report Organization of the Final EIR.....	1-2
1.2.1 Report Contents.....	1-2
1.2.2 List of Commenters.....	1-2
1.2.3 Master Responses.....	1-2
1.2.4 Errata.....	1-2
1.2.5 Comments and Individual Responses.....	1-2
1.2.6 References.....	1-3
2.0 List of Commenters	2-1
2.1 Written and Oral Comments and Responses.....	2-1
2.2 State Agency.....	2-1
2.3 Local Agencies.....	2-1
2.4 Groups or Organizations.....	2-2
2.5 Interested Citizens.....	2-2
3.0 Master Responses	3-1
3.1 Master Response 1 – Subsidence.....	3-2
3.2 Master Response 2 – Potential for Flowing Wells.....	3-4
3.3 Master Response 3 – Monitoring Programs.....	3-6
3.3.1 Monitoring Objectives.....	3-6
3.3.2 Design Criteria.....	3-6
3.3.3 Bayside Project Phase 1 Monitoring Well Network (BPMWN).....	3-7
3.3.4 Schedule.....	3-9
3.4 Master Response 4 – Liquefaction.....	3-10
3.4.1 Potential for Liquefaction.....	3-10
3.4.2 Exposure of Project Facilities to Liquefaction Damage.....	3-10
3.5 Master Response 5 – Groundwater Contamination.....	3-11
3.6 Master Response 6 – Radon and Chloroform.....	3-14
3.6.1 Radon.....	3-14
3.6.2 Chloroform.....	3-16
3.7 Master Response 7 – Project Phasing.....	3-18
3.8 Master Response 8 – Project Objectives and Alternatives.....	3-20
3.8.1 Project Objectives.....	3-20
3.8.2 Screening of Alternatives.....	3-21
3.9 Master Response 9 – Need for Project.....	3-25
3.9.1 Determining the Need for Water.....	3-25
3.9.2 Water Supply Planning.....	3-27
3.9.3 1995 WSMP Action Plan.....	3-29
3.10 Master Response 10 – Public Outreach and Notice, and DEIR Review.....	3-31
3.10.1 Community Liaison Group.....	3-31
3.10.2 Notice of Availability of DEIR.....	3-31

3.10.3 Extended Comment Period 3-32

3.11 Master Response 11 – Environmental Justice..... 3-33

3.12 Master Response 12 – Comments on 2001 DEIR..... 3-35

3.13 Master Response 13 – Additional Information Regarding ASR Projects ... 3-36

 3.13.1 ASR Background..... 3-36

 3.13.2 The Bayside Project is Consistent with State Policy..... 3-36

 3.13.3 Existing Groundwater Use 3-37

4.0 Errata 4-1

 4.1 Introduction 4-1

 4.2 Text Revisions..... 4-1

 4.3 Table and Figure Replacements to the DEIR..... 4-5

 4.3.1 Revised Tables..... 4-5

 4.3.2 Revised Figures 4-27

5.0 Responses to Comments Received on DEIR..... 5-1

 5.1 Comments and Responses for State Agencies..... 5-3

 5.2 Comments and Responses for Local Agencies..... 5-11

 5.3 Comments and Responses for Groups and Organizations 5-125

 5.4 Comments and Responses for Citizens..... 5-479

6.0 References 6-1

Tables

2-1 Commenter Group Code Prefixes and Types 2-1

3-1 Water Level Monitoring Network 3-9

3-2 Benchmark Distribution System Water Loss (Percentage)..... 3-29

3-3 Need for Water During 3-year Drought Planning Sequence 3-32

(Section 4.3.1 Errata) ES-2A Summary of Potentially Significant Impacts and Mitigation Measures for Phase 1 4-6

(Section 4.3.1 Errata) ES-2B Summary of Potentially Significant Impacts and Mitigation Measures for Phase 2 4-14

(Section 4.3.1 Errata) 2-2 Required Permits for Phase 1..... 4-22

(Section 4.3.1 Errata) 3.2-1 Comparative Water Quality Parameters from Water Treatment Plants and Recovered Groundwater..... 4-23

(Section 4.3.1 Errata) Table 3.9-5: Estimated Maximum Operational Noise Levels at Nearby Receptors for Phase 1 4-24

(Section 4.3.1 Errata) Table 3.9-7: Estimated Maximum Construction Noise Levels at Nearby Receptors 4-25

(Section 4.3.1 Errata) Table 7-2: Fatal Flaw Screening of Water Supply Alternatives.... 4-26

Figures

(Section 4.3.1 Errata) 1-2 Upper San Leandro Reservoir Production..... 4-29

(Section 4.3.1 Errata) 3.1-4 Groundwater Contours (ft msl) Newark and Equivalent
Aquifer (1990-1998 Average) 4-31

(Section 4.3.1 Errata) 3.1-7 Historic Water Levels - SEBPB and NCGWB 4-33

(Section 4.3.1 Errata) 3.1-2a Cross-Section Location (new figure)..... 4-35

Attachments

- 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