EBMUD

BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT

375 - 11th Street, Oakland, CA 94607 Office of the Secretary: (510) 287-0440

AGENDA
Tuesday, April 24, 2012

REGULAR CLOSED SESSION

11:00 a.m., Board Room

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.

ANNOUNCEMENT OF CLOSED SESSION AGENDA:

1. Existing litigation pursuant to Government Code section 54956.9(a):

   a. *Ameron International Corporation v. Sundt Construction, Inc.*
   San Joaquin County Superior Court, Case No. 39-2009-00226920,
   consolidated with *FRWA / EBMUD v. S.J. Louis Construction, Inc.*
   Sacramento County Superior Court, Case No. 34-2009-00066909

2. Significant exposure to litigation pursuant to Government Code section 54956.9(b):

   a. Lehman Brothers Special Financing Inc. and EBMUD,
   Derivatives ADR Notice No. 323.

(The Board will hold Closed Session in Conference Room 8A/B)

REGULAR BUSINESS MEETING

1:15 p.m., Board Room

ROLL CALL:

BOARD OF DIRECTORS:

- Pledge of Allegiance

ANNOUNCEMENTS FROM CLOSED SESSION:

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.

CONSENT CALENDAR: (Single motion and vote approving 6 recommendations including 2 resolutions.)

1. Approve the Regular Meeting Minutes of April 10, 2012.

2. File correspondence with the Board.

3. Authorize an amendment to the agreement with the Automated Power Exchange, in an amount not to exceed $150,000 annually for providing power scheduling and California Independent System Operator settlement services for the Camanche and Pardee Power Plants and the Wastewater Power Generation Station for the period July 1, 2012 to June 30, 2017.

4. Authorize amendments to two of the existing Western Area Power Administration Agreements, in the estimated additional annual amount of $1,400,000, for a total estimated annual value of $2,000,000 for electricity service for the Main Wastewater Treatment Plant and up to five additional electrical accounts for the period ending December 31, 2024.

5. Approve Resolution ratifying the action of the Association of California Water Agencies (ACWA) Health Benefits Authority Board to terminate the Authority and transition the health benefits program to the ACWA Joint Powers Insurance Authority (JPIA). The Resolution also approves District membership in the ACWA JPIA in order to continue participation in the Anthem Blue Cross plan. (Resolution)

6. Approve revisions to the following District policies: Policy 3.07 – Responsibility to Serve Water Customers; Policy 4.07 – Investment Policy; Policy 4.13 – Establishing Water Rates; Policy 7.01 – Aqueduct Rights-of-Way Maintenance; Policy 9.01 – Fire Control and Fuels Management on Watershed Lands; and Policy 9.04 – Watershed Management and Use. (Resolution)

DETERMINATION AND DISCUSSION:

7. Legislative Update:
   - Receive Legislative Report No. 05-12 and consider positions on the following bills: AB 2398 (Hueso) Water Recycling; AB 2443 (Williams) Vessels: Registration Fee: Quagga and Zebra Mussel Infestation Prevention Program; and SB 1094 (Kehoe) Land Use: Mitigation Lands: Nonprofit Organizations
   - Update on Legislative Issues of Interest to EBMUD

8. File the Water Supply Availability and Deficiency Report in conformance with Policy 9.03, and declare that the District's water supply is sufficient for meeting customer demands in 2012.

9. Consider actions related to the Water Supply Management Program (WSMP) 2040.

   9.1. Certify the Final Revised Program Environmental Impact Report for the WSMP 2040 and make Findings in accordance with the California Environmental Quality Act and adopt the Mitigation Monitoring and Reporting Plan. (Resolution)

   9.2. Approve and authorize the Water Supply Management Program 2040 Revised Final Plan. (Resolution)

DETERMINATION AND DISCUSSION (Continued):

10. General Manager's Report:
    - Water Supply Report

REPORTS AND DIRECTOR COMMENTS:

11. Committee Reports:
    - Finance/Administration
    - Planning
    - Legislative/Human Resources

12. Director Comments.

ADJOURNMENT:

The next Regular Meeting of the Board of Directors will be held at 1:15 p.m. on Tuesday, May 8, 2012 in the Administration Center Board Room, 375 Eleventh Street, Oakland, California.

Disability Notice

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.

Document Availability

Materials related to an item on this Agenda that have been submitted to the EBMUD Board of Directors within 72 hours prior to this meeting are available for public inspection in EBMUD's Office of the Secretary at 375 11th Street, Oakland, California, during normal business hours.

W:\Agendas\Agendas 2012\042412_regular_agenda.doc

BOARD CALENDAR

Date	Meeting	Time/Location	Topics
Tuesday, April 24	**Finance/Administration Committee** Katz (Chair), Mellon, Patterson	10:30 a.m. Training Resource Center	• Quarterly Financial Reports • Revisions to District Policies
	Board of Directors	11:00 a.m. 1:15 p.m.	• Closed Session • Regular Meeting
Tuesday, May 8	**Planning Committee** Linney (Chair), Foulkes, McIntosh	9:15 a.m. Training Resource Center	•
	Legislative/Human Resources Committee McIntosh (Chair), Katz, Mellon	10:15 a.m. Training Resource Center	• Legislative Update
	Board of Directors	11:00 a.m. 1:15 p.m.	• Closed Session • Regular Meeting

Draft Prepared by
Office of the Secretary

MINUTES

Tuesday, April 10, 2012

East Bay Municipal Utility District
Board of Directors
375 Eleventh Street
Oakland, California

Regular Closed Session Meeting

President John A. Coleman called to order the Regular Closed Session Meeting of the Board of Directors at 11:00 a.m. in the Administration Center Board Room.

ROLL CALL

Directors Katy Foulkes, Andy Katz, Doug Linney, Lesa R. McIntosh, Frank Mellon, William B. Patterson, and President John A. Coleman were present at roll call.

Staff present included General Manager Alexander R. Coate, General Counsel Jylana Collins, Director of Finance Eric Sandler, and Treasury Manager Wanda B. Hendrix.

PUBLIC COMMENT

There were no comments.

ANNOUNCEMENT OF CLOSED SESSION AGENDA

President Coleman announced the Closed Session agenda. The Board convened to Conference Room 8A/B for discussion.

Regular Business Meeting

President Coleman called to order the Regular Business Meeting of the Board of Directors at 1:15 p.m. in the Administration Center Board Room.

ROLL CALL

Directors Katy Foulkes, Andy Katz, Doug Linney, Lesa R. McIntosh, Frank Mellon, William B. Patterson, and President John A. Coleman were present at roll call.

Staff present included General Manager Alexander R. Coate, General Counsel Jylana Collins and Secretary of the District Lynelle M. Lewis.

BOARD OF DIRECTORS

President Coleman led the Pledge of Allegiance.

ANNOUNCEMENTS FROM CLOSED SESSION

There were no announcements required from closed session.

PRESENTATION

General Manager Coate announced that the District received the 2011 award for Outstanding Water Project from Region 9 (California) of the American Society of Civil Engineers for the Folsom South Canal Connection Project. The $240 million project was recognized for its low level of change orders, technical accomplishments on the Mokelumne River crossing and aqueduct tie-ins, management of environmental and permitting issues and outstanding design and construction management efforts that resulted in a flawless testing and start-up process. General Manager Coate said the award recognized the contributions of many District employees who made this project come to fruition. The following employees were present to accept the award on behalf of the team: Director of Engineering and Construction Xavier J. Irias, Manager of Design David L. Pratt, Manager of Engineering Services Elizabeth Bialek, Manager of Construction Jimi Yoloye, Manager of Pipeline Infrastructure Alvin Tong, Senior Mechanical Engineer David Bailey, Associate Civil Engineer Rolando Bueno, Senior Electrical Engineer Dado Hernandez, Associate Electrical Engineer Doug Handran, Senior Civil Engineer Jonathan Tham, Manager of Facilities Maintenance and Construction Phillip Kohne, Assistant Engineer Joseph Kacyra, Associate Civil Engineer Anthony Ballestero, Supervising Plant Inspector Ronald Monteforte, Senior Construction Inspector Kevin Hangman, TC Senior Construction Inspector Carlos Rodriguez, and Senior Civil Engineer David Bruzzone. On behalf of the Board, Director Mellon presented the award to staff. The Board congratulated staff on a job well done.

PUBLIC COMMENT

The following person addressed the Board: Al Miller, Stege Sanitary District, commended the District on the recent completion of the Biogas Turbine Renewable Energy Expansion Project. Next, he commented on the use of chemical cremation utilized by mortuaries in the service and inquired about the impacts on the wastewater treatment process. President Coleman asked staff to provide an information memo regarding this process.

CONSENT CALENDAR:

- Motion by Director Patterson, seconded by Director Foulkes, to approve Items 1-7 on the Consent Calendar, carried (7-0) by voice vote.

1. **Motion No. 040-12 --** Approved the Special and Regular Meeting Minutes of March 27, 2012.

2. The following correspondence was filed with the Board: 1) Slide presentation entitled "Water Supply Board Briefing," Water Supply Engineering, dated April 10, 2012.

3. **Motion No. 041-12** -- Awarded a contract to the lowest responsible/responsive bidder, American Industrial Equipment, in the total amount of $262,383 for supplying one 2.75 million gallon per day trailer-mounted, electric motor-driven centrifugal temporary pumping plant with acoustic enclosures for the Berkeley View and Las Aromas Pumping Plants Rehabilitation Project under Proposal No. 1213.

4. **Motion No. 042-12** -- Authorized an agreement with Keller Group, Incorporated under the State of California's contract for Open Office Panel Systems (furniture) in an amount not to exceed $140,000 for supplying and assembling new AllSteel brand free-standing systems furniture for the Customer Contact Center Reconfiguration Project at the Adeline Maintenance Center.

5. **Motion No. 043-12** -- Authorized an agreement with the Sacramento Municipal Utility District (SMUD) in an amount not to exceed $75,000 to provide construction services to install a fiber optic cable, and an amount not to exceed $3,000 annually for the use of SMUD's existing underground conduit during the period April 11, 2012 to April 10, 2021, with an option to renew for an additional five-year period.

6. **Motion No. 044-12** -- Approved the assignment of the contracts for fire service detector check valves, wet barrel fire hydrants, PVC pressure pipe, and resilient-seated gate valves previously awarded under Proposal Numbers 0816, 0906, 1003, and 1202 respectively by Board Motions 094-08, 055-09, 125-09 and 121-11 respectively, and purchase orders from Groeniger, Inc. to Ferguson Enterprises, Inc.

7. **Resolution No. 33869-12** -- Adopting The Water Management Plan 2011.

DETERMINATION AND DISCUSSION

8. **Legislative Update.**

Legislative/Human Resources Committee Chair Lesa R. McIntosh reported that at the meeting earlier in the day, the Committee unanimously supported the staff recommended positions in Legislative Report No. 04-12.

- Motion by Director McIntosh, seconded by Director Katz, to approve the recommended positions in Legislative Report No. 04-12, carried (7-0) by voice vote.

Motion No. 045-12 -- Approved the following positions in Legislative Report No. 04-12 on the following bills: SUPPORT AB 1442 (Wieckowski) Pharmaceutical Waste; SUPPORT AB 2249 (Buchanan) Solar Water Heating and Efficiency Act of 2007; and SUPPORT AND AMEND SB 1045 (Emmerson) Metal Theft: Damages.

Special Assistant Marlaigne Dumaine reported that the Governor's revised budget is anticipated to come out in mid-May. She noted that discussions on pension reform

are still underway and staff is closely monitoring this issue. Additionally, Ms. Dumaine noted that the Governor will extend state public employees' contracts until after the November election.

9. **General Manager's Report.**

Operations and Maintenance Department Manager Eileen M. White presented a status update on the April snow survey, water supply allocations, precipitation, water production, and reservoir storage. She reported that the Department of Water Resources April 1 snow survey revealed that statewide snow content is 56% of average, statewide water supplies are good due to last year's rain, and rain is continuing in April. The Water Year 2012 is still projected to be a dry year, but conditions have greatly improved.

General Manager Coate noted that the March 2012 Monthly Report was provided in the Board's packet and pointed out that water revenues are down due to lower consumption.

REPORTS AND DIRECTOR COMMENTS

10. **Committee Reports.**

- There were no Committee Minutes filed with the Board.

11. **Director Comments.**

- Director Foulkes reported attending the following: Alameda County Special Districts' Association annual banquet on March 29 in Pleasanton; Main Wastewater Treatment Plant dedication of the Biogas Turbine Renewable Energy Expansion Project on April 3 in Oakland; and the Alameda County Special Districts' Association Executive Committee meeting on April 9.

- Director Katz reported attending the Main Wastewater Treatment Plant dedication of the Biogas Turbine Renewable Energy Expansion Project on April 3 in Oakland. Additionally, he reported being a guest speaker at the Chinese-American Scientific Professionals Association event on April 7 in Foster City.

- Director Linney reported attending the Main Wastewater Treatment Plant dedication of the Biogas Turbine Renewable Energy Expansion Project on April 3 in Oakland.

- Director McIntosh had no comment.

- Director Mellon reported attending the Sierra Club workshop on desalination on March 31 in Oakland; Alameda County Special Districts' Association annual banquet on March 29 in Pleasanton; Contra Costa Mayors' Conference monthly meeting on April 5 in Clayton; the Main Wastewater Treatment Plant dedication of the Biogas Turbine Renewable Energy Expansion Project on April 3 in Oakland; and the Annual Wildflowers Hike event at Middle Bar on April 7.

- Director Patterson reported attending the Main Wastewater Treatment Plant dedication of the Biogas Turbine Renewable Energy Expansion Project on April 3 in Oakland.

- President Coleman reported attending the following: ACWA/JPIA Executive Committee meeting on March 28 in Roseville; ACWA Federal Affairs meeting and the Clair Hill Awards meeting on March 29 in Sacramento; ACWA Executive Committee and Board meeting on March 30 in Sacramento; Main Wastewater Treatment Plant dedication of the Biogas Turbine Renewable Energy Expansion Project on April 3 in Oakland; and agenda review meeting with General Manager Coate on April 4 in Oakland. He reported on plans to attend the following upcoming events: ACWA/JPIA Executive Committee meeting on April 16 in Roseville; agenda review meeting with General Manager Coate on April 18 in Oakland; and ACWA Executive Committee meetings on April 10 and 17.

ADJOURNMENT

President Coleman adjourned the meeting at 1:48 p.m.

SUBMITTED BY:

_____
Lynelle M. Lewis, Secretary of the District

APPROVED: April 24, 2012

_____
John A. Coleman, President of the Board

W:\Minutes\Minutes 2012\041012_regular_minutes.doc

EBMUD

AGENDA NO. 3.
MEETING DATE April 24, 2012

TITLE AMENDMENT TO THE AUTOMATED POWER EXCHANGE CONTRACT

☒MOTION ☐ RESOLUTION ☐ ORDINANCE

RECOMMENDED ACTION

Authorize an amendment to the agreement with the Automated Power Exchange (APX), in an amount not to exceed $150,000 annually for providing power scheduling and California Independent System Operator (CAISO) settlement services for the Camanche and Pardee Power Plants and the Wastewater Power Generation Station (PGS) for the period July 1, 2012 to June 30, 2017.

SUMMARY

The District's hydroelectric power plants have been selling into the California wholesale energy markets since 1999. In order to participate in these markets, generators are required to procure or self-provide scheduling and settlement services through a CAISO-certified Scheduling Coordinator (SC). These SC services are currently being provided by the APX under an agreement which will expire June 30, 2012. Recently the PGS has expanded its generating capacity, and the California wholesale electric markets offer an alternative sales option for PGS exported power. A formal evaluation of other CAISO-approved SCs determined that only the APX provides all the services required by the District.

DISCUSSION

The District terminated its long-term Mokelumne Power Sales Contract with Pacific Gas and Electric in 1999 and began selling power produced by the District's hydroelectric power plants in the California wholesale electric markets. In that year, the Board of Directors authorized an agreement with the APX to provide power scheduling and settlement services. Since then, the District has continued to contract with the APX as they have been the only local SC that provided all of the services that the District requires. These services include web access for scheduling generation and settlement data. On June 26, 2007, the Board authorized the most recent amendment to the agreement to provide scheduling and settlement services through June 30, 2012. The APX fees are paid on a unit cost per megawatt-hour of power sold, so the actual cost will vary depending on the annual generation and sales volume. The current average cost will be $120,000 annually, with an estimated maximum cost of $150,000.

Funds Available: FY12	Budget Code: 776/5374	
DEPARTMENT SUBMITTING O&M	DEPARTMENT MANAGER or DIRECTOR Eileen M. White Eileen M. White	APPROVED General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

SERVICE PROVIDER SELECTION

The CAISO provided a list of 144 SCs that are currently certified by the CAISO to perform SC services. A short list of these SCs was established based on firms located in Northern California that offer SC services to, at minimum, third parties and generators. The APX was the only SC of the three that provides scheduling and settlement services that meet the full requirements of the District's power selling activities.

CONTRACT EQUITY PROGRAM EFFORTS

The completed P-035 and P-061 forms are attached.

FISCAL IMPACT

This action will not result in any additional operating costs. The APX fees are offset against power sales revenue. This expense is small relative to power revenue and will not affect the power revenue budget estimate.

UNION NOTIFICATION

This type of work is not performed by District staff; consequently, union notification was not required.

ALTERNATIVE

Do not authorize amending the agreement with APX. This alternative is not recommended because staff will be unable to schedule power generated from Camanche and Pardee Power Plants or the Wastewater Biogas Turbine Generator in accordance with the CAISO rules, and the District's Power Purchase Agreement with Sacramento Municipal Utility District.

ATTACHMENTS

P-035 CEP Summary
P-061 Affirmative Action Summary

CONTRACT EQUITY PROGRAM SUMMARY (P-035)

EBMUD

This summary contains information on the contractor's workforce and contract equity participation. (Completed by District)

TITLE	DATE:
Amendment to Professional Services Agreement Agreement with APX Power Markets, Inc. - Five-Year Contract	March 26, 2012

CONTRACTOR:			PERCENTAGE OF CONTRACT DOLLARS		
APX Power Markets, Inc. San Jose, CA			Availability Group	Contracting Objectives	Participation
BID/PROPOSER'S PRICE:	**FIRM'S OWNERSHIP**		**White Men**	**25%**	**0.0%**
	Ethnicity	**Gender**	**White Women**	**6%**	**0.0%**
$150,000 /yr.	Publicly Held Corp.		**Ethnic Minorities**	**25%**	**0.0%**

CONTRACT EQUITY PARTICIPATION

COMPANY NAME	ESTIMATED AMOUNT	ETHNICITY	GENDER		CONTRACTING PARTICIPATION						
			M	F	White-Men	White-Women	Ethnic Minorities	Unclassified	Publicly Held Corp.	Gov't/Non Profit	Foreign
PRIME:											
APX Power Markets, Inc.	$150,000	Publicly Held Corp.			---	---	---	---	100.0%	---	---
SUBS:											
None					---	---	---	---	---	---	---
					---	---	---	---	---	---	---
					---	---	---	---	---	---	---
					---	---	---	---	---	---	---
					---	---	---	---	---	---	---
					---	---	---	---	---	---	---
					---	---	---	---	---	---	---
					---	---	---	---	---	---	---
					---	---	---	---	---	---	---
TOTAL	$150,000				0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%

CONTRACTOR'S WORKFORCES PROFILE (From P-025 Form)

	White Men	White Women	Ethnic Minorities	Total Employees
No. of Employees:	13	3	23	39
Percent of Total Employees:	33.3%	7.7%	59.0%	
MSA Labor Market %:	26.9%	21.0%	52.1%	
MSA Labor Market Location:	San Jose			

COMMENTS

Contract Equity Participation - Zero Contract Equity participation since firm is a publicly held corporation and no subcontract opportunities exist.

Workforce Profile & Statement of Nondiscrimination Submitted	Good Faith Outreach Efforts Requirement Satisfied	Award Approval Recommended
NA	NA	

EBMUD

AFFIRMATIVE ACTION SUMMARY (P-061)

(Completed by District)

This summarizes information provided by the contractor(s)' P-025 Form regarding their workforce.

Title: **Agreement with APX Power Markets, Inc. - Five-Year Contract**

Professional Services Agreement

DATE: 3/26/2012

Ethnic Minority Percentages From U.S. Census Data	B	H	A/PI	AI/AN	TOTAL
National	10.5	10.7	3.7	0.7	27.3
9 Bay Area Counties	5.5	16.2	14.2	0.4	39.9
Alameda/CC Counties	10.7	15.6	15.4	0.5	46.2

R=Recmmd, P=Prime, S=Sub

Number of Ethnic Minority Employees

R/P/S	Composition of Ownership / Company Name, Owner/Contact Person, Address, and Phone Number		B	H	A/PI	AI/AN	TOTAL	PERCENT	MSA %
RP	Publicly Held Corp.	Company Wide	1	4	18	-	23	59.0%	52.1%
	APX Power Markets, Inc.	Manager/Prof	1	4	16	-	21	61.8%	
	Jose Ibietatorremendia	Technical/Sales	-	-	2	-	2	40.0%	
	224 Airport Parkway, Suite 600	Clerical/Skilled	-	-	-	-	-	NA	
	San Jose, CA 95110	Semi/Unskilled	-	-	-	-	-	NA	
		Bay Area	1	4	18	-	23	59.0%	39.9%
	408-517-2100	AA Plan on File:	NA		Date of last contract with District:			6/26/2007	
		Co. Wide MSA:	San Jose		# Employees-Co. Wide:		39	Bay Area:	39
		Company Wide							
		Manager/Prof							
		Technical/Sales							
		Clerical/Skilled							
		Semi/Unskilled							
		Bay Area							39.9%
		Co. Wide MSA:			# Employees-Co. Wide:			Bay Area:	
		Company Wide							
		Manager/Prof							
		Technical/Sales							
		Clerical/Skilled							
		Semi/Unskilled							
		Bay Area							39.9%
		Co. Wide MSA:			# Employees-Co. Wide:			Bay Area:	
		Company Wide							
		Manager/Prof							
		Technical/Sales							
		Clerical/Skilled							
		Semi/Unskilled							
		Bay Area							39.9%
		Co. Wide MSA:			# Employees-Co. Wide:			Bay Area:	
		Company Wide							
		Manager/Prof							
		Technical/Sales							
		Clerical/Skilled							
		Semi/Unskilled							
		Bay Area							39.9%
		Co. Wide MSA:			# Employees-Co. Wide:			Bay Area:	
		Company Wide							
		Manager/Prof							
		Technical/Sales							
		Clerical/Skilled							
		Semi/Unskilled							
		Bay Area							39.9%
		Co. Wide MSA:			# Employees-Co. Wide:			Bay Area:	

WM=White Male, WW=White Women, EM=Ethnic Minority (Ethnicities: B=Black, H=Hispanic, A/PI=Asian/Pacific Islander, and AI/AN=American Indian/Alaskan Native)

EBMUD

AGENDA NO. 4.
MEETING DATE April 24, 2012

TITLE **AMENDMENT TO WESTERN AREA POWER ADMINISTRATION CONTRACTS**

☒MOTION ☐ RESOLUTION ☐ ORDINANCE

RECOMMENDED ACTION

Authorize amendments to two of the existing Western Area Power Administration (WAPA) Agreements, in the estimated additional annual amount of $1,400,000, for a total estimated annual value of $2,000,000 for electricity service for the Main Wastewater Treatment Plant (MWWTP) and up to five additional electrical accounts for the period ending December 31, 2024.

SUMMARY

EBMUD generates renewable energy at many of its facilities, and supplements renewable energy it generates with power from the grid as needed. In addition to the MWWTP, the District has four large electric service accounts that are currently eligible for WAPA-supplied electric service, and a fifth account that will be eligible following a planned rehabilitation project. Because the District's MWWTP renewable energy generation has increased to the point where the plant is able to be an annual net energy generator, the base resource can be used at other facilities. These include the Sobrante Water Treatment Plant, Scenic East Pumping Plant (PP), Danville PP, El Cerrito Center and the Almond PP. The combined annual load of these facilities is approximately 17,000 megawatt-hours (MWh) with an annual expense paid to Pacific Gas and Electric Company (PG&E) of approximately $2,400,000. Purchasing lower cost electricity from WAPA (estimated to be $1,400,000) for these additional accounts is expected to save the District approximately $1,000,000 annually. In order to add additional accounts to the existing WAPA service, the District will need to amend the WAPA Back-to-Back and Custom Product Agreements.

DISCUSSION

Since 1982, the District's MWWTP has received an allocation of low-cost federal power from the Central Valley Water Project under contracts with WAPA, one of four power marketing administrators within the U.S. Department of Energy. Historically this electricity has been provided to the District at approximately one-third less than PG&E's price. The delivery of this power to the District is facilitated through four separate WAPA Agreements: the base resource, custom product, scheduling coordinator, and back-to-back. The District has contracted with WAPA to receive the lower cost hydropower from the base resource agreement through December 31, 2024. When the District's power needs exceed the allocation of hydropower provided by the base resource agreement, the District purchases supplemental energy through

Funds Available: FY 12	Budget Code:776/5374	
DEPARTMENT SUBMITTING	DEPARTMENT MANAGER or DIRECTOR	APPROVED
Water Operations	Eileen M. White Eileen M. White	General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

the WAPA custom product agreement. The back-to-back agreement provides the terms and conditions for the interconnection and transmission service over PG&E's electric distribution system, and the scheduling coordinator agreement, which does not need to be amended, addresses settlements and scheduling services. The custom product agreement needs to be amended to include the additional energy use and the back-to-back agreement needs to be amended to include the additional accounts.

CONTRACT EQUITY PROGRAM EFFORTS

The Contract Equity Program is not applicable to governmental entities such as WAPA.

FISCAL IMPACT

Funding for these amended agreements is included in the District's operating budget.

This action will result in reducing operating costs up to approximately $1,000,000 per year. The actual contract amount will depend on the unit price of electricity and the quantity of electricity actually used by District facilities. The estimated annual cost is $2,000,000 and is based on six accounts with an annual use of approximately 27,000 MWh.

ALTERNATIVES

Do not authorize agreements. This alternative is not recommended because the District would continue purchasing retail electricity from PG&E and forgo the long-term cost savings on electricity purchases.

EBMUD

AGENDA NO. 5.
MEETING DATE April 24, 2012

TITLE **ASSOCIATION OF CALIFORNIA WATER AGENCIES JOINT POWERS INSURANCE AUTHORITY FOR HEALTH BENEFITS**

☐ MOTION ☒ RESOLUTION ☐ ORDINANCE

RECOMMENDED ACTION

Approve Resolution ratifying the action of the Association of California Water Agencies (ACWA) Health Benefits Authority (HBA) Board to terminate the Authority and transition the health benefits program to the ACWA Joint Powers Insurance Authority (JPIA). The Resolution also approves District membership in the ACWA JPIA in order to continue participation in the Anthem Blue Cross plan.

SUMMARY

The ACWA HBA has initiated proceedings to transition its operations and programs to the ACWA JPIA. This move will allow the two organizations to combine resources, reduce overall costs, and improve operations and customer service. In order to proceed with the transition, the HBA has initiated a formal process to dissolve and merge its operations with the JPIA. The District needs to approve the Resolution authorizing membership in the ACWA JPIA and ratifying the dissolution of the ACWA HBA in order to continue participation in the Anthem Blue Cross plan.

DISCUSSION

The ACWA HBA is a public agency providing a variety of health insurance coverage to 277 ACWA member agencies. The District is a member of the ACWA HBA with approximately 205 active employees and 243 retirees participating in the Anthem Blue Cross medical plan.

Under the ACWA HBA bylaws, the organization may be dissolved by its Board of Directors with written consent of 75% of the HBA member agencies. The HBA Board of Directors officially took action to begin dissolution of the HBA effective April 1, 2012. The next step is obtaining the consent of 75% of the member agencies (207) by July 1, 2012 in order to complete the merger of the two agencies. Each agency's board of directors must adopt a resolution consenting to join the Employee Benefits Program of the ACWA JPIA and ratifying the action by the HBA Board of Directors to dissolve the HBA.
This merger is supported by ACWA and the HBA and JPIA Board of Directors due to the efficiencies and improved operations that can be obtained.

Funds Available:	Budget Code:	
DEPARTMENT SUBMITTING Human Resources	DEPARTMENT MANAGER or DIRECTOR Richard Jung	APPROVED General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

FISCAL IMPACT

This transition has no fiscal impact on the District.

UNION NOTIFICATION

Approval of this resolution has no union impact and does not require union notification.

ALTERNATIVE

Do not approve the resolution dissolving the HBA and joining the JPIA. This action is not recommended as it would result in loss of the Anthem Blue Cross plan for participating employees and retirees.

Draft Prepared By:
Office of General Counsel

RESOLUTION NO. _____

RESOLUTION APPROVING MEMBERSHIP IN THE ACWA JOINT POWERS INSURANCE AUTHORITY, CONSENTING TO JOIN THE HEALTH BENEFITS PROGRAM OF THE ACWA JOINT POWERS INSURANCE AUTHORITY, RATIFYING THE ACTION OF THE ACWA HEALTH BENEFITS AUTHORITY BOARD OF DIRECTORS TO TERMINATE THE HEALTH BENEFITS AUTHORITY JOINT POWERS AGREEMENT, AND AUTHORIZING AND DIRECTING EXECUTION OF ALL NECESSARY DOCUMENTS

Introduced by Director ; Seconded by Director

WHEREAS, this Agency entered into a joint exercise of powers agreement ("HBA Agreement") with the Association of California Water Agencies Health Benefits Authority ("HBA") in order to pool its purchasing needs with other public agencies desiring to provide their employees with comprehensive and economical health and welfare benefits; and

WHEREAS, this Agency entered into a Health Benefits Memorandum of Understanding ("MOU") to enroll in specific health programs and ancillary programs ("Existing Employee Benefits Coverage") offered by HBA and agreed to abide by: (1) the HBA Agreement; (2) all rules and procedures established by HBA in the administration of the Agency's Existing Employee Benefits Coverage; and (3) all underwriting, eligibility, and contribution requirements in Appendix A to the MOU; and

WHEREAS, certain public agencies have entered into a joint exercise of powers agreement ("JPIA Agreement") with the Association of California Water Agencies Joint Powers Insurance Authority ("JPIA") in order to pool their purchasing needs with other public agencies desiring to obtain comprehensive and economical public liability, workers' compensation, unemployment, health, accident and/or dental, or property coverage; and

WHEREAS, JPIA is both qualified and authorized by the laws of the State of California to administer the Existing Employee Benefits Coverage to this Agency through JPIA's Employee Benefits Program; and

WHEREAS, during a noticed special meeting held on February 6, 2012, the HBA Board of Directors unanimously voted to transfer all HBA operations and administrative functions to JPIA on or about July 1, 2012, and to pursue a merger of the two public agencies after which the HBA Agreement would be terminated; and

WHEREAS, pursuant to Article 22 of the HBA Agreement, the HBA Agreement may be terminated by the HBA Board of Directors subject to ratification by the written consent of three-fourths of the HBA Member agencies within 90 days of the HBA Board's action, provided, however, that HBA and the HBA Agreement shall continue to exist for the purpose of concluding all functions necessary to wind up HBA's affairs; and

WHEREAS, during a noticed regular meeting held on March 28, 2012, the HBA Board of Directors approved HBA Resolution 12-03-02: (1) electing to terminate the HBA Agreement pursuant to Article 22 of the HBA Agreement and, except as provided in clause 2 below, said termination shall become effective upon ratification by the written consent of three-fourths of the HBA member districts and agencies; (2) recognizing that pursuant to Article 22 of the HBA Agreement, HBA and the HBA Agreement shall continue to exist for the purpose of winding up and dissolving the business affairs of HBA, and acknowledge that the HBA Board of Directors is vested with all powers of HBA for doing the same; and (3) declaring that Resolution 12-03-02 shall take effect on April 1, 2012, thereby beginning the 90-day ratification period;

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of East Bay Municipal Utility District hereby:

1. Agree that the JPIA Agreement and the HBA Memorandum of Understanding referred to in the recitals above are incorporated in this resolution by reference.

2. Approve this Agency's membership in the Association of California Water Agencies Joint Powers Insurance Authority.

3. Consent to join JPIA's Employee Benefits Program and acknowledge, represent, and agree that all terms and conditions of the HBA Memorandum of Understanding apply to the provision of this Agency's Existing Employee Benefits Coverage through JPIA.

4. Authorize full cooperation with HBA and JPIA in the execution of any documents and in the completion of any additional actions that may be necessary or appropriate for the purpose of ensuring that this Agency's Existing Employee Benefits Coverage continues without lapse through JPIA.

5. Ratify the action of the HBA Board of Directors to terminate the HBA Agreement, to be effective as provided in Article 22 of the HBA Agreement.

6. Direct the Secretary of the Board of this Agency to send a certified copy of this resolution to: Association of California Water Agencies Health Benefits Authority, 4600 Northgate Blvd, Suite 100, Sacramento, California, 95834.

ADOPTED this 24th day of April, 2012 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
President

ATTEST:

_____
Secretary

APPROVED AS TO FORM AND PROCEDURE:

_____
General Counsel

EBMUD

AGENDA NO. 6.
MEETING DATE April 24, 2012

TITLE **REVISIONS TO SEVERAL DISTRICT POLICIES**

☐ MOTION ☒ RESOLUTION ☐ ORDINANCE

RECOMMENDED ACTION

Approve revisions to the following District policies:

- Policy 3.07 – Responsibility to Serve Water Customers
- Policy 4.07 – Investment Policy
- Policy 4.13 – Establishing Water Rates
- Policy 7.01 – Aqueduct Rights-of-Way Maintenance
- Policy 9.01 – Fire Control and Fuels Management on Watershed Lands
- Policy 9.04 – Watershed Management and Use

DISCUSSION

Staff conducts bi-annual reviews of District policies and procedures to consider whether any organizational, regulatory, or other changes in operations would necessitate their modification. Policies which are identified as requiring modification are forwarded to the Board for consideration and approval. Attached are five policies with modifications that are proposed by staff, and one policy for reaffirmation. These policy changes were reviewed with the Finance/Administration Committee on April 24, 2012.

POLICIES RECOMMENDED FOR REVISION

1. **Policy 3.07 – Responsibility to Serve Water Customers**

   Policy was modified to include reference to Procedure 109 (Services: Estimates), correct the name of the Department of Public Health, and to include California Government Code Section 66473.3 in the Authority section.

2. **Policy 4.07 – Investment Policy**

   No changes are proposed for the District's Investment Policy at this time. Section 53646 of

Funds Available FY:	Budget Code:	
DEPARTMENT SUBMITTING Finance Department	DEPARTMENT MANAGER or DIRECTOR Eric L. Sandler, Director of Finance	APPROVED General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

the California Government Code requires the District's Board of Directors to reaffirm the Investment Policy on an annual basis.

3. **Policy 4.13 – Establishing Water Rates**

   Policy 4.13 was previously titled Rate Setting Guidelines for Water Rates. Policy was modified to update the language to acknowledge compliance with notice and hearing requirements set forth in Prop 218 and Chapter 11.5 of the MUD Act; add SBx7-7 (2010) (Water Code Section 10608.16) to reduce urban per capital water use; remove the specifics outlining how rates would be calculated; and remove the detail on the cost allocation principles.

4. **Policy 7.01 – Aqueduct Rights-of-Way Maintenance**

   Policy was revised to clarify Rights-of-Way Use Restrictions.

5. **Policy 9.01 – Fire control and Fuels management on Watershed Lands**

   Minor revisions were made to the policy to reflect present and projected fire and fuel programs.

6. **Policy 9.04 – Watershed Management and Use**

   Minor changes were made to the policy to clarify efforts to preserve and protect water quality and incorporate consideration for climate change.

UNION NOTIFICATION

Policies and procedures affecting wages, hours and working conditions have been reviewed with the unions. Employee Relations has reviewed all policies to determine the necessity for union review. The revised policies have no union impact.

FISCAL IMPACT

The policy changes do not have a fiscal impact.

ALTERNATIVE

Do not update these policies. This alternative is not recommended because it would leave policies in place that do not reflect current operating practices, are not consistent with Board directives, and/or are not in compliance with California law.

Attachments

EBMUD

Policy 3.07R

EFFECTIVE ~~27 APR 10~~ 24 APR 12

SUPERSEDES ~~14 OCT 08~~ 27 APR 10

RESPONSIBILITY TO SERVE WATER CUSTOMERS

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Ensure that during times of water shortage, available water supplies are appropriately allocated to water customers.

Discussion

Water supplies that were available to EBMUD's customers were limited due to rationing necessitated by past drought conditions.

It is expected that the water available for supplying EBMUD's customers will vary over time depending on the following factors: diversions by Mokelumne River users with senior water rights, requirements for instream flows to protect fish and wildlife in the Mokelumne River, the Sacramento–San Joaquin River Delta, and the San Francisco Bay, as well as development of future supplemental supplies.

Water agencies are responsible for planning to meet the needs of their customers through periods of drought with minimal disruption to residential, commercial, and industrial activities within their service area.

Water Service Responsibility

EBMUD recognizes that when there is a water shortage or projected water shortage, EBMUD's responsibility to serve its customers and service area is prioritized as follows:

- First, to serve its existing customers within its existing service area.
- Second, to serve expected new customers within its existing service area, but only if this does not unacceptably impair EBMUD's ability to serve its existing customers.
- Third, to consider serving new customers outside of its existing service area, but only if this does not impair EBMUD's ability to serve existing and expected new customers within its service area.

In accordance with California Government Code, Section 65589.7, when new service connections are restricted by EBMUD's Board of Directors, priority shall be given to applicants for water service to proposed developments within EBMUD's existing service area that include housing units affordable to lower income households, pursuant to ~~administrative procedures adopted and implemented by the General Manager~~Procedure 109 – Services: Estimates. Applicants granted such priority shall comply with all of EBMUD's Water Service regulations and pay all requisite fees.

Restrictions on provision of new water service connections may be due to the following:

- A declaration of a water shortage emergency condition under California Water Code, Section 350, et seq.

- A determination by the Board of Directors, based on EBMUD's Urban Water Management Plan, that sufficient water supply is not available to support the granting of all requests for new service, as provided in California Government Code, Section 66473.7.

- A determination by the Board of Directors, based on a written engineering report, that EBMUD does not have sufficient water treatment or distribution capacity to serve the needs of proposed development.

- The imposition of a compliance order by the Department of Public Health ~~Services~~ limiting new connections.

Authority

Resolution No. 32867-94, June 28, 1994
As amended by Resolution No. 33443-04, September 28, 2004
As amended by Resolution No. 33543-06, June 27, 2006
As amended by Resolution No. 33687-08, October 14, 2008
As amended by Resolution No. 33763-10, April 27, 2010.
As amended by Resolution No. XXXXX-12, April 24, 2012

California Government Code, Section 66473.7
California Government Code, Section 65589.7

Reference

Procedure 109 – Services: Estimates

EBMUD

Policy 3.07

EFFECTIVE 24 APR 12

SUPERSEDES 27 APR 10

RESPONSIBILITY TO SERVE WATER CUSTOMERS

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Ensure that during times of water shortage, available water supplies are appropriately allocated to water customers.

Discussion

Water supplies that were available to EBMUD's customers were limited due to rationing necessitated by past drought conditions.

It is expected that the water available for supplying EBMUD's customers will vary over time depending on the following factors: diversions by Mokelumne River users with senior water rights, requirements for instream flows to protect fish and wildlife in the Mokelumne River, the Sacramento-San Joaquin River Delta, and the San Francisco Bay, as well as development of future supplemental supplies.

Water agencies are responsible for planning to meet the needs of their customers through periods of drought with minimal disruption to residential, commercial, and industrial activities within their service area.

Water Service Responsibility

EBMUD recognizes that when there is a water shortage or projected water shortage, EBMUD's responsibility to serve its customers and service area is prioritized as follows:

- First, to serve its existing customers within its existing service area.
- Second, to serve expected new customers within its existing service area, but only if this does not unacceptably impair EBMUD's ability to serve its existing customers.
- Third, to consider serving new customers outside of its existing service area, but only if this does not impair EBMUD's ability to serve existing and expected new customers within its service area.

In accordance with California Government Code, Section 65589.7, when new service connections are restricted by EBMUD's Board of Directors, priority shall be given to applicants for water service to proposed developments within EBMUD's existing service area that include housing units affordable to lower income households, pursuant to Procedure 109 – Services: Estimates. Applicants granted such priority shall comply with all of EBMUD's Water Service regulations and pay all requisite fees.

Restrictions on provision of new water service connections may be due to the following:

- A declaration of a water shortage emergency condition under California Water Code, Section 350, et seq.
- A determination by the Board of Directors, based on EBMUD's Urban Water Management Plan, that sufficient water supply is not available to support the granting of all requests for new service, as provided in California Government Code, Section 66473.7.

- A determination by the Board of Directors, based on a written engineering report, that EBMUD does not have sufficient water treatment or distribution capacity to serve the needs of proposed development.

- The imposition of a compliance order by the Department of Public Health limiting new connections.

Authority

Resolution No. 32867-94, June 28, 1994
As amended by Resolution No. 33443-04, September 28, 2004
As amended by Resolution No. 33543-06, June 27, 2006
As amended by Resolution No. 33687-08, October 14, 2008
As amended by Resolution No. 33763-10, April 27, 2010.
As amended by Resolution No. XXXXX-12, April 24, 2012

California Government Code, Section 66473.7
California Government Code, Section 65589.7

Reference

Procedure 109 – Services: Estimates

EBMUD

Policy 4.07R

EFFECTIVE ~~23 NOV 10~~ 24 APR 12

SUPERSEDES ~~26 JAN 10~~ 23 NOV 10

INVESTMENT POLICY

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Invest District funds and funds managed by the District on behalf of its Joint Powers Authorities (JPA) in compliance with investment criteria for safety, liquidity, yield and diversity as set forth herein. Investments shall be in securities with a range of maturities to provide a high rate of return on investments while providing adequate security and liquidity to pay demands when due.

Authority

Section 53600 et. seq. of the California Government Code, Article 7 in Chapter 6 of the Municipal Utility District (M.U.D.) Act, and Board Resolution No. 33232-01 defines the types of allowable investments and delegates to the Director of Finance as the Treasurer the authority and responsibility to invest idle monies of the District. The investment of bond proceeds are specifically defined in the individual bond indenture documents and are not included in this policy. Section 53635 of the California Government Code defines how investments are to be handled for Joint Powers Authorities.

Investment Criteria

Criteria for selecting investments, in order of priority are:

1. *Safety* - The District's ability to recover principal and interest. Investments shall be made that will seek to ensure the preservation of principal and interest and minimize risk to the greatest extent possible. It is the primary duty of the Treasurer to protect, preserve and maintain cash and investments on behalf of the District.

2. *Liquidity* - The District's ability to have cash available when needed to support expenditure cycles and budgetary objectives. The average maturity of the portfolio shall not exceed 720 days in order to balance liquidity and yields.

3. *Yield* - Ability to provide maximum return on the District's investments while conforming to the safety and liquidity criteria above.

4. *Diversity* - Ability to maintain a broad investment portfolio for the District. In order to accomplish this, no more than 40% of the total portfolio shall be invested in any one type of security, and other than federally backed securities, no more than 10% in any one investment issue, nor more than 10% with any one issuer.

Investment Options

The District is able to purchase investments in the following instruments as stipulated under Section 53601 et. seq. of the California Government Code, Article 7 in Chapter 6 of the M.U.D. Act, Board Resolutions and guidelines set by the District:

1. U.S. Treasury Notes, Bonds and Bills

   - Unlimited investments
   - Maturity date not to exceed 5 years

2. State of California, Local Agency Investment Fund (LAIF)

   - Maximum limit as determined by Section 16429.1 of the California Government Code.

3. Obligations issued by Federal Agencies or a U.S. Government sponsored enterprise such as the Federal Farm Credit Bank (FFCB), Federal Home Loan Bank (FHLB), and Federal National Mortgage Association (FNMA).

   - Each agency holding limited to 40% of the Portfolio Investments
   - Maturity date not to exceed 5 years

4. Banker's Acceptances

   - Limited to 40% of the District's Portfolio
   - Issued by banks with total deposits of one billion dollars ($1,000,000,000) or more
   - Maturity not to exceed 180 days
   - Prime quality depending on size and credit worthiness of Bank
   - Issued by banks from offices in the U.S.

5. Commercial Paper

   - Limited to 25% of the District's Portfolio
   - Maturity not to exceed 270 days
   - Ratings of A1, P1 or F1 by either S&P, Moody's, or Fitch respectively
   - Eligible Commercial Paper is limited to those issued by corporations organized and operating in the U.S., with total assets exceeding $500,000,000

6. Medium Term Corporate Notes

   - Limited to 30% of the District's Portfolio
   - Maturity not to exceed five years
   - Issued by corporations operating within the United States
   - Rated AA or higher by one nationally-recognized rating service. If the rating drops below AA, an evaluation of the credit will be performed to determine if the notes should be sold.

7. Repurchase Agreements

   - Limited to 20% of the District's investment portfolio
   - Maturity not to exceed 270 days
   - Collateral may be any securities authorized in items 1 through 5 above
   - A Master Repurchase Agreement must be on file with the District
   - Security marked to market on a daily basis and delivered to the District's custodial bank at a market value of at least 102%
   - Primarily used as a limited term investment and a vehicle to fill particular dates and amounts

8. Certificates of Time Deposit

   - Maturity not to exceed 5 years
   - On uncollateralized deposits, limited to $100,000 per Bank or Savings & Loan, or maximum FDIC insured
   - On collateralized deposits, limited to 30% of District's Investment Portfolio
   - Investment in local branches within the District, whenever possible
   - Deposits over $100,000 will be collateralized in accordance with Sections 53651 and 53652 of the California Government Code
   - Deposits will be supported by a Contract for Deposit of Money with the depositing bank
   - An important consideration will be credit worthiness/solvency of the banking institution as evaluated by S&P or Moody's or other evaluator of financial institution's fiscal stability

9. Negotiable Certificates of Deposit

   - Limited to 30% of the District's portfolio
   - Maturity not to exceed five years
   - Issued by banks with total deposits of one billion dollars ($1,000,000,000) or more, and a credit rating of AA or higher

10. Money Market Mutual Funds

    - Rated AAA (or equivalent highest ranking) by two of the three largest nationally recognized rating services
    - Unrated funds with assets under management in excess of $500,000,000 and which has retained an advisor registered with the Securities and Exchange Commission with no less than five years experience investing in instruments allowed under the District's investment policy
    - Permitted investments conform to those authorized by the California Government Code (Sections 53601 et seq,)
    - May not represent more than five percent (5%) of the money market fund's assets.

11. Municipal Bonds

    - Limited to 40% of the District's portfolio
    - Maturity date not to exceed 5 years or with a put provision within 5 years of date of purchase
    - Rated AA or higher by one nationally-recognized rating service. If the rating drops below AA, an evaluation of the credit will be performed to determine if the notes should be sold.
    - Notes must be issued by the State of California or a local California agency. Notes maturing within 365 days must have a rating of MIG-1, SP-1, or F-1 by either Moody's, S&P, or Fitch respectively. If a rating is revised downwards at any time, an evaluation will be made to determine if the notes should be sold.
    -

Investment Placement

Investment placement shall be determined by, but not limited to, continual evaluation and projection of market conditions, interest rate trends, cash flow needs, economic data, yield curves, and interest rate forecasts. Additionally, the Treasurer will obtain at least three quotations from dealers, brokers, banks or savings and loan associations before finalizing any investment purchase for all investments in excess of $1 million. The combination of these factors shall determine where, in what denomination, and for what maturity investments are made.

Selling Securities Prior To Maturity

Losses are only allowable if either the sale of securities was necessary to meet payment obligations where no other funds are available, or the proposed swap/trade can enhance yield over the life of the new security on a total return basis.

Collateral

Securities placed with agents of depository shall at all times be maintained as specified in District Resolution 33232-01 in one or more trust companies, State or national banks located within California, the Federal Reserve Bank, or with any state or national bank located in any city designated as a federal reserve city by the Board of Governors of the Federal Reserve System, and to take from any such banks or trust companies receipts for securities so deposited. Requests for Collateral substitution and releases are subject to the Treasurer's written approval.

Purchasing Entities

Investments not purchased directly from the issuer will be purchased from:

- Institutions licensed by the State of California as a broker - dealer
- National or California State Chartered Banks
- Federal or California Chartered Savings Institution
- Brokerage firms designated as a primary government dealer by the Federal Reserve Bank
- Member of a federally regulated securities exchange

The Treasurer shall maintain a current eligible list of established dealers, brokers, banks and savings and loan associations with which securities trading and placement of funds are authorized. Strong capital base and credit worthiness are primary criteria for inclusion on the approved list. Dealers and brokers shall be regulated by the Securities and Exchange Commission and be members in good standing of the National Association of Securities Dealers.

Investment Security

To ensure a high degree of internal control, the District shall comply with the following:

1. All Securities purchased from dealers and brokers shall be held in safekeeping by the District's custodial bank, a national bank, a State chartered bank or trust company, established for this purpose as someone other than the selling party of the security. Securities purchased will be covered by a trust or safekeeping receipt in a manner that establishes the District's ownership. All transactions require delivery of the security prior to payment for the security (delivery vs. payment).

2. All trade confirmations shall be received directly and reviewed for conformity to the original transaction by an individual other than the person originating the transaction. All trade confirmations must be an original; copies of confirmations are not allowed. Any discrepancies will be brought to the attention of the Treasurer.

Fund Wire Procedures

Payment for securities purchased from broker dealers that are ineligible to provide safekeeping will be made through the District's custodial bank. Funds will only be transferred subsequent but immediately following the custodial bank's acknowledgment that they are prepared to make settlement on the terms and conditions specified by the District. Payment for securities purchased from bank investment departments that will be safe kept with the trust department of the bank will be made immediately upon confirmation of the trade.

Review And Reporting Requirements

On a quarterly basis the Treasurer shall prepare and submit a report to the General Manager and the Board of Directors listing investment transactions for the quarter and providing an investment summary by security type, percent of the portfolio, investment yield and the remaining period of investment to maturity.

On an annual basis, in accordance with Section 53646 of the California Government Code, an investment policy may be presented to the Board for consideration at a public meeting. In conjunction with the investment policy consideration, the Board shall also annually review the delegation of its authority for the management of investments to the Treasurer of the District.

Performance Review And Internal Control

Office of Internal Audit

The Office of Internal Audit will periodically audit the investment portfolio to evaluate the effectiveness of the District's investment program as well as its compliance with the Investment Policy. These audits will supplement the annual review by the District's external auditors.

Finance Department

The Director of Finance will review the investment portfolio monthly for compliance with the Investment Policy and make recommendations for changes and improvements where warranted.

Authority

Resolution No. 33019-96 on December 10, 1996,
Amended by Resolution No. 32877-94 on January 26, 1999
Amended by Resolution No. 33232-01 on January 9, 2001
Amended by Resolution 33287-02 on January 22, 2002
Amended by Resolution 33350-03 on February 25, 2003
Amended by Resolution 33390-04 on January 27, 2004
Amended by Resolution 33464-05 on February 22, 2005
Amended by Resolution 33516-06 on January 24, 2006
Amended by Resolution 33585-07on March 13, 2007
Approved by Resolution 33658-08, February 26, 2008
Approved by Resolution 33702-09, February 24, 2009
Approved by Resolution 33752-10, January 26,2010
Approved by Resolution 33792-10, November 23, 2010
Approved by Resolution XXXXX-12, April 24, 2012

EBMUD

Policy 4.07

EFFECTIVE 24 APR 12

SUPERSEDES 23 NOV 10

INVESTMENT POLICY

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Invest District funds and funds managed by the District on behalf of its Joint Powers Authorities (JPA) in compliance with investment criteria for safety, liquidity, yield and diversity as set forth herein. Investments shall be in securities with a range of maturities to provide a high rate of return on investments while providing adequate security and liquidity to pay demands when due.

Authority

Section 53600 et. seq. of the California Government Code, Article 7 in Chapter 6 of the Municipal Utility District (M.U.D.) Act, and Board Resolution No. 33232-01 defines the types of allowable investments and delegates to the Director of Finance as the Treasurer the authority and responsibility to invest idle monies of the District. The investment of bond proceeds are specifically defined in the individual bond indenture documents and are not included in this policy. Section 53635 of the California Government Code defines how investments are to be handled for Joint Powers Authorities.

Investment Criteria

Criteria for selecting investments, in order of priority are:

1. *Safety* - The District's ability to recover principal and interest. Investments shall be made that will seek to ensure the preservation of principal and interest and minimize risk to the greatest extent possible. It is the primary duty of the Treasurer to protect, preserve and maintain cash and investments on behalf of the District.

2. *Liquidity* - The District's ability to have cash available when needed to support expenditure cycles and budgetary objectives. The average maturity of the portfolio shall not exceed 720 days in order to balance liquidity and yields.

3. *Yield* - Ability to provide maximum return on the District's investments while conforming to the safety and liquidity criteria above.

4. *Diversity* - Ability to maintain a broad investment portfolio for the District. In order to accomplish this, no more than 40% of the total portfolio shall be invested in any one type of security, and other than federally backed securities, no more than 10% in any one investment issue, nor more than 10% with any one issuer.

Investment Options

The District is able to purchase investments in the following instruments as stipulated under Section 53601 et. seq. of the California Government Code, Article 7 in Chapter 6 of the M.U.D. Act, Board Resolutions and guidelines set by the District:

1. U.S. Treasury Notes, Bonds and Bills

   - Unlimited investments
   - Maturity date not to exceed 5 years

2. State of California, Local Agency Investment Fund (LAIF)

   - Maximum limit as determined by Section 16429.1 of the California Government Code.

3. Obligations issued by Federal Agencies or a U.S. Government sponsored enterprise such as the Federal Farm Credit Bank (FFCB), Federal Home Loan Bank (FHLB), and Federal National Mortgage Association (FNMA).

   - Each agency holding limited to 40% of the Portfolio Investments
   - Maturity date not to exceed 5 years

4. Banker's Acceptances

   - Limited to 40% of the District's Portfolio
   - Issued by banks with total deposits of one billion dollars ($1,000,000,000) or more
   - Maturity not to exceed 180 days
   - Prime quality depending on size and credit worthiness of Bank
   - Issued by banks from offices in the U.S.

5. Commercial Paper

   - Limited to 25% of the District's Portfolio
   - Maturity not to exceed 270 days
   - Ratings of A1, P1 or F1 by either S&P, Moody's, or Fitch respectively
   - Eligible Commercial Paper is limited to those issued by corporations organized and operating in the U.S., with total assets exceeding $500,000,000

6. Medium Term Corporate Notes

   - Limited to 30% of the District's Portfolio
   - Maturity not to exceed five years
   - Issued by corporations operating within the United States
   - Rated AA or higher by one nationally-recognized rating service. If the rating drops below AA, an evaluation of the credit will be performed to determine if the notes should be sold.

7. Repurchase Agreements

   - Limited to 20% of the District's investment portfolio
   - Maturity not to exceed 270 days
   - Collateral may be any securities authorized in items 1 through 5 above
   - A Master Repurchase Agreement must be on file with the District
   - Security marked to market on a daily basis and delivered to the District's custodial bank at a market value of at least 102%
   - Primarily used as a limited term investment and a vehicle to fill particular dates and amounts

8. Certificates of Time Deposit

   - Maturity not to exceed 5 years
   - On uncollateralized deposits, limited to $100,000 per Bank or Savings & Loan, or maximum FDIC insured
   - On collateralized deposits, limited to 30% of District's Investment Portfolio
   - Investment in local branches within the District, whenever possible
   - Deposits over $100,000 will be collateralized in accordance with Sections 53651 and 53652 of the California Government Code
   - Deposits will be supported by a Contract for Deposit of Money with the depositing bank
   - An important consideration will be credit worthiness/solvency of the banking institution as evaluated by S&P or Moody's or other evaluator of financial institution's fiscal stability

9. Negotiable Certificates of Deposit

   - Limited to 30% of the District's portfolio
   - Maturity not to exceed five years
   - Issued by banks with total deposits of one billion dollars ($1,000,000,000) or more, and a credit rating of AA or higher

10. Money Market Mutual Funds

    - Rated AAA (or equivalent highest ranking) by two of the three largest nationally recognized rating services
    - Unrated funds with assets under management in excess of $500,000,000 and which has retained an advisor registered with the Securities and Exchange Commission with no less than five years experience investing in instruments allowed under the District's investment policy
    - Permitted investments conform to those authorized by the California Government Code (Sections 53601 et seq,)
    - May not represent more than five percent (5%) of the money market fund's assets.

11. Municipal Bonds

    - Limited to 40% of the District's portfolio
    - Maturity date not to exceed 5 years or with a put provision within 5 years of date of purchase
    - Rated AA or higher by one nationally-recognized rating service. If the rating drops below AA, an evaluation of the credit will be performed to determine if the notes should be sold.
    - Notes must be issued by the State of California or a local California agency. Notes maturing within 365 days must have a rating of MIG-1, SP-1, or F-1 by either Moody's, S&P, or Fitch respectively. If a rating is revised downwards at any time, an evaluation will be made to determine if the notes should be sold.
    -

Investment Placement

Investment placement shall be determined by, but not limited to, continual evaluation and projection of market conditions, interest rate trends, cash flow needs, economic data, yield curves, and interest rate forecasts. Additionally, the Treasurer will obtain at least three quotations from dealers, brokers, banks or savings and loan associations before finalizing any investment purchase for all investments in excess of $1 million. The combination of these factors shall determine where, in what denomination, and for what maturity investments are made.

Selling Securities Prior To Maturity

Losses are only allowable if either the sale of securities was necessary to meet payment obligations where no other funds are available, or the proposed swap/trade can enhance yield over the life of the new security on a total return basis.

Collateral

Securities placed with agents of depository shall at all times be maintained as specified in District Resolution 33232-01 in one or more trust companies, State or national banks located within California, the Federal Reserve Bank, or with any state or national bank located in any city designated as a federal reserve city by the Board of Governors of the Federal Reserve System, and to take from any such banks or trust companies receipts for securities so deposited. Requests for Collateral substitution and releases are subject to the Treasurer's written approval.

Purchasing Entities

Investments not purchased directly from the issuer will be purchased from:

- Institutions licensed by the State of California as a broker - dealer
- National or California State Chartered Banks
- Federal or California Chartered Savings Institution
- Brokerage firms designated as a primary government dealer by the Federal Reserve Bank
- Member of a federally regulated securities exchange

The Treasurer shall maintain a current eligible list of established dealers, brokers, banks and savings and loan associations with which securities trading and placement of funds are authorized. Strong capital base and credit worthiness are primary criteria for inclusion on the approved list. Dealers and brokers shall be regulated by the Securities and Exchange Commission and be members in good standing of the National Association of Securities Dealers.

Investment Security

To ensure a high degree of internal control, the District shall comply with the following:

1. All Securities purchased from dealers and brokers shall be held in safekeeping by the District's custodial bank, a national bank, a State chartered bank or trust company, established for this purpose as someone other than the selling party of the security. Securities purchased will be covered by a trust or safekeeping receipt in a manner that establishes the District's ownership. All transactions require delivery of the security prior to payment for the security (delivery vs. payment).

2. All trade confirmations shall be received directly and reviewed for conformity to the original transaction by an individual other than the person originating the transaction. All trade confirmations must be an original; copies of confirmations are not allowed. Any discrepancies will be brought to the attention of the Treasurer.

Fund Wire Procedures

Payment for securities purchased from broker dealers that are ineligible to provide safekeeping will be made through the District's custodial bank. Funds will only be transferred subsequent but immediately following the custodial bank's acknowledgment that they are prepared to make settlement on the terms and conditions specified by the District. Payment for securities purchased from bank investment departments that will be safe kept with the trust department of the bank will be made immediately upon confirmation of the trade.

Review And Reporting Requirements

On a quarterly basis the Treasurer shall prepare and submit a report to the General Manager and the Board of Directors listing investment transactions for the quarter and providing an investment summary by security type, percent of the portfolio, investment yield and the remaining period of investment to maturity.

On an annual basis, in accordance with Section 53646 of the California Government Code, an investment policy may be presented to the Board for consideration at a public meeting. In conjunction with the investment policy consideration, the Board shall also annually review the delegation of its authority for the management of investments to the Treasurer of the District.

Performance Review And Internal Control

Office of Internal Audit

The Office of Internal Audit will periodically audit the investment portfolio to evaluate the effectiveness of the District's investment program as well as its compliance with the Investment Policy. These audits will supplement the annual review by the District's external auditors.

Finance Department

The Director of Finance will review the investment portfolio monthly for compliance with the Investment Policy and make recommendations for changes and improvements where warranted.

Authority

Resolution No. 33019-96 on December 10, 1996,
Amended by Resolution No. 32877-94 on January 26, 1999
Amended by Resolution No. 33232-01 on January 9, 2001
Amended by Resolution 33287-02 on January 22, 2002
Amended by Resolution 33350-03 on February 25, 2003
Amended by Resolution 33390-04 on January 27, 2004
Amended by Resolution 33464-05 on February 22, 2005
Amended by Resolution 33516-06 on January 24, 2006
Amended by Resolution 33585-07on March 13, 2007
Approved by Resolution 33658-08, February 26, 2008
Approved by Resolution 33702-09, February 24, 2009
Approved by Resolution 33752-10, January 26,2010
Approved by Resolution 33792-10, November 23, 2010
Approved by Resolution XXXXX-12, April 24, 2012

EBMUD

Policy 4.13R

EFFECTIVE ~~27 APR 10~~ 24 APR 12

SUPERSEDES ~~25 JUL 06~~ 27 APR 10

~~RATE SETTING GUIDELINES FOR~~ESTABLISHING WATER RATES

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT ~~THAT~~TO:

~~A~~Establish water ~~rate structure~~rates that ~~provides~~ provide adequate revenues ~~through~~while remaining affordable ~~rates, encourages~~, encourage conservation and efficient use of water, and reflects ~~the~~ cost of providing service to ~~serve~~ customers ~~will~~. Rates should also enhance the District's ability to provide a safe, reliable, ~~adequate~~and sufficient water supply to its customers over the long term.

~~Cost of Service~~Rate Methodology

District water rates are developed using a cost-of-service methodology recommended by the American Water Works Association (AWWA) ~~which allocates costs to various cost causative factors ("customer service characteristics"). Allocation of costs to customer service characteristics is~~. These cost-based principles are intended to properly allocate the reasonable estimated costs to those customer classifications whose service demands give rise to the costs. The costs are based on ~~a detailed review of~~ the District's water distribution system components, and a determination of the costs of service associated with the customer service characteristics for each customer class.

~~Cost allocations to the District's customer classifications reflect the following~~ AWWA recommended cost allocation methodology~~:~~ allocates cost to the District's customer classifications as follows:

- ~~Determination of the total revenue requirements for the period for which the rates are to be effective;~~
- Allocation of ~~total revenue requirements~~costs applicable to the ~~basic~~ functional cost components of water service which could include extra capacity (peaking demands);
- Distribution of the component costs to the various customer classes in accordance with their requirements for service; and
- Design of water rates that will recover from each class of customer, within practical limits and consistent with District policy and applicable law, the reasonable, estimated costs to serve that class of customer.

~~Cost of service water~~Water rates shall be developed using an AWWA methodology, recognized practices in the industry and sound economic judgment. A cost-of-service water rate study is to be completed every ten years.

~~Cost Based Allocation Principles~~

~~Cost of service water rates are developed through the allocation of water service costs. The cost based principles are intended to properly allocate the reasonable, estimated costs to those customer classifications whose service demands give rise to the costs. Cost based principles include:~~

~~Rate Design~~

- ~~Allocation of costs applicable to the functional cost components of water service which could include extra capacity (peaking) demands;~~
- ~~Distribution of costs by the various components of water service to respective classes of customers in accordance with the respective responsibility of the customer classes for each of the component costs.~~

Rate Design

In addition to reflecting the cost of service ~~by class~~, water rates should be designed with consideration of the impact on conservation and ~~should seek~~ water supply enhancement ~~through water use efficiency incentive strategies~~. Such strategies may include incentive pricing for ~~sales of~~ water, ~~including~~ and/or ~~reclaimed~~ recycled water, and ~~utilization of~~ drought rates to curtail unreasonable use and effectively allocate the water supply during periods of limited availability.

These rate design objectives are in furtherance of and consistent with:

- The Memorandum of Understanding Regarding Urban Water Conservation, dated September 1991 and signed by more than 150 entities (including EBMUD), which lists specific "water conservation best management practices" that the Legislature has declared, if implemented, will achieve reasonable, yet substantial, reductions in water use in California. The Legislature has further declared that water conservation best management practice number 11.4, conservation pricing of water through rate structure design, will provide incentives to water customers to reduce average or peak water demand use, or both.

- AB 1712, signed into law by Governor Wilson on August 25, 1993, which declares that water conservation is an important component of California's water policy for the future; that all reasonable efforts to conserve water should continue to be a high priority of California's water policy; and expressly provides that any public agency which supplies water for municipal use may encourage water conservation through rate structure design.

- SBx7-7 (2010) (Water Code section 10608.16) which calls on the State to make progress toward reducing urban per capita water use by 10% by 2016 and by 20% by 2021.

- Article X, section 2 of the California Constitution which declares "that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

The District's water rate structure should also provide sufficient flexibility to allow for sales of subsistence water to low-income customers at an affordable price.

Rate Distribution

~~Recognizing the desirability of consistency~~To ensure fairness in rates applicable to single family residential customers, ~~it is the policy of the District that~~ tiered rates for single family residential customers shall not be increased or decreased in one tier by more than 5% ~~beyond~~ of any ~~rate~~ adjustment made to other tiers ~~in the rate structure~~ for the purpose of meeting annual budget requirements. This does not apply to rates adopted by the Board of Directors in response to a water shortage condition.

~~Opportunities for Public Comment on Proposed Water Rates~~Public Involvement in Rate Setting

~~Adoption~~Prior to the Board's consideration of new water rates ~~will be proposed in~~, a staff report presenting rate ~~and~~ recommendations ~~prepared by the General Manager which shall~~ will be filed with the Board of Directors and made available to ~~members of~~ the public ~~prior to consideration of the adoption of the proposed water rates~~. ~~The Board of Directors~~, EBMUD will conduct at least one public hearing on ~~the proposed water rate changes, in addition to~~ rates and take other ~~outreach efforts which will be employed to solicit~~steps to meet or surpass public ~~input before~~involvement requirements on rate setting ~~rates and charges for water service~~that are established by law.

Authority

Resolution No. 32985-96, May 14, 1996,
Amended by Motion 143-96, June 25, 1996.
Amended by Resolution 33550-06, July 25, 2006
Amended by Resolution 33763-10, April 27, 2010
Amended by Resolution No. XXXXX-12, April 24, 2012

EBMUD

Policy 4.13

EFFECTIVE 24 APR 12

SUPERSEDES 27 APR 10

ESTABLISHING WATER RATES

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Establish water rates that provide adequate revenues while remaining affordable, encourage conservation and efficient use of water, and reflect the cost of providing service to customers. Rates should also enhance the District's ability to provide a safe, reliable, and sufficient water supply to its customers over the long term.

Rate Methodology

District water rates are developed using a cost-of-service methodology recommended by the American Water Works Association (AWWA). These cost-based principles are intended to properly allocate the reasonable estimated costs to those customer classifications whose service demands give rise to the costs. The costs are based on the District's water distribution system components, and a determination of the costs of service associated with the customer service characteristics for each customer class.

AWWA recommended cost allocation methodology allocates cost to the District's customer classifications as follows:

- Allocation of costs applicable to the functional cost components of water service which could include extra capacity (peaking demands);
- Distribution of the component costs to the various customer classes in accordance with their requirements for service; and
- Design of water rates that will recover from each class of customer, within practical limits and consistent with District policy and applicable law, the reasonable, estimated costs to serve that class of customer.

Water rates shall be developed using an AWWA methodology, recognized practices in the industry and sound economic judgment. A cost-of-service water rate study is to be completed every ten years.

Rate Design

In addition to reflecting the cost of service, water rates should be designed with consideration of the impact on conservation and water supply enhancement. Such strategies may include incentive pricing for water, and/or recycled water, and drought rates to curtail unreasonable use and effectively allocate the water supply during periods of limited availability.

These rate design objectives are in furtherance of and consistent with:

- The Memorandum of Understanding Regarding Urban Water Conservation, dated September 1991 and signed by more than 150 entities (including EBMUD), which lists specific "water conservation best management practices" that the Legislature has declared, if implemented, will achieve reasonable, yet substantial, reductions in water use in California. The Legislature has further declared that water conservation best management practice number 1.4, conservation pricing of water through rate structure design, will provide incentives to water customers to reduce average or peak water demand use, or both.

- AB 1712, signed into law by Governor Wilson on August 25, 1993, which declares that water conservation is an important component of California's water policy for the future; that all reasonable efforts to conserve water should continue to be a high priority of California's water policy; and expressly provides that any public agency which supplies water for municipal use may encourage water conservation through rate structure design.

- SBx7-7 (2010) (Water Code section 10608.16) which calls on the State to make progress toward reducing urban per capita water use by 10% by 2016 and by 20% by 2021.

- Article X, section 2 of the California Constitution which declares "that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

The District's water rate structure should also provide sufficient flexibility to allow for sales of subsistence water to low-income customers at an affordable price.

Rate Distribution

To ensure fairness in rates applicable to single family residential customers, tiered rates for single family residential customers shall not be increased or decreased in one tier by more than 5% of any adjustment made to other tiers for the purpose of meeting annual budget requirements. This does not apply to rates adopted by the Board of Directors in response to a water shortage condition.

Public Involvement in Rate Setting

Prior to the Board's consideration of new water rates or revisions to existing water rates, a staff report presenting rate recommendations will be filed with the Board of Directors and made available to the public. EBMUD will conduct at least one public hearing on rates and take other steps to meet or surpass public involvement requirements on rate setting that are established by law.

Authority

Resolution No. 32985-96, May 14, 1996,
Amended by Motion 143-96, June 25, 1996.
Amended by Resolution 33550-06, July 25, 2006
Amended by Resolution 33763-10, April 27, 2010
Amended by Resolution No. XXXXX-12, April 24, 2012

EBMUD

Policy 7.01R

EFFECTIVE ~~14 SEP 10~~ 24 APR 12

SUPERSEDES ~~14 NOV 06~~ 14 SEP 10

AQUEDUCT RIGHTS-OF-WAY MAINTENANCE

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Maintain raw water aqueduct rights-of-way in order to ensure :

- Safety of water supply and rights and obligations of the District;
- Protection against fire;
- Protection against erosion; and,
- Protection against trespassing by individuals or unauthorized encroachment of rights-of-way.

Rights-of-Way Use Restrictions

Protect against trespassing by use of control measures such as~~eliminating~~ gates across rights-of-way to ensure operational requirements and the rights of other property owners are met.

With prior District approval, allow use of the rights-of-way for public trail purposes by public agencies provided such use will lessen maintenance work performed by the District with due regard for District liability, safety of pipelines, and maintenance of access roads.

Where possible, secure relinquishment of surface rights from present owners thereof in exchange for other requested rights.

Allow the use of District properties by others only under the terms of a written agreement.

Ensure that all uses of the aqueduct right-of-way accommodate future construction and/or reconstruction of the aqueducts.

Prohibit uses incompatible with the District's property rights, operation and maintenance of the aqueducts, or that potentially impact the District's assets. These prohibitions generally include but are not limited to:

- Use of District aqueduct properties by others as a condition to meet city/county zoning requirements or to obtain any land use permit, approval, or entitlement affecting properties not owned by the District.
- Third party building or portions of buildings constructed on aqueduct property.
- Vehicular parking by others over ~~unencased~~ aqueducts.
- Interference with gravity drainage of District raw water aqueduct property. Drainage facilities shall be provided outside District property to assure adequate drainage is maintained.

Authority

Resolution No. 14,620, January 26, 1951
As amended by Resolution 33027-02, September 24, 2002
As amended by Resolution No. 33443-04, September 28, 2004
As amended by Resolution No. 33564-06, November 14, 2006
As amended by Resolution No. 33780-10, September 14, 2010
As amended by Resolution No. XXXXX-12, April 24, 2012

Reference

Procedure 718 – Raw Water Aqueduct Right-of-Way Non-Aqueduct Uses

EBMUD

Policy 7.01

EFFECTIVE 24 APR 12

SUPERSEDES 14 SEP 10

AQUEDUCT RIGHTS-OF-WAY MAINTENANCE

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Maintain raw water aqueduct rights-of-way in order to ensure :

- Safety of water supply and rights and obligations of the District;
- Protection against fire;
- Protection against erosion; and,
- Protection against trespassing by individuals or unauthorized encroachment of rights-of-way.

Rights-of-Way Use Restrictions

Protect against trespassing by use of control measures such as gates across rights-of-way to ensure operational requirements and the rights of other property owners are met.

With prior District approval, allow use of the rights-of-way for public trail purposes by public agencies provided such use will lessen maintenance work performed by the District with due regard for District liability, safety of pipelines, and maintenance of access roads.

Where possible, secure relinquishment of surface rights from present owners thereof in exchange for other requested rights.

Allow the use of District properties by others only under the terms of a written agreement.

Ensure that all uses of the aqueduct right-of-way accommodate future construction and/or reconstruction of the aqueducts.

Prohibit uses incompatible with the District's property rights, operation and maintenance of the aqueducts, or that potentially impact the District's assets. These prohibitions generally include but are not limited to:

- Use of District aqueduct properties by others as a condition to meet city/county zoning requirements or to obtain any land use permit, approval, or entitlement affecting properties not owned by the District.
- Third party building or portions of buildings constructed on aqueduct property.
- Vehicular parking by others over aqueducts.
- Interference with gravity drainage of District raw water aqueduct property. Drainage facilities shall be provided outside District property to assure adequate drainage is maintained.

Authority

Resolution No. 14,620, January 26, 1951
As amended by Resolution 33027-02, September 24, 2002
As amended by Resolution No. 33443-04, September 28, 2004
As amended by Resolution No. 33564-06, November 14, 2006
As amended by Resolution No. 33780-10, September 14, 2010
As amended by Resolution No. XXXXX-12, April 24, 2012

Reference

Procedure 718 – Raw Water Aqueduct Right-of-Way Non-Aqueduct Uses

EBMUD

Policy 9.01R

EFFECTIVE ~~23 FEB 10~~ 24 APR 12

SUPERSEDES ~~09 OCT 07~~ 23 FEB 10

FIRE CONTROL AND FUELS MANAGEMENT ON WATERSHED LANDS

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Manage the District owned watersheds to minimize the occurrence and impacts of wildland fires to protect life, property, watershed lands and water quality.

Protection of Watershed Lands and Water Quality

The District will:

- Implement measures to reduce fire hazards and maintain emergency access on watershed lands to the extent practicable to protect life, property and source water quality from wildland fire-related impacts including erosion, sedimentation, and nutrient loading.
- Ensure fire and fuels management activities are consistent with the District's objectives for the management and protection of source water quality, biodiversity and other natural resources to the extent practicable by using a strategic planning approach to fire management.
- Cooperate with state and local fire suppression agencies and committees and with adjacent property owners in fire suppression programs, training and management activities.
- Maintain suppression capability, equipment, and patrols to retain a basic level of fire safety and initial response necessary to assist in suppressing fires on or threatening District property, and on other areas when requested for Mutual Aid.
- Recognize the importance of fire as a natural ecological process and use prescribed burning and other techniques to reduce hazardous fuel loads under carefully selected conditions to achieve long-term fire safety, water quality protection, and biodiversity management objectives.
- Encourage the use of a range of environmentally ~~sensitive~~ appropriate methods to reduce hazardous fuel loads (e.g., livestock and goat grazing, mowing, plowing, vegetation removal).
- Support the establishment and placement of required fire hazard mitigation measures within the boundaries of new developments ~~and avoid the placement of required fire hazard mitigation measures on~~ when possible in order to avoid additional costs to the District and impacts to District watershed property~~ies~~.
- Implement appropriate restoration activities after a fire on District watersheds when necessary to protect water quality.

Authority

Resolution No. 16,866, January 14, 1955
Amended by Resolution No. 33116-98, August 11, 1998,
Amended by Resolution No. 33236-01, February 13, 2001
Amended by Resolution No. 33634-07, October 9, 2007
Amended by Resolution No. 33756-10, February 23, 2010
Amended by Resolution No. XXXXX-12, April 24, 2012

Reference

Policy 7.10 – Source Water Quality

EBMUD

Policy 9.01

EFFECTIVE 24 APR 12

SUPERSEDES 23 FEB 10

FIRE CONTROL AND FUELS MANAGEMENT ON WATERSHED LANDS

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Manage the District owned watersheds to minimize the occurrence and impacts of wildland fires to protect life, property, watershed lands and water quality.

Protection of Watershed Lands and Water Quality

The District will:

- Implement measures to reduce fire hazards and maintain emergency access on watershed lands to the extent practicable to protect life, property and source water quality from wildland fire-related impacts including erosion, sedimentation, and nutrient loading.
- Ensure fire and fuels management activities are consistent with the District's objectives for the management and protection of source water quality, biodiversity and other natural resources to the extent practicable by using a strategic planning approach to fire management.
- Cooperate with state and local fire suppression agencies and committees and with adjacent property owners in fire suppression programs, training and management activities.
- Maintain suppression capability, equipment, and patrols to retain a basic level of fire safety and initial response necessary to assist in suppressing fires on or threatening District property, and on other areas when requested for Mutual Aid.
- Recognize the importance of fire as a natural ecological process and use prescribed burning and other techniques to reduce hazardous fuel loads under carefully selected conditions to achieve long-term fire safety, water quality protection, and biodiversity management objectives.
- Encourage the use of a range of environmentally appropriate methods to reduce hazardous fuel loads (e.g., livestock and goat grazing, mowing, plowing, vegetation removal).
- Support the establishment and placement of required fire hazard mitigation measures within the boundaries of new developments when possible in order to avoid additional costs to the District and impacts to District watershed properties.
- Implement appropriate restoration activities after a fire on District watersheds when necessary to protect water quality.

Authority

Resolution No. 16,866, January 14, 1955
Amended by Resolution No. 33116-98, August 11, 1998,
Amended by Resolution No. 33236-01, February 13, 2001
Amended by Resolution No. 33634-07, October 9, 2007
Amended by Resolution No. 33756-10, February 23, 2010
Amended by Resolution No. XXXXX-12, April 24, 2012

Reference

Policy 7.10 – Source Water Quality

EBMUD

Policy 9.04R

EFFECTIVE ~~23 FEB 10~~ 24 APR 12

SUPERSEDES ~~09 OCT 07~~ 23 FEB 10

WATERSHED MANAGEMENT AND USE

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Acquire, protect, and manage watershed land surrounding District reservoirs in accordance with the District's primary objective of providing high quality drinking water and in a manner which protects source water quality and water supply, consistent with District environmental principles.

Watershed Management and Use – General

- Implement the Mokelumne Watershed Master Plan (MWMP) adopted by Resolution No. 33668-08 and the East Bay Watershed Master Plan (EBWMP) adopted by Resolution No. 32979-96 as policy for those lands described therein.
- Manage and maintain watershed lands in accordance with all applicable environmental laws, regulations and requirements.

Watershed Land Acquisition

- Anticipate watershed land requirements necessary for District operations and protection of source water quality with sufficient lead-time to effect economic acquisition of property.
- Acquire, maintain, and/or dispose of watershed land, consistent with District land ownership priorities and in accordance with District environmental principles and primary objective of providing high quality drinking water.
- Work with other agencies or public utilities seeking interest in or acquisition of District lands in accordance with the District's mission as outlined in this policy and in the MWMP and EBWMP.
- Resist, with all means and methods provided by law, land acquisition or use by non-District entities for purposes which are inconsistent with District Watershed Master Plans and Policies or which would result in the deterioration of environmental or drinking water source quality.

Watershed Land Protection

- Maintain an active program that preserves and protects source water quality through ~~for~~ sanitary control, watershed assessment and protection ~~for~~of watershed lands tributary to District reservoirs, all ~~to preserve and protect source water quality~~ consistent with the Safe Drinking Water Act and its amendments.
- Work with officials ~~of~~ from sanitary districts, the Regional Water Quality Control Board, and ~~from~~ federal, state, county, and local governments to preserve and protect source water quality.
- Develop, implement, and maintain Best Management Practices to minimize soil erosion, sedimentation, fire damage, nutrient and other pollutant impacts on District lands and source water quality.
- Track climate change science and the potential impacts of climate change on watershed lands. Incorporate findings, as appropriate into future studies and master plans.

- Prevent contamination and pollution from entering District reservoirs.
- Identify sediment sources from non-District owned land and determine their impact on District reservoirs and watercourses, while encouraging owners of non-District owned watershed lands to develop and implement Best Management Practices for erosion control.
- Where feasible, purchase and eliminate occupancy on watershed lands where sewage disposal is impracticable or constitutes a special hazard or where occupancy will result in the degradation of the District's source water quality. Prohibit any human use of District lands that lack adequate and approved facilities for removal of sewage.

Land Management and Control

- Permit public use of District land/watershed for purposes including, but not limited to, education, recreation and fishing that are consistent with the District's primary objective of providing high quality drinking water by protecting source water quality and preserving open space characteristics of land as outlined in the MWMP, EBWMP and in District policy. Permit only those uses that can be adequately monitored and managed by the District. Prioritize these uses to best meet core business needs and regulatory requirements of water supply, water quality, environmental protection and recreation. Consider the impact to ratepayers in determining the appropriateness of any watershed use not related to core business requirements.
- Maintain and operate reservoir recreation areas consistent with the District's mission and policies as ~~further~~ described in the MWMP and EBWMP. Recreation areas will be developed and operated by District staff, qualified public agencies or private concessionaires as determined by the Board of Directors. Non-District operation of recreation areas must conform with District-adopted performance standards.
- Obtain public input on District watershed management by inviting public participation via citizen advisory committees or other means, as deemed appropriate by the District, as part of the master planning process.
- Coordinate District land use planning and management with federal, state, and local agencies as required.
- Retain fee title to and direct control over all watershed lands and reservoirs essential to the security or operation of the utility system.
- Ensure security (including patrols) of District watershed lands and reservoirs.
- Modifications to the MWMP and EBWMP shall be made only by appropriate action of the Board of Directors following public notification and hearing. The Board of Directors may make such modifications as may be necessary to meet the requirements for the primary purpose of protecting watershed land, source water quality and water production.

Authority

Resolution No. 25,418, October 13, 1970
As amended by Resolution No. 33116-98, August 11, 1998
As amended by Resolution No. 33236-01, February 13, 2001
As amended by Resolution No. 33634-07, October 9, 2007
As amended by Resolution No. 33756-10, February 23, 2010
As amended by Resolution No. XXXXX-12, April 24, 2012

References

Policy 7.10 – Source Water Quality
Policy 7.05 – Sustainability
Policy 7.10 – Source Water Quality

EBMUD

Policy 9.04

EFFECTIVE 24 APR 12

SUPERSEDES 23 FEB 10

WATERSHED MANAGEMENT AND USE

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Acquire, protect, and manage watershed land surrounding District reservoirs in accordance with the District's primary objective of providing high quality drinking water and in a manner which protects source water quality and water supply, consistent with District environmental principles.

Watershed Management and Use – General

- Implement the Mokelumne Watershed Master Plan (MWMP) adopted by Resolution No. 33668-08 and the East Bay Watershed Master Plan (EBWMP) adopted by Resolution No. 32979-96 as policy for those lands described therein.
- Manage and maintain watershed lands in accordance with all applicable environmental laws, regulations and requirements.

Watershed Land Acquisition

- Anticipate watershed land requirements necessary for District operations and protection of source water quality with sufficient lead-time to effect economic acquisition of property.
- Acquire, maintain, and/or dispose of watershed land, consistent with District land ownership priorities and in accordance with District environmental principles and primary objective of providing high quality drinking water.
- Work with other agencies or public utilities seeking interest in or acquisition of District lands in accordance with the District's mission as outlined in this policy and in the MWMP and EBWMP.
- Resist, with all means and methods provided by law, land acquisition or use by non-District entities for purposes which are inconsistent with District Watershed Master Plans and Policies or which would result in the deterioration of environmental or drinking water source quality.

Watershed Land Protection

- Maintain an active program that preserves and protects source water quality through sanitary control, watershed assessment and protection of watershed lands tributary to District reservoirs, all consistent with the Safe Drinking Water Act and its amendments.
- Work with officials from sanitary districts, the Regional Water Quality Control Board, and federal, state, county, and local governments to preserve and protect source water quality.
- Develop, implement, and maintain Best Management Practices to minimize soil erosion, sedimentation, fire damage, nutrient and other pollutant impacts on District lands and source water quality.
- Track climate change science and the potential impacts of climate change on watershed lands. Incorporate findings, as appropriate into future studies and master plans.

- Prevent contamination and pollution from entering District reservoirs.
- Identify sediment sources from non-District owned land and determine their impact on District reservoirs and watercourses, while encouraging owners of non-District owned watershed lands to develop and implement Best Management Practices for erosion control.
- Where feasible, purchase and eliminate occupancy on watershed lands where sewage disposal is impracticable or constitutes a special hazard or where occupancy will result in the degradation of the District's source water quality. Prohibit any human use of District lands that lack adequate and approved facilities for removal of sewage.

Land Management and Control

- Permit public use of District land/watershed for purposes including, but not limited to, education, recreation and fishing that are consistent with the District's primary objective of providing high quality drinking water by protecting source water quality and preserving open space characteristics of land as outlined in the MWMP, EBWMP and in District policy. Permit only those uses that can be adequately monitored and managed by the District. Prioritize these uses to best meet core business needs and regulatory requirements of water supply, water quality, environmental protection and recreation. Consider the impact to ratepayers in determining the appropriateness of any watershed use not related to core business requirements.
- Maintain and operate reservoir recreation areas consistent with the District's mission and policies as described in the MWMP and EBWMP. Recreation areas will be developed and operated by District staff, qualified public agencies or private concessionaires as determined by the Board of Directors. Non-District operation of recreation areas must conform with District-adopted performance standards.
- Obtain public input on District watershed management by inviting public participation via citizen advisory committees or other means, as deemed appropriate by the District, as part of the master planning process.
- Coordinate District land use planning and management with federal, state, and local agencies as required.
- Retain fee title to and direct control over all watershed lands and reservoirs essential to the security or operation of the utility system.
- Ensure security (including patrols) of District watershed lands and reservoirs.
- Modifications to the MWMP and EBWMP shall be made only by appropriate action of the Board of Directors following public notification and hearing. The Board of Directors may make such modifications as may be necessary to meet the requirements for the primary purpose of protecting watershed land, source water quality and water production.

Authority

Resolution No. 25,418, October 13, 1970
As amended by Resolution No. 33116-98, August 11, 1998
As amended by Resolution No. 33236-01, February 13, 2001
As amended by Resolution No. 33634-07, October 9, 2007
As amended by Resolution No. 33756-10, February 23, 2010
As amended by Resolution No. XXXXX-12, April 24, 2012

References

Policy 7.10 – Source Water Quality
Policy 7.05 – Sustainability
Policy 7.10 – Source Water Quality

Draft Prepared By:

Joel Fred
Office of General Counsel

RESOLUTION NO. _____

ADOPTING REVISED POLICY 3.07, RESPONSIBILITY TO SERVE WATER CUSTOMERS; REVISED POLICY 4.07, INVESTMENT POLICY; REVISED POLICY 4.13, ESTABLISHING WATER RATES; REVISED POLICY 7.01, AQUEDUCT RIGHTS-OF-WAY MAINTENANCE; REVISED POLICY 9.01, FIRE CONTROL AND FUELS MANAGEMENT ON WATERSHED LANDS; AND REVISED POLICY 9.04, WATERSHED MANAGEMENT AND USE

Introduced by Director ; Seconded by Director

WHEREAS, it is the desire and intention of the Board of Directors to update and revise Policy 3.07, entitled "Responsibility to Serve Water Customers;" Policy 4.07, entitled "Investment Policy;" Policy 4.13, entitled "Establishing Water Rates;" Policy 7.01, entitled "Aqueduct Rights-of-Way Maintenance;" Policy 9.01, entitled "Fire Control and Fuels Management on Watershed Lands;" and Policy 9.04, entitled "Watershed Management and Use;"

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the East Bay Municipal Utility District that Revised Policy 3.07, Revised Policy 4.07, Revised Policy 4.13, Revised Policy 7.01, Revised Policy 9.01, and Revised Policy 9.04 attached hereto as Exhibits A through F, are hereby adopted.

ADOPTED this 24th day of April, 2012 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
President

ATTEST:

_____
Secretary

APPROVED AS TO FORM AND PROCEDURE

_____
General Counsel

W:\400\410\410.01\Policies\Pol 307 407 413 701 901 904.doc

Policy 3.07R

EFFECTIVE ~~27 APR 10~~ 24 APR 12

SUPERSEDES ~~14 OCT 08~~ 27 APR 10

RESPONSIBILITY TO SERVE WATER CUSTOMERS

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Ensure that during times of water shortage, available water supplies are appropriately allocated to water customers.

Discussion

Water supplies that were available to EBMUD's customers were limited due to rationing necessitated by past drought conditions.

It is expected that the water available for supplying EBMUD's customers will vary over time depending on the following factors: diversions by Mokelumne River users with senior water rights, requirements for instream flows to protect fish and wildlife in the Mokelumne River, the Sacramento--San Joaquin River Delta, and the San Francisco Bay, as well as development of future supplemental supplies.

Water agencies are responsible for planning to meet the needs of their customers through periods of drought with minimal disruption to residential, commercial, and industrial activities within their service area.

Water Service Responsibility

EBMUD recognizes that when there is a water shortage or projected water shortage, EBMUD's responsibility to serve its customers and service area is prioritized as follows:

- First, to serve its existing customers within its existing service area.
- Second, to serve expected new customers within its existing service area, but only if this does not unacceptably impair EBMUD's ability to serve its existing customers.
- Third, to consider serving new customers outside of its existing service area, but only if this does not impair EBMUD's ability to serve existing and expected new customers within its service area.

In accordance with California Government Code, Section 65589.7, when new service connections are restricted by EBMUD's Board of Directors, priority shall be given to applicants for water service to proposed developments within EBMUD's existing service area that include housing units affordable to lower income households, pursuant to ~~administrative procedures adopted and implemented by the General Manager~~Procedure 109 – Services: Estimates. Applicants granted such priority shall comply with all of EBMUD's Water Service regulations and pay all requisite fees.

Restrictions on provision of new water service connections may be due to the following:

- A declaration of a water shortage emergency condition under California Water Code, Section 350, et seq.

EXHIBIT A

- A determination by the Board of Directors, based on EBMUD's Urban Water Management Plan, that sufficient water supply is not available to support the granting of all requests for new service, as provided in California Government Code, Section 66473.7.
- A determination by the Board of Directors, based on a written engineering report, that EBMUD does not have sufficient water treatment or distribution capacity to serve the needs of proposed development.
- The imposition of a compliance order by the Department of Public Health ~~Services~~ limiting new connections.

Authority

Resolution No. 32867-94, June 28, 1994
As amended by Resolution No. 33443-04, September 28, 2004
As amended by Resolution No. 33543-06, June 27, 2006
As amended by Resolution No. 33687-08, October 14, 2008
As amended by Resolution No. 33763-10, April 27, 2010.
As amended by Resolution No. XXXXX-12, April 24, 2012

California Government Code, Section 66473.7
California Government Code, Section 65589.7

Reference

Procedure 109 – Services: Estimates

EBMUD

Policy 3.07

EFFECTIVE 24 APR 12

SUPERSEDES 27 APR 10

RESPONSIBILITY TO SERVE WATER CUSTOMERS

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Ensure that during times of water shortage, available water supplies are appropriately allocated to water customers.

Discussion

Water supplies that were available to EBMUD's customers were limited due to rationing necessitated by past drought conditions.

It is expected that the water available for supplying EBMUD's customers will vary over time depending on the following factors: diversions by Mokelumne River users with senior water rights, requirements for instream flows to protect fish and wildlife in the Mokelumne River, the Sacramento-San Joaquin River Delta, and the San Francisco Bay, as well as development of future supplemental supplies.

Water agencies are responsible for planning to meet the needs of their customers through periods of drought with minimal disruption to residential, commercial, and industrial activities within their service area.

Water Service Responsibility

EBMUD recognizes that when there is a water shortage or projected water shortage, EBMUD's responsibility to serve its customers and service area is prioritized as follows:

- First, to serve its existing customers within its existing service area.
- Second, to serve expected new customers within its existing service area, but only if this does not unacceptably impair EBMUD's ability to serve its existing customers.
- Third, to consider serving new customers outside of its existing service area, but only if this does not impair EBMUD's ability to serve existing and expected new customers within its service area.

In accordance with California Government Code, Section 65589.7, when new service connections are restricted by EBMUD's Board of Directors, priority shall be given to applicants for water service to proposed developments within EBMUD's existing service area that include housing units affordable to lower income households, pursuant to Procedure 109 – Services: Estimates. Applicants granted such priority shall comply with all of EBMUD's Water Service regulations and pay all requisite fees.

Restrictions on provision of new water service connections may be due to the following:

- A declaration of a water shortage emergency condition under California Water Code, Section 350, et seq.
- A determination by the Board of Directors, based on EBMUD's Urban Water Management Plan, that sufficient water supply is not available to support the granting of all requests for new service, as provided in California Government Code, Section 66473.7.

- A determination by the Board of Directors, based on a written engineering report, that EBMUD does not have sufficient water treatment or distribution capacity to serve the needs of proposed development.
- The imposition of a compliance order by the Department of Public Health limiting new connections.

Authority

Resolution No. 32867-94, June 28, 1994
As amended by Resolution No. 33443-04, September 28, 2004
As amended by Resolution No. 33543-06, June 27, 2006
As amended by Resolution No. 33687-08, October 14, 2008
As amended by Resolution No. 33763-10, April 27, 2010.
As amended by Resolution No. XXXXX-12, April 24, 2012

California Government Code, Section 66473.7
California Government Code, Section 65589.7

Reference

Procedure 109 – Services: Estimates

EBMUD

Policy 4.07R

EFFECTIVE 24 APR 12

SUPERSEDES 23 NOV 10

INVESTMENT POLICY

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Invest District funds and funds managed by the District on behalf of its Joint Powers Authorities (JPA) in compliance with investment criteria for safety, liquidity, yield and diversity as set forth herein. Investments shall be in securities with a range of maturities to provide a high rate of return on investments while providing adequate security and liquidity to pay demands when due.

Authority

Section 53600 et. seq. of the California Government Code, Article 7 in Chapter 6 of the Municipal Utility District (M.U.D.) Act, and Board Resolution No. 33232-01 defines the types of allowable investments and delegates to the Director of Finance as the Treasurer the authority and responsibility to invest idle monies of the District. The investment of bond proceeds are specifically defined in the individual bond indenture documents and are not included in this policy. Section 53635 of the California Government Code defines how investments are to be handled for Joint Powers Authorities.

Investment Criteria

Criteria for selecting investments, in order of priority are:

1. *Safety* - The District's ability to recover principal and interest. Investments shall be made that will seek to ensure the preservation of principal and interest and minimize risk to the greatest extent possible. It is the primary duty of the Treasurer to protect, preserve and maintain cash and investments on behalf of the District.

2. *Liquidity* - The District's ability to have cash available when needed to support expenditure cycles and budgetary objectives. The average maturity of the portfolio shall not exceed 720 days in order to balance liquidity and yields.

3. *Yield* - Ability to provide maximum return on the District's investments while conforming to the safety and liquidity criteria above.

4. *Diversity* - Ability to maintain a broad investment portfolio for the District. In order to accomplish this, no more than 40% of the total portfolio shall be invested in any one type of security, and other than federally backed securities, no more than 10% in any one investment issue, nor more than 10% with any one issuer.

Investment Options

The District is able to purchase investments in the following instruments as stipulated under Section 53601 et. seq. of the California Government Code, Article 7 in Chapter 6 of the M.U.D. Act, Board Resolutions and guidelines set by the District:

1. U.S. Treasury Notes, Bonds and Bills

   - Unlimited investments
   - Maturity date not to exceed 5 years

2. State of California, Local Agency Investment Fund (LAIF)

   - Maximum limit as determined by Section 16429.1 of the California Government Code.

EXHIBIT B

3. Obligations issued by Federal Agencies or a U.S. Government sponsored enterprise such as the Federal Farm Credit Bank (FFCB), Federal Home Loan Bank (FHLB), and Federal National Mortgage Association (FNMA).

   - Each agency holding limited to 40% of the Portfolio Investments
   - Maturity date not to exceed 5 years

4. Banker's Acceptances

   - Limited to 40% of the District's Portfolio
   - Issued by banks with total deposits of one billion dollars ($1,000,000,000) or more
   - Maturity not to exceed 180 days
   - Prime quality depending on size and credit worthiness of Bank
   - Issued by banks from offices in the U.S.

5. Commercial Paper

   - Limited to 25% of the District's Portfolio
   - Maturity not to exceed 270 days
   - Ratings of A1, P1 or F1 by either S&P, Moody's, or Fitch respectively
   - Eligible Commercial Paper is limited to those issued by corporations organized and operating in the U.S., with total assets exceeding $500,000,000

6. Medium Term Corporate Notes

   - Limited to 30% of the District's Portfolio
   - Maturity not to exceed five years
   - Issued by corporations operating within the United States
   - Rated AA or higher by one nationally-recognized rating service. If the rating drops below AA, an evaluation of the credit will be performed to determine if the notes should be sold.

7. Repurchase Agreements

   - Limited to 20% of the District's investment portfolio
   - Maturity not to exceed 270 days
   - Collateral may be any securities authorized in items 1 through 5 above
   - A Master Repurchase Agreement must be on file with the District
   - Security marked to market on a daily basis and delivered to the District's custodial bank at a market value of at least 102%
   - Primarily used as a limited term investment and a vehicle to fill particular dates and amounts

8. Certificates of Time Deposit

   - Maturity not to exceed 5 years
   - On uncollateralized deposits, limited to $100,000 per Bank or Savings & Loan, or maximum FDIC insured
   - On collateralized deposits, limited to 30% of District's Investment Portfolio
   - Investment in local branches within the District, whenever possible
   - Deposits over $100,000 will be collateralized in accordance with Sections 53651 and 53652 of the California Government Code
   - Deposits will be supported by a Contract for Deposit of Money with the depositing bank
   - An important consideration will be credit worthiness/solvency of the banking institution as evaluated by S&P or Moody's or other evaluator of financial institution's fiscal stability

9. Negotiable Certificates of Deposit

   - Limited to 30% of the District's portfolio
   - Maturity not to exceed five years
   - Issued by banks with total deposits of one billion dollars ($1,000,000,000) or more, and a credit rating of AA or higher

10. Money Market Mutual Funds

    - Rated AAA (or equivalent highest ranking) by two of the three largest nationally recognized rating services
    - Unrated funds with assets under management in excess of $500,000,000 and which has retained an advisor registered with the Securities and Exchange Commission with no less than five years experience investing in instruments allowed under the District's investment policy
    - Permitted investments conform to those authorized by the California Government Code (Sections 53601 et seq,)
    - May not represent more than five percent (5%) of the money market fund's assets.

11. Municipal Bonds

    - Limited to 40% of the District's portfolio
    - Maturity date not to exceed 5 years or with a put provision within 5 years of date of purchase
    - Rated AA or higher by one nationally-recognized rating service. If the rating drops below AA, an evaluation of the credit will be performed to determine if the notes should be sold.
    - Notes must be issued by the State of California or a local California agency. Notes maturing within 365 days must have a rating of MIG-1, SP-1, or F-1 by either Moody's, S&P, or Fitch respectively. If a rating is revised downwards at any time, an evaluation will be made to determine if the notes should be sold.
    -

Investment Placement

Investment placement shall be determined by, but not limited to, continual evaluation and projection of market conditions, interest rate trends, cash flow needs, economic data, yield curves, and interest rate forecasts. Additionally, the Treasurer will obtain at least three quotations from dealers, brokers, banks or savings and loan associations before finalizing any investment purchase for all investments in excess of $1 million. The combination of these factors shall determine where, in what denomination, and for what maturity investments are made.

Selling Securities Prior To Maturity

Losses are only allowable if either the sale of securities was necessary to meet payment obligations where no other funds are available, or the proposed swap/trade can enhance yield over the life of the new security on a total return basis.

Collateral

Securities placed with agents of depository shall at all times be maintained as specified in District Resolution 33232-01 in one or more trust companies, State or national banks located within California, the Federal Reserve Bank, or with any state or national bank located in any city designated as a federal reserve city by the Board of Governors of the Federal Reserve System, and to take from any such banks or trust companies receipts for securities so deposited. Requests for Collateral substitution and releases are subject to the Treasurer's written approval.

Purchasing Entities

Investments not purchased directly from the issuer will be purchased from:

- Institutions licensed by the State of California as a broker - dealer
- National or California State Chartered Banks
- Federal or California Chartered Savings Institution
- Brokerage firms designated as a primary government dealer by the Federal Reserve Bank
- Member of a federally regulated securities exchange

The Treasurer shall maintain a current eligible list of established dealers, brokers, banks and savings and loan associations with which securities trading and placement of funds are authorized. Strong capital base and credit worthiness are primary criteria for inclusion on the approved list. Dealers and brokers shall be regulated by the Securities and Exchange Commission and be members in good standing of the National Association of Securities Dealers.

Investment Security

To ensure a high degree of internal control, the District shall comply with the following:

1. All Securities purchased from dealers and brokers shall be held in safekeeping by the District's custodial bank, a national bank, a State chartered bank or trust company, established for this purpose as someone other than the selling party of the security. Securities purchased will be covered by a trust or safekeeping receipt in a manner that establishes the District's ownership. All transactions require delivery of the security prior to payment for the security (delivery vs. payment).

2. All trade confirmations shall be received directly and reviewed for conformity to the original transaction by an individual other than the person originating the transaction. All trade confirmations must be an original; copies of confirmations are not allowed. Any discrepancies will be brought to the attention of the Treasurer.

Fund Wire Procedures

Payment for securities purchased from broker dealers that are ineligible to provide safekeeping will be made through the District's custodial bank. Funds will only be transferred subsequent but immediately following the custodial bank's acknowledgment that they are prepared to make settlement on the terms and conditions specified by the District. Payment for securities purchased from bank investment departments that will be safe kept with the trust department of the bank will be made immediately upon confirmation of the trade.

Review And Reporting Requirements

On a quarterly basis the Treasurer shall prepare and submit a report to the General Manager and the Board of Directors listing investment transactions for the quarter and providing an investment summary by security type, percent of the portfolio, investment yield and the remaining period of investment to maturity.

On an annual basis, in accordance with Section 53646 of the California Government Code, an investment policy may be presented to the Board for consideration at a public meeting. In conjunction with the investment policy consideration, the Board shall also annually review the delegation of its authority for the management of investments to the Treasurer of the District.

Performance Review And Internal Control

Office of Internal Audit

The Office of Internal Audit will periodically audit the investment portfolio to evaluate the effectiveness of the District's investment program as well as its compliance with the Investment Policy. These audits will supplement the annual review by the District's external auditors.

Finance Department

The Director of Finance will review the investment portfolio monthly for compliance with the Investment Policy and make recommendations for changes and improvements where warranted.

Authority

Resolution No. 33019-96 on December 10, 1996,
Amended by Resolution No. 32877-94 on January 26, 1999
Amended by Resolution No. 33232-01 on January 9, 2001
Amended by Resolution 33287-02 on January 22, 2002
Amended by Resolution 33350-03 on February 25, 2003
Amended by Resolution 33390-04 on January 27, 2004
Amended by Resolution 33464-05 on February 22, 2005
Amended by Resolution 33516-06 on January 24, 2006
Amended by Resolution 33585-07on March 13, 2007
Approved by Resolution 33658-08, February 26, 2008
Approved by Resolution 33702-09, February 24, 2009
Approved by Resolution 33752-10, January 26,2010
Approved by Resolution 33792-10, November 23, 2010
Approved by Resolution XXXXX-12, April 24, 2012

EBMUD

Policy 4.07

EFFECTIVE 24 APR 12

SUPERSEDES 23 NOV 10

INVESTMENT POLICY

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Invest District funds and funds managed by the District on behalf of its Joint Powers Authorities (JPA) in compliance with investment criteria for safety, liquidity, yield and diversity as set forth herein. Investments shall be in securities with a range of maturities to provide a high rate of return on investments while providing adequate security and liquidity to pay demands when due.

Authority

Section 53600 et. seq. of the California Government Code, Article 7 in Chapter 6 of the Municipal Utility District (M.U.D.) Act, and Board Resolution No. 33232-01 defines the types of allowable investments and delegates to the Director of Finance as the Treasurer the authority and responsibility to invest idle monies of the District. The investment of bond proceeds are specifically defined in the individual bond indenture documents and are not included in this policy. Section 53635 of the California Government Code defines how investments are to be handled for Joint Powers Authorities.

Investment Criteria

Criteria for selecting investments, in order of priority are:

1. *Safety* - The District's ability to recover principal and interest. Investments shall be made that will seek to ensure the preservation of principal and interest and minimize risk to the greatest extent possible. It is the primary duty of the Treasurer to protect, preserve and maintain cash and investments on behalf of the District.

2. *Liquidity* - The District's ability to have cash available when needed to support expenditure cycles and budgetary objectives. The average maturity of the portfolio shall not exceed 720 days in order to balance liquidity and yields.

3. *Yield* - Ability to provide maximum return on the District's investments while conforming to the safety and liquidity criteria above.

4. *Diversity* - Ability to maintain a broad investment portfolio for the District. In order to accomplish this, no more than 40% of the total portfolio shall be invested in any one type of security, and other than federally backed securities, no more than 10% in any one investment issue, nor more than 10% with any one issuer.

Investment Options

The District is able to purchase investments in the following instruments as stipulated under Section 53601 et. seq. of the California Government Code, Article 7 in Chapter 6 of the M.U.D. Act, Board Resolutions and guidelines set by the District:

1. U.S. Treasury Notes, Bonds and Bills

   - Unlimited investments
   - Maturity date not to exceed 5 years

2. State of California, Local Agency Investment Fund (LAIF)

   - Maximum limit as determined by Section 16429.1 of the California Government Code.

3. Obligations issued by Federal Agencies or a U.S. Government sponsored enterprise such as the Federal Farm Credit Bank (FFCB), Federal Home Loan Bank (FHLB), and Federal National Mortgage Association (FNMA).

   - Each agency holding limited to 40% of the Portfolio Investments
   - Maturity date not to exceed 5 years

4. Banker's Acceptances

   - Limited to 40% of the District's Portfolio
   - Issued by banks with total deposits of one billion dollars ($1,000,000,000) or more
   - Maturity not to exceed 180 days
   - Prime quality depending on size and credit worthiness of Bank
   - Issued by banks from offices in the U.S.

5. Commercial Paper

   - Limited to 25% of the District's Portfolio
   - Maturity not to exceed 270 days
   - Ratings of A1, P1 or F1 by either S&P, Moody's, or Fitch respectively
   - Eligible Commercial Paper is limited to those issued by corporations organized and operating in the U.S., with total assets exceeding $500,000,000

6. Medium Term Corporate Notes

   - Limited to 30% of the District's Portfolio
   - Maturity not to exceed five years
   - Issued by corporations operating within the United States
   - Rated AA or higher by one nationally-recognized rating service. If the rating drops below AA, an evaluation of the credit will be performed to determine if the notes should be sold.

7. Repurchase Agreements

   - Limited to 20% of the District's investment portfolio
   - Maturity not to exceed 270 days
   - Collateral may be any securities authorized in items 1 through 5 above
   - A Master Repurchase Agreement must be on file with the District
   - Security marked to market on a daily basis and delivered to the District's custodial bank at a market value of at least 102%
   - Primarily used as a limited term investment and a vehicle to fill particular dates and amounts

8. Certificates of Time Deposit

   - Maturity not to exceed 5 years
   - On uncollateralized deposits, limited to $100,000 per Bank or Savings & Loan, or maximum FDIC insured
   - On collateralized deposits, limited to 30% of District's Investment Portfolio
   - Investment in local branches within the District, whenever possible
   - Deposits over $100,000 will be collateralized in accordance with Sections 53651 and 53652 of the California Government Code
   - Deposits will be supported by a Contract for Deposit of Money with the depositing bank
   - An important consideration will be credit worthiness/solvency of the banking institution as evaluated by S&P or Moody's or other evaluator of financial institution's fiscal stability

9. Negotiable Certificates of Deposit

- Limited to 30% of the District's portfolio
- Maturity not to exceed five years
- Issued by banks with total deposits of one billion dollars ($1,000,000,000) or more, and a credit rating of AA or higher

10. Money Market Mutual Funds

- Rated AAA (or equivalent highest ranking) by two of the three largest nationally recognized rating services
- Unrated funds with assets under management in excess of $500,000,000 and which has retained an advisor registered with the Securities and Exchange Commission with no less than five years experience investing in instruments allowed under the District's investment policy
- Permitted investments conform to those authorized by the California Government Code (Sections 53601 et seq,)
- May not represent more than five percent (5%) of the money market fund's assets.

11. Municipal Bonds

- Limited to 40% of the District's portfolio
- Maturity date not to exceed 5 years or with a put provision within 5 years of date of purchase
- Rated AA or higher by one nationally-recognized rating service. If the rating drops below AA, an evaluation of the credit will be performed to determine if the notes should be sold.
- Notes must be issued by the State of California or a local California agency. Notes maturing within 365 days must have a rating of MIG-1, SP-1, or F-1 by either Moody's, S&P, or Fitch respectively. If a rating is revised downwards at any time, an evaluation will be made to determine if the notes should be sold.
-

Investment Placement

Investment placement shall be determined by, but not limited to, continual evaluation and projection of market conditions, interest rate trends, cash flow needs, economic data, yield curves, and interest rate forecasts. Additionally, the Treasurer will obtain at least three quotations from dealers, brokers, banks or savings and loan associations before finalizing any investment purchase for all investments in excess of $1 million. The combination of these factors shall determine where, in what denomination, and for what maturity investments are made.

Selling Securities Prior To Maturity

Losses are only allowable if either the sale of securities was necessary to meet payment obligations where no other funds are available, or the proposed swap/trade can enhance yield over the life of the new security on a total return basis.

Collateral

Securities placed with agents of depository shall at all times be maintained as specified in District Resolution 33232-01 in one or more trust companies, State or national banks located within California, the Federal Reserve Bank, or with any state or national bank located in any city designated as a federal reserve city by the Board of Governors of the Federal Reserve System, and to take from any such banks or trust companies receipts for securities so deposited. Requests for Collateral substitution and releases are subject to the Treasurer's written approval.

Purchasing Entities

Investments not purchased directly from the issuer will be purchased from:

- Institutions licensed by the State of California as a broker - dealer
- National or California State Chartered Banks
- Federal or California Chartered Savings Institution
- Brokerage firms designated as a primary government dealer by the Federal Reserve Bank
- Member of a federally regulated securities exchange

The Treasurer shall maintain a current eligible list of established dealers, brokers, banks and savings and loan associations with which securities trading and placement of funds are authorized. Strong capital base and credit worthiness are primary criteria for inclusion on the approved list. Dealers and brokers shall be regulated by the Securities and Exchange Commission and be members in good standing of the National Association of Securities Dealers.

Investment Security

To ensure a high degree of internal control, the District shall comply with the following:

1. All Securities purchased from dealers and brokers shall be held in safekeeping by the District's custodial bank, a national bank, a State chartered bank or trust company, established for this purpose as someone other than the selling party of the security. Securities purchased will be covered by a trust or safekeeping receipt in a manner that establishes the District's ownership. All transactions require delivery of the security prior to payment for the security (delivery vs. payment).

2. All trade confirmations shall be received directly and reviewed for conformity to the original transaction by an individual other than the person originating the transaction. All trade confirmations must be an original; copies of confirmations are not allowed. Any discrepancies will be brought to the attention of the Treasurer.

Fund Wire Procedures

Payment for securities purchased from broker dealers that are ineligible to provide safekeeping will be made through the District's custodial bank. Funds will only be transferred subsequent but immediately following the custodial bank's acknowledgment that they are prepared to make settlement on the terms and conditions specified by the District. Payment for securities purchased from bank investment departments that will be safe kept with the trust department of the bank will be made immediately upon confirmation of the trade.

Review And Reporting Requirements

On a quarterly basis the Treasurer shall prepare and submit a report to the General Manager and the Board of Directors listing investment transactions for the quarter and providing an investment summary by security type, percent of the portfolio, investment yield and the remaining period of investment to maturity.

On an annual basis, in accordance with Section 53646 of the California Government Code, an investment policy may be presented to the Board for consideration at a public meeting. In conjunction with the investment policy consideration, the Board shall also annually review the delegation of its authority for the management of investments to the Treasurer of the District.

Performance Review And Internal Control

Office of Internal Audit

The Office of Internal Audit will periodically audit the investment portfolio to evaluate the effectiveness of the District's investment program as well as its compliance with the Investment Policy. These audits will supplement the annual review by the District's external auditors.

Finance Department

The Director of Finance will review the investment portfolio monthly for compliance with the Investment Policy and make recommendations for changes and improvements where warranted.

Authority

Resolution No. 33019-96 on December 10, 1996,
Amended by Resolution No. 32877-94 on January 26, 1999
Amended by Resolution No. 33232-01 on January 9, 2001
Amended by Resolution 33287-02 on January 22, 2002
Amended by Resolution 33350-03 on February 25, 2003
Amended by Resolution 33390-04 on January 27, 2004
Amended by Resolution 33464-05 on February 22, 2005
Amended by Resolution 33516-06 on January 24, 2006
Amended by Resolution 33585-07on March 13, 2007
Approved by Resolution 33658-08, February 26, 2008
Approved by Resolution 33702-09, February 24, 2009
Approved by Resolution 33752-10, January 26,2010
Approved by Resolution 33792-10, November 23, 2010
Approved by Resolution XXXXX-12, April 24, 2012

EBMUD

Policy 4.13R

EFFECTIVE ~~27 APR 10~~ 24 APR 12

SUPERSEDES ~~25 JUL 06~~ 27 APR 10

~~RATE SETTING GUIDELINES FOR~~ESTABLISHING WATER RATES

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT ~~THAT~~TO:

A~~E~~stablish water ~~rate structure~~rates that ~~provides~~ provide adequate revenues ~~through~~while remaining affordable rates, ~~encourages~~ encourage conservation and efficient use of water, and reflects the cost of providing service to ~~serve~~ customers ~~will~~. Rates should also enhance the District's ability to provide a safe, reliable, ~~adequate~~and sufficient water supply to its customers over the long term.

~~Cost of Service~~Rate Methodology

District water rates are developed using a cost-of-service methodology recommended by the American Water Works Association (AWWA) ~~which allocates costs to various cost causative factors ("customer service characteristics"). Allocation of costs to customer service characteristics is~~. These cost-based principles are intended to properly allocate the reasonable estimated costs to those customer classifications whose service demands give rise to the costs. The costs are based on ~~a detailed review of~~ the District's water distribution system components, and a determination of the costs of service associated with the customer service characteristics for each customer class.

~~Cost allocations to the District's customer classifications reflect the following~~ AWWA recommended cost allocation methodology~~:~~ allocates cost to the District's customer classifications as follows:

- ~~Determination of the total revenue requirements for the period for which the rates are to be effective;~~
- Allocation of ~~total revenue requirements~~costs applicable to the ~~basic~~ functional cost components of water service which could include extra capacity (peaking demands);
- Distribution of the component costs to the various customer classes in accordance with their requirements for service; and
- Design of water rates that will recover from each class of customer, within practical limits and consistent with District policy and applicable law, the reasonable, estimated costs to serve that class of customer.

~~Cost of service water~~Water rates shall be developed using an AWWA methodology, recognized practices in the industry and sound economic judgment. A cost-of-service water rate study is to be completed every ten years.

~~Cost Based Allocation Principles~~

~~Cost of service water rates are developed through the allocation of water service costs. The cost based principles are intended to properly allocate the reasonable, estimated costs to those customer classifications whose service demands give rise to the costs. Cost based principles include:~~

Rate Design

- ~~Allocation of costs applicable to the functional cost components of water service which could include extra capacity (peaking) demands;~~
- ~~Distribution of costs by the various components of water service to respective classes of customers in accordance with the respective responsibility of the customer classes for each of the component costs.~~

EXHIBIT C

Rate Design

In addition to reflecting the cost of service ~~by class~~, water rates should be designed with consideration of the impact on conservation and ~~should seek~~ water supply enhancement ~~through water use efficiency incentive strategies~~. Such strategies may include incentive pricing for ~~sales of~~ water, ~~including~~ and/or ~~reclaimed~~ recycled water, and ~~utilization of~~ drought rates to curtail unreasonable use and effectively allocate the water supply during periods of limited availability.

These rate design objectives are in furtherance of and consistent with:

- The Memorandum of Understanding Regarding Urban Water Conservation, dated September 1991 and signed by more than 150 entities (including EBMUD), which lists specific "water conservation best management practices" that the Legislature has declared, if implemented, will achieve reasonable, yet substantial, reductions in water use in California. The Legislature has further declared that water conservation best management practice number ~~11~~ 4, conservation pricing of water through rate structure design, will provide incentives to water customers to reduce average or peak water demand use, or both.

- AB 1712, signed into law by Governor Wilson on August 25, 1993, which declares that water conservation is an important component of California's water policy for the future; that all reasonable efforts to conserve water should continue to be a high priority of California's water policy; and expressly provides that any public agency which supplies water for municipal use may encourage water conservation through rate structure design.

- SBx7-7 (2010) (Water Code section 10608.16) which calls on the State to make progress toward reducing urban per capita water use by 10% by 2016 and by 20% by 2021.

- Article X, section 2 of the California Constitution which declares "that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

The District's water rate structure should also provide sufficient flexibility to allow for sales of subsistence water to low-income customers at an affordable price.

Rate Distribution

~~Recognizing the desirability of consistency~~To ensure fairness in rates applicable to single family residential customers, ~~it is the policy of the District that~~ tiered rates for single family residential customers shall not be increased or decreased in one tier by more than 5% ~~beyond~~ of any ~~rate~~ adjustment made to other tiers ~~in the rate structure~~ for the purpose of meeting annual budget requirements. This does not apply to rates adopted by the Board of Directors in response to a water shortage condition.

~~Opportunities for Public Comment on Proposed Water Rates~~Public Involvement in Rate Setting

~~Adoption~~Prior to the Board's consideration of new water rates ~~will be proposed in~~, a staff report presenting rate and recommendations ~~prepared by the General Manager which shall~~ will be filed with the Board of Directors and made available to ~~members of~~ the public ~~prior to consideration of the adoption of the proposed water rates~~. ~~The Board of Directors~~, EBMUD will conduct at least one public hearing on ~~the proposed water rate changes. In addition to~~ rates and take other ~~outreach efforts which will be employed to solicit~~steps to meet or surpass public ~~input before~~involvement requirements on rate setting ~~rates and charges for water service~~that are established by law.

Authority

Resolution No. 32985-96, May 14, 1996,
Amended by Motion 143-96, June 25, 1996.
Amended by Resolution 33550-06, July 25, 2006
Amended by Resolution 33763-10, April 27, 2010
Amended by Resolution No. XXXXX-12, April 24, 2012

EBMUD

Policy 4.13

EFFECTIVE 24 APR 12

SUPERSEDES 27 APR 10

ESTABLISHING WATER RATES

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Establish water rates that provide adequate revenues while remaining affordable, encourage conservation and efficient use of water, and reflect the cost of providing service to customers. Rates should also enhance the District's ability to provide a safe, reliable, and sufficient water supply to its customers over the long term.

Rate Methodology

District water rates are developed using a cost-of-service methodology recommended by the American Water Works Association (AWWA). These cost-based principles are intended to properly allocate the reasonable estimated costs to those customer classifications whose service demands give rise to the costs. The costs are based on the District's water distribution system components, and a determination of the costs of service associated with the customer service characteristics for each customer class.

AWWA recommended cost allocation methodology allocates cost to the District's customer classifications as follows:

- Allocation of costs applicable to the functional cost components of water service which could include extra capacity (peaking demands);
- Distribution of the component costs to the various customer classes in accordance with their requirements for service; and
- Design of water rates that will recover from each class of customer, within practical limits and consistent with District policy and applicable law, the reasonable, estimated costs to serve that class of customer.

Water rates shall be developed using an AWWA methodology, recognized practices in the industry and sound economic judgment. A cost-of-service water rate study is to be completed every ten years.

Rate Design

In addition to reflecting the cost of service, water rates should be designed with consideration of the impact on conservation and water supply enhancement. Such strategies may include incentive pricing for water, and/or recycled water, and drought rates to curtail unreasonable use and effectively allocate the water supply during periods of limited availability.

These rate design objectives are in furtherance of and consistent with:

- The Memorandum of Understanding Regarding Urban Water Conservation, dated September 1991 and signed by more than 150 entities (including EBMUD), which lists specific "water conservation best management practices" that the Legislature has declared, if implemented, will achieve reasonable, yet substantial, reductions in water use in California. The Legislature has further declared that water conservation best management practice number 1.4, conservation pricing of water through rate structure design, will provide incentives to water customers to reduce average or peak water demand use, or both.

- AB 1712, signed into law by Governor Wilson on August 25, 1993, which declares that water conservation is an important component of California's water policy for the future; that all reasonable efforts to conserve water should continue to be a high priority of California's water policy; and expressly provides that any public agency which supplies water for municipal use may encourage water conservation through rate structure design.

- SBx7-7 (2010) (Water Code section 10608.16) which calls on the State to make progress toward reducing urban per capita water use by 10% by 2016 and by 20% by 2021.

- Article X, section 2 of the California Constitution which declares "that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

The District's water rate structure should also provide sufficient flexibility to allow for sales of subsistence water to low-income customers at an affordable price.

Rate Distribution

To ensure fairness in rates applicable to single family residential customers, tiered rates for single family residential customers shall not be increased or decreased in one tier by more than 5% of any adjustment made to other tiers for the purpose of meeting annual budget requirements. This does not apply to rates adopted by the Board of Directors in response to a water shortage condition.

Public Involvement in Rate Setting

Prior to the Board's consideration of new water rates or revisions to existing water rates, a staff report presenting rate recommendations will be filed with the Board of Directors and made available to the public. EBMUD will conduct at least one public hearing on rates and take other steps to meet or surpass public involvement requirements on rate setting that are established by law.

Authority

Resolution No. 32985-96, May 14, 1996,
Amended by Motion 143-96, June 25, 1996.
Amended by Resolution 33550-06, July 25, 2006
Amended by Resolution 33763-10, April 27, 2010
Amended by Resolution No. XXXXX-12, April 24, 2012

EBMUD

Policy 7.01R

EFFECTIVE ~~14 NOV 06~~ 24 APR 12

SUPERSEDES ~~14 NOV 06~~ 14 SEP 10

AQUEDUCT RIGHTS-OF-WAY MAINTENANCE

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Maintain raw water aqueduct rights-of-way in order to ensure :

- Safety of water supply and rights and obligations of the District;
- Protection against fire;
- Protection against erosion; and,
- Protection against trespassing by individuals or unauthorized encroachment of rights-of-way.

Rights-of-Way Use Restrictions

Protect against trespassing by use of control measures such as ~~eliminating~~ gates across rights-of-way to ensure operational requirements and the rights of other property owners are met.

With prior District approval, allow use of the rights-of-way for public trail purposes by public agencies provided such use will lessen maintenance work performed by the District with due regard for District liability, safety of pipelines, and maintenance of access roads.

Where possible, secure relinquishment of surface rights from present owners thereof in exchange for other requested rights.

Allow the use of District properties by others only under the terms of a written agreement.

Ensure that all uses of the aqueduct right-of-way accommodate future construction and/or reconstruction of the aqueducts.

Prohibit uses incompatible with the District's property rights, operation and maintenance of the aqueducts, or that potentially impact the District's assets. These prohibitions generally include but are not limited to:

- Use of District aqueduct properties by others as a condition to meet city/county zoning requirements or to obtain any land use permit, approval, or entitlement affecting properties not owned by the District.
- Third party building or portions of buildings constructed on aqueduct property.
- Vehicular parking by others over unencased aqueducts.
- Interference with gravity drainage of District raw water aqueduct property. Drainage facilities shall be provided outside District property to assure adequate drainage is maintained.

Authority

Resolution No. 14,620, January 26, 1951
As amended by Resolution 33027-02, September 24, 2002
As amended by Resolution No. 33443-04, September 28, 2004
As amended by Resolution No. 33564-06, November 14, 2006
As amended by Resolution No. 33780-10, September 14, 2010
As amended by Resolution No. XXXXX-12, April 24, 2012

Reference

Procedure 718 – Raw Water Aqueduct Right-of-Way Non-Aqueduct Uses

EXHIBIT D

EBMUD

Policy 7.01

EFFECTIVE 24 APR 12

SUPERSEDES 14 SEP 10

AQUEDUCT RIGHTS-OF-WAY MAINTENANCE

IT IS THE POLICY OF EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Maintain raw water aqueduct rights-of-way in order to ensure :

- Safety of water supply and rights and obligations of the District;
- Protection against fire;
- Protection against erosion; and,
- Protection against trespassing by individuals or unauthorized encroachment of rights-of-way.

Rights-of-Way Use Restrictions

Protect against trespassing by use of control measures such as gates across rights-of-way to ensure operational requirements and the rights of other property owners are met.

With prior District approval, allow use of the rights-of-way for public trail purposes by public agencies provided such use will lessen maintenance work performed by the District with due regard for District liability, safety of pipelines, and maintenance of access roads.

Where possible, secure relinquishment of surface rights from present owners thereof in exchange for other requested rights.

Allow the use of District properties by others only under the terms of a written agreement.

Ensure that all uses of the aqueduct right-of-way accommodate future construction and/or reconstruction of the aqueducts.

Prohibit uses incompatible with the District's property rights, operation and maintenance of the aqueducts, or that potentially impact the District's assets. These prohibitions generally include but are not limited to:

- Use of District aqueduct properties by others as a condition to meet city/county zoning requirements or to obtain any land use permit, approval, or entitlement affecting properties not owned by the District.
- Third party building or portions of buildings constructed on aqueduct property.
- Vehicular parking by others over aqueducts.
- Interference with gravity drainage of District raw water aqueduct property. Drainage facilities shall be provided outside District property to assure adequate drainage is maintained.

Authority

Resolution No. 14,620, January 26, 1951
As amended by Resolution 33027-02, September 24, 2002
As amended by Resolution No. 33443-04, September 28, 2004
As amended by Resolution No. 33564-06, November 14, 2006
As amended by Resolution No. 33780-10, September 14, 2010
As amended by Resolution No. XXXXX-12, April 24, 2012

Reference

Procedure 718 – Raw Water Aqueduct Right-of-Way Non-Aqueduct Uses

EBMUD

Policy 9.01R

EFFECTIVE ~~23 FEB 10~~ 24 APR 12

SUPERSEDES ~~09 OCT 07~~ 23 FEB 10

FIRE CONTROL AND FUELS MANAGEMENT ON WATERSHED LANDS

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Manage the District owned watersheds to minimize the occurrence and impacts of wildland fires to protect life, property, watershed lands and water quality.

Protection of Watershed Lands and Water Quality

The District will:

- Implement measures to reduce fire hazards and maintain emergency access on watershed lands to the extent practicable to protect life, property and source water quality from wildland fire-related impacts including erosion, sedimentation, and nutrient loading.
- Ensure fire and fuels management activities are consistent with the District's objectives for the management and protection of source water quality, biodiversity and other natural resources to the extent practicable by using a strategic planning approach to fire management.
- Cooperate with state and local fire suppression agencies and committees and with adjacent property owners in fire suppression programs, training and management activities.
- Maintain suppression capability, equipment, and patrols to retain a basic level of fire safety and initial response necessary to assist in suppressing fires on or threatening District property, and on other areas when requested for Mutual Aid.
- Recognize the importance of fire as a natural ecological process and use prescribed burning and other techniques to reduce hazardous fuel loads under carefully selected conditions to achieve long-term fire safety, water quality protection, and biodiversity management objectives.
- Encourage the use of a range of environmentally ~~sensitive~~ appropriate methods to reduce hazardous fuel loads (e.g., livestock and goat grazing, mowing, plowing, vegetation removal).
- Support the establishment and placement of required fire hazard mitigation measures within the boundaries of new developments ~~and avoid the placement of required fire hazard mitigation measures on~~ when possible in order to avoid additional costs to the District and impacts to District watershed properties.
- Implement appropriate restoration activities after a fire on District watersheds when necessary to protect water quality.

EXHIBIT E

Authority

Resolution No. 16,866, January 14, 1955
Amended by Resolution No. 33116-98, August 11, 1998,
Amended by Resolution No. 33236-01, February 13, 2001
Amended by Resolution No. 33634-07, October 9, 2007
Amended by Resolution No. 33756-10, February 23, 2010
Amended by Resolution No. XXXXX-12, April 24, 2012

Reference

Policy 7.10 – Source Water Quality

EBMUD

Policy 9.01

EFFECTIVE 24 APR 12

SUPERSEDES 23 FEB 10

FIRE CONTROL AND FUELS MANAGEMENT ON WATERSHED LANDS

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Manage the District owned watersheds to minimize the occurrence and impacts of wildland fires to protect life, property, watershed lands and water quality.

Protection of Watershed Lands and Water Quality

The District will:

- Implement measures to reduce fire hazards and maintain emergency access on watershed lands to the extent practicable to protect life, property and source water quality from wildland fire-related impacts including erosion, sedimentation, and nutrient loading.
- Ensure fire and fuels management activities are consistent with the District's objectives for the management and protection of source water quality, biodiversity and other natural resources to the extent practicable by using a strategic planning approach to fire management.
- Cooperate with state and local fire suppression agencies and committees and with adjacent property owners in fire suppression programs, training and management activities.
- Maintain suppression capability, equipment, and patrols to retain a basic level of fire safety and initial response necessary to assist in suppressing fires on or threatening District property, and on other areas when requested for Mutual Aid.
- Recognize the importance of fire as a natural ecological process and use prescribed burning and other techniques to reduce hazardous fuel loads under carefully selected conditions to achieve long-term fire safety, water quality protection, and biodiversity management objectives.
- Encourage the use of a range of environmentally appropriate methods to reduce hazardous fuel loads (e.g., livestock and goat grazing, mowing, plowing, vegetation removal).
- Support the establishment and placement of required fire hazard mitigation measures within the boundaries of new developments when possible in order to avoid additional costs to the District and impacts to District watershed properties.
- Implement appropriate restoration activities after a fire on District watersheds when necessary to protect water quality.

Authority

Resolution No. 16,866, January 14, 1955
Amended by Resolution No. 33116-98, August 11, 1998,
Amended by Resolution No. 33236-01, February 13, 2001
Amended by Resolution No. 33634-07, October 9, 2007
Amended by Resolution No. 33756-10, February 23, 2010
Amended by Resolution No. XXXXX-12, April 24, 2012

Reference

Policy 7.10 – Source Water Quality

EBMUD

Policy 9.04R

EFFECTIVE ~~23 FEB 10~~ 24 APR 12

SUPERSEDES ~~08 OCT 07~~ 23 FEB 10

WATERSHED MANAGEMENT AND USE

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Acquire, protect, and manage watershed land surrounding District reservoirs in accordance with the District's primary objective of providing high quality drinking water and in a manner which protects source water quality and water supply, consistent with District environmental principles.

Watershed Management and Use – General

- Implement the Mokelumne Watershed Master Plan (MWMP) adopted by Resolution No. 33668-08 and the East Bay Watershed Master Plan (EBWMP) adopted by Resolution No. 32979-96 as policy for those lands described therein.
- Manage and maintain watershed lands in accordance with all applicable environmental laws, regulations and requirements.

Watershed Land Acquisition

- Anticipate watershed land requirements necessary for District operations and protection of source water quality with sufficient lead-time to effect economic acquisition of property.
- Acquire, maintain, and/or dispose of watershed land, consistent with District land ownership priorities and in accordance with District environmental principles and primary objective of providing high quality drinking water.
- Work with other agencies or public utilities seeking interest in or acquisition of District lands in accordance with the District's mission as outlined in this policy and in the MWMP and EBWMP.
- Resist, with all means and methods provided by law, land acquisition or use by non-District entities for purposes which are inconsistent with District Watershed Master Plans and Policies or which would result in the deterioration of environmental or drinking water source quality.

Watershed Land Protection

- Maintain an active program that preserves and protects source water quality through ~~for~~ sanitary control, watershed assessment and protection ~~for~~of watershed lands tributary to District reservoirs, all ~~to preserve and protect source water quality~~ consistent with the Safe Drinking Water Act and its amendments.
- Work with officials ~~of~~ from sanitary districts, the Regional Water Quality Control Board, and ~~from~~ federal, state, county, and local governments to preserve and protect source water quality.
- Develop, implement, and maintain Best Management Practices to minimize soil erosion, sedimentation, fire damage, nutrient and other pollutant impacts on District lands and source water quality.
- Track climate change science and the potential impacts of climate change on watershed lands. Incorporate findings, as appropriate into future studies and master plans.

EXHIBIT F

- Prevent contamination and pollution from entering District reservoirs.
- Identify sediment sources from non-District owned land and determine their impact on District reservoirs and watercourses, while encouraging owners of non-District owned watershed lands to develop and implement Best Management Practices for erosion control.
- Where feasible, purchase and eliminate occupancy on watershed lands where sewage disposal is impracticable or constitutes a special hazard or where occupancy will result in the degradation of the District's source water quality. Prohibit any human use of District lands that lack adequate and approved facilities for removal of sewage.

Land Management and Control

- Permit public use of District land/watershed for purposes including, but not limited to, education, recreation and fishing that are consistent with the District's primary objective of providing high quality drinking water by protecting source water quality and preserving open space characteristics of land as outlined in the MWMP, EBWMP and in District policy. Permit only those uses that can be adequately monitored and managed by the District. Prioritize these uses to best meet core business needs and regulatory requirements of water supply, water quality, environmental protection and recreation. Consider the impact to ratepayers in determining the appropriateness of any watershed use not related to core business requirements.
- Maintain and operate reservoir recreation areas consistent with the District's mission and policies as ~~further~~ described in the MWMP and EBWMP. Recreation areas will be developed and operated by District staff, qualified public agencies or private concessionaires as determined by the Board of Directors. Non-District operation of recreation areas must conform with District-adopted performance standards.
- Obtain public input on District watershed management by inviting public participation via citizen advisory committees or other means, as deemed appropriate by the District, as part of the master planning process.
- Coordinate District land use planning and management with federal, state, and local agencies as required.
- Retain fee title to and direct control over all watershed lands and reservoirs essential to the security or operation of the utility system.
- Ensure security (including patrols) of District watershed lands and reservoirs.
- Modifications to the MWMP and EBWMP shall be made only by appropriate action of the Board of Directors following public notification and hearing. The Board of Directors may make such modifications as may be necessary to meet the requirements for the primary purpose of protecting watershed land, source water quality and water production.

Authority

Resolution No. 25,418, October 13, 1970
As amended by Resolution No. 33116-98, August 11, 1998
As amended by Resolution No. 33236-01, February 13, 2001
As amended by Resolution No. 33634-07, October 9, 2007
As amended by Resolution No. 33756-10, February 23, 2010
As amended by Resolution No. XXXXX-12, April 24, 2012

References

Policy 7.10 – Source Water Quality
Policy 7.05 – Sustainability
Policy 7.10 – Source Water Quality

EBMUD

Policy 9.04

EFFECTIVE 24 APR 12

SUPERSEDES 23 FEB 10

WATERSHED MANAGEMENT AND USE

IT IS THE POLICY OF THE EAST BAY MUNICIPAL UTILITY DISTRICT TO:

Acquire, protect, and manage watershed land surrounding District reservoirs in accordance with the District's primary objective of providing high quality drinking water and in a manner which protects source water quality and water supply, consistent with District environmental principles.

Watershed Management and Use – General

- Implement the Mokelumne Watershed Master Plan (MWMP) adopted by Resolution No. 33668-08 and the East Bay Watershed Master Plan (EBWMP) adopted by Resolution No. 32979-96 as policy for those lands described therein.
- Manage and maintain watershed lands in accordance with all applicable environmental laws, regulations and requirements.

Watershed Land Acquisition

- Anticipate watershed land requirements necessary for District operations and protection of source water quality with sufficient lead-time to effect economic acquisition of property.
- Acquire, maintain, and/or dispose of watershed land, consistent with District land ownership priorities and in accordance with District environmental principles and primary objective of providing high quality drinking water.
- Work with other agencies or public utilities seeking interest in or acquisition of District lands in accordance with the District's mission as outlined in this policy and in the MWMP and EBWMP.
- Resist, with all means and methods provided by law, land acquisition or use by non-District entities for purposes which are inconsistent with District Watershed Master Plans and Policies or which would result in the deterioration of environmental or drinking water source quality.

Watershed Land Protection

- Maintain an active program that preserves and protects source water quality through sanitary control, watershed assessment and protection of watershed lands tributary to District reservoirs, all consistent with the Safe Drinking Water Act and its amendments.
- Work with officials from sanitary districts, the Regional Water Quality Control Board, and federal, state, county, and local governments to preserve and protect source water quality.
- Develop, implement, and maintain Best Management Practices to minimize soil erosion, sedimentation, fire damage, nutrient and other pollutant impacts on District lands and source water quality.
- Track climate change science and the potential impacts of climate change on watershed lands. Incorporate findings, as appropriate into future studies and master plans.

- Prevent contamination and pollution from entering District reservoirs.
- Identify sediment sources from non-District owned land and determine their impact on District reservoirs and watercourses, while encouraging owners of non-District owned watershed lands to develop and implement Best Management Practices for erosion control.
- Where feasible, purchase and eliminate occupancy on watershed lands where sewage disposal is impracticable or constitutes a special hazard or where occupancy will result in the degradation of the District's source water quality. Prohibit any human use of District lands that lack adequate and approved facilities for removal of sewage.

Land Management and Control

- Permit public use of District land/watershed for purposes including, but not limited to, education, recreation and fishing that are consistent with the District's primary objective of providing high quality drinking water by protecting source water quality and preserving open space characteristics of land as outlined in the MWMP, EBWMP and in District policy. Permit only those uses that can be adequately monitored and managed by the District. Prioritize these uses to best meet core business needs and regulatory requirements of water supply, water quality, environmental protection and recreation. Consider the impact to ratepayers in determining the appropriateness of any watershed use not related to core business requirements.
- Maintain and operate reservoir recreation areas consistent with the District's mission and policies as described in the MWMP and EBWMP. Recreation areas will be developed and operated by District staff, qualified public agencies or private concessionaires as determined by the Board of Directors. Non-District operation of recreation areas must conform with District-adopted performance standards.
- Obtain public input on District watershed management by inviting public participation via citizen advisory committees or other means, as deemed appropriate by the District, as part of the master planning process.
- Coordinate District land use planning and management with federal, state, and local agencies as required.
- Retain fee title to and direct control over all watershed lands and reservoirs essential to the security or operation of the utility system.
- Ensure security (including patrols) of District watershed lands and reservoirs.
- Modifications to the MWMP and EBWMP shall be made only by appropriate action of the Board of Directors following public notification and hearing. The Board of Directors may make such modifications as may be necessary to meet the requirements for the primary purpose of protecting watershed land, source water quality and water production.

Authority

Resolution No. 25,418, October 13, 1970
As amended by Resolution No. 33116-98, August 11, 1998
As amended by Resolution No. 33236-01, February 13, 2001
As amended by Resolution No. 33634-07, October 9, 2007
As amended by Resolution No. 33756-10, February 23, 2010
As amended by Resolution No. XXXXX-12, April 24, 2012

References

Policy 7.10 – Source Water Quality
Policy 7.05 – Sustainability
Policy 7.10 – Source Water Quality

7.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: April 19, 2012

MEMO TO: Board of Directors

FROM: Alexander R. Coate, General Manager

SUBJECT: Legislative Report No. 05-12

The following issues are being referred to the Board of Directors for action, as appropriate.

STATE LEGISLATION		RECOMMENDED POSITION
AB 2398 (Hueso)	**WATER RECYCLING**	**SUPPORT IN CONCEPT**

Recycled water is a key component of California's water supply. However, existing law regards recycled water as a waste. The use of all categories of recycled water is permitted via the State Water Resources Control Board and the nine regional water quality control boards (water boards). The permitting practices of the water boards varies, which can lead to inconsistent access to recycled water supplies throughout the state. The California Department of Public Health (DPH) currently regulates potable drinking water quality for public health purposes but its role with regard to recycled water that is intended for indirect potable reuse is limited to advisory. An update to the existing statutory and regulatory framework for recycled water is needed to provide clarity and consistency for the use of this resource.

AB 2398, as amended April 16, 2012, would enact the Water Recycling Act of 2012 to recast and consolidate current provisions relating to recycled water to recognize recycled water as a resource, rather than a waste. AB 2398 would define recycled water as water which, as a result of treatment of waste, "is suitable for a direct beneficial use or a controlled use that would not otherwise occur," including municipal wastewater that is treated to a disinfected tertiary level or greater, and would change the way this type of water is regulated.

For regulating purposes, AB 2398 would split recycled water into two categories based on this new definition: (1) Advanced Treated Purified Water (ATPW) that is intended for indirect potable reuse; and (2) other recycled water that is treated to a tertiary level or higher. The statute for recycled water that falls under this new definition would be moved to the Water Recycling Act of 2012 in a new division of the Water Code, which governs the regulation of recycled water as a resource, and out of the Porter Cologne Water Quality Act where recycled water is considered a waste.

Under AB 2398, recycled water would be regulated in one of two ways. First, water that is considered ATPW, and intended for indirect potable reuse, would be permitted by DPH. Regulating recycled water that is ultimately intended for potable uses is consistent with DPH's role to protect public health in its regulation of potable water supplies.

Second, recycled water that is treated to a tertiary level or higher, including ATPW that is not intended for potable uses (such as the recycled water used at EBMUD's RARE project), would be regulated by the water boards as recycled water. Recycled water that is treated to less than a tertiary level, such as secondary, would continue to be regulated by the water boards as a waste. AB 2398 would also revise the fee structure for recycled water permitting.

AB 2398 is sponsored by WateReuse in an effort to modernize recycled water law to recognize that recycled water is an important part of the state's overall water supply portfolio. In California, recycled water is used in a wide range of applications including but not limited to landscape and agricultural irrigation, industrial processes, wetlands restoration, streamflow augmentation, and toilet flushing in dual-plumbed commercial buildings. Recycled water can be used to supplement local supplies and reduce demand on freshwater supplies, but in the current regulatory structure it is often treated as a waste discharge subject to discharge requirements rather than encouraged as an alternative source of water supply. This can raise public perception issues that focus on the categorization of recycled water as a waste without regard to the level of treatment the water has received.

In EBMUD's service area, recycled water is an important part of the water supply portfolio. EBMUD initiated its recycled water program over 40 years ago and has developed several landmark projects where the use of recycled water for landscape irrigation, toilet flushing, and industrial purposes has reduced the demand on high-quality drinking water and can reduce the amount of treated wastewater that is discharged into the San Francisco Bay. These projects include RARE, East Bayshore Recycled Water Project, and the San Ramon Valley Recycled Water Program. In 2011, EBMUD customers used more than 7.7 million gallons a day (mgd) of recycled water and EBMUD's goal is to increase this to 20 mgd by 2040. The majority of the recycled water EBMUD produces is treated to a tertiary level.

AB 2398's objective to regulate recycled water as a resource rather than as a waste is a bold initiative that will help raise awareness of the resource value of recycled water and facilitate the development of projects. AB 2398 is consistent with EBMUD's efforts to use recycled water as a resource that can replace the use of potable supplies for some applications and is worthy of support. However, this measure is a work in progress that is likely to undergo substantial development in the coming months and thus a "Support in Concept" position is recommended. As this measure develops, staff will continue to work closely with the author and sponsors.

The current list of AB 2398 support and opposition is shown below.

Support
BIOCOM
California Association of Sanitation Agencies
Dublin San Ramon Services District
Eastern Municipal Water District
Irvine Ranch Water District
Las Virgenes Municipal Water District
Metropolitan Water District of Southern California
San Diego County Water Authority
Sonoma County Water Agency
WateReuse

Opposition
Russian River Watershed Protection Committee

AB 2443 (Williams) **VESSELS: REGISTRATION FEE: QUAGGA AND ZEBRA MUSSEL INFESTATION PREVENTION PROGRAM** **SUPPORT**

Existing law authorizes the Department of Fish and Game (DFG) to address the control and eradication of zebra and quagga mussels, also known as dreissenid mussels, from infested water bodies in California. DFG has the authority to inspect, quarantine, and take other necessary actions to prevent the spread of these mussels. Owners or operators of infested water supply facilities are required to develop and implement a control and eradication plan.

In addition, and as a result of the enactment of EBMUD-sponsored AB 2065 (Hancock), owners and operators of recreational reservoirs that are not infested with dreissenid mussels are required to implement a prevention program. Current law also requires the owner of a vessel to register the vessel with the Department of Boating and Waterways (Boating and Waterways) and pay a registration fee.

AB 2443, as amended April 16, 2012, would build on existing law by establishing the Quagga and Zebra Mussel Infestation Prevention Account (Account) in the state's general fund to be used to fund grants to special districts, cities, counties, and city and county governments, and joint powers authorities for implementation of an adopted prevention plan and to fund regulatory activities of DFG associated with eradication efforts. The Account would be funded by an additional registration fee on vessels that are already required to pay the regular boater registration fee. The amount of the proposed fee would be determined by Boating and Waterways but cannot exceed $10.

Dreissenid mussels originated in the Ukraine and Black and Caspian Sea drainages and first appeared in North America in the 1980s as a result of transatlantic cargo ship traffic in the Great Lakes region. The first detection west of the Continental Divide was made in January 2007, when quagga mussels were found in Lake Mead. Quagga mussels were subsequently discovered in the Colorado River and Aqueduct, and in at least ten reservoirs in Nevada, Arizona, and Southern California, prompting emergency actions by impacted water utilities. In January 2008, zebra mussels were discovered in Northern California in the San Justo Reservoir in San Benito County. To date, no reliable method of eradication has been identified, and once a body of water is infested it is extremely costly to control the infestation.

Dreissenid mussels spread in water by clinging to the outer surfaces of boats and other aquatic equipment or by the microscopic mussel larva, known as veligers, drifting or otherwise entering into water bodies. According to DFG, "the most likely mechanism for transfer between non-contiguous water bodies in the U.S. is through contaminated boats."

EBMUD has implemented an aggressive prevention and monitoring program for its water system and has spent approximately $3 million on the prevention and monitoring program since 2008. The prevention program, in place at all six reservoirs on which recreational boating is allowed, includes a vessel history survey and physical inspection. Boats which fail either the survey or inspection may not be launched into EBMUD reservoirs. To date, neither quagga nor zebra mussels have been found within EBMUD's water system. The grant program that would be created under AB 2443 would apply to special districts (including EBMUD) as well as other entities that are implementing prevention plans.

Because much of California's water supply system is interconnected, no single water supply agency can stop the spread of dreissenid mussels by itself. AB 2443 would help fund the efforts that are needed to provide a comprehensive approach to preventing the further spread of these invasive mussels throughout California's waterways. Given that boats are considered by the DFG to be the most likely means of transfer, AB 2443's proposed fee to be imposed on boaters is consistent with the "beneficiary pays" principle that EBMUD has consistently advocated.

EBMUD has previously sponsored and supported legislation to address the threat of dreissenid mussels. EBMUD sponsored AB 2065 (Hancock) in 2008, which required the owners and operators of recreational reservoirs that are <u>not</u> infested with dreissenid mussels to implement a mussel prevention program. AB 2065 was signed into law (Chapter 667). In 2011, EBMUD supported SB 215 (Huff), which extended the sunset date from January 1, 2012 to January 1, 2017, authorizing DFG to continue to control and eradicate zebra and quagga mussels from mussel-infested waters. SB 215 was signed into law (Chapter 332).

The current list of AB 2443 support and opposition is shown below.

Support
ACWA
Humboldt Bay Municipal Water District
Monterey County
Redwood Valley County Water District
San Luis Obispo County
Santa Barbara County
Sonoma County Water Agency

OPPOSITION
California Association of Harbor Masters and Port Captains
California Marine Parks and Harbors Association
California Yacht Brokers Association
Marina Recreation Association
Northern California Marine Association
Western Boaters Safety Group

SB 1094 (Kehoe) **LAND USE: MITIGATION LANDS: NONPROFIT ORGANIZATIONS** **SUPPORT**

Under existing law, a private party seeking a permit to develop a project may be required to transfer an interest in real property, such as a fee title or a conservation easement, to a state or local public agency as part of mitigation efforts related to the development's adverse environmental impacts. Likewise, a public agency may be required to protect lands to mitigate adverse environmental impacts when undertaking its own project.

Existing law, as enacted by SB 436 (Kehoe) of 2011, which EBMUD supported, allows a public agency or special district to authorize a nonprofit organization to hold title to and manage properties as part of a mitigation effort. In addition, nonprofits and special districts are allowed to hold and manage mitigation properties as well as the accompanying funds (endowment) that are required to be set aside for any lands or conservation easements that have been conveyed to the nonprofit organization or special district. However, it is unclear whether the provisions of current law would enable EBMUD to hold and manage endowments for its mitigation lands.

SB 1094 would clarify existing law by specifying entities that may hold properties as well as the endowment. SB 1094 would also authorize a state or local agency to hold the endowment in an account administered by an elected official. Amendments are pending which would expand the language in SB 1094 to specifically include EBMUD as an entity that can hold and manage endowments for its mitigation lands.

EBMUD is often required to carryout mitigations associated with its projects. By clarifying existing law and expanding the entities it applies to, SB 1094, as planned to be

amended would provide public agencies, including EBMUD, with more options for the management of mitigation funds and would allow for more cost-effective management of mitigation lands.

EBMUD has previously supported measures intended to facilitate the management of mitigation lands. In 2011, EBMUD adopted a "support" position on SB 436 (Kehoe), that allows special districts to hold and manage mitigation properties and to allow a nonprofit organization or special district to also manage the mitigation funds. SB 436 was signed into law (Chapter 590).

The current list of support and opposition to SB 1094 is shown below.

Support
Big Sur Land Trust
California Council of Land Trusts
Center for Natural Lands Management
Land Trust of Santa Cruz County
League of California Community Foundations
Mendocino Land Trust
Ojai Valley Land Conservancy
Peninsula Open Space Trust
Redwood Coast Land Conservancy
Rocky Mountain Elk Foundation
Sierra Foothill Conservancy
Solano Land Trust
Trust for Public Land
Wildlife Heritage Foundation

Opposition
None Listed

PENSION REFORM UPDATE **INFORMATION**

The subject of pension reform is drawing significant interest in the legislature and administration again this year. To date, a total of 59 bills have been introduced. A list of each of the bills is included at the end of this discussion.

Current state pension reform efforts fall into three general categories: (1) the governor's 12-point plan; (2) the work of the legislative conference committee on pension reform; and (3) other legislation. There are currently no pension reform measures that have qualified for the 2012 ballots.

Governor's 12-point plan

In October 2011 Governor Brown released a 12-point plan for pension reform that is intended to apply to all California state, local, school, and other public employers, including EBMUD. The reform goals have been described as applying to new public employees and having limited application to current employees. The 12-point plan calls for the following reforms:

1. Equal sharing of normal pension costs between all employees and employers,
2. A hybrid deferred compensation and defined benefit pension plan for all new employees,
3. Increase in retirement ages for all new employees,
4. Require benefits be based on highest annual compensation over a three year period versus a single year,
5. Calculate benefits based on the normal rate of base pay and exclude bonuses, unplanned overtime, unused vacation and unused sick leave from the benefit calculation,
6. Limit post-retirement employment,
7. Require public officials and employees convicted of felonies in carrying out their official duties to forfeit pension and related benefits,
8. Prohibit retroactive pension formula increases,
9. Prohibit pension contribution holidays,
10. Prohibit purchases of service credit for time not actually worked,
11. Increase independence and expertise of the California Public Employees' Retirement System Board, and
12. Reduce the state's retiree health care costs.

In February 2012, republican legislators placed the governor's 12-point plan into a package of four bills that combined, address all of the 12 points in the governor's plan. These bills are:

- ACA 22 (Smyth) - Public Employees' Retirement
- SCA 18 (Huff) - Public Employees' Retirement
- AB 2224 (Smyth) - Public Employees' Retirement
- SB 1176 (Huff) - Public Employees' Retirement

These bills are currently before the legislature.

Legislative conference committee

In October 2011, the legislature convened a Conference Committee on Pension Reform (conference committee) and has held five informational hearings to date. The topics considered by the conference committee to date are: the governor's 12-point plan, the condition of current public employee benefits, hybrid plan options, the impact of increasing the retirement age, issues relating to 37 Act Retirement Systems, which are independent county retirement systems separate from the California Public Employees Retirement System, and benefits for elected officials. The conference committee is expected to continue its work over the coming months.

Once the conference committee completes its work, it will release a draft report that would include a proposed bill or package of bills to advance the objectives agreed upon by the conference committee, and may use AB 340 (Furutani) and SB 827 (Simitian) for this purpose. Once the draft report is released, additional hearings may be held to consider public comment on the draft report, before a final report and legislative language is issued to the legislature.

Other legislation
In addition to the four bills that comprise the governor's plan, individual members of the legislature have introduced 55 pension reform-related bills. These measures cover a variety of pension-related topics, most notably:

- limiting or capping the amount of pensions,
- requiring forfeiture of pension benefits,
- prohibiting pensions for certain elected or appointed officials, and
- funding of post-employment benefits.

The scope of these measures ranges from applying only to specific entities such as county employees or employees covered by the State Teacher's Retirement System, to applying to all state and local plans. These bills are currently being considered by the legislature. To date, none of these measures has been identified as a vehicle to advance either the governor's plan or the work of the legislative conference committee.

Overall, the work of the legislature and administration on pension reform continues. It is not yet clear what final direction the legislature and administration will take. Staff will continue to closely monitor these efforts and will provide updates to the board as appropriate.

PENSION RELATED LEGISLATION

Governor's 12-Point Plan
ACA 22 (Smyth) Public Employees' Retirement
SCA 18 (Huff) Public Employees' Retirement
SB 1176 (Huff) Public Employees' Retirement
AB 2224 (Smyth) Public Employees' Retirement

Conference Committee on Pension Reform
AB 340 (Furutani) Public Employees' Retirement
SB 827 (Simitian) Public Employees' Retirement

Individual Legislators' Bills

Limiting Pensions:
AB 1633 (Wagner) Public Employees' Retirement

AB 1639 (Hill) Retirement: Public Employees

Forfeiture of Pensions:
AB 1649 (Smyth) Public Employees' Retirement: Felony Forfeiture
AB 1653 (Cook) Public Employees: Pensions: Forfeiture
AB 1681 (Smyth) Public Employees' Retirement: Felony Forfeiture
ACA 26 (Smyth) Public Employees' Retirement
SB 115 (Strickland) Public Employees: Pensions: Forfeiture

Benefits for Appointed and Elected Officials:
AB 2429 (Hagman) Public Employee Benefits: Local Appointed and Elected Officials
AB 2437 (Jeffries) Public Employees' Retirement: Elected Officials

Postemployment Benefits:
SB 1141 (Walters) Public Employees: Postemployment Health Care
SB 1142 (Walters) Public Employee Benefits: Postemployment Health Care Benefits
SB 1143 (Walters) Public Employees' Benefits: Postemployment Benefits

Reserve Funds:
AB 2416 (Mansoor) Public Employees' Retirement Systems: Reserve Funds

Counties:
AB 1519 (Wieckowski) County Employee Retirement Boards
AB 1542 (Mansoor) County Employee Retirement: Cost of Living Adjustments
AB 1815 (Harkey) Retirement: Orange County Board of Supervisors
AB 1885 (Bonilla) – County Employees' Retirement: Reciprocal Benefits
AB 2664 (Committee on Public Employees, Retirement and Social Security) County Employees' Retirement: Electronic Signatures
SB 1231 (Walters) County Employees' Retirement: Cost of Living Adjustments
SB 1232 (Walters) County Employees' Retirement: Cost of Living Adjustments
SB 1294 (Berryhill) Public Employee Health Benefits: Mariposa County
SB 1382 (Negrete McLeod) County Employees' Retirement: Retiree Organizations
SB 1494 (DeSaulnier) County Employees' Retirement: Contra Costa County

Teacher's Retirement:
AB 17 (Davis) Retirement: Pension Fund Management
AB 1101 (Eng) Teacher's Retirement Board: Members
AB 1681 (Smyth) Public Employee's Retirement: Felony Forfeiture
AB 1735 (Wieckowski) State Teacher's Retirement: Executive and Managerial Positions
AB 1819 (Ammiano) Charter Schools: State Teachers' Retirement Plan
AB 1949 (Cedillo) Public Employees': Annuities and Mutual Fund Custodial Accounts
AB 2139 (Furutani) State Teachers' Retirement
AB 2275 (Achadjian) State Teachers' Retirement

AB 2663 (Committee on Public Employees, Retirement and Social Security) Teachers' Retirement Law

Other:
AB 344 (Furutani) Public Employees' Retirement
AB 1184 (Gatto) Public Employees' Retirement Benefit
AB 1248 (Hueso) Local Public Employees' Retirement
AB 1320 (Allen) Public Employees' Retirement: Employer Contribution Rates
AB 1874 (Mansoor) Legislators' Retirement System
AB 1942 (Fletcher) Public Employees' Retirement System: Board of Administration

AB 2140 (Lara) Public Employees' Retirement: State Bargaining Unit 5: Contribution Rates
AB 2142 (Furutani) – Public Employee's Health Benefits: Premiums
AB 2154 (Fletcher) Retirement: State Employees

AB 2310 (Morrell) Unemployment Insurance Benefits; Governmental Pension and Retirement Payments
AB 2428 (Hagman) – Public Employees' Retirement: Elected Local Officials
AB 2495 (Grove) Public Employees: Fair Share Payments
AB 2606 (Mendoza) Public Employees' Retirement: Postretirement Death Benefits
AB 2665 (Committee on Public Employees, Retirement and Social Security) State Employees': Memorandum of Understanding: Addenda
SB 27 (Simitian) Public Employees' Retirement
SB 807 (Correa) Retirement: Compensation Earnable
SB 955 (Pavley) Public Employees' Retirement: Pension Fund Management
SB 992 (Committee on Public Employment and Retirement) Public Employees' Retirement: Employer Contributions
SB 995 (Committee on Public Employment and Retirement) State Teachers' Retirement System
SB 1132 (Walters) Public Employees' Retirement System
SB 1234 (De Leon) Retirement Savings Plans

ARC:MD:JF

EBMUD

AGENDA NO. 8.

MEETING DATE April 24, 2012

TITLE **WATER SUPPLY AVAILABILITY AND DEFICIENCY REPORT 2012**

☒ MOTION ☐ RESOLUTION ☐ ORDINANCE

RECOMMENDED ACTION

File the Water Supply Availability and Deficiency Report in conformance with Policy 9.03, and declare that the District's water supply is sufficient for meeting customer demands in 2012.

SUMMARY

This annual Water Supply Availability and Deficiency Report is prepared and submitted to the Board of Directors as required under District Policy 9.03. This report evaluates the adequacy of current year (2012) water supply, and assesses the District's ability to reliably meet demands through the year 2040. In low water years, this annual report provides the basis for the Board's consideration of possible demand management measures. In years of excess supply, this report provides the basis for the Board's determination of additional availability of water.

This 2012 assessment concludes that water year 2012 is a dry year and that the projected runoff requires "Dry" year flows in the lower Mokelumne River under the District's Joint Settlement Agreement (JSA). This determination is based on Department of Water Resources' April 1st projected Mokelumne River runoff of 350,000 acre feet or about 47% of average. As a related consequence, Woodbridge Irrigation District will receive 60,000 acre-feet; Jackson Valley Irrigation District will receive its maximum entitlement of 3,850 acre feet; and North San Joaquin Water Conservation District, a junior water right holder, will receive no water this year. In addition, no flood control releases are anticipated and no water surplus to District needs will be available.

The median forecast for the September 30th total system storage will not lead to implementation of demand management measures even though the projected runoff for this water year is low. This is primarily due to the very full condition of our reservoirs at the start of the water year. In addition, based on the District's Interim Drought Management Program guidelines, the need for dry-year supplemental water supplies will not be triggered and customer rationing will not be required. The District will continue to monitor the water supply situation and encourage efficient water use whenever possible to minimize impacts should next year be dry. The 2012 assessment continues to show that the District will require additional supplemental supplies to achieve a reliable drought water supply through 2040.

Funds Available: N/A	Budget Code:	
DEPARTMENT SUBMITTING Water and Natural Resources	DEPARTMENT MANAGER or DIRECTOR Richard G. Sykes	APPROVED General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

2012 WATER SUPPLY AND DEMAND ASSESSMENT

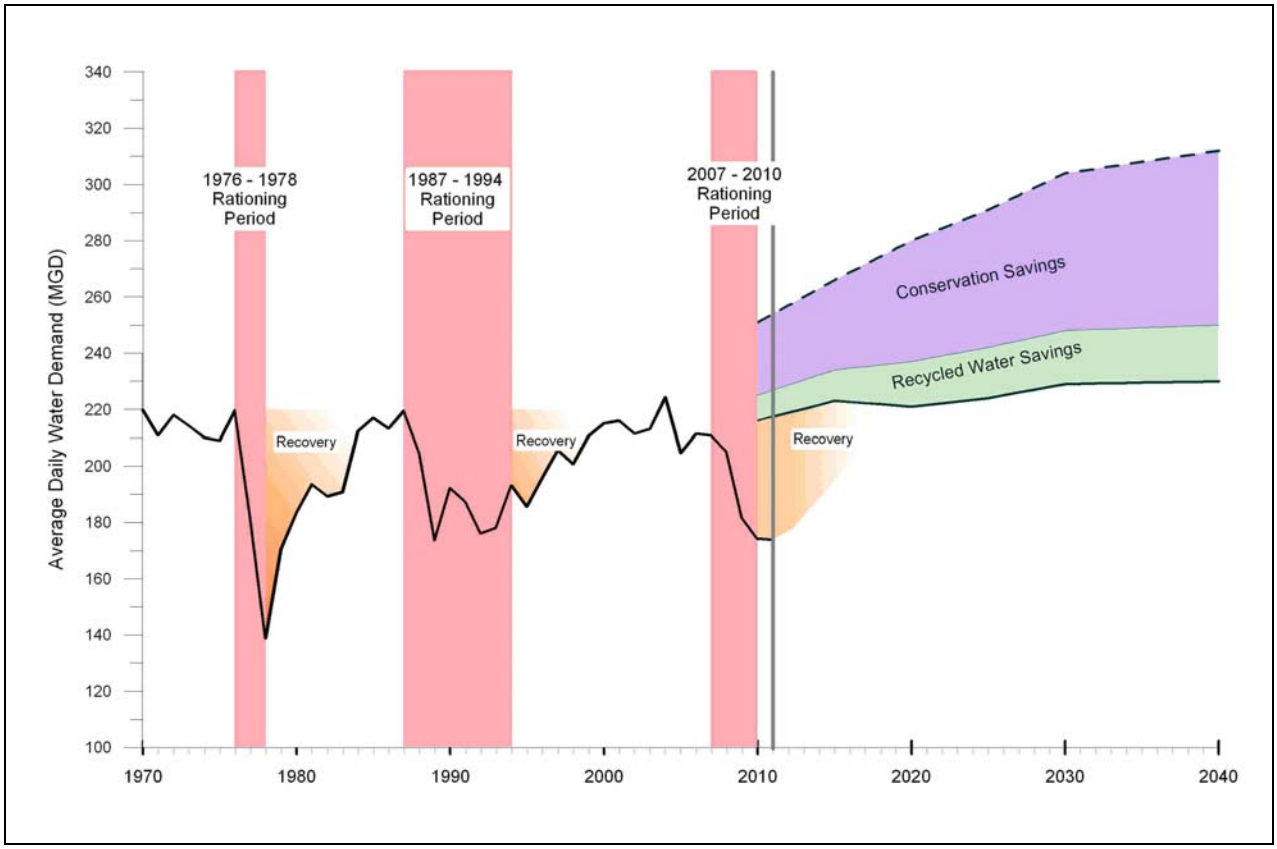
Current year water supply availability is determined by forecasting the amount of water that will be stored in District reservoirs on September 30th which marks the end of the "water year." This forecast is a two-step calculation. First, the amount of total system storage as of September 30th is determined by adding projected runoff amounts to existing storage levels. The second step is the subtraction of anticipated customer demands and the volume of water that must be released from the District's storage reservoirs to meet downstream obligations. These obligations include minimum instream flows for JSA fishery requirements, use by senior water right holders, and water requirements by other downstream interests. If the projected September 30th total system storage exceeds 500 TAF the District has sufficient current year water supply. If the sum is less than 500 TAF the District's water supply is deficient.

Precipitation from July 1 through mid-April typically represents most of the total amount for the season. Precipitation as of April 17 in the Mokelumne Basin is 63% of average, and precipitation in the East Bay watersheds is 79% of average. Based on current rainfall and dry to median precipitation to follow, the current median runoff projection is 350 TAF. For comparison, an average year yields 750 TAF of runoff. Because EBMUD was able to refill its reservoirs during the 2011 water year and due to below average customer water demand water, the corresponding median total system storage at the end of September 2012 is projected to be 520 TAF.

INTERIM WATER SUPPLY AND DEMAND ASSESSMENT

During the 2007-2010 rationing period, EBMUD customers were subjected to mandatory and voluntary water use restrictions. The residual rationing effect of the recent drought management program and the suppressed demand from the downturn in the economy led EBMUD to adopt Interim Drought Management Program Guidelines. These interim guidelines recognize that demand is below the planning level during a recovery period. During this time, while demand is below the planning level of demand, a sufficient water supply defers the need for additional dry-year supplemental water. It is anticipated that the demands will return to pre-drought levels around 2020 (see Figure 1).

Figure 1. Historical and Projected Demand



PLANNING LEVEL WATER SUPPLY AND DEMAND ASSESSMENT THROUGH 2040

To assess the adequacy of the District's water supplies through 2040, this report compares projected future Service Area demands to an analysis of the reliability of future water supplies.

The *District-Wide Update of Water Demand Projections* (2009 Demand Study) estimates future customer demands based on expected changes in land use patterns as described in the general plans of municipalities located in the District's service area. The planning level demands for 2020, 2030 and 2040 are shown in Table 1 and do not include the short-term reduction and rebound in demand caused by the multi-year drought and the downturn in the economy. These demands include billed consumption for which the District receives revenue, unbilled consumption, and system losses.

Table 1. Projected Customer Demand

	2020	2030	2040
Planning Level of Demand	221 MGD	229 MGD	230 MGD

The Allowable Maximum Level of Demand (AMLD) is the demand that the system can sustain under the planned worst case drought scenario. The AMLD is calculated using the District's hydrologic model applying the following assumptions:

- The existing supplemental supplies through the Freeport Regional Water Facility and Bayside Groundwater Phase 1 Facility will be available;
- Customer rationing is assumed not to exceed 15% during the three-year drought sequence, per the District's Long Term Drought Management Program Guidelines as outlined in Chapter 3 of the Urban Water Management Plan 2010 and consistent with the WSMP 2040;

- Drought management measures will be imposed when specified threshold storage levels will not be maintained per the District's Long Term Drought Management Program Guidelines as outlined in Chapter 3 of the Urban Water Management Plan 2010;
- Fishery releases to the lower Mokelumne River will be made pursuant to the 1998 JSA between USFWS, CDFG, and EBMUD and approved by FERC and the SWRCB;
- Senior water right holders needs will be satisfied as required by their prior rights and established water rights settlement agreements; and
- All other operational requirements will be met, including Army Corps of Engineers flood control requirements.

Based on these assumptions, the hydrologic model calculates an AMLD of 189 MGD for the 2040 level of demand. The AMLD for 2020, 2030 and 2040 are shown in the Table 2.

If conservation and recycling programs do not achieve targets, or if additional dry-year supplemental supplies are not developed, the gap between the planning level of demand and AMLD will increase in future years. This increase occurs as senior water right holders increase water diversions under their entitlements and the District's demand increases. Accordingly, without the dry-year supplemental supplies, the District's current water supply will not be adequate to meet customer water demands during future severe drought conditions while maintaining a 15% rationing limit. The AMLD without new supplemental supplies does not change between 2020 and 2030 as diversions by upstream users are projected to increase only modestly during this time.

Table 2. Projected Allowable Maximum Level of Demand

	2020	2030	2040
Planning Level of Demand	221 MGD	229 MGD	230 MGD
AMLD without new supplemental supplies and 15% rationing	205 MGD	205 MGD	189 MGD

EBMUD

AGENDA NO. 9.1
MEETING DATE April 24, 2012

TITLE **CERTIFY THE FINAL REVISED PROGRAM ENVIRONMENTAL IMPACT REPORT FOR WATER SUPPLY MANAGEMENT PROGRAM (WSMP) 2040**

☐ MOTION ☒ RESOLUTION ☐ ORDINANCE

RECOMMENDED ACTION

Certify the Final Revised Program Environmental Impact Report (Final Revised PEIR) for the WSMP 2040 and make Findings in accordance with the California Environmental Quality Act (CEQA) and adopt the Mitigation Monitoring and Reporting Plan.

INTRODUCTION

The WSMP 2040 is a multi-year planning effort which aims to meet the dry year water needs of District customers through the year 2040. The WSMP 2040 updates the previous WSMP which was prepared in 1993. The current plan was initiated in 2007 and culminated with certification of the PEIR on October 13, 2009. A legal challenge to the PEIR resulted in an order issued by the Superior Court for the County of Sacramento requiring EBMUD to address identified deficiencies in the PEIR. EBMUD subsequently decertified the PEIR in May 2011 and prepared a Revised PEIR addressing the deficiencies. All circulation and public review and comment is complete on the Revised PEIR, and the proposed action would certify the Final Revised PEIR and complete the required actions identified by the court.

DISCUSSION

The Revised WSMP 2040 includes at its core a Portfolio of projects and programs that would be implemented over time to meet the projected need for water through the year 2040. It includes the following elements:

- Dry-year water rationing at a 15% maximum level;
- Water Conservation Level D (39 million gallons per day (MGD) beyond current conservation);
- Water Recycling Level 3 (11 MGD beyond current recycling);
- Supplemental supply projects: Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking/Exchange; Regional Desalination; Enlarge Lower Bear Reservoir; Mokelumne Inter-Regional Conjunctive Use Project (IRCUP)/San Joaquin Groundwater Banking/Exchange; and participation in an expanded Los Vaqueros Reservoir.

Funds Available	Budget Code:	
DEPARTMENT SUBMITTING Water & Natural Resources	DEPARTMENT MANAGER or DIRECTOR Richard G. Sykes Richard G. Sykes	APPROVED General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

The program and the portfolio of projects and programs will enable the District to meet an anticipated additional need for water during a severe drought in the year 2040. Implementation will occur to address the need for water as it grows over time.

Revised Draft PEIR

The Draft Revised PEIR was prepared to address the deficiencies identified by the Court including:

- Further discussion of the potential impacts to and mitigations for Miwok ancestral gathering places resulting from an expansion of Pardee Reservoir,
- Discussion of the Middle Bar Run as a recreational resource and the impacts to the resource from an expanded Pardee Reservoir,
- Discussion of the public safety impacts and potential mitigations arising from the possible removal of the Middle Bar Bridge, and
- Analysis and evaluation of participation in an expanded Los Vaqueros Reservoir as a supplemental supply alternative.

Comments and Responses

The Final Revised PEIR includes responses to all comments received through April 12, 2012 on the Draft Revised PEIR. There were no comments received after the printing deadline for the Final Revised PEIR. Two master responses were prepared to avoid redundancy and provide thorough and consistent responses to the most frequently raised issues:

- Evaluation and inclusion of the Expand Los Vaqueros Alternative; and
- A brief description of the PEIR Revision Effort and the staff recommendation reflected in the Revised PEIR.

Findings and Mitigation and Monitoring Plan

As part of the WSMP 2040 Draft Revised PEIR development effort, potential environmental impacts were analyzed at a program level in compliance with CEQA. Findings detailing those impacts are provided in Exhibit A to the Board resolution for the recommended action. Impacts are categorized as:

- Significant and unavoidable;
- Significant or potentially significant but avoided or mitigated to a less-than-significant level; or
- Less-than-significant.

The majority of findings remain unchanged as compared with those prepared for the 2009 WSMP 2040 Draft PEIR. Hence they describe impacts that are less than significant or can be avoided or mitigated. There were also areas where, because of the program-level nature of the analysis and lack of detail regarding specific project design and means of mitigation, impacts have been labeled as potentially significant and unavoidable. For this latter category, the Board will be asked to find that the economic, legal, social, technological, health and safety or other benefits of the WSMP 2040 Preferred Portfolio

override and outweigh the potentially significant and unavoidable adverse impacts. However, for all the impacts in this category, future opportunities to mitigate are anticipated when more information is available during project-level environmental review. All the mitigation measures are summarized in a Mitigation Monitoring and Reporting Plan (MMRP) which is included as Exhibit B to the Board resolution for the recommended action.

ALTERNATIVE

Do not certify the PEIR. This alternative is not recommended because the Final Revised PEIR meets CEQA requirements and fully addresses deficiencies as identified by the Court in the 2009 WSMP Final PEIR. Without a certified PEIR and an approved Plan, the District will lack an adequate framework to move forward with water supply planning, and therefore the reliability of the District's future water supply would be reduced. Further, the District must present this Final Revised PEIR to the Court in order to reach closure on the litigation.

Attachments

Draft Prepared
Office of General Counsel

RESOLUTION NO. _____

CERTIFYING THE REVISED PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE WATER SUPPLY MANAGEMENT PROGRAM 2040, MAKING FINDINGS, AND ADOPTING THE MITIGATION, MONITORING AND REPORTING PROGRAM

Introduced by Director ; Seconded by Director

WHEREAS, on October 13, 2009, the EBMUD Board of Directors certified a Final Program Environmental Impact Report (PEIR) pursuant to the California Environmental Quality Act (CEQA) for the Water Supply Management Program (WSMP) 2040; and

WHEREAS, the CEQA documentation was challenged in court and the court ordered EBMUD to revise the PEIR to correct identified deficiencies; and

WHEREAS, on June 23, 2011, EBMUD circulated a Notice of Preparation (NOP) of a Revised PEIR for the WSMP 2040 in accordance with CEQA; and

WHEREAS, EBMUD issued a Scoping Report in September 2011 that included a description of all comments received in response to the NOP either in writing or as part of public meetings hosted by EBMUD on July 13, 2011, in Jackson, California, on July 14, 2011, in San Andreas, California, and on July 21, 2011, in Oakland, California; and

WHEREAS, the Board held a WSMP 2040 Workshop on September 27, 2011, and received public comments regarding the WSMP 2040 revision process; and

WHEREAS, a Draft Revised PEIR containing revisions to the 2009 PEIR was posted on the District website and released for a 53-day public review period between December 6, 2011 and January 27, 2012; and

WHEREAS, EBMUD published a Notice of Availability (NOA) of the Draft Revised Program EIR in three newspapers in Alameda County, Calaveras County, and Amador County and the NOA included a brief description of the WSMP 2040 revision effort, notification of the public comment period, and locations where copies of the Draft Revised PEIR were available for review, and whom to contact with comments or questions; and

WHEREAS, EBMUD hosted meetings to take comment on the Draft Revised PEIR on January 11, 2012, in Jackson, California, on January 12, 2012, in Sutter Creek, California, and on January 17, 2012, in Oakland, California; and

WHEREAS, on February 28, 2012, EBMUD held a public workshop to review the WSMP 2040 effort and to receive additional comments on the Draft Revised PEIR and EBMUD's recommended revisions to the WSMP 2040; and

WHEREAS, a Final Revised PEIR was prepared consisting of responses to comments on the Draft Revised PEIR received by EBMUD during the public comment period; and

WHEREAS, EBMUD has prepared a Mitigation Monitoring and Reporting Program (MMRP) addressing the potentially significant impacts and mitigation measures for the WSMP 2040 contained in the Final PEIR prepared in 2009, as revised by the Revised PEIR;

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the East Bay Municipal Utility District does hereby find, determine and certify that:

1. The Board has been presented with the Final Revised PEIR, which includes the 2009 PEIR, the Draft Revised PEIR, public comments on the Draft Revised PEIR received by the District both during and after the public comment period, responses to said comments, revisions to the Draft Revised PEIR in response to comments, and the MMRP. The Board has reviewed and considered the information contained therein prior to approving WSMP 2040, and the Final Revised PEIR reflects the Board's independent judgment and analysis.

2. All proceedings of the environmental review process, including all required notices, have been conducted and completed in compliance with CEQA, the CEQA Guidelines, and all other applicable laws, regulations and procedures.

3. The potential environmental impacts, at a programmatic level, of the WSMP 2040 are fully disclosed in the Draft and Final Revised PEIR, and the Draft and Final Revised PEIR are adequate for use by the District: a) to consider the information in the Revised PEIR as early indicators at a program level of adverse impacts upon resources affected by the supplemental water supply components, the magnitude of those impacts, and the general approach that will be necessary to avoid or mitigate those impacts as future projects are planned and developed; and b) to be incorporated by reference as appropriate into project-level CEQA analyses of projects proposed subsequent to adoption of WSMP 2040.

4. No significant new information has been added to the Revised PEIR since EBMUD provided public notice of the Draft Revised PEIR, and therefore recirculation of the Revised PEIR is not required under Section 21092.1 of the Public Resources Code or Section 15088.5(a) of the CEQA Guidelines. Similarly, none of the circumstances under Section 21166 of the Public Resources Code or Section 15162 of the CEQA Guidelines are present; there have been no substantial changes, changes in circumstances, or other new information that would necessitate major revisions in the 2009 PEIR, or the Revised PEIR, its analysis of effects, mitigation measures, or alternatives. Therefore, EBMUD is not required to undertake any subsequent or

supplemental environmental review of the WSMP 2040 other than the supplemental review undertaken to date.

5. Public consultation conducted in the course of completing the Draft Revised PEIR has been a valuable component of the planning process. Efforts to encourage public participation in the development of the WSMP 2040 included extensive community and agency outreach. These efforts allowed for continued public input throughout the planning process. Further, in the preparation of the Revised PEIR, every effort has been made to utilize the best information available and to incorporate new information as it became available, including information obtained from the public, from other public agencies, and from the studies prepared for WSMP 2040.

6. The Board of Directors makes the findings and determinations regarding the WSMP 2040 project set forth in the Findings, attached hereto as Exhibit A and incorporated herein by this reference.

7. The Board of Directors hereby approves, adopts, and imposes the MMRP, attached hereto as Exhibit B and incorporated herein by this reference. The mitigation measures adopted by the Board of Directors and set forth in the PEIR are hereby imposed as conditions of approval of WSMP 2040.

8. The documents and material constituting the record of this proceeding are located at EBMUD's administrative offices, 375 11th Street, Oakland, CA 94607. The custodian of said records is the Secretary of the District.

BE IT FURTHER RESOLVED that the Final Revised PEIR which incorporates the 2009 PEIR and makes necessary changes to that document is hereby certified as having been completed in compliance with CEQA.

BE IT FURTHER RESOLVED that the Secretary of the District is hereby directed to file a Notice of Determination, in accordance with CEQA Guidelines Section 15094, with the County Clerks of Alameda County, Alpine County, Amador County, Butte County, Calaveras County, Contra Costa County, Colusa County, Glenn County, Plumas County,

Sacramento County, San Francisco County, San Joaquin County, Santa Clara County, Shasta County, Solano County, Sutter County, Tehama County, Yolo County, Yuba County, and with the State Clearinghouse.

ADOPTED this 24th day of April, 2012 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
President

ATTEST:

_____
Secretary of the District

APPROVED AS TO FORM AND PROCEDURE:

_____
General Counsel

W:\400\410\410.01\WSMP 2040 Revised PEIR reso 4-24-12.doc

EXHIBIT A

EBMUD BOARD OF DIRECTORS FINDINGS REGARDING THE WATER SUPPLY MANAGEMENT PROGRAM 2040 PROJECT

1.0 INTRODUCTION

This is the findings document adopted by the East Bay Municipal Utility District ("EBMUD" or "District") Board of Directors ("Board"), as the decision-making body for the lead agency, for approval of the Water Supply Management Program 2040 (WSMP 2040) ("Project").

Section 1.1, "The Project," describes the WSMP 2040, and the revisions that EBMUD has made to the WSMP 2040 Plan. The WSMP 2040 was analyzed in the 2009 WSMP 2040 Program Environmental Impact Report (PEIR) and in the 2011 Revised Draft PEIR and 2012 Revised Final PEIR, and this discussion describes the portfolio of programs and potential supplemental supply projects included in the WSMP 2040 Preferred Portfolio and places it in the context of the EBMUD's supplemental water supply planning efforts.

Section 2, "CEQA Requirements Regarding Project Impacts," describes the requirements of the California Environmental Quality Act (CEQA) regarding Program EIRs and analysis of impacts and alternatives.

Section 3, "Findings Regarding Independent Review and Judgment, contains findings regarding the independent review and judgment of the Board.

Section 4, "Findings Regarding the Project," contains the findings regarding potential impacts resulting from the approval of the WSMP 2040. This section contains three parts:

- Section 4.1 contains the Board's findings that the Project will have significant and unavoidable environmental impacts.
- Section 4.2 contains the findings regarding significant or potentially significant Project impacts that are avoided or mitigated to a less-than-significant level.
- Section 4.3 contains the Board's findings regarding less-than-significant Project impacts.

Section 5, "Findings Regarding Alternatives," contains the findings concerning WSMP 2040 portfolio alternatives considered in the DEIR. This portion of Exhibit A contains three sections:

- Section 5.1 contains the Board's findings regarding the No Project alternative.
- Section 5.2 contains the Board's findings regarding five alternatives.

- Section 5.3 contains the Board's findings regarding the selection of the WSMP 2040 Portfolio.

Section 6, "Statement of Overriding Considerations," contains the lead agency's findings that the benefits of implementing the Project outweigh certain significant and unavoidable adverse environmental effects that have been identified and that approval is therefore justified despite these impacts.

Section 7, "Findings Related to Potential Growth-Inducing Impacts," contains the finding that there are not expected to be any growth-inducing impacts from the approval of the WSMP 2040, which is intended to ensure that adequate supplies are available in dry years to serve the growth that has been planned and projected by local land use planning agencies within the EBMUD service area.

Section 8, "Cumulative Impacts," contains the finding that cumulative impacts will be less than significant.

Section 9, "Project Approval," contains the Board's decision to approve the WSMP 2040 based on the WSMP 2040 Portfolio of components analyzed in the WSMP 2040 PEIR.

As stated more fully in section 4, the findings presented here summarize the mitigation measures set forth in the Draft PEIR and the Revised Draft PEIR and agreed to by the District or incorporated into the Project. The mitigation measures are summarized below for convenience, but the summary is not intended to change any aspects of the complete text of the mitigation measures described in the Final PEIR and adopted by the District.

1.1 THE PROJECT

A. PROJECT OBJECTIVES

The WSMP 2040 estimates water supply needs to the year 2040, and sets forth a program of policy and potential project initiatives to meet those needs. EBMUD's water supplies were estimated to be sufficient during the planning period (2010-2040) in normal and wet years to serve projected demand. In normal and wet water years, sufficient precipitation occurs in the Mokelumne River basin to provide EBMUD with an adequate supply of water under its existing water rights. In drier years, there is inadequate Mokelumne River basin precipitation and resulting river flow to meet EBMUD's water needs, even after accounting for demand reductions that have been achieved from EBMUD's aggressive conservation and recycling programs. The primary objective of the WSMP 2040, therefore, is to identify and recommend solutions to meet dry-year water needs through 2040.

Increased water demand through 2040 by other water agencies that rely on the Mokelumne River for their supply, forecast growth within EBMUD's service area, and

the potential impacts of climate change on watershed yield and customer demand, will likely limit EBMUD's ability to rely upon existing water sources in the future during drought conditions. EBMUD prepared the WSMP 2040 to ensure that it could be prepared to meet dry-year water supply shortages, in recognition that in the future these shortages are likely to occur more frequently. The WSMP 2040 development effort identified new potential supplemental supply projects that could be used to supplement, but not replace, EBMUD's existing water supply from the Mokelumne River.

The objectives of the WSMP 2040 centered on the need to develop a plan that was flexible and reliable, minimized environmental and socioeconomic effects, and minimized overall costs to EBMUD customers. EBMUD used these objectives as evaluation criteria in determining which components should be included in the WSMP 2040. The WSMP 2040 objectives were stated as follows:

- Operations, Engineering, Legal and Institutional Objectives:
  - Provide water supply reliability;
  - Rely upon current water right entitlements; and
  - Promote District involvement in regional solutions.

- Economic Objectives:
  - Minimize cost to District customers;
  - Minimize drought impact to District customers; and
  - Maximize positive impact to local economy.

- Public Health, Safety and Community Objectives:
  - Ensure the high quality of EBMUD's water supply;
  - Minimize adverse sociocultural impacts;
  - Minimize risks to public health and safety; and
  - Maximize security of infrastructure and water supply.

- Environmental Objectives:
  - Preserve and protect the environment for future generations;
  - Preserve and protect biological resources;
  - Minimize carbon footprint; and
  - Promote recreational opportunities.

In the course of developing the WSMP 2040, the Board also established certain overarching policies, most notably a commitment to pursue demand-side water management solutions, including extending and expanding current goals for conservation and recycled water provision through the year 2040.

B. PROJECT DESCRIPTION AND LOCATIONS

EBMUD proposes to adopt and implement the WSMP 2040. The WSMP 2040 is a plan that sets forth a portfolio of components that consists of a rationing policy, target conservation level, recycled water level, and potential supplemental supply options to

meet dry year water needs through the year 2040. The WSMP 2040 estimates annual water demand in the EBMUD service area to the year 2040 and then estimates the additional amount of water necessary to serve that demand in dry years when existing supplies are limited. The WSMP 2040 then sets forth a compilation of water supply components to meet those needs. The WSMP 2040 Portfolio includes the following:

- Rationing level of 15 percent;
- Water Conservation (39 MGD);
- Recycled Water development (11 MGD); and
- Potential supplemental water supply components (variable yield to achieve 43 MGD).

Rationing is a policy that, when implemented, results in reduction of water use by District customers above the conservation achieved to that point. EBMUD's prior policy of instituting customer rationing to 25 percent in the event of a critical dry year was determined to be unachievable in the future given the increased conservation savings and resulting diminishment in customer ability to further decrease use during a drought. The WSMP 2040 Portfolio includes a targeted maximum 15 percent rationing policy in the future, which is more feasible and preserves flexibility to increase above this level, if necessary. The policy assumes that EBMUD will successfully carry out a number of the water conservation, recycled water, and supplemental supply initiatives within the WSMP 2040 planning horizon.

The water conservation level target of 39 MGD would be achieved by implementing more than 50 conservation measures that target residential, commercial, and industrial customers. Conservation programs will rely on behavioral actions related to how customers use water, and on program actions such as the replacement of fixtures, appliances, and equipment to use water more efficiently.

EBMUD's existing and committed inventory of recycled water projects are estimated to generate 9.3 MGD of recycled water by the year 2010. The WSMP 2040 Portfolio proposes to increase the amount of recycled water available for non-potable use by an additional 11 MGD between 2010 and 2040.

Under the WSMP 2040, existing supplies, in concert with the aggressive conservation target and recycled water use, would provide sufficient water to meet demands in normal years through the year 2040. Those programs alone, however, would not be sufficient to meet year 2040 service area demands during a prolonged drought. During droughts a combination of rationing and additional supplemental water sources will be needed. The WSMP 2040 potential supplemental supply components are:

- Northern California Water Transfers. EBMUD would seek water transfers with partners in the Sacramento Valley, or with partners who have supplies that originate north of the Delta so that the transferred water can be conveyed through the Freeport Regional Water Project.

- Bayside Groundwater Project Phase 2. The WSMP 2040 would build upon successful operation of the Bayside Groundwater Project Phase 1 by expanding its extraction and storage capacity by as much as an additional 9 MGD. Bayside Groundwater Project Phase 2 facilities would be designed to inject treated water into the aquifer during years when water is available, and to recover stored groundwater during a drought.

- Sacramento Basin Groundwater Banking / Exchange. This component includes development of in-lieu or artificial groundwater recharge and recovery in cooperation / partnership with Sacramento area water interests. EBMUD would support development of facilities to recharge the Sacramento groundwater basin, and would receive either groundwater extracted from the basin or surface water in exchange for a portion of the water stored.

- Regional Desalination. A Regional Desalination Project, consisting of one or more desalination facilities, would be undertaken by EBMUD, Contra Costa Water District, the San Francisco Public Utilities Commission, and Santa Clara Valley Water District. The desalination plant would be operated intermittently as a dry-year supplemental supply, subject to specific agreements between the partner agencies.

- Regional Upcountry Project. The WSMP 2040 Portfolio includes potential interrelated components that would occur in the Mokelumne watershed.

  - Enlarge Lower Bear Reservoir. This component would provide 18,300 AF of additional yield from which EBMUD would receive approximately 2,500 AF during a dry year.
  - San Joaquin Groundwater Banking / Exchange. Under this component, one or more appropriate partners would either obtain a new water right, or modify an existing water right, to enable surface water to be diverted from the Mokelumne River and banked in the Eastern San Joaquin Groundwater Basin for later use by one or more partners

- Los Vaqueros Reservoir Expansion. This proposal involves a joint project between EBMUD and Contra Costa Water District (CCWD) to utilize reservoir storage in a project being undertaken by CCWD to expand their Los Vaqueros Reservoir, which is an above-ground, off-stream storage reservoir located in eastern Contra Costa County owned and operated by CCWD. CCWD has completed an EIR/EIS for the Los Vaqueros Reservoir Expansion and is currently constructing an enlargement that will expand the reservoir's storage volume to 160,000 acre-feet. Through this document, EBMUD incorporates by reference the relevant portions of the EIR/EIS and adopts the findings made by CCWD with regard to the adequacy of the mitigation measures that CCWD and its project partner have committed to undertake. The analysis conducted by EBMUD focuses on the elements that will be necessary for EBMUD to utilize a portion of the available storage capacity of Los Vaqueros Reservoir.

The components of the WSMP 2040 set forth in the WSMP 2040 Portfolio would be located both within and outside of the EBMUD service area. More specifically, some would occur in the western foothills of the Sierra Nevada within or near the Mokelumne River basin. Others would be located within California's "Central Valley" and within the vicinity of EBMUD's Freeport Regional Water Project (which includes portions of Sacramento County as well as the Sacramento and American River watersheds). Still others would be located within the San Francisco Bay Area, including the EBMUD and CCWD's service areas.

C. PROJECT DEVELOPMENT AND PUBLIC INVOLVEMENT

The development of the WSMP 2040 began with the preparation of comprehensive and detailed water demand study that projected long-term demand. The development of the WSMP 2040 Portfolio required detailed evaluation of a wide range of potential dry-year water supply solutions. "Components" consisting of various rationing policies, conservation levels (and conservation elements that served to comprise various levels), recycled water program levels (and project components that reside in particular levels), and a range of supplemental supply options were then combined into a set of interrelated actions set forth as varying "portfolios".

A thematic approach was used to develop the portfolios and to emphasize one or more planning objectives in the various portfolios. Next the portfolios were reviewed from the context of how they responded to particular screening criteria.

In early 2008, preliminary portfolios were presented to the EBMUD Board of Directors as well as a Community Liaison Committee (CLC), which was created in Spring 2007 to provide a forum for the exchange of information between stakeholders and EBMUD during the development of WSMP 2040. In addition, prior to this point, the CLC and the Board conducted numerous workshops and CLC meetings leading up to the portfolio development stage, all of which were open to the public and helped to identify the components to be included in particular portfolio options.

Following the input of the CLC and deliberation by the Board in light of policy considerations, a total of fourteen preliminary portfolios were assembled that were then further reviewed and analyzed. The fourteen portfolios were tested using a supply model to:

- Ascertain operational feasibility and volume of water delivered during a worst-case drought;
- Determine the frequency and severity of required rationing, and the potential cost of such rationing to customers in the service area; and
- Calculate the capital, operating and maintenance costs to the District.

An exclusion criteria evaluation next provided a "fatal flaw" analysis. Any portfolio that did not pass the exclusion criteria evaluation was held from further study. Specifically, exclusion criteria were:

- Does the portfolio "meet projected water demands through 2040?"; and
- Does the portfolio "meet the District's drought planning sequence?"

The group of fourteen portfolios was narrowed to a list of five portfolios. Each of the final five was designed to satisfy the additional identified Need for Water and were based around a cornerstone component (such as Groundwater Storage for example), and were carried forward for in-depth analysis.

On June 24, 2008, guidance was received from the EBMUD Board of Directors regarding the selection of the WSMP 2040 Portfolio. The Board weighed the public and CLC comments on the five portfolios (and their components). After considering the established project objectives as well as Board goals and policies, instead of recommending that one of the five final portfolios be selected as the "WSMP 2040 Portfolio," the Board instead recommended that particular elements of the group of five portfolios be assembled into a unique, WSMP 2040 Portfolio, and that this Portfolio be carried forward in WSMP 2040 and the PEIR.

The WSMP 2040 Draft PEIR was developed and posted on the District website and released for public and agency review with an initial 45-day public review period between February 19, 2009 and April 6, 2009. In response to public requests to lengthen the comment period, EBMUD extended it for 29 additional days for a total comment period of 74 days. During the DPEIR comment period, EBMUD also held meetings for the purpose of receiving comments in Lodi, Sutter Creek, Oakland, and Walnut Creek. In response to public and agency requests for an additional meeting in the Sierra communities' area to provide comments on the DPEIR, EBMUD conducted a meeting for that purpose in San Andreas (Calaveras County) on March 30, 2009. EBMUD staff also presented information regarding WSMP 2040 to the following agencies at their request: Contra Costa County Water Council; City of Lockford Municipal Advisory Council; Plymouth City Council; Central Contra Costa Sanitary District. On August 11, 2009, EBMUD also held a public workshop on the WSMP 2040 and the PEIR in Oakland.

In 2009, EBMUD finalized a PEIR for the WSMP 2040 after conducting a year-long public review process of the environmental analysis. The PEIR was challenged in court, and EBMUD has now incorporated revisions to the PEIR to address the deficiencies identified in the order issued by the Superior Court for the County of Sacramento in the matter of Foothill Conservancy et al. v. East Bay Municipal Utility District, Case No. 34-2010-80000491.

In its order on May 25, 2011, the court identified the following legal deficiencies in the 2009 PEIR prepared by EBMUD:

> (1) the failure to adequately formulate mitigation measures for the potentially significant impact to native Miwok ancestral gathering places that would result if the Mokelumne River is inundated by expansion of Pardee Reservoir;

(2) the failure to adequately describe the Middle Bar Run as a recreational resource and analyze and mitigate impacts that would result if the Middle Bar Run is inundated by expansion of Pardee Reservoir;
(3) the failure to adequately identify and mitigate the potentially significant safety impacts that might arise due to possible removal of the Middle Bar Bridge as an emergency evacuation route; and
(4) the failure to prepare an adequate analysis of reasonable alternatives to the project, due to the EIR's failure to take into account the potentially significant impacts from inundation of the Middle Bar Run and Middle Bar Bridge, and failure to analyze and include participation in the Los Vaqueros Reservoir expansion as part of its consideration of alternatives to the Regional Upcountry water supply components.

On June 23, 2011, EBMUD released a Notice of Preparation (NOP) for a Draft Revised PEIR, describing the nature of the revisions and providing notice regarding three scoping meetings. The NOP invited agencies, interested groups and individuals to submit comments through the close of business on July 29, 2011, and after the close of the comment period, EBMUD released a Scoping Report in August 2011. This report is available on EBMUD's website at http://ebmud.com/our-water/water-supply/long-term-planning/water-supply-managementprogram-2040.

The NOP advised that the revision effort would be limited to the identified areas of deficiency, as well as any changes mandated by significant new information. The Draft Revised PEIR was released for review and comment through January 27, 2011. EBMUD prepared written responses to comments received on the Draft Revised PEIR as well as any necessary changes to the analysis, and completed a Final Revised PEIR in April 2012.. The previously prepared 2009 PEIR as revised by the Final Revised PEIR serve as the CEQA analysis for the WSMP 2040.

The 2009 Draft PEIR, 2009 Final PEIR, and all related documents are available for review on EBMUD's website at http://ebmud.com/our-water/water-supply/long-term planning/watersupply- management-program-2040 and at the EBMUD building at 375 Eleventh Street in Oakland, California. Copies are also available on CD-ROM in libraries as listed in the Notice of Availability crafted for the Draft Revised PEIR, which is posted on the above

2.0 CEQA REQUIREMENTS REGARDING PROJECT IMPACTS

Public Resources Code Section 21081 requires the lead agency to make written findings of project impacts. Regarding these findings, CEQA Guidelines Section 15091, states:

> (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or

more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

(1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

(b) The findings required by subsection (a) shall be supported by substantial evidence in the record.

(c) The finding in subsection (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subsection (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

(d) When making the findings required in subsection (a)(I), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

(e) The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.

(f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

The changes or alterations referred to in State law, as quoted above, may be mitigation measures, alternatives to the project or changes to the project by the project proponent. The PEIR identifies mitigation measures that are proposed at a program level to reduce significant environmental effects of the project to a level of insignificance.

The PEIR functions as a Program EIR according to CEQA Guideline section 15168 and covers a broad program of policy and potential project initiatives to ensure that EBMUD can meet water demand in its service area. The PEIR focuses on broad policy alternatives and mitigation measures that can be determined without unnecessary speculation at this time.

3.0 FINDINGS REGARDING INDEPENDENT REVIEW AND JUDGMENT

Each member of the EBMUD Board of Directors was provided a copy of the Draft and Final PEIR in 2009. As part of the Final PEIR, the Board was provided with a copy of the public comments on the DPEIR received by the District both during and after the close of the public comment period through August 31, 2009, responses to said comments, and revisions to the Draft PEIR in response to comments on October 1, 2009. On October 8, 2009, the Board was provided with a copy of the comments received between August 31, 2009 and October 7, 2009 and the response to these comments.

For the revised PEIR process, the Board was provided a copy of the draft revisions to the PEIR in December 2011 as well as with a copy of the public comments on the Revised Draft PEIR received by the District both during and after the close of the public comment period, as well as responses to said comments, and revisions as appropriate.

Collectively, the information provided in 2009, and in December 2011, and April 2012 are referred to as the "WSMP 2040 PEIR". The WSMP 2040 PEIR reflects the Board's independent judgment, and the Board has reviewed and considered the WSMP 2040 PEIR prior to taking action on the WSMP 2040.

In making the determination to certify the Final PEIR and to approve the Project, the Board recognizes that the Project involves controversial environmental issues and that a range of opinion exists with respect to these issues. The Board further recognizes that certain aspects of the WSMP 2040 development process, including the extensive effort in developing long-term demand projections, have been questioned. In the numerous workshops on the Project, and in its review of the Draft PEIR and Revised Draft PEIR, the comments received on the Draft PEIR and Revised Draft PEIR, and the responses to those comments in the 2009 Final PEIR and 2012 Final Revised PEIR, the Board has acquired an understanding of the range of opinion. The Board has made its decision after weighing and considering the various viewpoints on the important issues raised by the WSMP 2040 and certifies that its findings are based on a full appraisal of all evidence presented in the record addressing the WSMP 2040 and the Final PEIR developed in 2009, as well as the revisions to the PEIR reflected in the 2012 Final Revised PEIR, along with the recommended revisions to the WSMP 2040 Plan.

4.0 FINDINGS REGARDING THE PROJECT

After reviewing and considering the information contained in the PEIR and the MMRP, the EBMUD Board of Directors hereby adopts the following findings regarding Project impacts and mitigation measures.

This exhibit does not attempt to describe the full analysis of each environmental impact contained in the 2009 Final PEIR and the revisions to the 2009 PEIR and conducted at a program level. Instead, the exhibit provides a summary description of each impact, describes the applicable mitigation measures identified in the 2009 Final PEIR and Final Revised PEIR and adopted by the Board, and states the Board's findings on the significance of each impact after imposition of the adopted mitigation measures. A full explanation of these environmental findings and conclusions can be found in the Final PEIR and Final Revised PEIR and these findings hereby incorporate by reference the discussion and analysis in the Final PEIR and Final Revised PEIR supporting the PEIR's determinations regarding the Project's impacts and mitigation measures designed to address those impacts. In making these findings, the Board ratifies, adopts and incorporates the analysis and explanation in the Final PEIR and Final Revised PEIR, ratifies, adopts, and incorporates in these findings the determinations and conclusions of the Final PEIR and Final Revised PEIR relating to environmental impacts and mitigation measures, and adopts and incorporates as conditions of approval of the Project the mitigation measures set forth in the MMRP attached as Exhibit B.

4.1 FINDINGS REGARDING SIGNIFICANT AND UNAVOIDABLE IMPACTS

A. Hydrology, Groundwater and Water Quality Impacts

Potentially-Significant Impact 5.2.A-9: Impacts to Sacramento and Delta downstream water users.

Finding: The Sacramento Basin Groundwater Banking/Exchange and San Joaquin Groundwater Banking/Exchange components have the potential to result in these impacts and it is not feasible to identify mitigation measures at this stage that would reduce the potentially significant effects of Impact 5.2.A-9 to less than significant levels.

Facts in Support of Finding: Impact 5.2.A-9 is potentially significant for the Sacramento Basin Groundwater Banking/Exchange and San Joaquin Groundwater Banking/Exchange components.

Northern California drainage basins join together at the Sacramento River-San Joaquin River Delta. The Sacramento River at Freeport lies within the defined Delta area. It is possible that increased diversions at the FRWP, or diversions elsewhere along the Sacramento River in support of the groundwater project could reduce the amount of

water available to downstream diversions and/or change water quality conditions (i.e. temperature) thereby impacting aquatic resources.

The Sacramento Basin Groundwater Banking/Exchange program is anticipated to provide up to 4.2 MGD (approximately 4.7 TAFY) of surface water during average or wet years. Project-related diversions would be small in comparison to the background flow rates, and would not likely produce discernible differences in river flow, nor significantly affect Delta water users. In addition, legal requirements to avoid injury to fish and wildlife or to water users from water transfers would also likely ensure that there is little risk of potential impacts to these resources

Despite this, because the location and capacity and aspects of the water source for a Sacramento-area groundwater project are unknown, the potential impacts are presumed to be potentially significant. Without more specific information that can only be developed at a project-level stage, no specific mitigation measures can be identified at this time. Future project-level modeling and analysis would consider the location and capacity of a joint groundwater project, and future conditions on the river.

The San Joaquin Groundwater Banking/Exchange project would divert an additional 17.4 MGD (approximately 19.5 TAFY) of Mokelumne River water in normal and/or wet years. Additional diversions from the Mokelumne River have the potential to impact downstream flows to the Delta. While the additional water to be diverted is not substantial relative to the overall volume of Delta inflow, uncertainties regarding future Delta diversions, and the undefined characteristics of a San Joaquin Groundwater project require the presumption at this stage of potentially significant impacts for this component. Although existing legal and regulatory protections would assist in reducing impacts, without more specific information that can only be developed at a project-level stage, specific effective mitigation measures cannot be identified at this time, in part because the design would require detailed modeling and knowledge regarding the project capacity, timing and diversions and other specifics of the project design.

Impact Significance: **Significant and Unavoidable**

D. Land Use Impacts

Potentially-Significant Impact 5.2.D-1: Reduction of agricultural productivity and conversion of farmland to non-agricultural uses.

Finding: Implementation of Mitigation Measures 5.2.D-1a and 5.2.D-1b, which would require the project to avoid siting proposed facilities within State-designated important farmlands and ensure that drainage systems that are needed for agricultural uses remain functioning, minimize any disturbance of important farmland during construction, and coordinate construction scheduling to minimize disruption of agricultural operations would reduce the potentially significant effects of Impact 5.2.D-1 to less than significant levels for the Sacramento Basin Groundwater Banking/Exchange, Enlarge Lower Bear

Reservoir, and San Joaquin Groundwater Banking/Exchange components. The Northern California Water Transfers component has the potential to result in Impact 5.2.D-1 and it is not feasible to identify mitigation measures at this stage that would reduce the potentially significant effects of Impact 5.2.D-1 to less than significant levels.

Facts in Support of Finding: EBMUD has not yet identified the source of water for the Northern California Water Transfers component. Consequently, it is not possible to determine the impact that could result to agricultural land. It is likely that a transfer involving fallowing or retirement of lands could be designed so that the agricultural productivity of the land would not be significantly diminished, but without project-specific details regarding the source and site specific design details, specific mitigation measures cannot be developed at this stage. The same is true of other types or project configurations for water transfers. As a result, at this stage, it cannot be determined with sufficient certainty that identified Mitigation Measure 5.2.D-1a and 5.2.D-1b, which commit the District to avoid siting facilities within important farm lands and restore agricultural lands, would reduce impacts from the Northern California Water Transfers component to a less-than-significant level or that other project-specific mitigation measures would be feasible.

Impact Significance: **Significant and Unavoidable**

F. Air Quality

Potentially Significant Impact 5.2.F-2: Violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Finding: Both the construction generated emissions and operations of the Recycled Water, Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking/Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking/Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options have the potential to result in Impact 5.2.F-2 and at this stage, it cannot be determined with certainty that implementation of Mitigation Measures 5.2.F-2a, 5.2.F-2b and 5.2.F-2c would fully reduce the potentially significant risk of violating air quality standards to less than significant levels.

Facts in Support of Finding: Impact 5.2.F-2 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options. These components involve construction and operation of new facilities, which would result in emissions of Criteria Air Pollutants and ozone precursors in air basins that are in non-attainment for these pollutants.

Concentrations of several air pollutants—ozone (O3), carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), respirable and fine particulate matter (PM10 and PM2.5), and lead—are used as indicators of ambient air quality conditions. These Criteria Air Pollutants (CAPs) are known to be deleterious to human health. Temporary dust emissions and exhaust emissions of reactive organic gases (ROG), NOx, and PM10 would result from construction of facilities associated with the components and could exceed the applicable mass emission thresholds of the jurisdictional air quality management district. Thus, construction-generated emissions could violate air quality standards or contribute substantially to an existing or projected air quality violation.

Implementation of Mitigation Measures 5.2.F-2a and 5.2.F-2b, which commit EBMUD to implement control measures to reduce fugitive PM10 dust emissions during site preparation, grading, material hauling, and other construction activities, implement measures to reduce exhaust emissions of ozone precursors from heavy-duty off-road construction equipment and on-road mobile sources associated with material delivery and worker commute trips, and implement measures to reduce emissions of CAPs and ozone precursors if such emissions would otherwise exceed the significance thresholds established by the local air district would result in approximate reductions of 75 percent, 5 percent, 20 percent, and 45 percent in fugitive PM10 dust, and construction-related exhaust emissions of ROG, NOx, PM10, respectively. Nonetheless, if short-term construction-generated emissions of CAPs and ozone precursors cannot be reduced to levels below the applicable thresholds of the local air district, then the construction-generated emissions would be potentially significant. This is unlikely, but without additional information that can only be developed at the project-specific stage, it cannot be determined with certainty that the use of off-road diesel-powered equipment, earth movement, or truck trips involved with construction would not result in potentially significant impacts.

Detailed information regarding the operations of each component also cannot be developed at this time. The specific size and number of required exaction wells, injection wells, and pump stations cannot be established with certainty, and similarly, the number of vehicle trips resulting from the enlargement of Lower Bear Reservoir cannot be determined at this stage. Mitigation Measure 5.2.F-2c requires EBMUD to implement measures to reduce emissions of CAPs and ozone precursors if such emissions would otherwise exceed the significance thresholds established by the local air district. Because project-specific information regarding design and operations cannot be developed at this stage, even with implementation of these project-specific mitigation measures, operational emissions may exceed thresholds established by the jurisdictional air quality management, and thus there is the possibility that the components would result in Impact 5.2.F-2.

Impact Significance: **Significant and Unavoidable**

Potentially Significant Impact 5.2.F-3: Cumulatively considerable net increase of criteria pollutants for which the region is in nonattainment under an applicable national or State ambient air quality standard.

Finding: Both the construction generated emissions and operations of the Recycled Water, Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking/Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking/Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options have the potential to result in Impact 5.2.F-3 and at this stage, it cannot be determined that implementation of Mitigation Measure 5.2.F-3 would fully reduce the potentially significant risk of a cumulatively considerable net increase in criteria pollutants for which a region is in nonattainment under applicable national or State ambient air quality standards.

Facts in Support of Finding: Impact 5.2.F-2 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Construction-generated and operational emissions associated with these components have the potential to exceed the applicable mass emission thresholds established by the jurisdictional air quality management district and thus result in a cumulatively considerable net increase of a CAP for which the region is in nonattainment.

Mitigation Measure 5.2.F-3 reaffirms EBMUD's obligation to carry-out mitigation measures 5.2.F-2a, 5.2.F-2b, and 5.2.F-2c. At the project-specific stage, as part of the project-specific environmental review, EBMUD will estimate the emission levels of CAPs associated with the construction and operation of component facilities and develop detailed, project-specific mitigation. This analysis will determine if construction and operational emissions would contribute to the nonattainment status of the region, and suggest project-specific measures that could be required in the project specifications to ensure that emissions remain below regulatory thresholds. Without this project-specific information, however, at this stage it is not possible to determine that Impact 5.2.F-3 is reduced to a less-than-significant level because it is possible that even with these mitigating actions, the resulting emissions could potentially result in a cumulatively considerable net increase of CAP or that any increase in CAP would contribute unavoidably to a significant air quality impact.

Impact Significance: **Significant and Unavoidable**

Potentially Significant Impact 5.2.F-4: Exposure of sensitive receptors to substantial pollutant concentrations.

Finding: The construction generated emissions of the Recycled Water, Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking/Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking/Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options have the potential to result in Impact 5.2.F-4 and at this stage, it cannot be determined that implementation of Mitigation Measures 5.2.F-4a, 5.2.F-4b, and 5.2.F-4c would fully reduce the potentially significant effects of construction-generated fugitive dust, exhaust particulate, and asbestos emissions to less than significant levels.

Facts in Support of Finding: Impact 5.2.F-4 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Construction-related activities would result in fugitive PM10 and PM2.5 dust emissions from site preparation, earth movement, grading, and hauling of earthen material. While the fugitive dust emissions generated by all of these activities may contribute to ambient background concentrations of PM10 and PM2.5 in the region, they also may directly result in localized concentrations of PM10 and PM2.5 that exceed ambient air quality standards at nearby sensitive receptors. Exposure to levels of PM10 and PM2.5 that exceed State and national ambient air quality standards can lead to adverse health effects and nuisance concerns. Implementation of Mitigation Measure 5.2.F-4a would reduce these potential impacts, but without project-level, site-specific analysis, it is not possible to determine at this stage that impacts are reduced to a less-than-significant level or to develop the detailed measures that would address impacts.

Components such as Regional Desalination and the enlargement of Lower Bear Reservoir, could involve a large number of diesel-powered vehicles, movement of large quantities of earthen material, and a high volume of haul truck trips over an extended period. These activities would potentially expose sensitive receptors to substantial concentrations of diesel PM emissions. Implementation of Mitigation Measure 5.2.F-4b would also reduce these potential impacts, but without project-level, site-specific analysis, it is not possible to determine at this stage that impacts are reduced to a less-than-significant level or to develop the detailed measures that would address impacts.

Construction associated with the WSMP 2040 Portfolio would occur within four different air basins, and most of the components would involve soil disturbance for site preparation, trenching, or earthmoving. Construction and soil disturbance activities could occur in areas that contain naturally occurring asbestos (NOA). The potential Bayside Groundwater Phase 2 sites, for example, are located in the vicinity of NOA.

Some components would also involve demolition of structures that potentially contain asbestos, although in implementing the components, EBMUD would comply with all applicable rules and regulations related to asbestos removal. Therefore, all necessary precautionary measures would be implemented during soil disturbance and demolition activities to avoid exposing construction workers or nearby receptors to NOA emissions, which would reduce any potential impacts to a less-than-significant level. Some components, however, would involve ground disturbance in areas of NOA and/or could include demolition of structures that potentially contain asbestos materials. Mitigation Measure 5.2.F-4c commits EBMUD to implement measures to prevent exposure to airborne asbestos pursuant to the requirements of the local air district and/or other local jurisdictions, and it is likely that this measure would ensure that risk of exposure of sensitive receptors to airborne asbestos is minimized. Without project-specific, site-specific analysis, however, it cannot be determined at this stage that the potential impact has been reduced to a less-than-significant level.

Mitigation Measure 5.2.F-4a reaffirms EBMUD's commitment to implement Mitigation Measure 5.2.F-2a to implement control measures to reduce dust emissions during site preparation, grading, material hauling, and other construction activities. This Mitigation Measure would reduce the potential for component construction to expose sensitive receptors to substantial dust emissions, but without project-specific design details, it is possible that certain activities, particularly earth movement, could result in potentially significant impacts. Mitigation Measure 5.2.F-4b commits EBMUD to implement measures to reduce construction-related emissions of diesel PM exhaust from heavy-duty off-road construction equipment. Without project-specific environmental review and details regarding site layout, equipment types, emission rates, construction schedules, and meteorological conditions, the effectiveness of this measure, and project-specific measures necessary cannot be determined and thus there is the potential for significant impacts. Mitigation Measure 5.2.F-4c commits EBMUD to implement measures to prevent exposure to airborne asbestos pursuant to the requirements of the local air district and/or other local jurisdictions. As noted above, however, the effectiveness of this measure cannot be ascertained at the program EIR level without specific project site locations. Thus, despite the commitment to all of these measures, at this stage, impact 5.2.F-4 is considered significant and unavoidable.

Construction of the all proposed Los Vaqueros Reservoir Expansion Options would generate emissions of diesel particulate matter (PM), which is classified as a carcinogen by the California Air Resources Board. Due to the uncertainty of construction activities and facility locations, it cannot be specifically determined what the mass emissions or emissions concentrations of diesel PM would be during construction activities. Furthermore, the location of sensitive receptors is not known at this time. Therefore, even with the implementation of Mitigation Measure 5.2.F-4, this impact is considered potentially significant at the program level of review, and further evaluation would be necessary at a project-specific level of environmental review.

Impact Significance: **Significant and Unavoidable**

Potentially Significant Impact 5.2.F-7: Potential to generate short-term and temporary GHG emissions during construction of the proposed project.

Finding: The construction generated emissions of the Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options have the potential to result in Impact 5.2.F-7 and at this stage, it cannot be determined that implementation of Mitigation Measures 5.2.F-2b and 5.2.F-2c would fully reduce the potentially significant effects of construction-generated short-term and temporary greenhouse gas emissions to less than significant levels.

Facts in Support of Finding: Impact 5.2.F-7 is potentially significant for Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Construction activities associated with participation in the Los Vaqueros expansion would generate temporary greenhouse gas (GHG) emissions. These emissions, though short-term in nature, could be relatively large depending on requirements of off-road construction equipment, material delivery trucks, and construction worker vehicles. Because this is a program-level analysis, the precise construction activities (e.g., schedule, types of equipment, hours of operation per day) and subsequent GHG emissions cannot be determined at this time. However, as discussed in the 2009 PEIR, California Air Resources Board initiatives associated with the AB 32 Scoping Plan and Mitigation Measures 5.2.F-2b and 5.2.F2c would reduce future construction-related GHG emissions. Although implementation of these initiatives and mitigation measures, turnover in construction fleets and on-road vehicles, and cleaner emissions technology (e.g., fuel efficiency, electric cars) would reduce future GHG emissions, the extent to which they would affect the project's GHG construction emissions cannot be determined at this time. Furthermore, as described above, the magnitude of the proposed activities cannot be accurately determined as well. Therefore, it is possible that the sheer magnitude of construction activities could outweigh and overshadow future reductions. Therefore, this impact is considered potentially significant, even with implementation of Mitigation Measure 5.2.F-2.

Mitigation Measure 5.2.F-2 affirms the District's commitment to implement Mitigation Measures 5.2.F-2b and 5.2.F-2c from Section 5.2.F Air Quality of the 2009 PEIR.

Mitigation Measures 5.2.F2b and 5.2.F-2c are set forth on pages 5.2.F-10 through 5.2.F-11 of the 2009 PEIR.

Impact Significance: **Significant and Unavoidable**

G. Noise

Potentially-Significant Impact 5.2.G.1: Exposure of sensitive receptors to noise levels in excess of applicable noise standards, and/or result in a noticeable increase in ambient noise levels from short-term construction activities.

Finding: The Recycled Water, Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking/Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking/Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options have the potential to result in Impact 5.2.G-1 and at this stage, it cannot be determined that implementation of Mitigation Measures 5.2.G-1a and 5.2.G-1b would reduce the potentially-significant impacts to sensitive sites and populations from construction-related noise to less than significant levels.

Facts in Support of Finding: Impact 5.2.G-1 is potentially significant for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking / Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking / Exchange components , and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options of the WSMP 2040 Portfolio.

Since the locations of many of the proposed facilities have not yet been determined, the potential exists for construction of facilities associated with the components to expose sensitive receptors to noise levels in excess of applicable daytime and nighttime noise standards and/or result in a noticeable increase in ambient noise levels. Mitigation Measure 5.2.G-1a requires EBMUD to avoid siting proposed construction activities in close proximity to noise-sensitive land uses. Mitigation Measure 5.2.G-1b commits EBMUD to implement measures to reduce short-term construction noise levels.

The analysis presented in the 2009 PEIR beginning on page 5.2.G-2 is applicable to the facilities proposed under the Current Los Vaqueros Expansion Options (defined in this general discussion as Boyd Road, New Intertie and Untreated Water Options only). As described in the 2009 PEIR, effects of construction noise largely depend on the type of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment in the receptor's vicinity. Such effects would be short-term and last only for the duration of construction activities. Noise levels attributable to short-term construction would fluctuate depending on the particular type, number, and duration of use for various types of equipment. The noise-sensitive uses described in the settings are in close proximity to proposed construction areas; therefore, the potential exists for the construction of the proposed options to expose sensitive receptors to noise levels in

excess of the applicable daytime and nighttime noise standards and/or result in a noticeable increase in ambient noise levels.

Construction requirements for the facilities proposed under the Current Expansion Options have not yet been developed. Further site-specific analysis would be needed to determine the potential effects of noise at the noise-sensitive land uses in close proximity to proposed construction areas and further development of mitigation could occur at that time. As a result, construction noise impacts in this program level analysis are considered potentially significant. While implementation of Mitigation Measures 5.2.G-1a and 5.2.G-1b would reduce potential impacts, it is not known whether these measures would reduce potential impacts to less-than-significant levels.

As with the Current Expansion Options, the analysis presented in the 2009 PEIR beginning on page 5.2.G-2 is applicable to the facilities proposed under the Los Vaqueros Reservoir Future Expansion Option. The noise-sensitive uses described in the setting discussion above are in close proximity to the construction areas for the proposed check valves and aqueduct interconnections; therefore, the potential exists for the construction of the proposed facilities to expose sensitive receptors to noise levels in excess of the applicable daytime and nighttime noise standards and/or result in a noticeable increase in ambient noise levels. As a result, noise impacts related to construction of the check valves and aqueduct interconnections would be potentially significant. While implementation of Mitigation Measures 5.2.G-1a and 5.2.G-1b would reduce potential impacts, it is not known whether these measures would reduce potential impacts to less than-significant levels. Further site-specific analysis would be needed to determine the potential effects of noise at the noise-sensitive land uses in close proximity to proposed construction areas.

Mitigation Measure 5.2.G-1a commits the District to avoid siting proposed construction activities in close proximity to noise-sensitive land uses.

Mitigation Measure 5.2.G-1b commits the District to iImplement measures to reduce short-term construction noise levels.

These measures are set forth on pages 5.2.G-4 and 5.2.G-5 of the 2009 PEIR.

Mitigation Measure 5.2.G-1c commits the District to provide public notice of proposed activities and provide noise shielding to the extent feasible.

This mitigation measure was presented in the Freeport Regional Water Project Draft EIR/EIS and applies to the possible construction of a treatment plant on aqueduct facilities near Camanche Reservoir.15 Similar measures could be used for new treatment facilities located at existing water treatment plants.

Prior to construction, adequate notice would be provided to all potentially affected residences. The construction contractor will designate a noise disturbance coordinator who will be responsible for responding to complaints regarding construction noise. The

coordinator will determine the cause of the complaint and will ensure that reasonable measures are implemented to correct the problem. A contact telephone number for the noise disturbance coordinator will be conspicuously posted on construction site fences and will be included in the written notification of the construction schedule sent to nearby residents. Such notices should be provided to all residences within 4,000 feet of construction areas at least 2 weeks before construction activities begin. In addition, noise shielding should be provided to the extent feasible and practicable. Such shielding may include, but is not limited to, features such as movable noise barriers, noise reducing "blankets," hay bale shield walls, and similar features. Full consideration should be given to noise-reducing construction methods. A noise specialist shall be consulted to assist in identifying feasible methods of noise reduction.

Implementation of Mitigation Measures 5.2.G-1a, 5.2.G-1b, and 5.2G-1c would reduce at least partially the exposure of sensitive receptors to project-generated construction noise. However, construction activity could still result in a substantial temporary or periodic increase in pre-construction ambient noise levels in the project vicinity. Further site-specific analysis would be needed to determine the potential effects of noise at sensitive land uses in proximity to proposed construction areas. Once the project-specific design details are known, it can be determined whether there is a need for additional mitigation measures to reduce construction noise through measures such as the development of additional design specific measures regarding sound barriers, pile drilling practices, or other construction related controls. Until detailed site specific analysis can be done, the development of additional measures is not feasible and construction noise impacts, although temporary, are considered significant and unavoidable.

Impact Significance After Mitigation: **Significant and Unavoidable**

Potentially Significant Impact 5.2.G-2: Exposure of noise-sensitive receptors to noise levels in excess of applicable standards resulting from long-term operational activities.

Finding: The Recycled Water, Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking/Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking/Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Future Expansion Options have the potential to result in Impact 5.2.G-2 and at this stage, it cannot be determined that implementation of Mitigation Measures 5.2.G-2a and 5.2.G-2b would reduce the potentially-significant impacts of exposure of sensitive sites and populations to excess noise levels from long-term operational activities to less than significant levels.

Facts in Support of Finding: Impact 5.2.G-2 is potentially significant for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking / Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking / Exchange components, and

Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Future Expansion Options of the WSMP 2040 Portfolio.

Certain facilities needed to implement specific components would generate operational noise levels generally ranging from 45 dB to 80 dB Leq at a distance of 50 feet. Likely noise sources include fans, pumps, air compressors, chillers, turbines, or cooling towers. Noise levels from proposed facility operational equipment may vary significantly depending on unit efficiency, size, and location.

The locations and specific design of many of the WSMP 2040 Portfolio component facilities have not yet been determined at this stage.

The analysis presented in the 2009 PEIR beginning on page 5.2.G-6 is applicable to the facilities proposed for the Treated Water Options. Some of the proposed facilities (e.g., pumping plant) could generate operational-related noise. Buried pipelines would not likely result in any long-term operational noise impacts. Noise levels from proposed operational equipment may vary significantly depending on unit efficiency, size, and location. The noise-sensitive uses described in the setting discussion above are in close proximity to these facilities; therefore, the potential exists for their operation to expose sensitive receptors to noise levels in excess of the applicable daytime and nighttime noise standards and/or result in a noticeable increase in ambient noise levels. As a result, operational stationary noise would be potentially significant. While implementation of Mitigation Measures 5.2.G-2a and 5.2.G-2b would reduce potential impacts, it is not known whether these measures would reduce potential impacts to less than-significant levels. Further site-specific analysis would be needed to determine the potential effects of noise at the noise-sensitive land uses in close proximity to the proposed portable pump and pumping plant.

Mitigation Measure 5.2.G-2a commits the District to avoid siting proposed facilities in close proximity to noise sensitive land uses.

Mitigation Measure 5.2.G-2b commits the District to implement measures to reduce long-term operational related noise levels.

These mitigation measures are set forth on page 5.2.G-7 of the 2009 PEIR.

For the Los Vaqueros Expansion Option, construction of the proposed treatment facilities would occur within EBMUD property at existing water treatment plants or along aqueducts. These facilities could generate operational noise. Because the specific location of these facilities is not known at this time, the potential impacts on nearby noise-sensitive land uses cannot be determined. Therefore, this impact is potentially significant. While implementation of Mitigation Measures 5.2.G-2a and 5.2.G-2b would reduce potential impacts, it is not known whether these measures would reduce potential impacts to less-than-significant levels. Further site-specific analysis would be needed to

determine the potential effects of noise at the noise-sensitive land uses in close proximity to the proposed treatment facilities.

Mitigation Measure 5.2.G-2a requires EBMUD to avoid siting proposed facilities in close proximity to noise-sensitive land uses and Mitigation Measure 5.2.G-2b requires EBMUD to implement measures to reduce long-term operational related noise levels. Further site-specific analysis and specific details regarding the design of particular components would be needed to determine the adequacy of these measures and the specific effects that would result from operational noise. Thus, because the effectiveness of these measures cannot be ascertained without specific project site locations, operational noise impacts are presumed to be significant and unavoidable.

Impact Significance After Mitigation: **Significant and Unavoidable**

Potentially-Significant Impact 5.2.G-4: Exposure of sensitive receptors to excessive ground-borne noise and vibration levels.

Finding: The Recycled Water, Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking/Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking/Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options have the potential to result in Impact 5.2.G-4 and at this stage, it cannot be determined that implementation of Mitigation Measures 5.2.G-4a and 5.2.G-4b would fully reduce the potentially-significant impacts to sensitive sites and populations from pile-driving and other construction activities that produce vibration. Such impacts, although short-term, remain significant and unavoidable

Facts in Support of Finding: Impact 5.2.G-4 is potentially significant for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking / Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking / Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options of the WSMP 2040 Portfolio.

If a vibration-sensitive land use or if sensitive species are located in proximity to construction sites where activities such as pile driving or earth compaction will occur, people or animals may be exposed to disturbance or actual harm, and these construction related vibration impacts would be potentially significant. Mitigation Measures 5.2.G-4a commits EBMUD to avoid siting proposed construction activities in close proximity to vibration-sensitive land uses and 5.2.G-4b commits EBMUD to implement measures to reduce construction-generated vibration levels from construction activities at existing vibration-sensitive receptors. While these Mitigation Measures would reduce the potential for Impact 5.2.G-4, without further project-level details regarding design and

siting it cannot be determined whether these measures would fully reduce them to less-than-significant levels. Thus, because the effectiveness of these measures cannot be ascertained without specific project site locations, operational noise impacts are presumed to be significant and unavoidable.

The analysis presented in the 2009 PEIR beginning on page 5.2.G-9 is applicable to the facilities proposed under all Los Vaqueros Reservoir Expansion Options. Construction activities would have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and operations involved. Sensitive receptors located in close proximity to construction activities could be exposed to ground-borne vibration levels exceeding the recommended FTA and Caltrans guidelines, resulting in annoyance or architectural/structural damage. As a result, construction-induced vibration impacts would be potentially significant. While implementation of Mitigation Measures 5.2.G-4a and 5.2.G-4b would reduce potential impacts, it is not known whether these measures would reduce potential impacts to less than-significant levels. Further site-specific analysis would be needed to determine the potential effects of increased ground-borne vibration levels at the vibration-sensitive land uses.

Impact Significance After Mitigation: **Significant and Unavoidable**

I. Visual Resource Impacts

Potentially-Significant Impact 5.2.I-1: Adversely affect existing visual character and scenic vistas or resources at project venues.

Finding: Northern California Water Transfers, and the Enlarge Lower Bear Reservoir component of the Regional Upcountry Project component have the potential to result in Impact 5.2.I-1, and at this stage, it cannot be determined that implementation of Mitigation Measure 5.2.I-1 would fully reduce the potentially significant effects of Impact 5.2.I-1 to less than significant levels.

Facts in Support of Finding: Construction activities would be temporary and would have less-than-significant impacts on existing visual character and scenic views with implementation of Mitigation Measure 5.2.I-1.

Enlargement of Lower Bear Reservoir could potentially alter views of the reservoir and surrounding areas.

The conversion of agricultural land to other uses that could result from water transfers, and the fallowing of croplands, would have the potential to change the seasonal appearance of affected agricultural lands. These actions could potentially affect scenic views and resources.

EBMUD has not developed any project-level design details for the Enlarge Lower Bear Reservoir component. In addition, the project-level details, including sources, of the Northern California Water Transfers component are not known at this time. Consequently, it is not possible to develop specific mitigation measures to reduce potential impacts on visual character and scenic vistas and resources resulting from these components at this stage. Thus, because the specific details of mitigation measures to reduce impacts from these components cannot be ascertained without specific project site locations, impacts are presumed to be significant and unavoidable.

Impact Significance: **Significant and Unavoidable**

L. Environmental Justice

Potentially-Significant Impact 5.2.L-1: Disproportionate impact to densely populated minority and low income communities.

Finding: The Recycled Water, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking/Exchange, Regional Desalination, San Joaquin Groundwater Banking/Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Future Expansion Options have the potential to result in Impact 5.2.L-1 and at this stage, it cannot be determined that implementation of Mitigation Measures 5.2.L-1a and 5.2.L-1b would reduce the potentially significant effects from disproportionate impacts to densely populated minority and low income communities to less than significant levels.

The exact locations of many of these facilities have not been identified, except for Bayside Groundwater Phase 2 which is likely to include siting of at least some of the required facilities on a portion of the Phase 1 site, and the Regional Desalination facility, for which general locations are identified. The precise location of other facilities, however, is not known at this stage. To the extent possible, recycled water facilities would be co-located with existing treatment plants, and pipelines would be located along existing roadways and easements.

Construction would include activities such as excavation, trenching and staging that would generate dust, noise, safety hazards from transport, storage, or use of hazardous materials, and traffic hazards. Such effects would be short-term for the duration of construction activities. Some of the proposed facilities (e.g., treatment plants and pump stations) would generate long-term operations-related effects such as air pollution, noise, and safety hazards. If these adverse impacts affected an Environmental Justice Study Area (EJSA), and if an EJSA technical analysis found evidence of a disproportionate adverse human health and environmental impact on minority or low-income populations, the effect would be potentially significant.

For the Bayside Groundwater Project Phase 2, future sites are within the south Oakland, San Lorenzo, San Leandro area within or near Census Tracts 4073, 4088, 4090, 4091,

4092, 4325, 4332, and 4334 that may be considered EJSAs. Development of a groundwater project in these areas could have a potentially significant impact upon the health of a predominantly low-income minority population.

For the Regional Desalination component, it is assumed that a project could be located near Suisun Bay in eastern Contra Costa County, although a firm location has not yet been chosen. Census Tracts 3141.03 and 3142 are estimated to have denser minority populations, and could be defined as EJSAs if project effects were anticipated in these districts. Development of the desalination project in these areas could have a potentially significant impact upon a predominantly low-income minority population.

For both Los Vaqueros Reservoir Expansion Treated Water Options discussed above, as described in Chapter 5.2.L, Environmental Justice, of the 2009 PEIR, an Environmental Justice Study Area (EJSA) exists where the minority population and/or low-income population exceeds 50 percent of total population for that census tract. Proposed facilities for the Treated Water Options would be constructed in census tracts 3250, 3260, 3400.01, and 3400.02. Although racial minorities comprise well under 50 percent of the total population for these tracts and Contra Costa County as a whole, census tract 3400.01 has a low-income household population of 51 percent. Accordingly, this area could represent an EJSA, and construction in this area would have the potential to create a disproportionate adverse human health and environmental effect on low-income populations. As such, this impact is considered potentially significant. While implementation of Mitigation Measures 5.2.L-1a and 5.2.L-1b would reduce this impact, it is not known if the impact would be reduced to a less-than-significant level. Further site-specific analysis would be required to determine the proposed facilities' potential effects on low-income communities within this census tract as well as in other facility locations that have not yet been identified.

Proposed facilities for the Los Vaqueros Reservoir Future Expansion Option would be constructed in census tracts 3400.02 in Contra Costa County and in other area(s) that have not yet been identified. As described above for the Treated Water Option, census tract 3400.02 does not contain minorities or low-income households in excess of 50 percent of the total population for that tract. Because the location of the proposed treatment facilities is has not been identified, construction of these facilities has the potential create a disproportionate adverse human health and environmental effect on low-income populations; as such, this impact is considered potentially significant. While implementation of Mitigation Measures 5.2.L-1a and 5.2.L-1b would reduce this impact, it is not known if the impact would be reduced to a less-than-significant level. Further site specific analysis would be required to determine the proposed facility's potential effects on low-income communities.

Mitigation Measure 5.2.L-1a reaffirms EBMUD's commitment to implement mitigation Mitigation Measures 5.2.E-1, 5.2.E-2, 5.2.E-4, 5.2.E-5, 5.2.E-6a, 5.2.E-6b (Transportation); 5.2.F-2a, 5.2.F-2b, 5.2.F-2c, 5.2.F-4b, 5.2.F-4c (Air Quality); 5.2.G-1a, 5.2.G-1b, 5.2.G-1c, 5.2.G-2a, 5.2.G-2b, 5.2.G-3a, 5.2.G-3b, 5.2.G-4a, 5.2.G-4b, (Noise);

and 5.2.J-1, 5.2.J-2, 5.2.J-3a, 5.2.J-3b (Hazards) within EJSAs to reduce significant construction activity impacts on minority and low-income communities.

Mitigation Measure 5.2.L-1b requires EBMUD to conduct an environmental justice screening analysis. If significant impacts within an EJSA cannot be reduced to less than significant levels, EBMUD would identify alternative locations to avoid such adverse impacts within the EJSA(s). If alternative locations that avoid impacts within an EJSA cannot be selected, it is possible that there could be significant effects that would remain unavoidable. Because this EIR is at the program level and site-specific information has not yet been developed, at this stage, it is unknown whether impact can be mitigated to a less-than-significant level. Thus, because the specific details of mitigation measures to reduce impacts from these components cannot be ascertained without specific project site locations, impacts are presumed to be significant and unavoidable.

Impact Significance: **Significant and Unavoidable**

4.2 FINDINGS REGARDING POTENTIALLY SIGNIFICANT IMPACTS MITIGATED TO LESS- THAN-SIGNIFICANT LEVELS

Mitigation measures proposed in the EIR will avoid or mitigate all of the following potentially significant Project impacts to a less-than-significant or no-impact level.

A. Hydrology, Groundwater, and Water Quality

Potentially Significant Impact 5.2.A-1: Potential to degrade water quality from construction.

Finding: Implementation of Mitigation Measures 5.2.A-1a and 5.2.A-1b would reduce potentially significant construction-related impacts to water quality to less-than-significant levels.

Facts in Support of Finding: Mitigation Measures 5.2.A-1a and 5.2.A-1b are hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-1 is potentially significant for the following components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination; Enlarge Lower Bear Reservoir; IRCUP / San Joaquin Groundwater Banking / Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Proposed facilities developed as part of the above components would include new treatment plants, wells, pump stations, recharge ponds, dam-related facilities, and pipelines. Although the combination and locations of facilities for many of the

components have not been identified, they could occur in both urban and rural areas. Many surface waters exist throughout the WSMP 2040 Study Area, ranging from small creeks, lakes, and lagoons to large rivers. Runoff from construction could drain directly to one or more of these waterbodies.

Construction activities, including vegetation removal, grading, staging, and excavation, would expose soils to the erosive forces of wind, rain and stream flow, and may result in the transportation of sediment into local drainages, increasing turbidity and degrading water quality. In addition, fuels, solvents and chemicals used in construction could be released into and degrade the quality of these local drainages.

For the Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, and San Joaquin Groundwater Banking and Exchange, water quality impacts may result from surface run-off and/or cross-contamination of aquifer zones during well installation and development. Installation of wells on or adjacent to properties with known or unknown contamination would have the potential to affect groundwater quality of the underlying aquifer.

Implementation of Mitigation Measure 5.2.A-1a commits EBMUD to comply with the National Pollutant Discharge Elimination System (NPDES) Construction Activity Stormwater Permit, including development of a Stormwater Pollution Prevention Plan outlining Best Management Practices (BMPs) for construction/post-construction activities. EBMUD will perform routine inspections of the construction areas to verify that the BMPs specified in the SWPPP are properly implemented and maintained and will notify its contractors immediately if there is a noncompliance issue that will require compliance. Implementation of Mitigation Measures 5.2.A-1b commits EBMUD to use proper well installation methodologies.

As noted in Section 5.2.A of the 2009 PEIR, construction-related runoff could drain directly to surface water bodies, increasing turbidity and degrading water quality. Construction-related impacts associated with the degradation of water quality are considered potentially significant. Implementation of Mitigation Measure 5.2.A-1a, which is set forth in the 2009 PEIR and requires compliance with general construction permit BMPs, would reduce these potential impacts from the construction of facilities required for participation in the Los Vaqueros Reservoir expansion to a level that is less than significant.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.A-2: Potential to degrade water quality from waste discharge.

Finding: Implementation of Mitigation Measure 5.2.A-2 would reduce potentially significant impacts to receiving waters from brine discharge from a Regional Desalination facility.

Facts in Support of Finding: Mitigation Measure 5.2.A-2 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-2 is potentially significant for the Regional Desalination component. Operation of the proposed desalination facility would result in discharge of brine. The potential adverse effects of brine discharge depend on the salinity and temperature of the receiving waters, freshwater inflow, tidal and wind actions in the mixing and dispersal of the discharge. The brine discharge may exceed established water quality objectives and numerical standards identified for the receiving water body. For purposes of this analysis, impacts on water quality would be considered potentially significant.

Implementation of Mitigation Measure 5.2.A-2 would commit EBMUD to conduct hydrodynamic modeling and incorporate the results into the design for the Regional Desalination component. This evaluation of the variables affecting salinity will allow the design of the desalination plant outfall to minimize impacts to receiving waters from brine discharge. The design objective would be to maximize the rapid dispersion and mixing of saline effluent in the outfall vicinity.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.A-4: Potential to degrade groundwater and drinking water quality from the direct introduction of non-local water into native groundwater basins.

Finding: Implementation of Mitigation Measure 5.2.A-4 would reduce the potentially significant effects to groundwater and drinking water quality from the direct introduction of non-local water into native groundwater basins to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.A-4 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-4 is potentially significant for the following components: Bayside Groundwater Phase 2; Sacramento Basin Groundwater Banking and Exchange; and San Joaquin Groundwater Banking and Exchange.

For the Bayside Groundwater Phase 2, Potable water from the District's distribution system would be used to recharge the South East Bay Plain Basin (SEBPB). The injected water is of better quality than ambient groundwater, with the exception of certain disinfection by-products.

EBMUD demonstrated in the EIR for Bayside Groundwater Project Phase 1 that SEBPB native groundwater, when mixed with treated potable drinking water from surface sources, would continue to meet all existing primary and secondary drinking water standards and would improve basin water quality overall. Since the Bayside Groundwater Phase 2 facilities will be located in the SEBPB, these results are anticipated

to remain valid. However, as the specific locations for all Phase 2 facilities have not yet been identified, at this stage, basin impacts are presumed to be potentially significant.

For the Sacramento Basin Groundwater Banking and Exchange component, Sacramento River water taken at the FRWP intake would be used to recharge the Central Basin via percolation ponds. The quality of Sacramento River water is high, with moderate amounts of alkalinity and minerals and low levels of disinfection by-product precursors. After treatment, Sacramento River water meets all Federal and State drinking water standards.

Groundwater in the Sacramento area occurs in unconfined to semi-confined aquifers. The lower aquifer system contains higher concentrations of iron and manganese, in addition to elevated concentrations of total dissolved solids. No studies have yet been conducted regarding the potential for adverse geochemical reactions or water quality changes from the blending of Sacramento River water with ambient groundwater. Therefore, at this stage, impacts are considered potentially significant.

For the San Joaquin Groundwater Banking and Exchange component, Mokelumne River water would recharge the Eastern San Joaquin Groundwater Basin. Mokelumne River water is generally of high quality, low in total dissolved solids, and requires minimal treatment to meet Federal and State drinking water standards.

Groundwater in the Eastern San Joaquin Groundwater Basin has been heavily used in the past. These historic overdraft conditions have resulted in steep eastward groundwater gradients from the Delta, resulting in increased salinity levels. The San Joaquin Groundwater Banking and Exchange project venue has not been identified. Therefore, at this stage, because the specific details of the project are not defined, impacts to groundwater levels and water quality are presumed to be potentially significant.

Mitigation Measures 5.2.A-4 commits EBMUD, and where appropriate its groundwater project partners, to implement a groundwater monitoring program to establish the pre-project conditions of groundwater basins and to monitor the impact of new project operations on groundwater levels and water quality and respond accordingly. The groundwater monitoring programs will specify monitoring and water quality sampling frequency, protocols and response actions. The monitoring programs will be developed and conducted in accordance with State and Federal regulatory requirements such as those under the jurisdiction of DPH and the RWQCB.

Impact Significance: **Less than Significant After Mitigation.**

Potentially Significant Impact 5.2.A-5: Potential for saltwater intrusion from the operation of groundwater wells.

Finding: Implementation of Mitigation Measures 5.2.A-4 and 5.2.A-5 would reduce the potentially significant effects of saltwater intrusion from the operation of groundwater extraction wells to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.A-5 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-5 is potentially significant for the Bayside Groundwater Phase 2 and San Joaquin Groundwater Banking and Exchange components.

The movement of saline water into a fresh water aquifer can occur in coastal systems such as the East Bay Plain Groundwater Basin and Niles Cone Groundwater Basin, where the shallow aquifers are in communication with San Francisco Bay, or in San Joaquin County where saline water can intrude from the Delta. Saltwater intrusion degrades the aquifer for most beneficial uses. Increasing the volume of water stored in these aquifers would minimize the potential for saltwater intrusion by reducing pumping depressions, and by keeping groundwater levels elevated.

The hydraulic gradient could be reversed and saltwater could intrude into the production aquifers from either the Bay or the Delta if pumping causes sufficient drawdown. In San Joaquin County, a larger zone of depression resulting from pumping could cause an upward gradient from deeper saline aquifers, thereby impacting the production aquifer. If pumping increases in deeper zones, downward vertical gradients could also promote the migration of saltwater from shallow aquifers into deeper aquifers.

Implementation of Mitigation Measure 5.2.A-4 will commit EBMUD to implement a groundwater monitoring program to establish the pre-project conditions of groundwater basins and to monitor the impact of operations on groundwater levels and water quality and respond accordingly. Mitigation Measure 5.2.A-5 will commit EBMUD, and where appropriate its project partners, to use numerical modeling to properly design the groundwater storage and extraction project such that the potential saltwater intrusion impact cased by the Bayside project is less than significant.

Impact Significance: **Less than Significant After Mitigation.**

Potentially-Significant Impact 5.2.A-6: Potential effects on groundwater supplies and production of existing wells from recharge and/or extraction operations.

Finding: Implementation of Mitigation Measures 5.2.A-6a, 5.2.A-6b, and 5.2.A-6c would reduce the potentially significant effects on groundwater supplies and production of existing wells from recharge and/or extraction operations to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.A-6a, 5.2.A-6b, and 5.2.A-6c are hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-6 is potentially significant for Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking and Exchange; and San Joaquin Groundwater Banking and Exchange components.

Recharge operations may cause nearby active wells or improperly abandoned wells to flow at the surface. During groundwater extraction, nearby wells may experience declining water levels or diminished well yields. Groundwater level fluctuations and interference to existing wells would be either temporary or long-term in nature, depending on the extraction operations, and are potentially significant.

Mitigation Measure 5.2.A-6a commits EBMUD, and where appropriate its project partners, to inventory existing wells within the areas of the affected basins where studies indicate that drawdown effects could be observed and/or where water levels could rise above the ground surface in response to injections. The information collected will be used to predict drawdown and drawup (mounding) at each well location and identify existing wells that could be affected by groundwater recharge and extraction operations. Mitigation Measure 5.2.A-6b commits EBMUD and its project partners to monitor wells and aquifer water levels in areas that could experience flowing conditions or that could be rendered inoperable as a result of changes in water levels resulting from EBMUD and any potential partner's groundwater operations. EBMUD would commit to modifying such operations until adverse effects to existing wells have been addressed. Mitigation Measure 5.2.A-6b commits EBMUD and any potential project partners to work with property owners to destroy abandoned or inactive wells in accordance with State and County standards where predicted water levels may rise above the ground surface or where a potential conduit for contamination migration could occur as a result of the proposed groundwater operations.

Impact Significance**: Less than Significant After Mitigation.**

Potentially-Significant Impact 5.2.A-7: Alteration of the existing drainage pattern or contribution to existing local or regional flooding.

Finding: Implementation of Mitigation Measure 5.2.A-7 would reduce the potentially significant effects from alteration of the existing drainage pattern or contribution to existing local or regional flooding to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.A-7 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-7 is potentially significant for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking and Exchange; Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Facilities developed as part of these components could be located within 100-year floodplains and would likely create new impermeable surfaces. Without proper management, conversion of open ground to impermeable surfaces could increase runoff

volumes and pollutant loading to surface waters. Sediment deposits can obstruct water flow in storm drains and cause localized flooding. Because the locations of future facilities have not been identified at this stage, and the amount of impermeable surface that might be added is not currently known, impact 5.2.A-7 is presumed to be potentially significant.

Implementation of Mitigation Measure 5.2.A-7 would require EBMUD to comply with NPDES general construction permit requirements including preparation and implementation of a SWPPP with Best Management Practices for control of storm water runoff in order to prevent significant increases in storm water runoff.

Impact Significance: **Less than Significant After Mitigation.**

Potentially-Significant Impact 5.2.A-8: Permanent land subsidence from groundwater withdrawals.

Finding: Implementation of Mitigation Measures 5.2.A-8a and 5.2.A-8b would reduce the potentially significant impacts from permanent land subsidence from groundwater withdrawals to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.A-8a and 5.2.A-8b are hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-8 is potentially significant for the Northern California Water Transfers, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking and Exchange; and San Joaquin Groundwater Banking and Exchange components.

Groundwater within aquifers and aquitards helps support the weight of the overlying sediments. When groundwater extraction occurs, water pressure in the aquifers and pore spaces of saturated sediments decreases, and in some cases, causes a lowering of ground surface elevations in a process called land subsidence. EBMUD would seek to ensure that wells are sited so as to reduce interference with existing well sites or to create large sustained cones of depression. In locating and designing the wells, the proximity of existing wells, current groundwater extraction rates and volumes, aquifer properties, and the planned operation of the new wells will be considered. Extractions would be managed to reduce the sustained enlargement of existing cones of depression. By maintaining groundwater levels above historic lows, consolidation of overlying sediments would be avoided, thereby reducing the risk of land subsidence.

Even with careful siting of wells and other precautions, proposed wells could be situated such that land subsidence is possible. Mitigation Measure 5.2.A-8a applies to the Bayside Groundwater Phase 2 and commits EBMUD to monitor for permanent land subsidence and implement corrective actions as necessary. Mitigation Measure 5.2.A-8a commits EBMUD to monitor for permanent land subsidence and implement corrective actions as necessary. Monitoring will be coordinated with statewide monitoring

programs for land subsidence, and if any inelastic or permanent land subsidence is detected through monitoring, EBMUD will implement corrective actions, such as reducing pumping rates or ceasing extractions.

Impact Significance: **Less than Significant After Mitigation.**

Potentially Significant Impact 5.2.A-10: Potential effects on other intakes and outfalls from operation of the Regional Desalination component intake.

Finding: Implementation of Mitigation Measure 5.2.A-10 and Mitigation Measure 5.2.A-2 will reduce the potential effects on intakes and outfalls from operation of the Regional Desalination component intake to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.A-10 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-10 is potentially significant for the Regional Desalination component. Localized flow patterns around the new intake could decrease the rate of intake and/or the quality of water diverted. Impacts to the operation of neighboring facilities would be considered potentially significant.

Mitigation Measure 5.2.A.10 commits EBMUD to conduct modeling and incorporate the results into the design for the Regional Desalination component. The results of the numerical modeling shall be used in the design to minimize both impacts from the project on existing intakes/outfalls, and from these sources on the project's intake structure. Implementation of Mitigation Measure 5.2.A-2 would also protect the intake source water quality.

Impact Significance: **Less than Significant After Mitigation.**

Potentially Significant Impact 5.2.A-11: Changes in Mokelumne River basin hydrologic conditions from enlarged Lower Bear Reservoir.

Finding: Implementation of Mitigation Measure 5.2.A-11 will reduce the potential impacts from changes in Mokelumne River basin hydrologic conditions from enlarged reservoirs to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.A-11 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.A-11 is potentially significant for the enlarged Lower Bear Reservoir component. Construction of an enlarged Lower Bear Reservoir could temporarily impact Mokelumne River flows which could impact interests dependent on those flows. Planning for this project would include maintaining required downstream flow releases and flood control storage capacity. Long-term impacts to Mokelumne River hydrology

from this project include additional capture of surplus flows when available. Increases in capture above the existing entitlements would be subject to legal and regulatory proceedings, which would include protections to fish and wildlife resources and to other users.

Mitigation Measure 5.2.A-11 commits EBMUD to modify and manage the future operations of the reservoirs to meet flow requirements established by applicable agreements and to meet all environmental obligations and obligations to downstream appropriators and holders of riparian water rights.

Impact Significance: **Less than Significant After Mitigation.**

B. Geology, Soils and Seismicity

Potentially Significant Impact 5.2.B-1: Exposure of people or structures to geologic and seismic hazards.

Finding: Implementation of Mitigation Measures 5.2.B-1a and 5.2.B-1b would reduce the potentially significant effects of exposure to seismic hazards such as earthquakes and landslides to levels that are less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.B-1a and 5.2.B-1b are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.B-1 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Strong seismic shaking associated with earthquakes could cause liquefaction, lateral spreading, slope failures, settlement of poorly compacted fill or consolidation of soft natural deposits, if facilities developed for these components are located in areas susceptible to these conditions, with consequent risk of injury to people. State law requires that adverse geologic hazards and seismic conditions be identified, and appropriate engineering measures included in the design and construction of facilities.

Landslides could damage proposed facilities if located in areas exposed to such hazards (e.g., steep slopes). Unstable subsurface materials, such as artificial fill or soft bay mud deposits are common in the EBMUD service area and could be prone to settlement. Corrosive or expansive soils could lead to the failure of unprotected concrete or steel pipelines.

EBMUD maintains an earthquake preparedness and emergency response program to inspect and repair District facilities following an earthquake. As part of the program,

EBMUD conducts emergency response drills using simulated earthquake scenarios. Site selection and design of new EBMUD facilities will require identification of geologic and seismic hazards, and their inclusion in the preparedness program.

Mitigation Measure 5.2.B-1a commits EBMUD to complete project-specific geologic and geotechnical studies and implement recommendations. These studies shall identify the presence of hazards or conditions and identify corrective actions to avoid the hazard or support the design of engineering control measures. EBMUD will also consult with appropriate state agencies during the project-specific geotechnical investigation phase for the Enlarge Lower Bear Reservoir component and all four Los Vaqueros Reservoir Expansion options to ascertain whether specific requirements are needed. Mitigation Measure 5.2.B-1b, commits EBMUD to update its earthquake preparedness and emergency response program.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.B-2: Potential erosion and loss of topsoil during construction.

Finding: Implementation of Mitigation Measures 5.2.B-2 and 5.2.A-1a would reduce the potentially significant effects of erosion and loss of topsoil during construction to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.B-2 is hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.B-2 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Construction of WSMP 2040 component facilities would require earthmoving activities that cause soil erosion. Some types of soils in the WSMP 2040 Portfolio Study Area are more susceptible to erosion from disturbance by excavation, trenching and grading. The effects of erosion are directly related to water quality degradation, as described under Potentially Significant Impact 5.2.A-1.

Mitigation Measure 5.2.B-2 commits EBMUD to implement a SWPPP and Mitigation Measure 5.2.A-1a commits EBMUD to comply with the National Pollutant Discharge Elimination System (NPDES) Construction Activity Stormwater Permit, including development of a Stormwater Pollution Prevention Plan outlining Best Management Practices (BMPs) for construction/post-construction activities, including activities to The SWPPP includes avert runoff of soil and contaminants to surface water.

Impact Significance: **Less than Significant After Mitigation**

C. Biological Impacts

Potentially-Significant Impact 5.2.C-1: Temporary and permanent impacts to sensitive natural communities or wetlands or waters falling under the jurisdiction of the US Army Corps of Engineers (USACE) and the State of California.

Finding: Implementation of Mitigation Measures 5.2.C-1a and 5.2.C-1b would reduce the potentially significant effects of impacts to natural communities or wetlands or waters falling under USACE and State of California jurisdiction to levels that are less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C1a and 5.2.C-1b are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-1 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, and San Joaquin Groundwater Banking and Exchange components.

Construction of WSMP 2040 component facilities would involve excavation, grading, vegetation removal, and trenching that may increase erosion or contribute sediment to wetlands and/or waters of the U.S. Component projects may occur in or near coastal brackish marsh, northern coastal salt marsh, coastal and valley freshwater marsh, and vernal pools. These habitats are considered sensitive natural communities.

Mitigation measure 5.2.C-1a requires EBMUD to conduct a formal jurisdictional determination according to USACE guidelines and submit it to the Corps for verification. The extent of waters of the State as defined under CDFG Code and the RWQCB under the Porter Cologne Act and Clean Water Act will also be delineated. To the extent feasible, EBMUD will design and construct component facilities to avoid or minimize adverse effects to waters of the United States or jurisdictional waters of the State of California. EBMUD will also incorporate locally-mandated plans and policies regarding wetland buffers into component design. Mitigation measure 5.2.C-1b requires EBMUD to acquire a Section 404 permit and Section 401 certification of waste discharge requirements for fill of jurisdictional wetlands from the Corps and the RWQCB, respectively. In addition, EBMUD shall obtain a CDFG Streambed Alteration Agreement when project conditions so require. Mitigation measures incorporated at the project-specific stage will conform to the Corps "no-net-loss" policy and Corps guidance on appropriate mitigation for impacts to jurisdictional waters.

Impact Significance: **Less than Significant After Mitigation**

Potentially-Significant Impact 5.2.C-2: Temporary disturbance to, or permanent loss of special-status plant species, sensitive plant communities, or protected trees.

Finding: Implementation of Mitigation Measures 5.2.C-2a, 5.2.C-2b, 5.2.C-2c, 5.2.C-2d, and 5.2.C-2e would reduce the potentially significant effects from temporary disturbance to, or permanent loss of special status plant species, sensitive plant communities or protected trees to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-2a, 5.2.C-2b, 5.2.C-2c, 5.2.C-2d, and 5.2.C-2e are hereby adopted and will be implemented as set forth in the MMRP Impact 5.2.C-2 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, and San Joaquin Groundwater Banking and Exchange components.

Special status plants and sensitive natural communities are found in each of the component project areas. For Recycled Water, habitat likely affected includes Northern maritime chaparral, serpentine bunchgrass, valley needlegrass grassland, great valley riparian forest, and valley oak woodland. For Northern California Water Transfers, habitat likely affected includes special-status plants, valley needlegrass, serpentine bunchgrass, alkali meadow, seep, grassland, elderberry savannah, northern maritime and Ione chaparral, great valley riparian forest, big tree forest, and montane hardwood. For the Bayside Groundwater Phase 2, habitat likely affected includes special-status plants. For Sacramento Basin Groundwater Banking/Exchange, habitat likely affected includes special-status plants, valley needlegrass, serpentine bunchgrass, alkali meadow, seep, grassland, elderberry savannah, northern maritime and Ione chaparral, great valley riparian forest, big tree forest, montane hardwood. For the Regional Desalination component, habitat likely affected includes special-status plants, alkali meadow, seep or grassland. For the Enlarge Lower Bear Reservoir component, habitat likely affected includes Ione chaparral, valley oak woodland, big tree forest, and montane hardwood. For the San Joaquin Groundwater Banking/Exchange component, habitat likely affected includes Special-status plants, alkali seep, serpentine bunch grass, coastal brackish marsh, freshwater marsh, elderberry savannah, vernal pool, seasonal wetland, perennial wetland, chaparral, and valley oak woodland.

Mitigation Measures 5.2.C-2a commits EBMUD to conduct a habitat assessment using a qualified botanist to determine the potential for occurrence of special-status plant species. Mitigation Measure 5.2.C-2b commits EBMUD to conduct a habitat assessment using a qualified botanist, to determine the potential for special status plant species and sensitive natural plant communities to occur and to delineate sensitive natural plant communities within the project area as appropriate. Mitigation Measure 5.2.C-2c commits EBMUD to conduct a tree survey to determine if protected and/or heritage trees may be present within the area of a project. Mitigation Measure 5.2.C-2d commits EBMUD to design and construct component facilities to avoid special-status plant species, sensitive plant communities, and protected and/or heritage trees. When avoidance is not possible, Mitigation Measure 5.2.C-2e commits EBMUD to consult regulatory agencies and comply with their requirements. If avoidance is not feasible, additional mitigation measures identified in Mitigation Measure 5.2.C-2e include revegetation with native and/or special-status plant species by means of harvesting and relocation of plants or seed

and habitat compensation with respective ratios of vegetation replacement determined based on habitat function and value and coordination with the appropriate agencies.

Impact Significance: **Less than Significant After Mitigation**

Potentially-Significant Impact 5.2.C-3: Disturbance to or loss of special status invertebrates or their habitats.

Finding: Implementation of Mitigation Measures 5.2.C-3a, 5.2.C-3b, and 5.2.C-2c, would reduce the potentially significant effects from disturbance to or loss of special status invertebrates or their habitats to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-3a, 5.2.C-3b, and 5.2.C-2c are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-3 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, and San Joaquin Groundwater Banking and Exchange components.

Special-status invertebrate species, including several species of butterfly, beetles, vernal pool brachipods, bees and snails may be found at WSMP 2040 component venues. Mitigation Measure 5.2.C-3a commits EBMUD to conduct a pre-design habitat assessment using a qualified biologist to determine the potential for special-status invertebrate species to occur. If suitable habitat is found at a project area, Mitigation Measure 5.2.C-3b requires EBMUD to conduct focused surveys using qualified biologists to determine the presence of any special status invertebrates if suitable habitat is found at a project venue during the pre-project reconnaissance. Mitigation Measure 5.2.C-3c requires EBMUD to avoid occupied habitat for special-status invertebrates or implement measures to minimize impacts. Measures that could be implemented include replacement of habitat at a location approved by the appropriate jurisdictional agency, and participation in an in-lieu fee program, purchase of the required acreage in an approved mitigation bank, or implementation of an HCP.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.C-4: Disturbance to or loss of special-status reptiles and amphibians, and their habitat or critical habitat.

Finding: Implementation of Mitigation Measures 5.2.C-4a, 5.2.C-4b, and 5.2.C-4c, would reduce the potentially significant effects from disturbance to or loss of special-status reptiles and amphibians and their habitat or critical habitat to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-4a, 5.2.C-4b, and 5.2.C-4c, are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-4 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Special-status reptiles and/or amphibians and their habitat and/or critical habitat have the potential to occur within the WSMP 2040 WSMP 2040 Portfolio Study Area. Special-status reptiles and amphibians that may be found at project venues include Alameda whipsnake, San Joaquin whipsnake, giant garter snake, western/northwestern pond turtle, western spadefoot toad, Yosemite toad, Sierra yellow-legged frog, California red-legged frog, foothill yellow-legged frog, silvery legless lizard, coast (California) horned lizard, Mt. Lyell salamander, and California tiger salamander.

Mitigation Measures 5.2.C-4a commits EBMUD to conduct a habitat assessment prior to the implementation of any project where special status reptiles and/or amphibians may be present. Mitigation Measrue5.2.C-4b commits EBMUD to conduct pre-construction surveys for special-status reptiles and amphibians if suitable habitat is determined to be present. Mitigation Measure 5.2.C-4c commits EBMUD to avoid critical habitat and areas with special-status reptiles and amphibians, or, if avoidance of occupied habitat or designated critical habitat is not feasible, to consult with state and federal regulatory agencies to determine mitigation measures.

Impact Significance: **Less than Significant After Mitigation**

Potentially-Significant Impact 5.2.C-5: Disturbance to or loss of nesting birds.

Finding: Implementation of Mitigation Measures 5.2.C-5a, 5.2.C-5b, 5.2.C-5c and 5.2.C-5d would reduce the potentially significant effects of disturbance to or loss of nesting birds to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-5a, 5.2.C-5b, 5.2.C-5c and 5.2.C-5d are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-5 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Several special-status bird species may nest in existing structures or vegetation at potential WSMP 2040 project venues. Nesting habitat including trees, shrubs, irrigated

pastures, ruderal habitats, emergent aquatic vegetation, saltmarsh, bank stabilization treatments, or grassland Construction activities that entail removal of such vegetation, buildings, bridges or other structures, and grading in the vicinity of active passerine or non-passerine land bird nests, active raptor nests, or owl burrows could result in nest abandonment, nest failure, or premature fledging. Further, removal of historic nest trees should be avoided. Raptors tend to cycle through different nest trees each year, which helps reduce the buildup of parasites.

Destruction or disturbance of active nests would be in violation of the Migratory Bird Treaty Act (MBTA) and the California Department of Fish and Game Code. Such disturbance would be considered a potentially significant impact. Implementation of Mitigation Measures 5.2.C-5a through 5.2.C-5d, which require a habitat assessment and surveys, avoidance of construction during nesting seasons, establishment of buffer zones, and monitoring of nests, would reduce potential impacts to less-than-significant levels.

Mitigation Measure 5.2.C-5a commits EBMUD to conduct habitat and nesting bird surveys using a qualified biologist prior to the implementation of any project where nesting birds may be present. Mitigation Measure 5.2.C-5b commits EBMUD to avoid construction, including removal of structures, trees, emergent aquatic vegetation, or shrubs, during nesting season, and sets forth the requirements for surveys to ensure that activities would have no harmful effects on nesting habitat. Mitigation Measure 5.2.C-5c requires EBMUD to establish a buffer zone around nests during construction. Mitigation Measure 5.2.C-5d requires EBMUD to monitor active nests for bird activity.

Impact Significance: **Less than Significant After Mitigation**

Potentially-Significant Impact 5.2.C-6: Disturbance to or loss of special-status bat species and roosting habitat.

Finding: Implementation of Mitigation Measures 5.2.C-6a, 5.2.C-6b, 5.2.C-6c and 5.2.C-6d would reduce the potentially significant effects from disturbance to or loss of special-status bat species and roosting habitat to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-6a, 5.2.C-6b, 5.2.C-6c and 5.2.C-6d are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-6 is potentially significant for Recycled Water, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Existing buildings, bridges, mature trees and snags in certain areas where component facilities could be constructed could provide roosting habitat for special-status bat species. Construction activity at these venues could result in disturbance to or destruction of these roosting sites. If special-status bats are found roosting within the locations of the

proposed project(s), destruction or disturbance of roosting sites could have a potentially significant impact.

Mitigation measure 5.2.C-6a commits EBMUD to conduct pre-construction habitat surveys for roosting bats within 30 days prior to any removal of trees or structures on a site and to install an exclusion device during the construction period to prevent bats from occupying the roosting site during the construction period. Mitigation measure 5.2.C-6b requires EBMUD avoid active maternity roosts or hibernacula or if avoidance cannot be accomplished to commence demolition before maternity colonies form. Mitigation measure 5.2.C-6c commits EBMUD to safely evict non-breeding bats prior to demolition activities, under the direction of a qualified biologist (as determined by a Memorandum of Understanding with CDFG). If special-status bats are roosting in trees or structures that require removal, Mitigation Measure 5.2.C-6d commits EBMUD to create appropriate replacement roosts at a suitable location on or off-site, in coordination with a qualified biologist and CDFG.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.C-7: Disturbance to or loss of other special-status mammals.

Finding: Implementation of Mitigation Measures 5.2.C-7a, 5.2.C-7b, and 5.2.C-7c would reduce the potentially significant effects from disturbance to or loss of special-status mammals to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-7a, 5.2.C-7b, and 5.2.C-7c are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-5 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Special-status mammals that could be found at WSMP 2040 component project venues include the San Francisco dusky-footed woodrat, riparian brush rabbit, riparian woodrat, salt marsh harvest mouse, American badger, California wolverine, Humboldt marten, Pacific fisher, San Joaquin pocket mouse, Yosemite pika, western white-tailed jackrabbit, Sierra Nevada red fox, San Joaquin kit fox, San Pablo vole, Suisun shrew, salt-marsh wandering shrew, and Alameda Island mole. If suitable habitat is present in the areas where the component projects will be undertaken, destruction or disturbance of this habitat could have a significantly harmful impact on these species.

Mitigation measure 5.2.C-7a requires EBMUD to conduct a habitat assessment using a qualified biologist prior to the implementation of any project where special status

mammals may be present. If suitable habitat for special-status mammals is identified, Mitigation measure 5.2.C-7b requires EBMUD to conduct pre-construction surveys, using a qualified biologist, according to USFWS or CDFG protocols, prior to initiation of construction activities. Mitigation measure 5.2.C-7c commits EBMUD to avoid areas where special-status mammals are found or areas containing designated critical habitat. When avoidance is not possible, Mitigation Measure 5.2.C-7c commits EBMUD to consult with state and federal regulatory agencies to determine mitigation measures and implement site-specific mitigation activity, which could include a number of enumerated measures.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.C-8: Loss of or impacts to fish and aquatic habitats.

Finding: Implementation of Mitigation Measures 5.2.C-8a and 5.2.C-8b would reduce the potentially significant effects from loss of or impacts to fish and aquatic habitats to levels that are less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-8a and 5.2.C-8b are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-8 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, and San Joaquin Groundwater Banking and Exchange components.

Construction of facilities in the future for the above components, including facilities such as pump stations, recharge ponds, and pipelines, could produce erosion or disturbance of sediments and soils that temporarily increase turbidity and sedimentation downstream of the construction sites if transported in river flows or stormwater runoff. Construction-related increases in sediments, turbidity, water temperature, and contaminants could adversely affect aquatic habitats and fish populations in the vicinity of construction activities.

Mitigation measure 5.2.C-8a reaffirms EBMUD's commitment to comply with the State NPDES general construction permit requirements, including preparation and implementation of a SWPPP and use of BMPs to control erosion prior to implementation of any project where fish species and aquatic habitats could be adversely affected. Mitigation measure 5.2.C-8b commits EBMUD to prepare and implement a spill prevention control and countermeasures plan prior to implementing any project where fish species and aquatic habitats could be impacted.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.C-9: Entrainment of special-status fish into pumps/intake pipes.

Finding: Implementation of Mitigation Measures 5.2.C-9 would reduce potential impact from the entrainment of special-status fish into pumps and intake pipes to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-9 is hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-9 is potentially significant for the Regional Desalination and San Joaquin Groundwater Banking and Exchange components.

Diversions from rivers and water bodies have the potential to entrain fish eggs, larvae, juveniles, and adults, including special-status species. Egg, larval, and juveniles are most susceptible to entrainment.

Mitigation measure 5.2.C-9 commits EBMUD to design and install fish screens over any potential new diversion intake(s). The fish screens will be designed consistent with CDFG and NMFS criteria for screen mesh size, water velocity approach, and other parameters.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.C-10: Reduction of surface water quality.

Finding: Implementation of Mitigation Measures 5.2.C-10 would reduce the potential impact from a reduction of surface water quality to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-10 is hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-10 is potentially significant for the Recycled Water and Bayside Groundwater Project Phase 2 components. Groundwater recharge and recovery could negatively affect surface water quality and associated aquatic habitats through the introduction of disinfection chemicals, contaminants or the intrusion of salt water. This impact could occur if degraded water flows to the surface and spills over into surface water bodies directly without filtering through soils and sediments.

Mitigation measure 5.2.C-10 reaffirms EBMUD's commitment to implement a comprehensive groundwater monitoring plan, as described in Mitigation Measure 5.2.A-4 in order to establish pre-project conditions of groundwater basins and to monitor the impact of operations on groundwater levels and water quality and respond accordingly.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.C-11: Disruption of downstream flow releases.

Finding: Implementation of Mitigation Measures 5.2.C-11 would reduce the potential impact from disruption of downstream flow releases to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.C-11 is hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.C-11 is potentially significant for the Enlarge Lower Bear Reservoir component. For the Lower Bear Reservoir, the timing, configuration and other aspects of changes to flow are not certain at this time, although it is possible that a temporary re-routing of the river would be necessary to accommodate construction.

Mitigation Measure 5.2.C-11 requires EBMUD to work to develop a reoperation plan as necessary to ensure that there adequate water to maintain required downstream releases prior to the onset of construction. The reoperation plan requirement would be applicable to any project with the potential to result in disruption of downstream flow releases and would note specifically any seasonal restrictions on construction-related outages in order to accommodate resource concerns.

Impact Significance: **Less than Significant After Mitigation**

D. Land Use Impacts

Potentially-Significant Impact 5.2.D-1: Potential reduction of agricultural productivity and conversion of farmland to non-agricultural uses.

Finding: Implementation of Mitigation Measures 5.2.D-1a and 5.2.D-1b would reduce the potentially significant effects from the reduction of agricultural productivity and conversion of farmland to non-agricultural uses to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.D-1a and 5.2.D-1b are hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.D-1 is potentially significant for Recycled Water, Northern California Water Transfers, Sacramento Basin Groundwater Banking and Exchange, Enlarge Lower Bear Reservoir, and San Joaquin Groundwater Banking and Exchange components.

Depending on the specific location of project components, disruption to agricultural operations, including the conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural uses, may occur, with consequent reduction in agricultural productivity. Both short-term and long-term impacts could result.

Mitigation Measure 5.2.D-1a commits EBMUD to avoid siting proposed component facilities within State-designated farmlands. If avoidance is not possible, EBMUD shall site these facilities at the edge of existing farms to the extent possible. Mitigation Measure 5.2.D-1b commits EBMUD to undertake certain activities to restore agricultural lands to pre-project conditions and minimize disturbance to important lands. These

actions include avoiding disruption of drainage crucial to farming operations, construction management practices that avoid disturbance to valued agricultural lands, and soil conservation practices that preserve it for future agricultural use.

Impact Significance: **Less than Significant After Mitigation**

Impact 5.2.D-1 remains Significant and Unavoidable for Northern California Water Transfers, as stated in Section 4.1 of this Exhibit A.

Potentially-Significant Impact 5.2.D-2: Impairment of recreation facilities and activities.

Finding: Implementation of Mitigation Measures 5.2.D-2a and 5.2.D-2b would reduce the potentially significant effects from impairment of recreation facilities and activities to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.D-2a and 5.2.D-2b are hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.D-2 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie and Treated Water – New Intertie Options.

For the Enlarge Lower Bear Reservoir component, the overall areas of inundation would increase around the reservoirs, resulting in flooding of existing recreational facilities. Construction activities and operation associated with a number of components could also temporarily restrict access to existing recreation areas and facilities, or permanently require the closure and relocation of such facilities.

Depending on the location of the proposed facilities (e.g., pipelines, intertie, pump stations, treatment facilities), recreation may be affected. Pipelines would be located within existing roadways and easements. Several recreational facilities (e.g., trails) cross the proposed pipeline alignments for several components, particularly the Los Vaqueros Reservoir Extension component options. These facilities would be temporarily disrupted during construction and may also be damaged during facility installation. Such impacts on recreational resources would be considered potentially significant. Implementation of Mitigation Measure 5.2.D-2a, which requires repair and reopening of affected recreational facilities, would reduce potential impacts to a level that is less than significant.

For both Los Vaqueros Treated Water Options would be constructed adjacent to several trails and parks/recreation centers. The Contra Costa Canal Trail and Briones-Mt. Diablo

Regional Trail cross the proposed pipeline alignment at Geary Road, just east of Buena Vista Avenue. Hiking, biking, and use of recreation centers and parks could be temporarily affected by construction activities. These disturbances may include trail re-routing, hiking restrictions, noise, and traffic. These temporary effects may displace some hikers, bikers, and other recreationists to other facilities affording a similar experience. As the conceptual pipeline alignment would cross two trails which may be damaged during the course of pipeline and facility installation, the potential impacts of constructing both Treated Water Options would be potentially significant. Implementation of Mitigation Measure 5.2.D.2a would reduce this impact to a less-than-significant level. In the long term, the presence of the underground pipeline, pump, and intertie facilities would not affect recreational uses in the area. The potential impacts of operating the both Treated Water Options would be less than significant.

Mitigation Measures 5.2.D-2a commits EBMUD to include within the construction specifications a requirement to repair recreational facilities damaged by project construction. Mitigation Measure 5.2.D-2b commits EBMUD to replace recreational features displaced by project-specific enlargement of reservoirs and to implement an operations plan as necessary for the enlarged Pardee Reservoir supplemental supply project option, although removal of this component makes this particular aspect of mitigation unnecessary.

Impact Significance: **Less than Significant After Mitigation**

E. Transportation

Potentially Significance Impact 5.2.E-1: Reduction of the number or available width of travel lanes on roads from construction, resulting in temporary disruption of traffic flows, increases in traffic congestion, and access to adjacent land uses for both general and emergency access.

Finding: Implementation of Mitigation Measure 5.2.E-1 would reduce the potentially significant short-term effects from reduction in the number or available width of travel lanes on roads from construction, to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.E-1 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.E-1 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, and Future Expansion Options.

Construction of facilities developed as part of these components would require the installation of above-ground structures and buried pipelines. Installation of pipelines

would occur within road rights-of-way, which could lead to short-term traffic delays for vehicles traveling past construction zones, as well as temporary limitations on access to adjacent lands. For the purposes of this program-level analysis, impacts associated with traffic delays and restrictions to adjacent uses would be considered potentially significant. Implementation of Mitigation Measure 5.2.E-1 would reduce this impact to a less-than significant level.

Because pipeline construction would require space to accommodate open trenches/pits and staging areas for materials and equipment, the travel width of roadways would likely be reduced, thus resulting in potential traffic delays within construction zones. To the extent feasible, two-way traffic would be maintained on all roadways. However, on roadways with restricted travel widths, alternate one-way travel may be required, and if sufficient road width is not available, complete closure of roads may be required. Lane blockages or street closures during pipeline installation could also reduce on-street parking, delay emergency access, or limit access to adjacent land uses. The impacts associated with traffic delays and restrictions, in the absence of more detailed project-specific design, are considered to be potentially significant.

Mitigation Measure 5.2.E-1 commits EBMUD to prepare a detailed traffic control plan for affected roadways and intersections. The traffic control plan will be prepared in accordance with professional traffic engineering standards and in compliance with the requirements of the affected jurisdiction's encroachment permit requirements. It will include appropriate measures, including measures designed to maintain travel lane capacity and coordinate construction activities to minimize traffic disturbances.

Installation of pipelines for both Los Vaqueros Reservoir Expansion Treated Water Options would occur within road rights-of-way, which could lead to short-term traffic delays for vehicles traveling past construction zones, as well as temporarily limit access to adjacent land uses. Pipeline installation would occur within public roadways that extend through a variety of land uses, including primarily residential and commercial uses. As described in the 2009 PEIR beginning on page 5.2.E-2, because pipeline construction would require space to accommodate open trenches/pits and staging areas for materials and equipment, the travel width of roadways would likely be reduced, thus resulting in potential traffic delays within construction zones. Lane blockages or street closures during pipeline installation could also reduce curb parking, delay emergency access, or limit access to adjacent land uses. In addition, the reduction in travel lanes could result in a shift in traffic circulation patterns to adjacent and parallel streets. To the extent feasible, two-way traffic would be maintained on all roadways. However, on roadways with restricted travel widths, alternate one-way travel may be required. If sufficient road width is not available, complete closure of roads may be required. Impacts associated with traffic delays and lane or road closures (although temporary) would be potentially significant. Implementation of Mitigation Measure 5.2.E-1 would reduce this impact to a less-than-significant level.

Construction of the treatment facilities associated with the Los Vaqueros Reservoir Expansion – Future Expansion Option would occur within EBMUD property at existing water treatment plants or along aqueducts away from public road rights-of-way and as such, would not directly affect nearby traffic patterns. However, material and supply deliveries and other traffic to and from the construction sites could impact public roads. Impacts associated with traffic delays and lane closures or road closures (although temporary) would be potentially significant. Implementation of Mitigation Measure 5.2.E 1 would reduce this impact to a less-than-significant level.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significance Impact 5.2.E-2: Short-term increases in vehicle trips during construction.

Finding: Implementation of Mitigation Measure 5.2.E-2 would reduce the potentially significant impacts of increased vehicle travel during construction.

Facts in Support of Finding: Mitigation Measures 5.2.E-2 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.E-2 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Construction-generated traffic congestion, although temporary, would result in short-term and intermittent lessening of roadway capacities due to slower movements and larger turning radii of construction trucks. The number of construction-related truck trips that would be generated from the WSMP 2040 Portfolio components has not been determined at this stage and would be known only as part of the project-level development. Truck trips would be dispersed throughout the day, and would follow designated haul routes. Construction trips that coincide with peak-period traffic (which differs with geography) would have the greatest potential to impede traffic flow on local roads and highways. For the purposes of this program-level analysis, impacts associated with short-term increases in construction-related vehicle trips are considered to be potentially significant.

For the Enlarge Lower Bear Reservoir component, substantial numbers of truck trips to transport materials and equipment to and from construction sites are anticipated, although reliable estimates are not yet feasible. Construction traffic could also conflict with peak recreational traffic at one or both reservoirs, resulting in congestion.

Operation of the Los Vaqueros Reservoir Expansion – Current and Future Expansion Options is expected to result in minor increases in workers, as existing EBMUD

employees would likely maintain proposed facilities as part of existing workloads. Therefore, potential traffic impacts would be less than significant.

Mitigation Measure 5.2.E-2 commits EBMUD to schedule construction truck trips to avoid peak traffic hours and peak recreational periods and include this measure in construction plans and specifications.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significance Impact 5.2.E-4: Increase in wear and tear on designated haul routes from construction vehicles.

Finding: Implementation of Mitigation Measure 5.2.E-4 would reduce the potentially significant impact from an increase in wear and tear on designated haul routes from construction vehicles to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.E-4 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.E-4 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, IRCUP / San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

The use of heavy trucks to transport equipment and material to and from work sites could affect road conditions on designated haul routes by increasing the rate of road wear. The degree to which this impact would occur depends on the design (pavement type and thickness) and existing condition of the road, as well as the number of vehicle trips generated.

Major arterials and collectors are designed to accommodate heavy trucks; potential impacts are expected to be negligible on such roads. Residential roads are generally not built with a pavement thickness intended to withstand substantial truck traffic volumes. Although these roads would be avoided to the extent feasible, residential roadways could be used to access selected pipeline installation sites.

The use of heavy trucks to transport equipment and material to and from work sites could affect road conditions on designated haul routes by increasing the rate of road wear. Major arterials and collectors are designed to accommodate a mix of vehicle types, including heavy trucks; potential impacts are expected to be negligible on such roads. Residential roads and some local roadways whose pavement thickness may not withstand the increase in the number of truck trips that would occur during construction are generally not intended to withstand substantial truck traffic volumes. Although these roads would be avoided to the extent feasible, impacts related to damaged roadways

would be considered potentially significant. Implementation of Mitigation Measure 5.2.E- 4 below would reduce these potential impacts to less-than-significant levels.

Construction vehicles would access Lower Bear Reservoirs via local roadways with pavement thickness incapable of withstanding the substantial number of truck trips that would occur during construction.

Implementation of Mitigation Measure 5.2.E-4 would commit EBMUD to incorporate into contract specifications a requirement to conduct pre-construction surveys of road conditions on key access routes. Road surfaces determined to be damaged by construction will be repaired to a condition equal to or better than that which existed prior to construction activity.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significance Impact 5.2.E-5: Temporary disruption of bus service along proposed pipeline corridors during construction.

Finding: Implementation of Mitigation Measure 5.2.E-5 would reduce the potentially significant impacts from temporary disruption of bus service along proposed pipeline corridors during construction to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.E-5 is hereby adopted and will be implemented as set forth in the MMRP.

Impact 5.2.E-5 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, and Untreated Water Options.

Pipeline construction activities can limit access to bus stops, require their relocation, or require that bus routes be detoured. While the locations of all facilities associated with WSMP 2040 Portfolio components are not known at this program level stage, access to bus service may be impeded by construction along pipeline alignments associated with certain components.

Bus routes occur throughout the EBMUD service area. Pipeline alignments associated with the Los Vaqueros Treated Water – New Intertie Option would occur along the County Connection Bus Route 7 which operates on Geary Road and Buena Vista Avenue. In addition, access to the Untreated Water Option as well as the Treated Water – Boyd Road Intertie Option may also cross the County Connection 7 Bus route. Construction activities, especially installation of pipelines, have the potential to temporarily affect transit operations by limiting access to bus stations, thereby requiring relocation of bus stops. If entire roadways are closed, then bus route detours may be necessary. The relocation of bus stations or detour of routes would last as long as

construction activities, but disruption of bus routes would be a potentially significant impact. Implementation of Mitigation Measure 5.2.E-5 would reduce this impact to a less-than-significant level.

Mitigation Measure 5.2.E-5 commits EBMUD to work with the local transit service to relocate bus stops or detour bus routes during those periods of time when pipeline construction activity would disrupt access to service. The necessity of this would be determined once project-level design is undertaken and pipeline alignments are selected.

Impact Significance: **Less than Significant After Mitigation**

Potentially Significant Impact 5.2.E-6: Adverse affects on rail operations.

Finding: Implementation of Mitigation Measures 5.2.E-6a and 5.2.E-6b would reduce the potentially significant impacts from adverse effects on rail operations to a level that is less than significant.

Facts in support of Finding: Mitigation Measures 5.2.E-6a and 5.2.E-6b are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.E-6 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, and IRCUP / San Joaquin Groundwater Banking and Exchange components.

Pipeline alignments for the WSMP 2040 Portfolio components may be placed in roadways that cross existing railroad tracks. Open-trench construction activities would adversely affect railroad operations, and would most likely not be allowed by the railway operators.

The placement of a pipeline along railroad tracks could become infeasible if there is inadequate width adjacent to or between trackways to accommodate installation and maintenance of additional pipelines. Because the details of component construction cannot be known at this stage, disruption of railroad operations from project implementation is considered to be potentially significant.

Implementation of Mitigation Measures 5.2.E-6-a commits EBMUD to implement trenchless construction techniques for the crossing of rail tracks. Mitigation Measure 5.2.E-6b commits EBMUD to coordinate with the affected railroad entity to determine the necessary setback from railroad tracks for placement pipelines along the railroad easement.

Impact Significance: **Less than Significant After Mitigation**

G. Noise

Potentially Significant Impact 5.2.G-3: Noticeable increase in traffic noise (3dB or greater) along roadways designated as construction haul routes.

Finding: Implementation of Mitigation Measures 5.2.G-3a and 5.2.G-3b would reduce the potentially significant impacts from noticeable increases in traffic noise along roadways designated as construction haul routes to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.G-3a and 5.2.G-3b are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.G-3 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Existing traffic volumes on local roadway networks will vary depending on individual portfolio component construction locations. For urban areas, local roadway networks would be expected to consist of high existing traffic volumes, resulting in high existing traffic noise levels. In these instances, an increase of daily traffic volumes due to construction traffic would not be expected to result in a substantial increase in existing traffic noise levels. Typically, a doubling of traffic volumes would be required to increase existing traffic noise levels by 3 dB.

Noise-sensitive populations adjacent to a designated haul route would be exposed to a noticeable increase in ambient noise levels from construction-related traffic volume increases. As a result, construction-related traffic noise impacts would be potentially significant.

The analysis presented in the 2009 PEIR beginning on page 5.2.G-8 is applicable to the facilities proposed under all Los Vaqueros Reservoir Expansion Options. Construction materials would be transported over designated haul routes on the local roadway network, thus increasing traffic volumes along affected roadway segments. Local roadway networks in urban areas would be expected to consist of high existing traffic volumes, resulting in high existing traffic noise levels. Rural areas generally have lower existing traffic volumes, resulting in lower existing traffic noise levels. Construction related traffic increases would be expected to increase existing traffic noise levels; however, increases would be site specific and require specific traffic analysis when details are available. As a result, construction-related traffic noise impacts would be considered potentially significant, although further site-specific analysis would be needed to determine the potential effects of increased traffic noise at the noise-sensitive land uses. Implementation of Mitigation Measures 5.2.G-3a and 5.2.G-3b would reduce impacts to a level that is less than significant.

Implementation of Mitigation Measures 5.2.G-3a would commit EBMUD to avoid designating construction haul routes on local roadways with adjacent noise-sensitive land

uses. If avoidance is not possible, EBMUD would designate construction haul routes with the fewest possible adjacent noise-sensitive land uses. Mitigation Measure 5.2.G-3b commits EBMUD to implement measures to reduce construction-generated traffic noise levels at existing noise-sensitive receptors taking site-specific information into account.

Impact Significance: **Less than Significant After Mitigation**

H. Cultural Resources Impacts

Potentially-Significant Impact 5.2.H-1: Alteration or damage to known or unrecorded cultural resources, including human remains, during construction.

Finding: Implementation of Mitigation Measures 5.2.H-1a, 5.2.H-1b, 5.2.H-1c, and 5.2.H-1d would reduce the potentially significant impacts from alteration or damage to known or unrecorded cultural resources, including human remains, during construction to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.H-1a, 5.2.H-1b, 5.2.H-1c are hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.H-1 is potentially significant for Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir,, San Joaquin Groundwater Banking and Exchange components; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Construction of new or expanded facilities (including treatment plants, pumping stations, wells, recharge ponds, dam-related facilities, pipelines) would require excavation and grading that could create indirect or direct physical impacts to prehistoric or historic cultural resources. Alteration or damage to cultural resources could result in the loss of integrity of cultural deposits, loss of information, and alterations of site settings. Previously unidentified artifacts may be discovered since much of the WSMP 2040 Portfolio Study Area has not been surveyed for the presence of cultural resources and site-specific information and project-level detail is not available at this program-level stage. Construction of WSMP 2040 Portfolio facilities in already disturbed urban settings would reduce the likelihood of damage to cultural resources, but would not fully avoid that risk.

For the Enlarge Lower Bear Reservoir component, archaeological sites at or below the maximum flood level could potentially be affected by fluctuation of the reservoir elevation. Site disturbance can include weathering erosion and displacement of artifacts.

Mitigation Measure 5.2.H-1a requires EBMUD to retain a qualified archaeologist to perform a cultural resources record search and to use the results of the record search to design and complete an appropriate cultural resources inventory and preliminary assessment program for the applicable components. The inventory will include

appropriate treatment for identified resources, and a plan for dealing with unanticipated finds during construction. Mitigation Measure 5.2.H-1b requires EBMUD to develop a plan to manage the discovery of as-yet unknown cultural resources and to ensure that specific measures, including a cessation of work, notification to relevant agencies, and assessment of the significance of the find and appropriate treatment measures occur. Mitigation Measure 5.2.H-1c requires EBMUD to design component elements to avoid disturbance to human remains and to take measures to ensure that Native American remains are not damaged or disturbed until consultations in accordance with State law and procedures have occurred. For the Enlarge Lower Bear Reservoir component and the IRCUP/San Joaquin Groundwater Banking/Exchange Project, Mitigation Measure 5.2.H-1d requires EBMUD to develop and implement a Data Recovery Plan and prepare Historic American Engineering Record Documentation on other sites and resources as appropriate.

Impact Significance: **Less than Significant After Mitigation**

I. Visual Resource Impacts

Potentially-Significant Impact 5.2.I-1: Adversely affect existing visual character and scenic vistas at project venues.

Finding: Implementation of Mitigation Measure 5.2.I-1 would reduce the potentially significant effects from adverse effects on existing visual character and scenic vistas at project venues to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.I-1 is hereby adopted and will be implemented as set forth in the MMRP. Mitigation Measure 5.2.I-1 would reduce potentially significant effects of Impact 5.2.I-1 to less than significant levels for the Recycled Water, Bayside Groundwater Phase 2, Sacramento Basin Groundwater Banking/Exchange, Regional Desalination, San Joaquin Groundwater Banking / Exchange components of the WSMP 2040 Portfolio; and Los Vaqueros Reservoir Expansion: Untreated Water and Future Expansion Options.

Although water transfer partners have not been identified and thus it is not known which lands would be potentially affected by the Northern California Water Transfers component, the potential conversion of agricultural land to other uses may result from water transfers and could potentially affect scenic views and resources.

New facilities for the Sacramento Basin Groundwater Banking / Exchange component would include a pump station, wells, treatment facilities and pipelines that could impact visual character and scenic views.

For the Los Vaqueros Reservoir Expansion: Untreated Option, because construction would occur for a relatively short period of time, potential impacts on visual character or scenic views and resources would be limited in duration. Replacement/retrofitted check valves and the construction of an interconnection between Mokelumne Aqueducts with

isolation valves would have minor impacts on visual character or scenic views, as they would be located at an existing EBMUD facility at the Walnut Creek East Portal. This site is also surrounded by tall trees. It is not yet known where additional treatment facilities would be constructed, but these facilities would occur at existing EBMUD water treatment facilities or aqueduct locations. The industrial appearance of new facilities would potentially contrast with adjacent uses and impact the existing aesthetic character of the project sites and environs. The extent of potential effects on views and visual character from the treatment facilities and temporary construction activities cannot be determined without specific information concerning the facility's design. Project-level planning and environmental documentation would be required to determine the extent of impacts on views and the visual character of affected areas. Therefore, for the purposes of this program-level analysis, impacts on views and visual character would be potentially significant. Implementation of Mitigation Measure 5.2.I-1 would reduce this impact to a level that is less than significant.

For the Los Vaqueros Reservoir Expansion: Future Expansion Option, it is not yet known where additional treatment facilities would be constructed, but these facilities would occur at existing EBMUD water treatment facilities or aqueduct locations. The industrial appearance of new facilities would potentially contrast with adjacent uses and impact the existing aesthetic character of the project sites and environs. The extent of potential effects on views and visual character from the treatment facilities and temporary construction activities cannot be determined without specific information concerning the facility's design. Project-level planning and environmental documentation would be required to determine the extent of impacts on views and the existing visual character of affected areas. Therefore, for the purposes of this program-level analysis, impacts on views and visual character would be potentially significant. Implementation of Mitigation Measure 5.2.I-1 would reduce this impact to a level that is less than significant.

Mitigation Measure 5.2.I-1 will mitigate these impacts and commits EBMUD to integrate above-ground structures with the surrounding landscape using design elements, including but not limited to painting of structural facades or installation of berms and landscaping around facilities.

Impact Significance: **Less than Significant After Mitigation.**

Mitigation Measure 5.2.I-1 would not fully reduce the potentially significant effects of Impact 5.2.I-1 to less than significant levels for the Northern California Water Transfers, and the Enlarge Lower Bear Reservoir component of the WSMP 2040 Portfolio. Impact 5.2.I-1 remains significant and unavoidable for these components (*See separate findings under Section 4.1 I in this Exhibit A.*

Potentially Significant Impact 5.2.I-2: Potential to increase light and glare.

Finding: Implementation of Mitigation Measure 5.2.I-2 would reduce the potentially-significant effects from an increase in light and glare to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.I-2 is hereby adopted and will be implemented as set forth in the MMRP. Potential Impact 5.2.I-2 addressed the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, San Joaquin Groundwater Banking / Exchange; and Los Vaqueros Reservoir Expansion: Future Expansion Options.

New facilities associated with these components may include the introduction of artificial lighting sources, particularly in areas not already illuminated, or increased ambient light and glare. The introduction of a new light source, particularly in an area not already illuminated, or an increase in ambient light or glare would be a potentially significant impact. Additional project-level visual analysis would be conducted once specific sites are selected and individual design is determined, to identify light and glare effects.

For the Los Vaqueros Reservoir Future Expansion Option, it is not yet known where additional treatment facilities would be constructed, but these facilities would occur at existing EBMUD water treatment facilities or aqueduct locations. Project-level planning and environmental documentation would be required to determine the extent of light and glare impacts. The proposed facilities may include exterior lighting, which may be visible from, or dispersed to create glare on, surrounding uses. Implementation of Mitigation Measure 5.2.I-2 would reduce this potential impact to a less-than-significant level. Additional project-level visual analysis would be conducted once specific sites are selected and individual designs are completed, to determine light and glare effects.

Implementation of Mitigation Measure 5.2.I-2 would commit EBMUD to incorporate design elements into project specifications to reduce light intrusion and glare on surrounding uses. EBMUD would not use highly reflective building materials and/or finishes in the design of proposed structures and landscaping would be maintained to minimize off-site light and glare.

Impact Significance: **Less than Significant After Mitigation.**

J. Hazards

Potentially Significant Impact 5.2.J-1: Exposure to uncontrolled releases of hazardous materials.

Finding: Implementation of Mitigation Measures 5.2.J-1 would reduce the potentially-significant impact from exposure to uncontrolled releases of hazardous materials to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.J-1 is hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.J-1 is potentially significant for the following WSMP 2040 Portfolio components: Recycled Water; Northern California

Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir,, San Joaquin Groundwater Banking / Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

There is a risk of harm from accidental release of substances such as fuels, oils, lubricants, paints and chemicals used or stored during construction and operation of WSMP 2040 component facilities. Because the exact locations of many of these facilities cannot be known at this program-level stage, the potential for exposure of workers, schools and waterbodies from both construction and operation of components is considered to be potentially significant.

Mitigation Measure 5.2.J-1 commits EBMUD enforce on-site hazardous materials handling rules. Contract specifications would incorporate the requirement that contractors enforce strict on-site handling rules to prevent exposure of workers and the public to hazardous material releases and degradation of receiving water quality. Compliance with required laws and regulations through the project design and construction specifications would ensure that impacts associated with the transport, use, storage, and disposal of hazardous materials would be reduced to less-than-significant levels.

During construction activities, the analysis presented in the 2009 PEIR beginning on page 5.2.J-2 is applicable to the all the Los Vaqueros Reservoir Expansion Options facilities proposed under the Current and Future Expansion Options. Uncontrolled release of substances such as fuels, oils, and lubricants, paints and chemicals used or stored during construction of proposed facilities have the potential to expose workers and the public to contamination. The potential for exposure of workers and the public to hazardous materials from accidental spills would be potentially significant. Implementation of Mitigation Measure 5.2.J-1 would reduce this impact to a level that is less than significant.

Under operations, the analysis presented in the 2009 PEIR beginning on page 5.2.J-2 is applicable to the all proposed facilities under the Los Vaqueros Reservoir Expansion Options. As described in the 2009 PEIR, operation of the proposed facilities would involve the storage, use, and transport of hazardous materials. The potential risk of exposure of workers and the public to uncontrolled releases of hazardous substances during project operation would be potentially significant. Implementation of Mitigation Measure 5.2.J-1 would reduce this impact to a level that is less than significant.

Mitigation Measure 5.2.J-1: Enforce on-site hazardous materials handling rules.

Impact Significance: **Less than Significant After Mitigation.**

Potentially Significant Impact 5.2.J-2: Exposure of construction workers to contaminated soil and water.

Finding: Implementation of Mitigation Measure 5.2.J-2 would reduce the potentially-significant impact from exposure of construction workers to contaminated soil and water to a level that is less than significant.

Facts in Support of Finding: Mitigation Measure 5.2.J-2 is hereby adopted and will be implemented as set forth in the MMRP. Impact 5.2.J-2 is potentially significant for the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir,, San Joaquin Groundwater Banking/Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Because the locations of proposed facilities have not been determined at this program-level stage, the risk of harm to construction workers from exposure to known and previously undetected soil contaminants in project work areas is considered to be potentially significant.

For the Enlarge Lower Bear Reservoir component, historic mine sites are potential sources of contaminants. Mine spoils, tailings and waste piles may contain arsenic, mercury and acids. Seepage from the rock fill in Lower Bear River Reservoir Dam contains natural copper concentrations that exceed the California Toxic Rule aquatic toxicity criteria. At this program level stage, the potential to expose workers and the public to contamination associated with natural minerals and mining residuals is considered to be potentially significant.

Mitigation Measure 5.2.J-2 commits EBMUD to conduct due diligence review of the selected sites, as needed, to ensure that known hazardous materials contamination will be avoided. This will include performance of a Phase 1 Hazardous Materials Site Assessment. If the Phase I Assessment indicates that a release of hazardous materials could have affected soil or groundwater quality at the site, EBMUD will obtain a Phase II Assessment to determine the extent of contamination at the site. If the results of a Phase II Assessment indicate the presence of hazardous materials, alteration of facility design or site remediation shall be included in project specifications. EBMUD will also require its contractors to comply with its Trench Spoils Field Management Practices Program for worker safety during excavation and trenching in the presence of contaminated soils.

Impact Significance: **Less than Significant After Mitigation.**

Potentially Significant Impact 5.2.J-3: Exposure to risk of wildland fires.

Finding: Implementation of Mitigation Measures 5.2.J-3a and 5.2.J-3b would reduce the potentially-significant impact from risk of exposure to wildland fires to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.J-3a and 5.2.J-3b are hereby adopted and will be implemented as part of the MMRP. Impact 5.2.J-3 is potentially significant for the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Regional Desalination, Enlarge Lower Bear Reservoir,, San Joaquin Groundwater Banking/Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Operation of equipment used to construct proposed facilities, such as bulldozers, tractors, transportation vehicles, welders, and grinders, could increase the potential for fire. Workers at sites could also increase the risk of fire through careless disposal of cigarettes, off-road vehicle travel, and operation of motorized construction equipment. Wildland fire could result in significant risk to human safety, loss of and injury to livestock and wildlife, damage to buildings, and loss of sensitive habitat, among other adverse outcomes. The potential for igniting wildfires during construction-related activities is considered to be potentially significant, particularly during the fire season.

Implementation of Mitigation Measures 5.2.J-3a would commit EBMUD and/or its contractors to develop and implement fire control plans containing fire management procedures. These fire control plans would require consultation with the affected jurisdictions and appropriate agencies responsible for fire protection at proposed project sites. Mitigation Measure 5.2.J-3b would require EBMUD to implement EBMUD's Fire Management Plan and include in the project construction specifications the requirement to comply with the Plan.

Impact Significance: **Less than Significant After Mitigation.**

K. Public Services, Utilities and Energy

Potentially Significant Impact 5.2.K-1: Damage to or temporary disruption of public utilities, and impacts related to the relocation of utilities.

Finding: Implementation of Mitigation Measures 5.2.K-1a through 5.2.K-1e would reduce the potentially-significant impacts from potential temporary damage to or disruption of existing regional and local public utilities and impacts related to the relocation of utilities to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.K-1a through 5.2.K-1e are hereby adopted and will be implemented as part of the MMRP. Impact 5.2.J-2 is potentially significant for the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento

Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir,, San Joaquin Groundwater Banking/Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

These component facilities have the potential to traverse or encroach upon existing utility corridors. Construction activities to develop facilities for these components could result in unintentional disruption of utility services, including water, sewer, storm drain, natural gas pipelines, electricity, telephone, and television cable service. Both regional and local utility lines are located throughout the WSMP 2040 Portfolio Study Area and many of these utility corridors include multiple utility lines. Locating these existing utilities prior to the start of construction would help avoid unplanned disruption of utility services.

Implementation of Mitigation Measure 5.2.K-1a requires EBMUD to notify neighboring residents and businesses of potential utility service disruption in advance of construction. Mitigation Measure 5.2.K-1b commits EBMUD and/or its contractors to locate overhead and underground utility lines in the field before starting excavation work and to confirm utility line information prior to excavation and reconnect utilities promptly. Mitigation Measure 5.2.K-1c requires EBMUD to safeguard employees from potential accidents related to underground utilities. Mitigation Measure 5.2.K-1d requires EBMUD or its contractors to develop and implement an emergency response plan to prepare for the risk of leak or explosion, and to notify local authorities when damage to a gas utility results in a leak or suspected leak. Mitigation Measure 5.2.K-1e requires EBMUD to coordinate final construction plans with utility providers.

Impact Significance After Mitigation: **Less than Significant After Mitigation.**

Potentially Significant Impact 5.2.K-3: Temporary adverse effect on solid waste landfill capacity.

Finding: Implementation of Mitigation Measures 5.2.K-3 would reduce the potentially-significant impact from a temporary adverse effect on solid waste landfill capacity to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.K-3 is hereby adopted and will be implemented as part of the MMRP. Impact 5.2.K-3 is potentially significant for the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir,, San Joaquin Groundwater Banking/Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Construction of facilities developed as part of these components could generate a large volume of waste materials that could potentially exceed the daily tonnage limit of these

landfills and/or adversely affect landfill capacity. These waste materials include construction debris, demolition materials, and excavated soil.

The specific quantity and composition of solid waste to be disposed of would be determined during the project-level design of each component project. Due to the economic value of clean excavated soil and the cost of landfill disposal, the PEIR assumed that 50 percent of excavation/spoils would be diverted from landfills and reused. This rate of diversion would be consistent with the California Integrated Waste Management Act of 1989. In the absence of reliably-estimated disposal quantities, compliance with local policies and regulations regarding solid waste management cannot be determined. Therefore, impacts related to compliance with Federal, State, and local statutes are presumed to be potentially significant.

Onsite disposal for a portion of the demolition is likely for the Enlarge Lower Bear Reservoir component. Where this occurs, excavated materials would not be disposed of in local landfills and would not impact landfill capacity. Nonetheless, at this program level, because the exact quantity and quality of disposed material and the daily disposal rates have not been determined, the impacts are considered to be potentially significant.

For the Los Vaqueros Reservoir Expansion, construction of the facilities proposed under the Current and Future Expansion Options could result in the generation of a large volume of waste materials. The Future Expansion Option would have the largest potential for generation of waste materials during the construction of the proposed treatment facilities, while the Untreated Water Option would likely generate the least waste material since it requires less intensive construction. If all construction waste materials were disposed of in local landfills, these materials could potentially exceed the daily tonnage limit of these landfills and/or adversely affect landfill capacity. Since the exact quantity and quality of disposed material and the daily disposal rates have not yet been determined for each option, the impact on permitted landfill capacity is considered potentially significant. Implementation of Mitigation Measure 5.2.K-3 would reduce this potential impact to a less-than significant level.

Mitigation Measure 5.2.K-3 would commit EBMUD to implement waste reduction measures through contract specifications for each component project. Contractor(s) would be required to obtain any necessary waste management permits prior to construction and comply with the conditions attached. Contractors would also be required to submit a solid waste recycling plan to the affected agencies, with elements including actions to reuse or recycle construction debris and clean excavated soil and divert at least 50 percent of inert solids from disposal in a landfill.

Impact Significance: **Less than Significant After Mitigation.**

Potentially Significant Impact 5.2.K-4: Construction-related energy use and increased long-term energy use during operation.

Finding: Implementation of Mitigation Measures 5.2.K-4 would reduce the potentially-significant impact from construction-related energy use and increased long-term energy use during operation to a level that is less than significant.

Facts in Support of Finding: Mitigation Measures 5.2.K-4 is hereby adopted and will be implemented as part of the MMRP. Impact 5.2.K-4 is potentially significant for the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir,, San Joaquin Groundwater Banking/Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Construction of facilities for these components would require the use of fuels for a variety of construction activities, including excavation, grading, demolition, material transport, and construction worker vehicle travel. Implementation of exhaust control measures specified in Mitigation Measures 5.2.F-2b and 5.2.F-2c would ensure that fuels are not used in a wasteful manner.

For the Recycled Water component, energy use is required to treat wastewater for non-potable use, and conveyance to the point of use. The amount of energy required would depend on the equipment used, the degree of treatment required, and the proximity of the treatment plant to the location where the recycled water would be used.

Energy required for the Northern California Water Transfers component would be related to pumping and local treatment. Energy would be required for pumping water through the Freeport intake and through the Mokelumne Aqueducts. The amount of energy required for pumping depends on the quantity of water being conveyed. The Northern California Water Transfers component is anticipated to be operational during dry years.

For the Bayside Groundwater Project, energy is required to pump the groundwater from the wells and treat it for release to the distribution system. The amount of energy required depends on the efficiency of the pumping equipment, the depth to groundwater, and the distance to the treatment facility. Since the water injected is "treated" water, the extracted water would only need "partial" re-treatment. The Bayside Groundwater Project Phase 2 component would increase energy use associated with the conveyance of recharge water, retrieval of groundwater in the South East Bay Plain Groundwater Basin, and water treatment.

The Sacramento Basin Groundwater Banking / Exchange component would lead to an increase in energy needs associated with conveyance of water through the Mokelumne and Freeport pipelines, the retrieval of accumulated water in the Sacramento Basin, and water treatment.

Desalination processes to treat water from San Francisco Bay and convey it to a water treatment system are energy-intensive. During wet years, it is assumed that the desalination plant would only operate at 20 percent capacity to maintain the integrity of the reverse osmosis (RO) membranes. The amount of energy required for desalinating water, transporting it to EBMUD water treatment plants, and re-treating it would depend on the equipment used, the degree of treatment required, and the proximity of the treatment plant to the location where the water would be used.

For the Enlarge Lower Bear Reservoir component, energy would be required to pump water to the EBMUD service area, and for treatment. Pumping is required during high demand periods. The additional increment of energy required to convey and treat water released from the Enlarge Lower Bear Reservoir component would be partially offset by increased hydroelectric generation capacity.

For the San Joaquin Groundwater Banking / Exchange component, production of dry-year groundwater requires energy to pump it from the wells and to convey it via the Mokelumne Aqueducts to a water treatment system. The Mokelumne Aqueducts would also be used in wet years for delivery of recharge water to the San Joaquin Basin. The amount of energy required depends on the efficiency of the pumping equipment, the depth to groundwater, the distance to the treatment facility, and the degree of treatment required. Implementation of the San Joaquin Groundwater Banking / Exchange component would lead to an increase in energy usage associated with recharge water conveyance, the retrieval of accumulated water in the Eastern San Joaquin Groundwater Basin, conveyance through the Mokelumne Aqueducts, and water treatment.

Construction energy expenditures would include both direct and indirect use of energy. Though construction energy would be consumed only during the construction period, it would represent irreversible consumption of finite natural energy resources. Energy consumed during construction would primarily be in the form of fuel (primarily gas, diesel, and motor oil) and would not have a significant effect on PG&E's energy resources.

Excessive idling and other inefficient site operations could result in the wasteful use of fuels. Therefore, impacts related to the wasteful use of fuels during construction would be potentially significant. Implementation of exhaust control measures specified in the 2009 PEIR Section 5.2.F, Air Quality (Mitigation Measures 5.2.F-2b and 5.2.F-2c), would ensure that fuels are not used in a wasteful manner and would reduce this impact to a less-than-significant level.

Based on available information, estimated energy requirements by component in units of kilowatts hours of energy per million gallons of water produced (kWh/MG) are provided in Table 7-3. These options would be primarily operated during dry years; for the Los Vaqueros Expansion options however, it is possible that water would be delivered during non drought situations. For a comparison of energy use with the components described in the 2009 PEIR, please refer to Table 5.2.K-1 (page 5.2.K-12 of the 2009 PEIR). As a

point of reference, PG&E's generation capacity is 8,255 megawatts (MW (PG&E 2002) and the State's capacity is 63,213 MW (EIA 2006).

Table 7-3: Energy Use by Option

OPTION	COMPONENT YIELD (MGD)	TOTAL DRY YEAR ENERGY USE[1,2] (KWH/MG)	ENERGY USE[1] (KWH/DAY)	EQUIVALENT NUMBER OF HOUSEHOLDS OF ENERGY USE[3]	ANNUAL ENERGY DEMAND[1] (MWH/YR)
Treated Water - Boyd Road Intertie Option	8	3,000-6,000	24,000-48,000	1,348-2,695	8,760-17,520
Treated Water - New Intertie Option	8-12	3,000-6,000	24,000-72,000	1,348-4,043	8,760-26,280
Untreated Water Option	Up to 45	3,000-6,000	135,000-270,000	7,581-15,162	49,275-98,550
Future Expansion Option	45-100	3,000-6,000	135,000-600,000	7,581-33,692	49,275-219,000

Notes:
[1] Maximum load is assumed.
[2] Total dry year energy use is provided for the Enlarge Los Vaqueros options as a range, as the energy use for these options has not been modeled and cannot be more accurately estimated at this time as part of this program level analysis.
[3] A typical California household consumes 6,500 kWh of energy annually (CEC 2003).
Source: EBMUD 2011

As described in the 2009 PEIR on page 5.2.K-11, the estimated energy requirements for the above options includes energy required for water treatment to bring the water to the standard necessary for its intended use, energy required for pumping, as well as energy required to convey the water to treatment plants and subsequently to its intended users. The amount of energy required would depend on the equipment used, the degree of treatment required, and the proximity of the treatment plant to the location of the source water.

Because the actual energy use of the options is not known, and the new facilities would come online over the course of the 30-year planning period, impacts on energy use would be potentially significant. However, incorporation of energy efficiency measures (Mitigation Measure 5.2.K-4 in the 2009 PEIR) would reduce this impact to a less-than significant level. Impacts on energy use would be evaluated as part of project-level CEQA documentation.

Treated Water - Boyd Road Intertie Option

The energy required for the Treated Water – Boyd Road Intertie Option would be related to pumping water from the CCWD water treatment plant to the EBMUD service area in dry years, or at other times if needed, and for conveyance of water to its intended users. The amount of energy required for pumping depends on quantity of water being conveyed.

Based on available information, the Treated Water – Boyd Road Intertie Option would require between 3,000 and 6,000 kWh/MG in dry years. The expected yield of this component is approximately 8 MGD, so a total of between 24,000 and 48,000 kWh per day (8,760-17,520 MWh annually) of energy would be required for operation. The Treated Water – Boyd Road Intertie Option is only anticipated to be operational during dry years. Based on the assumption that a typical California household consumes 6,500 kWh annually (CEC 2003), this component would consume roughly the same amount of electricity as between 1,348 and 2,695 households per year.

In 2002, PG&E delivered over 76 million MWh of power to its electric customers (PG&E 2002); the Treated Water – Boyd Road Intertie Option would be estimated to require between 0.01% and 0.02% of PG&E's electric deliveries.

The actual energy use of new facilities proposed under this option will be confirmed at the project design stage and will depend on facility design and the use of emerging technologies that may increase energy efficiency. Because the actual energy use of the Treated Water – Boyd Road Intertie Option is not known at this stage, and the new facilities would come online at a yet to be determined time during the 30-year planning period, impacts on energy use would be potentially significant. However, incorporation of energy efficiency measures (Mitigation Measure 5.2.K-4 in the 2009 PEIR) would reduce this impact to a less-than-significant level. Impacts on energy use would be evaluated part of project-level CEQA documentation.

Treated Water - New Intertie Option

Energy required for the Treated Water – New Intertie Option would be related to pumping water from the CCWD water treatment plant to the EBMUD service area in dry years, or at other times if needed, and for conveyance of water to its intended users. The amount of energy required for pumping depends on quantity of water being conveyed.

Based on available information, the Treated Water – New Intertie Option would require between 3,000 and 6,000 kWh/MG in dry years. The expected yield of this component is between approximately 8 and 12 MGD, so a total of between 24,000-72,000 kWh per day (8,760-26,280 MWh annually) of energy would be required for operation. The Treated Water – New Intertie Option is primarily anticipated to be operational during dry years. Based on the assumption that a typical California household consumes 6,500 kWh annually (CEC 2003), this component would consume roughly the same amount of electricity as between 1,348 and 4,043 households per year.

In 2002, PG&E delivered over 76 million MWh of power to its electric customers (PG&E 2002); the Treated Water – New Intertie Option would be estimated to require between 0.01% and 0.03% of PG&E's electric deliveries.

The actual energy use of new facilities proposed under this component will be confirmed at the project design stage and will depend on facility design and the use of emerging technologies that may increase energy efficiency. Because the actual energy use of the Treated Water – New Intertie Option is not known at this stage, and the new facilities

would come online at a yet to be determined time during the 30-year planning period, impacts on energy use would be potentially significant. However, incorporation of energy efficiency measures (Mitigation Measure 5.2.K-4 in the 2009 PEIR) would reduce this impact to a less-than-significant level. Impacts on energy use would be evaluated as part of projectlevel CEQA documentation.

Untreated Water Option

Energy required for the Untreated Water Option would be related to pumping water from the expanded Los Vaqueros Reservoir to an EBMUD raw water reservoir and/or to a local EBMUD treatment facility in a drought, or at other times if needed, and for conveyance of water to its intended users. The amount of energy required for pumping depends on the quantity of water being conveyed.

Based on available information, the Untreated Water Option would require between 3,000 and 6,000 kWh/MG in dry years. The expected yield of this component is approximately 45 MGD, so a total of between 135,000 and 270,000 kWh per day (49,275 and 98,550 MWh annually) of energy would be required for operation. The Untreated Water Option is primarily anticipated to be operational during dry years. Based on the assumption that a typical California household consumes 6,500 kWh annually (CEC 2003), this component would consume roughly the same amount of electricity as between 7,581 and 15,162 households per year.

In 2002, PG&E delivered over 76 million MWh of power to its electric customers (PG&E 2002); the Untreated Water Option would be estimated to require between 0.06% and 0.13% of PG&E's electric deliveries.

The actual energy use of new facilities proposed under this component will be confirmed at the project design stage and will depend on facility design and the use of emerging technologies that may increase energy efficiency. Because the actual energy use of the Untreated Water Option is not known, and the new facilities would come online at a yet to be determined time during the 30-year planning period, impacts on energy use would be potentially significant. However, incorporation of energy efficiency measures (Mitigation Measure 5.2.K-4 in the 2009 PEIR) would reduce this impact to a less-than significant level. Impacts on energy use would be evaluated as part of project-level CEQA documentation.

Future Expansion Option

Energy required for the Future Expansion Option would be related to pump water from the expanded Los Vaqueros Reservoir to the EBMUD service area, for local (in-District) treatment, and for upcountry treatment at the proposed pre-treatment plant in years 2 and 3 of a drought, and possibly during drought year 1 or during other non-drought situations. Energy required also takes into account the energy, required for conveyance of water to its intended users. The amount of energy required for pumping depends on quantity of water being conveyed. Under this option, up to 100 MGD of water would be treated at the proposed treatment facilities.

Based on available information, the Future Expansion Option would require between 3,000 and 6,000 kWh/MG in dry years. The expected yield of this component is between approximately 45 and 100 MGD, so a total of between 135,000 and 600,000 kWh per day (49,275 and 219,000 MWh annually) of energy would be required for operation. The Future Expansion Option is primarily anticipated to be operational during dry years. Based on the assumption that a typical California household consumes 6,500 kWh annually (CEC 2003), this component would consume roughly the same amount of electricity as between 7,581 and 33,692 households per year. In 2002, PG&E delivered over 76 million MWh of power to its electric customers (PG&E 2002); the Future Expansion Option would be estimated to require between 0.06% and 0.29% of PG&E's electric deliveries.

The actual energy use of new facilities proposed under this option will be confirmed at the project design stage and will depend on facility design and the use of emerging technologies that may increase energy efficiency. Because the actual energy use of the Future Expansion Option is not known, and the new facilities would come online at a yet to be determined time during the 30-year planning period, impacts on energy use would be potentially significant. However, incorporation of energy efficiency measures (Mitigation Measure 5.2.K-4 in the 2009 PEIR) would reduce this impact to a less-than significant level. Impacts on energy use would be evaluated as part of project-level CEQA documentation.

Energy required for the Future Expansion Option would be related to pumping water from the expanded Los Vaqueros Reservoir to the EBMUD service area, for treating that water at one or more locations in a drought, or during other times as needed. Energy required also takes into account the energy, required for conveyance of water to its intended users. The amount of energy required for pumping depends on quantity of water being conveyed.

Mitigation Measure 5.4.K-4: Commits EBMUD to Incorporate Energy Efficiency Measures.

This Mitigation Measure is set forth on page 5.2.K-18 of the 2009 PEIR.

Mitigation Measure 5.4.K-4 commits EBMUD to include energy efficient processes and equipment in the design specifications for the proposed facilities developed as part of the WSMP 2040. EBMUD would evaluate the potential for use of renewable energy resources at facility sites during project-specific design.

Impact Significance: **Less than Significant After Mitigation.**

4.3 FINDINGS REGARDING LESS-THAN-SIGNIFICANT IMPACTS

A. Hydrology, Groundwater, and Water Quality Impacts

Potential Impact 5.2.A-2: Degradation of water quality from waste discharge.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.A-5 and 2011 DEIR pgs. 7-33 and 7-34), for the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Phase 2; Sacramento Basin Groundwater Banking / Exchange; San Joaquin Groundwater Banking / Exchange; and Los Vaqueros Reservoir Expansion: Untreated Water and Future Expansion Options..

Facts in Support of Finding:
With both Los Vaqueros Reservoir Expansion Treated Water Options, EBMUD would receive water from Los Vaqueros Reservoir that is treated by CCWD, and no new or expanded water treatment facilities would be required. Therefore, no increase in waste discharge would occur and no impact would occur.

With the Los Vaqueros Reservoir Expansion Untreated Water Option, EBMUD would take untreated water from Los Vaqueros Reservoir and send it through the Mokelumne Aqueduct to an existing EBMUD raw water reservoir for treatment at an existing EBMUD water treatment facility, or it might be sent directly to one of EBMUD's in-line water treatment plants which receive water directly from an aqueduct. In this later case, additional treatment facilities would be required. The Los Vaqueros Reservoir Expansion Future Expansion Option also would require new water treatment facilities. New water treatment facilities would generate liquid wastes during operation, which would be discharged to EBMUD's main wastewater treatment plant or to the local

New or expanded treatment facilities associated with the above components would generate liquid wastes, such as backwash and sanitary wastes, during operation. These wastes would be discharged to the local sanitary sewer system for treatment prior to discharge to the Bay or local surface water body. All wastes would be treated to comply with individual treatment plant permit limits (set by the appropriate RWQCB) prior to discharge and would not exceed discharge limits. Therefore, water quality impacts associated with the operation of new or expanded treatment plants would be considered less than significant.

Impact Significance: **Less than Significant**

Potential Impact 5.2.A-3: Violation of water quality standards and waste discharge requirements for land application of recycled water.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.A-9).

Facts in Support of Finding: Potential Impact 5.2.A-3 addressed the following WSMP 2040 Portfolio components: Recycled Water; Sacramento Basin Groundwater Banking / Exchange.

Although application of recycled water for landscape irrigation could potentially violate water quality standards, Title 22 restricts irrigation of disinfected tertiary recycled water

within 50 feet of any domestic water supply well, and prohibits the over-application or direct runoff of applied recycled water. EBMUD would provide additional operational guidelines and work with end users to avoid overspraying and ponding.

Recycled water could potentially contain trace amounts of pharmaceutical compounds. Current treatment methods remove some pharmaceutical compounds. Natural processes, such as biological and photo-degradation at or below the ground surface would further break down residual contamination. The presence of trace amounts of these compounds in the recycled water would not adversely affect landscape irrigation or any other proposed uses of the recycled water within the project areas. The use and application of recycled water according to the Department of Public Health's *Regulations and Guidance for Recycled Water* (2004) reduces the risk that minute quantities of these compounds could migrate through the soil and into groundwater during the wet weather season. If this migration were to occur, the concentrations would be extremely low.

EBMUD customers using recycled water are issued a water reuse permit and must designate a Site Supervisor to undergo training on Best Management Practices and the safe and efficient use requirements for recycled water. Additionally, EBMUD performs yearly site evaluations to ensure that customers are applying recycled water correctly, and are complying with permit requirements.

Impact Significance: **Less than Significant**

Potential Impact 5.2.A-12: Impact to downstream Mokelumne River water users.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.A-23, 24) for the San Joaquin Groundwater Banking component.

Facts in Support of Finding: Potential Impact 5.2.A-12 addressed New Mokelumne River diversions to support the project may decrease the volume of water available for diversion, or degrade the quality of water available for diversion. The project could thus affect the ability of downstream users to divert water when needed to meet demands, or interfere with their existing water treatment systems. Nonetheless, with an anticipated maximum diversion of 17.4 MGD (approximately 19.5 TAFY) occurring only in average or wet years, changes in Mokelumne River hydrology during the times of usage would not be not substantial.

Impact Significance: **Less than Significant**

Potential Impact 5.2.A-13: Flooding along the Mokelumne River Basin from dam failure.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.A-24).

Facts in Support of Finding: Potential Impact 5.2.A-13 addresses the Enlarge Lower Bear Reservoir component.

New or reconstructed dams in would have very low potential of failure, with consequent downstream flooding, because they would comply with the latest technology in dam construction, and would comply with then-current Division of the Safety of Dams requirements. Therefore, this impact is presumed to be less than significant at this stage.

Impact Significance: **Less than Significant**

Potential Impact 5.2.A-14: Inundation by tsunamis, seiches, or mudflows.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.A-25).

Facts in Support of Finding: Potential Impact 5.2.A-14 addresses the Recycled Water, Bayside Groundwater Project Phase 2, Regional Desalination, Enlarge Lower Bear Reservoir component.

Future recycled water facilities and Bayside Groundwater Project Phase 2 will be located adjacent to San Francisco Bay and will be exposed to the risk of damage from tsunamis. The run-up would be expected to decrease the further inland that a tsunami travels. Accordingly, its effects would be greatly attenuated at the likely future project locations inland from the bay shoreline, and thus the potential impacts from tsunamis are less than significant.

Because the enlarged Lower Bear Reservoir project expands the surface area of the reservoir, there would be a greater risk of developing seiches capable of causing shoreline or embankment erosion and the potential for overtopping the dam. However, based on the minimal existence of watershed development, the reservoir pool area, and the nature of the embankment materials, it is expected that damage would be minimal and unlikely to pose a structural risk.

Mudflows occur during heavy rains on lands without vegetative cover, and are therefore lacking in soil anchoring. For portfolio components located in relative flat areas, the likelihood of inundation from mudflows is minimal. For portfolio components located in the foothills, proper construction and adherence to best management practices, such as revegetation following construction, would reduce the potential impacts from mudflows to less-than-significant levels.

Impact Significance: **Less than Significant**

Potential Impact 5.2.D-2: Impairment of recreation facilities and activities.

Finding: Less-than-significant impact; no mitigation required (2011 DEIR pgs. 7-42 and 7-43) for the Los Vaqueros Expansion: Untreated Water and Future Expansion Options.

Facts in Support of Finding: For the Untreated Water Option, hiking opportunities along the Briones-Mt. Diablo Regional Trail, as well as several of the trails that run through the

Acalanes Ridge Open Space, could be temporarily affected by construction activities at the Walnut Creek East Portal. These disturbances may include trail re-routing, hiking restrictions, noise, and traffic. These temporary effects may displace some hikers to other hiking trails affording a similar experience. In the long-term, the presence of the check valve replacement and Mokelumne Aqueduct interconnection at the Walnut Creek East Portal would not affect recreational uses in the area. Therefore, the potential impacts of constructing and operating the Untreated Water Option would be less than significant.

For the Future Expansion Option, the new water treatment facilities needed by EBMUD would be located on EBMUD property at an existing water treatment plant or in the vicinity of the Mokelumne Aqueducts. Therefore, the potential impacts of constructing and operating these facilities would be less than significant.

Impact Significance: **Less than Significant**

E. Transportation

Potential Impact 5.2.E.1: Reduction of the number or available width of travel lanes on roads from construction, resulting in temporary disruption of traffic flows, increases in traffic congestion, and access to adjacent land uses for both general and emergency access.

Finding: Less-than-significant impact; no mitigation required (2011 DEIR pg. 7-44) for the Los Vaqueros Reservoir Expansion – Untreated Water Option.

Facts in Support of Finding:

Construction of the facilities associated with the Untreated Water Option would occur within existing EBMUD property away from public road rights-of-way, and as such, would not directly affect nearby traffic patterns. This impact would be less than significant.

Impact Significance: Less than Significant

Potential Impact 5.2.E.3: Potential to generate demand for parking spaces for worker vehicles.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.E-7 and 2011 DEIR pg. 7-46) for he Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Regional Desalination, Sacramento Basin Groundwater Banking / Exchange; IRCUP / San Joaquin Groundwater Banking / Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Facts in Support of Finding:

Pipeline installation along roadways could displace available parking spaces in the construction zone. Worker vehicles could displace parking spaces in the vicinity of construction zones. Within residential areas, construction activities would occur during the day when residents are away, and therefore sufficient parking to accommodate the public and worker vehicles would be available. Within industrial areas, sufficient on-street parking spaces are typically available. However, in commercial areas where parking spaces are limited, adequate space for public and worker vehicles might not be available. In this case, the public and workers may have to park outside the immediate area of affected streets.

For the Los Vaqueros Reservoir Expansion Treated Water Options, construction activities would occur at the treatment facility locations (existing water treatment plants or along aqueducts), at the Walnut Creek East Portal site, and along pipeline alignments. There would likely be sufficient space at the potential treatment facility locations and Walnut Creek East Portal site to accommodate staging and worker vehicle parking. Pipeline installation along roadways as part of the Treated Water Options could displace available parking spaces in the construction zone. Although the number of displaced parking spaces to accommodate worker vehicles cannot be determined at this time, within residential areas, construction activities would occur during the day when residents are most likely at work, and therefore sufficient parking to accommodate the public and worker vehicles would likely be available on nearby streets. This would be a less-than-significant impact.

Operation of the Los Vaqueros Reservoir Expansion – Current and Future Expansion Options is expected to result in a minor increase in workers, with adequate parking available to accommodate any new staff. As such, operational impacts related to parking would be less than significant.

Impact Significance: **Less than Significant**

F. Air Quality

Potential Impact 5.2.F.1: Conflict with or obstruct implementation of applicable air quality plans.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.F-6 and 2011 DEIR pg. 7-48) for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Regional Desalination, Enlarge Lower Bear Reservoir; Sacramento Basin Groundwater Banking / Exchange; San Joaquin Groundwater Banking / Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Facts in Support of Finding:

Some of the WSMP 2040 Portfolio components would involve operation of pumping stations, extraction wells, injection wells, and a large desalination plant. Because these facilities are typically electric-powered and have back-up diesel generators that are only operated during emergencies and for periodic testing, they would not regularly generate emissions on-site. Permits to operate and test the backup generators would be required by the respective air district and, therefore, the emissions produced by each generator would be accounted for in the emissions inventory of the local air basin.

Implementation of the WSMP 2040 Portfolio would be consistent with the existing land use designations of the surrounding communities and would not directly result in an increase in population, employment, or vehicle miles traveled beyond the levels already planned and approved for development, and accounted for in the emissions budgets of the jurisdictional air quality management district. Thus, there would not be a significant adverse incremental effect on the region's ability to attain ambient air quality standards, and would not obstruct implementation of the air quality goals of the BAAQMD, SJVAPCD, SMAQMD, or ACAPCD.

Facilities developed as part of the options for participation in all the Los Vaqueros Reservoir Expansion Options would not generate substantial long-term operational emissions that would add to the region's emissions profile for the lifetime of the project. Rather, a minimal increase in VMT would occur from employees and maintenance workers traveling to and from the project site. It is not anticipated that the level of daily trips associated with the proposed project would exceed any threshold of significance. Therefore, this impact would be considered less than significant.

Impact Significance: **Less than Significant**

Potentially-Significant Impact 5.2.F-5: Exposure of sensitive receptors to substantial CO concentrations.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.F-18 and 2011 DEIR pg. 7-51) For the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir, IRCUP/San Joaquin Groundwater Banking/Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Facts in Support of Finding:

Carbon monoxide (CO) concentrations are found on congested roadways. Under certain weather conditions, concentrations may reach unhealthy levels for sensitive receptors. Air quality districts therefore require analysis of CO emissions at a local rather than a regional level. Because none of the WSMP 2040 Portfolio components is anticipated to

cause heavy traffic congestion on area roadways, Portfolio development would not result in or substantially contribute to CO emissions.

Construction of the proposed facilities for the Los Vaqueros Reservoir Expansion – Current and Future Expansion Options would add additional truck and passenger vehicle traffic to regional roadways. However, it is not anticipated that construction activities would generate a significant amount of traffic that would cause a carbon monoxide (CO) hotspot at a regional intersection. In addition, operational activities would require minimal maintenance and operation workers, which are also not anticipated to contribute substantial traffic volumes to regional roadways. This impact is considered less than significant.

Impact Significance: **Less than Significant**

Potential Impact 5.2.F-6: Objectionable odors affecting a substantial number of people.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.F-19 and 2011 DEIR pg. 7-51) for the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking/Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Facts in Support of Finding:

Diesel PM exhaust, as well as off-gas emissions from asphalt paving and the application of coatings, would occur during construction. The temporary nature of construction activities and the rapid dispersal of most construction-generated odors would comply with jurisdictional air quality management district rules. Enlargement of Lower Bear Reservoir could generate sulfuric-type odors from the enlarged water surface area when stagnant water or low-water anaerobic conditions are present.

Local air district rules and general plan policies regulating the generation of odors would apply to the WSMP 2040 Portfolio components. Best management practices to avoid the generation of odors from the construction and operation of these projects would be implemented. It is anticipated that the WSMP 2040 Portfolio components would not expose a substantial amount of people to objectionable odors.

Facilities developed as part of all the Los Vaqueros Reservoir Expansion Options are not considered large odor sources. Furthermore, the construction activities associated with the proposed facilities would occur intermittently and temporarily. Therefore, construction activities would not generate a constant plume of odors (e.g., diesel PM) that would affect nearby receptors. Lastly, as discussed in the 2009 PEIR, construction activities would comply with all local air district requirements to reduce nuisances (i.e., odors) and reactive organic gases (ROG) emissions associated with construction

materials (e.g., architectural coatings, asphalt paving). This impact is considered less than significant.

Impact Significance: **Less than Significant**

Potential Impact 5.2.F-8: Potential to generate long-term greenhouse gas (GHG) emissions due to operational activities associated with the proposed project.

Finding: Less-than-significant impact; no mitigation required (2011 DEIR pg. 7-53) for the following WSMP 2040 Portfolio components: Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Facts in Support of Finding:

Long-term operational activities associated with the all Los Vaqueros Reservoir Expansion Options would not generate substantial GHG emissions. The proposed facilities would require minimal vehicle trips for daily operations and maintenance. Although electricity would be used to power the proposed facilities, and that diesel fuel could be used for emergency generators, the facilities would be designed and built using the newest energy efficient technologies. Therefore, the project is consistent with the goals of AB 32 to continue providing services to the public at a more GHG-efficient rate. It also should be noted that several state initiatives (e.g., Renewable Portfolio Standard) discussed in Section 8, Cumulative Impacts, of the 2009 PEIR would reduce the GHG emissions associated with electricity production and consumption in the future. Therefore, this impact is considered less than significant.

Impact Significance: **Less than Significant**

I. Visual Resource Impacts

Potentially-Significant Impact 5.2.I-1: Adversely affect existing visual character and scenic vistas at project venues.

Finding: Less-than-significant impact; no mitigation required (2011 DEIR pg. 7-60) for the following WSMP 2040 Portfolio components: Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie and Treated Water – New Intertie Options.

Facts in Support of Finding:

The precise locations, designs and layouts of all of the proposed facilities have not yet been determined. Proposed facilities include above-ground structures (e.g., treatment facilities), as well as pipelines that would be buried underground.

Because pipeline construction would occur for a relatively short period of time in any given area, potential impacts on visual character or scenic views and resources would be

limited in duration. Pipelines and associated instrumentation/facilities would be buried underground and would therefore have no long-term impact on visual character or scenic views. This impact would be less than significant.

Impact Significance: **Less than Significant.**

K. Public Services, Utilities and Energy

Potentially-Significant Impact 5.2.K-2: Increased short-term demand for police and fire protection.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 5.2.K-7) for the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking/Exchange; and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.

Facts in Support of Finding:

Facilities developed as part of these components have the potential to generate a short-term need for police and fire services stemming from construction-related accidents. These services, if needed at all, would be expected to be accommodated within the normal workload of public safety agencies in the respective work areas.

Impact Significance: **Less than Significant.**

Potential Cumulative Impact 8-1: Potential generation of short-term and temporary greenhouse gas (GHG) emissions during construction of each component.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 8-39) for the following WMSP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir, and San Joaquin Groundwater Banking/Exchange.

Facts in Support of Finding:

Construction of the WSMP 2040 component facilities would require substantial consumption of fossil fuels and use of non-renewable materials. WSMP 2040 component construction would increase the use of electricity and refined petroleum products (primarily gas, diesel, and oil).

State-wide emission reduction plans and new regulations being developed under the mandate of AB 32 will increase the GHG efficiency of construction equipment. Further efficiencies will result from implementation of Mitigation Measures 5.2.F 2b and 5.2.F-2c. Accordingly, the WSMP 2040 Portfolio's construction-related GHG emissions would not be cumulatively considerable.

Impact Significance: **Less than Significant.**

Potential Cumulative Impact 8-2: Generation of long-term GHG emissions due to operational activities associated with each component.

Finding: Less-than-significant impact; no mitigation required (2009 DEIR pg. 8-39 to 8-42) or the following WSMP 2040 Portfolio components: Recycled Water; Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking / Exchange; Regional Desalination, Enlarge Lower Bear Reservoir, and San Joaquin Groundwater Banking/Exchange.

Facts in Support of Finding:

Determination of the WSMP 2040 Portfolio's impact on global climate change is based on its consistency with the proposed measures to reduce GHG emissions associated with water usage in California Air Resources Board's *Proposed Scoping Plan.* The *Proposed Scoping Plan* identifies three "urban end use" and two energy-related GHG reduction measures. The "urban end use" reduction measures target water use efficiency, use of recycled water, and reuse of urban runoff. The energy-related reduction measures aim to increase renewable energy production and water system energy efficiency

All components of the WSMP 2040 Portfolio would increase water system energy efficiency. Components of the WSMP 2040 Portfolio that involve water conveyance or treatment would be constructed using new pipelines, treatment equipment, and conveyance equipment. The Regional Desalination plant is anticipated to use the then-current state-of-the-art technology which will increase the efficiency of the energy intensive treatment processes. The water conservation component would include supply-side programs that increase water use and distribution efficiency through detection and repair of leaks.

The enlarged Lower Bear Reservoir component of the WSMP 2040 Portfolio would contribute to the State's renewable energy supply for the life of the project. Therefore, the WSMP 2040 Portfolio would be consistent with the goals of AB 32 to increase the GHG efficiency and use of clean energy for water consumption, conveyance, and treatment. The impact of the project on climate change would not be cumulatively considerable, and would therefore be less than significant.

Consistent with *California Energy Action Plan II* priorities for reducing energy usage and the *Renewable Energy Facilitation Plan*, the District would ensure that energy-efficient

equipment is used for all WSMP 2040 projects and would continue its long-standing practice of avoiding high energy usage during nonpeak periods. Where possible, electricity for WSMP 2040 projects would be supplied from a renewable energy resource, or an alternative renewable energy resource such as solar power. Therefore, the long term increase in electricity demand would not be significant, and no mitigation is required.

Impact Significance: **Less than Significant**

5.0 Findings Regarding Alternatives

CEQA Guidelines Section 15126.6 requires discussion of a "No Project" alternative, analysis of a reasonable range of feasible alternatives, and description of the Environmentally Superior Alternative. Based on the information and analysis contained in the 2009 DPEIR, the 2009 FPEIR, the 2011 Revised DPEIR, and the 2012 Final Revised PEIR, the Board of Directors hereby makes the following findings on the alternatives.

The PEIR describes and evaluates five alternative portfolios of components. The Board finds that none of these alternative portfolios would fully satisfy all of the WSMP 2040 objectives. While each would mitigate or avoid some impacts to a greater level than the WSMP 2040 Portfolio, on balance, none of the alternative portfolios has environmental advantages over the WSMP 2040 Portfolio that are sufficiently great to justify approval of an alternative portfolio instead of the WSMP 2040 Portfolio of components. In making this determination, the Board finds that, as mitigated at this program level stage, the WSMP 2040 Portfolio provides a reasonable balance between fully satisfying each of the project objectives and reducing potential environmental impacts to an acceptable level.

5.1 No Project Alternative

The No Project alternative is rejected because it would fail to satisfy the WSMP 2040 objectives, and would jeopardize EBMUD's ability to meet projected future water demands in dry years, causing risks to public health and safety and economic impacts that have been documented as part of the WSMP 2040 development.

Under the No Project Alternative, the WSMP 2040 Portfolio of policies and potential supplemental supply projects would not be pursued. EBMUD would not obtain supplemental water suppliesto meet demands during drought or emergency conditions beyond those already in progress under the 1993 WSMP:

- Conservation: 35 MGD (22.5 MGD realized by 2008 plus 7.5 MGD realized through future natural replacement activity; additional 5 MGD realized through funded programs);
- Recycled Water: 14 MGD (9.3 MGD on-line by 2010; additional 4.7 MGD by 2020); and
- Supplemental Supply: 55.1 MGD (50.1 MGD on line by 2010 including FRWP and Bayside Groundwater Project Phase 1; 5 MGD additional capacity completed by 2020).

The No Project Alternative fails to meet two primary objectives of the WSMP 2040:

- Minimize the vulnerability and risk of disruptions, and
- Maximize the system's operational flexibility.

The No Project alternative also fails to provide water supply reliability, minimize drought impacts to District customers, and minimize risks to public health and safety. Without the use of supplemental water supplies beyond the 1993 WSMP programs already-in-progress, particularly during critical water shortages that would be likely to occur under droughts or emergencies, EBMUD would not be able to reliably meet water demand nor have the needed flexibility in operations to respond to changes in water supply conditions. Further, if future-year demand projections as described in this PEIR are realized, and if a multiple-year drought occurs, because the additional conservation and recycled water savings set forth in the WSMP 2040 would not be achieved, the risk of mandatory water rationing beyond the District-wide goal, a level of savings which is likely not achievable, is significant. While EBMUD could continue to rely on high-quality Mokelumne River water, there would be little back up either from aggressive demand management or alternate water supplies.

5.2 Project Alternatives

The EIR evaluated the following five alternative portfolio groupings of components at an equal level of detail:

Alternative Portfolio A: Groundwater/Conjunctive Use and Water Transfers.

The components of Portfolio A which emphasizes water production through groundwater/conjunctive use components and water transfers are described in Table 3-5 of the DEIR, p. 3-34. Unlike the WSMP 2040 Portfolio, this does not include the higher level of recycled water, although it does include 39 mgd in water savings from conservation.

The Board of Directors hereby rejects this alternative portfolio because it does not provide any compelling environmental, economic, social or other benefits beyond those of the WSMP 2040 Portfolio, and fails to meet one or more WSMP 2040 project objectives to the levels achieved under the WSMP 2040 Portfolio.

Alternative Portfolio A provides operational flexibility, as water supply from both types of projects can be increased or decreased in response to need. To be successful, both also require partnerships on a regional scale. Portfolio A is inadequate to fully meet the Operations, Engineering, Legal & Institutional objectives of *Minimizing the vulnerability and risk of disruptions*, and *Minimizing institutional and legal complexities and barriers.* Much of the District's supplemental water supply from the potential projects in this alternative would still have to cross the Delta and would thus be vulnerable to disruption from a seismic event or other disturbances. Conjunctive use projects, while providing operational flexibility, also have significant legal and operational barriers to overcome for successful implementation. Significant legal process is required in order to obtain water for these projects and legal obstacles to instituting conjunctive use projects, including some restrictions on exporting groundwater, would have to be overcome. There is typically a long lead time necessary to develop a groundwater banking project that will provide adequate supplies, and the emphasis placed on groundwater/conjunctive use in this portfolio will require that these projects be brought on line in time frames that may not be achievable. By eliminating certain components, this portfolio fails to provide the flexibility that is provided by other portfolios to ensure that water can be obtained it the time frames needed. The cost to the District is not significantly less than that for the WSMP 2040 Portfolio and this portfolio would not seek to maximize the water that could be obtained from recycled water projects.

Alternative Portfolio B: Regional Partnerships.

The components of Portfolio B which emphasizes water production through regional partnerships are described in Table 3-7 of the DEIR, p. 3-37. Unlike the WSMP 2040 Portfolio, this portfolio includes the lower level of 37 mgd in water savings from conservation and does not include the highest level of recycled water.

The Board of Directors hereby rejects Alternative Portfolio B because it does not provide compelling environmental, economic, social or other benefits beyond those of the WSMP 2040 Portfolio, and fails to meet one or more WSMP 2040 project objectives to the levels achieved under the WSMP 2040 Portfolio.

The emphasis on regional partnerships increases the chance of success for larger projects such as regional desalination that would otherwise be difficult for any one agency to build, but also increases the institutional and legal complexities. Portfolio B does not adequately meet the objectives of *Minimizing potential adverse impacts to public health of District customers* and *Maximizing use of water from the best available source* because of the increased emphasis on water sources other than Mokelumne River (i.e., groundwater and desalination). The portfolio places a heavy reliance on regional desalination being permitted, built and online by 2015, which is a schedule that may not be possible. The difficulty in achieving this in the time frame needed could leave the District vulnerable if a dry year event occurs prior to 2015 because other possible dry year solutions available as part of the WSMP 2040 Portfolio would not be available. Portfolio B does not meet the Environmental objectives of *Minimizing adverse impacts to*

the environment and *Minimizing construction and operation effects on environmentally sensitive resources*. This is primarily due to the greater emphasis on the desalination component and its associated brine discharge concerns. The portfolio also has the highest median electricity use and median greenhouse gas emission level of all of the portfolios considered. The cost to the District is not significantly less than that for the WSMP 2040 Portfolio and the portfolio would not seek to maximize the water that could be obtained from recycled water projects

Alternative Portfolio C: Local System Reliance.

The components of Portfolio C which emphasizes water production through reliance on a new increment of water storage in the EBMUD service area are described in Table 3-5 of the DEIR, p. 3-34. Unlike the WSMP 2040 Portfolio, this portfolio includes the lower level of 37 mgd of water savings from conservation and does not include the highest level of recycled water.

The Board of Directors hereby rejects Alternative Portfolio C because it does not provide compelling environmental, economic, social or other benefits beyond those of the WSMP 2040 Portfolio, and fails to meet one or more WSMP 2040 project objectives to the levels achieved under the WSMP 2040 Portfolio

Alternative Portfolio C emphasizes service reliability by providing a new increment of water storage west of the Delta, and includes the Buckhorn Canyon Reservoir project which was removed from further consideration during the WSMP 2040 development process following public input and Board consideration of objectives and policy issues. While the Portfolio provides advantages in terms of reliability, Portfolio C inadequately meets the objectives of *Minimizing adverse impacts to the environment* and *Minimizing construction and operation effects on environmentally sensitive resources* in part because of the Buckhorn Canyon Reservoir construction, which would involve a new earth fill dam with a capacity defined in large measure by the geologic formation of the canyon and engineering considerations, and would involve resulting impacts to wetlands and biological resources. The dam would effectively isolate fish populations and preclude the use of remaining spawning areas. Significant air quality and traffic impacts would also result, along with impacts to other resource areas. Portfolio C also fails to meet the objectives of *Minimizing long-term adverse community impacts, Minimizing adverse social effects, and Minimizing conflicts with existing and planned facilities, utilities and transportation facilities* because of Buckhorn Canyon Reservoir construction, which involves a new facility and all associated impacts to the community. Significant historic community opposition to the Buckhorn component which has prevented past efforts from moving forward, as well as an inability for this project to assist EBMUD in partnering with other agencies to jointly resolve water supply issues and needs also prevent this portfolio from fully satisfying the WSMP 2040 objectives. Portfolio C involves a higher rationing goal, which could result in greater economic burden to EBMUD customers, as well as physical impacts to landscapes overall, based on policy considerations, environmental considerations, and a failure to fully satisfy WSMP 2040 objectives, the Board has determined not to go forward with Portfolio C.

Alternative Portfolio D: Lower Carbon Footprint.

The components of Portfolio D which emphasizes water production through projects and facilities having the lowest carbon footprint are described in Table 3-11 of the DEIR, p. 3-45. This portfolio does not include the higher level of recycled water.

The Board of Directors hereby rejects Alternative Portfolio D because it does not provide compelling environmental, economic, social or other benefits beyond those of the WSMP 2040 Portfolio, and fails to meet one or more WSMP 2040 project objectives to the levels achieved under the WSMP 2040 Portfolio.

Portfolio D seeks to reduce energy consumption and greenhouse gas emissions and includes only a Mokelumne River source of supplemental supply and Bayside Groundwater Phase 2. The Portfolio places heavy reliance on permitting, constructing, and filling an Enlarge Pardee Reservoir by 2020 in order to ensure that sufficient water can be available in dry years, thus relying on a component that EBMUD has removed from the Preferred WSMP 2040 Portfolio of policies and potential supplemental supply projects. Portfolio D does not meet the objective of *Minimizing the vulnerability and risk of disruptions* because of its reliance on water from Pardee Reservoir, and the risks of service disruption for water crossing the Delta, as well as the emphasis on Bayside Groundwater Phase 2 to meet any short-tem need until the Enlarge Pardee Reservoir component can come online. The portfolio would still result in all of the identified potential impacts associated with Bayside Groundwater Phase 2 and the Enlarge Pardee Reservoir component, which is not recommended for inclusion in the WSMP 2040. The Portfolio also fails to meet the objectives of *Minimizing institutional and legal complexities and barriers* and *Maximizing regional partnerships and regional solutions* because it fails to provide for the components that have a higher carbon usage, but are less complex and can be implemented with fewer institutional and legal complexities. It also eliminates certain components, including the Regional Desalination Project which would allow EBMUD to partner with other Bay Area interests to develop a project with benefits to several Bay Area communities

Alternative Portfolio E: Recycled Water and Water Transfers.

The components of Portfolio E which emphasizes water production through recycled water and water transfers are described in Table 3-13 of the DEIR, p. 3-48. Unlike the WSMP 2040 Portfolio, this portfolio includes the lower level of 37 mgd of water savings from conservation.

The Board of Directors hereby rejects Alternative Portfolio E because it does not provide compelling environmental, economic, social or other benefits beyond those of the WSMP 2040 Portfolio, and fails to meet one or more WSMP 2040 project objectives to the levels achieved under the WSMP 2040 Portfolio.

Alternative Portfolio E does not meet the objectives of *Minimizing vulnerability to risk of disruptions* and *Minimize institutional and legal complexities and barriers* in part because of its lower conservation goal than that of the WSMP 2040 Portfolio. More importantly, the portfolio places a greater reliance on water transfers, eliminating the Upcountry projects and other opportunities to undertake a regional project in the Bay Area. While water transfers and recycled water can be scaled to match need, each could be difficult to implement fully in a timely manner and alternative water supply options are necessary to satisfy the WSMP 2040 objectives. Overall, because of the significantly lower degree of flexibility and associated ability to ensure that demand could be timely met, owing to the lack of a diverse set of optional supply components, the portfolio was determined to be less able to meet the WSMP 2040 objectives.

5.3 Environmentally Superior Alternative

The Board hereby finds that while Portfolios A, D and E are environmentally superior to the Alternative Portfolios B and C, each of these portfolios has different environmental benefits and impacts that cannot be quantified for this program-level assessment and none is clearly environmentally superior to the WSMP 2040 Portfolio. Portfolio D, Lower Carbon Footprint, is considered to be the Environmentally Superior Alternative because it would generate hydroelectric power and would thus offset greenhouse gas emissions from other component sources. Portfolio D would also avoid the relatively high energy requirements associated with groundwater banking and water transfers. Portfolio D, however, would not avoid any environmental impacts associated with Bayside Groundwater Phase 2 or the Enlarge Pardee Reservoir component, which is now recommended to be removed from the Preferred WSMP 2040 Portfolio of policies and potential supplemental supply projects, and because it would require a higher level of rationing, this portfolio would also have the potential to result in adverse impacts that could result from severe water shortages.

6.0 Statement of Overriding Considerations

CEQA requires the lead agency to balance the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the proposed project. The lead agency may decide to accept significant and unavoidable adverse environmental effects if the specific economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, adverse effects. (CEQA Guidelines Section 15093.)

As set forth in Section 4.1 of this Exhibit A, at the program level there are ten potentially significant and unavoidable adverse environmental effects of the WSMP 2040:

- Impacts to Sacramento and Delta downstream water users (Impact 5.2.A-9) for the Sacramento Basin Groundwater Banking/Exchange and San Joaquin Groundwater Banking/Exchange components;
- Reduction of agricultural productivity and conversion of farmland to non-agricultural uses (Impact 5.2.D-1) for the Northern California Water Transfers component;

- Violation of an air quality standard or substantial contribution to an existing or projected air quality violation (Impact 5.2.F-2) for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options;
- Cumulatively considerable net increase of criteria pollutants for which the region is in nonattainment under an applicable national or State ambient air quality standard (Impact 5.2.F-3) for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options;
- Potential exposure of sensitive receptors to substantial pollutant concentrations (Impact 5.2.F-4) for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options;
- Potential to generate short-term and temporary greenhouse gas (GHG) emissions during construction of the proposed project (Impact 5.2.F-7) for the Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options;
- Exposure of sensitive receptors to noise levels in excess of the applicable noise standards and/or result in a noticeable increase in ambient noise levels from short-term construction activities (Impact 5.2.G-1) for the Recycled Water, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options;
- Exposure of noise-sensitive receptors to noise levels in excess of the applicable noise standards and/or result in a noticeable increase in ambient noise levels from long-term operational activities (Impact 5.2.G-2) for the Recycled Water, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Future Expansion Options;
- Exposure of sensitive receptors to excessive ground-borne vibration levels from construction activity (Impact 5.2.G-4) for the Recycled Water, Northern California Water Transfers, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, Enlarge Lower Bear Reservoir, San Joaquin Groundwater Banking and Exchange components, and Los

Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options;

- Adversely affect the existing visual character and scenic vistas or resources at project venues (Impact 5.2.I-1) for the Northern California Water Transfers, Enlarge Lower Bear Reservoir components;
- Disproportionate impact to densely populated minority and low income communities (Impact 5.2.L-1) for the Recycled Water, Bayside Groundwater Project Phase 2, Sacramento Basin Groundwater Banking and Exchange, Regional Desalination, San Joaquin Groundwater Banking and Exchange components, and Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Future Expansion Options.

It is not feasible at this programmatic level of review and analysis to develop effective mitigation measures for these impacts. At the project-level, however, when more specific information is available with regard to project design, EBMUD will seek to avoid or mitigate these impacts to the extent feasible.

The Board hereby finds that the following economic, legal, social, technological, or other benefits of the WSMP 2040 Portfolio override and outweigh the significant and unavoidable adverse environmental effects described above, and makes this statement of overriding considerations to support its action to approve the WSMP 2040.

In addition to accounting for the increase in water demand through 2040 by other water agencies holding senior rights to water supply from the Mokelumne River, EBMUD has forecast the increase in demand that is expected within EBMUD's service area, and has assessed the potential impacts of climate change on watershed yield and customer demand. These variables will likely further limit EBMUD's ability to rely upon existing water sources during drought conditions. Because there will be an additional need for water in dry years, the WSMP 2040 identifies new supplies that would supplement, but not replace, EBMUD's existing water rights and supply from the Mokelumne River.

Particular benefits of the WSMP 2040 Portfolio include:

1. Ensuring that EBMUD is Prepared to Address Future Water Supply Uncertainties. Because it offers a flexible and diverse portfolio of water supply programs and projects, the WSMP 2040 Portfolio is designed to respond with the most flexibility to an uncertain water future. Even in the absence of other factors that are anticipated to affect water supply reliability, conservation and recycled water programs alone would not be sufficient to meet year 2040 service area demands during a prolonged drought. Supplemental water sources, beyond those already planned or constructed under EBMUD's 1993 WSMP must be developed to ensure reliability during a multiple-year drought event. The flexibility provided by the WSMP 2040 Portfolio is particularly important, given that the supplemental supply and recycled water components take considerable time to plan, design, permit and construct, and that during this time, Bay Area population is expected to increase and even with aggressive demand management, it is expected that additional supplies will be

needed. The broad mix of components, the scalability of several of the components, and the ability to adjust implementation schedules for a particular component to respond to short-term influences on demand and other factors and to help to minimize the risks associated with the uncertainties and development lead time issues identified in WSMP 2040.

There are significant social, environmental, and health and safety benefits from the WSMP 2040 Portfolio included in the WSMP 2040, as revised. EBMUD would achieve an additional conservation water savings of 39 MGD between 2010 and 2040, for a projected year 2040 conservation savings of 62 MGD (1993 – 2040). EBMUD would also increase the amount of recycled water available for non-potable use by an additional 11 MGD between the year 2010 and 2040;

The additional supplemental supply components include water transfers, groundwater banking/exchanges, cooperative development of a regional desalination plant, and increasing surface water supply options, and by having each of these as part of EBMUD's future water supply planning, EBMUD can ensure that it has a portfolio of options that can be scaled, adjusted, and timed as appropriate to meet water supply needs.

2. Ensuring That Projected Increases in Water Demand Can Be Met During Droughts. The WSMP 2040 Portfolio is designed to meet projected increases in customer demand. Customer demand, adjusted for the future success of conservation and recycled water programs, is projected to increase from 214 MGD (2005) to 230 MGD (2040). EBMUD's water supplies are estimated to be sufficient during this period in normal and wet years. The primary purpose of WSMP 2040 is to identify and recommend solutions to ensure that projected increases in water demand can be met in dry years. The WSMP 2040 continues and expands demand management programs and will continue EBMUD's policy of seeking even greater reductions during droughts. By providing a plan to meet demand, the WSMP 2040 Portfolio provides a legal benefit by assisting EBMUD in meeting its legal mandate, provides health and safety benefits to EBMUD's customers and other uses, including firefighting, within the service area, and provides economic benefits to the area economy.

3. Promoting Regional Solutions to Future Water Supply Development. Several of the WSMP 2040 Portfolio components require regional partnerships for implementation:
   - The Northern California Water Transfer component (potential yield of 13 MGD) of necessity requires a transferring entity in the Sacramento Valley or a partner with water supplies that originate north of the Sacramento Delta. While EBMUD derives the benefit of new short-term or extended-term water supplies, the transferring entity would obtain funds from the sale proceeds to undertake local water supply improvement projects, or they may receive direct participation from EBMUD in developing those facilities.

- Sacramento Basin Groundwater Banking / Exchange (potential yield of 4.2 MGD to EBMUD) would require the cooperation of Sacramento area interests to jointly develop in-lieu or artificial groundwater recharge and recovery.
- The San Joaquin Groundwater Banking/Exchange component as considered by the Mokelumne River Forum at the time that WSMP 2040 was published in 2009 could utilize Amador and Calaveras County water rights as a source, EBMUD's Mokelumne River facilities for conveyance, and San Joaquin County's groundwater basin for storage.
- The reservoir enlargement subcomponent of the WSMP 2040 Portfolio's Regional Upcountry component could provide water to EBMUD and potentially to partners in Amador, Calaveras and San Joaquin County.
- Regional Desalination is envisioned as a partnership of EBMUD, Santa Clara Valley Water District, the San Francisco Public Utilities Commission, and Contra Costa Water District.

These opportunities for regional collaboration would provide legal benefits to EBMUD by helping to resolve disputes over resources. They could also benefit possible partners by helping to resolve their supply needs in a cost effective manner.

4. Enhancing Water Supply Reliability Under Emergency Conditions. EBMUD's raw water delivery system is considered sufficiently reliable under normal operating conditions and is expected to withstand damage from most seismic events such that operation would continue at reduced levels. However, significant concerns remain for those parts of the system in the Delta region, due to the potential for levee failure and flooding. The effects of climatic variability and sea level rise also threaten the stability of Delta levees and thereby place EBMUD's aqueducts at risk. By including local projects, particularly the Bayside Groundwater Project Phase 2 component, which allows EBMUD to draw upon local groundwater supplies under emergency circumstances, as well as aggressive demand management and a Regional Desalination Project, the WSMP 2040 meets certain health and safety goals established by EBMUD and provides further economic certainty. The broad portfolio also provides the health and safety benefit of ensuring that sufficient emergencies supplies can be available to draw upon during an emergency.

5. Providing a Strategic Approach to Planning for Climate Change. EBMUD recognizes the vulnerability inherent in its reliance upon the Mokelumne River. As part of the WSMP 2040 planning process, EBMUD conducted a sensitivity analysis using historical hydrology to evaluate the effects of climate change and related drought conditions upon its water supply system. For purposes of that analysis, EBMUD assumed an increase in average daily temperatures of 4 degrees centigrade by 2040, and a 20 percent decrease in precipitation during the same period. These and other factors were applied through modeling to test the current water supply. The results revealed that EBMUD is most vulnerable to decreases in annual runoff volumes in the Mokelumne basin of 20 percent or more. Additional storage, combined with source diversity, offer the greatest degree of flexibility and success in adapting to the most likely affects of long-term climate change. Overall, this planning for climate

change, coupled with the selection of certain components having a low carbon footprint, provides environmental benefits and assists in reacting to the uncertainties resulting from projected climate change.

6. Setting forth a mix of projects with an inherent scalability and ability to adjust to implementation issues. There are distinct legal, economic and technological advantages to having a mix of programs and policies to provide for future needs, as is done in the WSMP 2040 Portfolio. Most notably, this ensures that the plan can be responsive to changes in demand and variations in the future. The WSMP 2040 Portfolio has the advantage of being flexible and anticipates that the components that are most feasible and environmentally responsible will be developed first, as influenced by funding availability, political influences, legal and institutional hurdles, and technical issues.

The collective value of these economic, legal, social, technological, service-related, and health and safety benefits outweigh the identified potentially significant and unavoidable adverse environmental effects of the WSMP 2040 Portfolio components.

7.0 Findings Related to Potential Growth Inducing Impacts

Potentially Significant Impact 7-1: Growth in excess of that which has been assumed in land use plans, to provide infrastructure to accommodate growth beyond plans, to remove an obstacle to growth or be inconsistent with general plan policies concerning growth.

Findings: Less-than-significant impact; no mitigation required (DEIR pg. 7-6).

Facts in Support of Finding: CEQA Guidelines section 15126.2(d) requires the lead agency to discuss the growth-inducing impacts of the proposed project. As analyzed DEIR Chapter 7, the WSMP 2040 Portfolio is designed to increase EBMUD's supplemental dry-year water supply to satisfy existing growth projections within EBMUD's service area, and is not intended to support unplanned growth. The WSMP 2040 Portfolio components would provide additional water in dry years, and would not increase the average annual supply. For example, the Regional Desalination component would be operated primarily during dry years.

Development as proposed in the general plans within EBMUD's service area is not constrained by water supply. As shown in the WSMP 2040 Need for Water analysis (WSMP 2040 plan document, p. 4-8), there is adequate average annual supply in normal years to meet projected growth. However, supply adequacy comes into question during times of drought. Ensuring that supply is adequate to serve demand during drought periods becomes increasingly problematic over the course of the WSMP 2040 planning horizon, and is exacerbated under prolonged drought conditions. If WSMP 2040 is not implemented, economic hardship could befall the EBMUD service area during drought periods, though it is not expected that this would significantly impact the level of growth that is currently projected and reflected in local plans.

EBMUD's water demand projections are based on development allowed under the approved general plans, specific plans and policies of the cities and counties of the EBMUD service area. They were developed in consultation with community planning officials. The community general plans, specific plans and related policies have been subject to environmental review under CEQA. Accordingly, the service area communities have adopted measures to mitigate adverse impacts associated with the growth, or statements of overriding considerations for those impacts that cannot be reduced to an insignificant level. Because the WSMP 2040 planning horizon is longer than many of the adopted general plans, EBMUD consulted with staff of local land use planning agencies to identify extended growth trends beyond the general plan horizon, to year 2040.

Impact Significance: **Less than significant**

8.0 Cumulative Impacts

CEQA Guidelines Section 15355 defines a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

EBMUD conducted an investigation of the impacts of the WSMP 2040 and past, present, and probably future cumulative projects and trends expected to occur over the next 30 years. Overall, it was determined that there are not expected to be any significant cumulative impacts and further that the WSMP 2040 Portfolio's contribution to cumulative effects would not be cumulatively considerable.

The cumulative impacts analysis included an analysis of climate change and the potential to generate short-term and temporary GHG emissions during construction of each component, as well as the potential to generate emissions as a result of operations. Overall, it was determined that the WSMP 2040 could assist in contributing to emission reduction measures. The project would improve water use efficiency and possibly assist in producing low GHG-emitting energy if certain components are implemented.

Impact Significance: **Less than Significant.**

9.0 Project Selection

Although the Board of Directors finds and determines that, with the exception of the ten potentially significant and unavoidable adverse environmental effects set forth in Section 4.1 of this Exhibit A, all other potentially significant effects of the proposed WSMP 2040 will be mitigated to less-than-significant levels by the imposition of the various mitigation measures, the Board also finds that to the extent that any such impacts set forth

in Section 4.2 of this Exhibit A have any residual unavoidable impacts, such impacts are acceptable in light of the benefits provided by the project.

Based upon the PEIR and the recent revisions, as well as the Response to Comments, and the Findings contained in this Exhibit A, the Board of Directors hereby finds and determines that the WSMP 2040 Portfolio as recently revised should be approved.

W:\600\610\610.01\WSMP 2040\Revisions to EIR\Findings and Reso drafts\DRAFT WSMP Revised PEIR Exhibit A Findings 4-17-12.rtf

EXHIBIT B

MITIGATION MONITORING AND REPORTING PLAN FOR THE WATER SUPPLY MANAGEMENT PROGRAM 2040 (WSMP 2040)

INTRODUCTION

This exhibit provides a brief description of the mitigation measures that have been identified to address the potentially significant impacts of EBMUD's Water Supply Management Program 2040. Implementation of these mitigation measures will allow identified impacts to be reduced to a less than significant level.

The mitigation strategies described below are for impacts evaluated and identified at a program-level decision and are to be used to avoid, minimize, or reduce any potentially significant impacts at this programmatic level. At this program level of planning, EBMUD is responsible for tracking the mitigation and incorporating it into future studies that it undertakes in relation to the implementation of identified supplemental water supply projects. Project-specific activities will undergo future environmental analysis as required by CEQA. As part of these subsequent environmental reviews, EBMUD will use the mitigation strategies identified in this program document as starting points to determine their applicability to each project component and to develop additional mitigation measures for significant adverse impacts identified in the project-specific analysis.

Potentially significant impacts were identified in the 2009 Final Program Environmental Impact Report (PEIR) and Revised PEIR for WSMP 2040. The table below presents the mitigation measures as adopted by EBMUD which reduce corresponding potentially significant impacts to a less than significant level. The table that forms the bulk of this exhibit constitutes the Mitigation Monitoring and Reporting Plan (MMRP) for WSMP 2040.

The MMRP is presented in a tabular format. Although the table includes a summary of the potential significant impact, the full text of the impact is presented in the Revised PEIR. Further, although mitigation measures are described in the table, they are also detailed in the 2009 PEIR and Revised PEIR. There were cases where certain impacts are not associated with each and every WSMP 2040 Preferred Portfolio component. Information provided in the first column of the table allows the reader to distinguish those instances. If an impact was viewed as not significant, or if at the program level of analysis suitable mitigation was not identified, that particular impact was not included in the MMRP.

The columns in the table provide the following information:

- **Impact and Applicable Components:** The first column provides information detailing the potential impact as identified for one or more components of the Preferred Portfolio;

- **PEIR Page:** The second column provides the Draft PEIR and Revised Draft PEIR page number where the potential impact is discussed;
- **Mitigation Measure**: The third column provides the mitigation measure that when implemented would result in a potential significant impact to become less than significant;
- **PEIR Page**: The fourth column provides the Draft PEIR and Revised Draft PEIR page number where the mitigation measure is discussed; and
- **Mitigation and Monitoring Tasks**: The fifth column provides the mitigation and monitoring task(s) that are associated with a particular impact.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Hydrology, Groundwater and Water Quality				
Impact 5.2.A-1: Potential to degrade water quality from construction. *Impact 5.2.A-1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.A-2 and 2011 Revised DEIR p. 7-33	**Mitigation Measure 5.2.A-1a.** Comply with State NPDES general construction permit.	2009 DEIR p. 5.2.A-4	1) EBMUD Contractor(s) shall file a Notice of Intent with the appropriate local Regional Water Quality Control Board (RWQCB) indicating compliance with the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity. 2) EBMD Contractor(s) shall prepare and implement a Storm Water Pollution Prevention Plan outlining Best Management Practices (BMPs) for construction/post-construction activities. BMPs shall include measures to control the contribution of pollutants to storm water runoff from construction areas. 3) EBMUD shall perform routine inspections of the construction areas to verify that the BMPs specified in the SWPPP are properly implemented and maintained. EBMUD shall notify its contractors of noncompliance.
		Mitigation Measure 5.2.A-1b: Use proper well installation methodologies.	2009 DEIR p. 5.2.A-5	1) EBMUD and/or its contractors shall thoroughly decontaminate all drilling and well development equipment and soil/water quality sampling equipment. 2) In situations where surface and/or shallow soil contamination is expected, contractor shall install conductor casing to prevent the downward migration of contaminants. 3) EBMUD and/or its contractors shall install all wells with sanitary seals to prevent the possibility of cross-contamination via the direct introduction of contaminants.
Impact 5.2.A-2: Potential to degrade water quality from waste discharge. *Impact 5.2.A-2 is potentially significant for the following Preferred Portfolio component:* ▪ *Regional Desalination*	2009 DEIR p. 5.2.A-6	**Mitigation Measure 5.2.A-2:** Conduct modeling and incorporate the results into the design for the Regional Desalination component.	2009 DEIR p. 5.2.A-6	1) EBMUD and its partners shall conduct numerical hydrodynamic modeling to evaluate the variables affecting salinity and to provide input to a plant outfall design that minimizes impacts to receiving waters.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Impact 5.2.A-4: Potential to degrade groundwater and drinking water quality from the direct introduction of non-local water into native groundwater basins. *Impact 5.2.A-4 is potentially significant for the following Preferred Portfolio components:* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR p. 5.2.A-13	**Mitigation Measure 5.2.A-4:** Implement a groundwater monitoring program.	2009 DEIR p. 5.2.A-14	1) EBMUD and its project partners shall establish project-specific groundwater monitoring well networks and implement comprehensive groundwater monitoring programs to establish the pre-project conditions of groundwater basins and to monitor the impact of operations on groundwater levels and water quality and respond accordingly. 2) EBMUD will develop and conduct monitoring programs that specify water quality sampling frequency, parameters, protocols and response actions in accordance with State and Federal regulatory requirements such as those under the jurisdiction of DPH and the RWQCB.
Impact 5.2.A-5: Potential for saltwater intrusion from the operation of groundwater wells. *Impact 5.2.A-5 is potentially significant for the following Preferred Portfolio components:* ▪ *Bayside Groundwater Phase 2;* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.A-14	**Mitigation Measure 5.2.A-5:** Use numerical modeling to properly design the groundwater storage and extraction project such that the potential saltwater intrusion impact caused by the project is less than significant.	2009 DEIR p. 5.2.A-15	1) EBMUD and its partners shall conduct numerical hydrodynamic modeling to evaluate the variables affecting saltwater intrusion and design storage and extraction parameters to minimize this impact.
Impact 5.2.A-6: Potential effects on groundwater supplies and production of existing wells from recharge and/or extraction operations. *Impact 5.2.A-6 is potentially significant for the following Preferred Portfolio components:* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange; and* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.A-15	**Mitigation Measure 5.2.A-6a:** Inventory existing wells.	2009 DEIR, p. 5.2.A-16	1) EBMUD and its project partners shall inventory existing wells within the areas of the affected basins where studies indicate that drawdown effects could be observed and/or where water levels could rise above the ground surface in response to injections. The inventory shall include collection of information regarding existing use, screened intervals, total depth and depth of pump. 2) EBMUD will use the information collected to predict drawdown and drawup at each well location, and identify wells that could be affected by groundwater recharge and extraction operations.
		Mitigation Measure	2009 DEIR,	1) EBMUD and its project partners shall

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
		5.2.A-6b: Monitor wells and modify groundwater operations.	p. 5.2.A-16	regularly monitor water levels in key zones that could experience flowing conditions, or be rendered inoperable due to change in water levels from EBMUD and its partner's groundwater operations. 2) EBMUD and its partners shall use the Information from monitoring to decrease or suspend injection/extraction, or modify the affected wells (e.g., install pressure-resistant well caps, reset pumps). Groundwater operations shall be modified until adverse effects to existing wells have been addressed.
		Mitigation Measure 5.2.A-6c: Destroy abandoned or inactive wells.	2009 DEIR, p. 5.2.A-16	1) EBMUD shall work with the property owners to destroy abandoned or inactive wells in areas where water levels rise above the ground surface or where a potential conduit for contamination migration could occur as a result of project groundwater operations.
Impact 5.2.A-7: Potential alteration of the existing drainage pattern or contribution to existing local or regional flooding. *Impact 5.2.A-7 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR, p. 5.2.A-16 and 2011 Revised DEIR p. 7-34	**Mitigation Measure 5.2.A-7:** Comply with NPDES general construction permit requirements including preparation and implementation of an SWPPP with Best Management Practices for control of storm water runoff.	2009 DEIR, p. 5.2.A-17	1) EBMUD Contractor(s) shall file a Notice of Intent with the appropriate local Regional Water Quality Control Board (RWQCB) indicating compliance with the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity. 2) EBMUD Contractor(s) shall prepare and implement a Storm Water Pollution Prevention Plan outlining Best Management Practices (BMPs) for construction/post-construction activities. BMPs shall include measures to control the contribution of pollutants to storm water runoff from construction areas. 3) EBMUD shall perform routine inspections of the construction areas to verify that the BMPs specified in the SWPPP are properly implemented and maintained. EBMUD shall notify its contractors of noncompliance.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Impact 5.2.A-8: Potential permanent land subsidence from groundwater withdrawals. *Impact 5.2.A-8 is potentially significant for the following Preferred Portfolio components:* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.A-17	**Mitigation Measure 5.2.A-8a**: Monitor for permanent land subsidence and implement corrective actions as necessary. *Mitigation Measure 5.2.A-8a applies to Bayside Groundwater Project Phase 2.*	2009 DEIR, p. 5.2.A-19	1) EBMUD shall implement corrective actions, such as reducing pumping rates or ceasing extractions, if inelastic subsidence is detected. 2) EBMUD shall modify groundwater operations until the subsidence conditions have been fully evaluated and actions are taken to prevent further non-recoverable subsidence.
		Mitigation Measure 5.2.A-8b: Monitor for permanent land subsidence and implement corrective actions as necessary. *Mitigation Measure 5.2.A-8b applies to Northern California Water Transfers; Sacramento Basin Groundwater Banking / Exchange; and IRCUP / San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.A-19	1) EBMUD shall be coordinate with statewide monitoring programs for land subsidence. Monitoring shall be implemented incrementally to allow observations of the groundwater basin's response to project operations. 2) If inelastic subsidence is detected, EBMUD and its project partners shall implement corrective actions, such as reducing pumping rates or ceasing extractions.
Impact 5.2.A-10: Potential effects on other intakes and outfalls from operation of the Regional Desalination component intake. *Impact 5.2.A-10 is potentially significant for the following Preferred Portfolio component:* ▪ *Regional Desalination*	2009 DEIR, p. 5.2.A-21	**Mitigation Measure 5.2.A-10**: Conduct modeling and incorporate the results into the design for the Regional Desalination component.	2009 DEIR, p. 5.2.A-22	1) EBMUD and its partners shall conduct numerical modeling of local intakes and outfalls within a certain distance from the facility that may affect, or be affected by, the project in terms of hydraulics and water quality. 2) EBMUD and its partners shall incorporate modeling results in project design
Impact 5.2.A-11: Potential changes in Mokelumne River basin hydrologic conditions from enlarged Pardee and Lower Bear Reservoirs.	2009 DEIR, p. 5.2.A-22	**Mitigation Measure 5.2.A-11**: Modify reservoir operations.	2009 DEIR, p. 5.2.A-23	1) EBMUD (and in the case of the Enlarge Lower Bear Reservoir component, its project partners) shall modify and manage reservoir operations to meet Joint Settlement

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Impact 5.2.A-11 is potentially significant for the following Preferred Portfolio components: ▪ *Enlarge Lower Bear Reservoir*				Agreement commitments (JSA flow requirements as established in the agreement) and as needed any flow to meet downstream obligations.
Geology, Soils and Seismicity				
Impact 5.2.B-1: Potential exposure of people or structures to geologic and seismic hazards. *Impact 5.2.B-1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR, p. 5.2.B-2 and 2011 Revised DEIR p. 7-35	**Mitigation Measure 5.2.B-1a:** Complete project-specific geologic and geotechnical studies and implement recommendations.	2009 DEIR, p. 5.2.B-3	1) EBMUD shall retain California-licensed geologists and / or geotechnical engineers to identify the presence of geologic and seismic hazards or conditions including risk of fault rupture, soft-ground conditions, slope stability and landslides, strong seismic shaking, liquefaction and lateral spreading, settlement, and corrosive or expansive soil. 2) Identify corrective actions to avoid the hazard or support the design of engineering control measures. 3) Document the investigations and detail the specific design support alternatives and protection measures that will be implemented.
		Mitigation Measure 5.2.B-1b: Update the EBMUD earthquake preparedness and emergency response program.	2009 DEIR, p. 5.2.B-4	1) EBMUD shall update its earthquake preparedness and emergency response program to include new facilities.
Impact 5.2.B-2: Potential erosion and loss of topsoil during construction. *Impact 5.2.B-2 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;*	2009 DEIR, p. 5.2.B-4 and 2011 Revised DEIR p. 7-36	**Mitigation Measure 5.2.B-2.** Comply with NPDES general construction permit Best Management Practices.	2009 DEIR p. 5.2.B-4	1) Contractor(s) shall file a Notice of Intent with the appropriate local Regional Water Quality Control Board (RWQCB) indicating compliance with the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity. 2) Contractor(s) shall prepare and

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*				implement a Storm Water Pollution Prevention Plan outlining Best Management Practices (BMPs) for construction/post-construction activities. BMPs shall include measures to control the contribution of pollutants to storm water runoff from construction areas. 3) EBMUD shall perform routine inspections of the construction areas to verify that the BMPs specified in the SWPPP are properly implemented and maintained. EBMUD shall notify its contractors of noncompliance.
Biological Resources				
Impact 5.2.C-1: Potential temporary and permanent impacts to sensitive natural communities, wetlands or waters under the jurisdiction of the US Army Corps of Engineers (USACE) and the State of California. *Impact 5.2.C-1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir; and* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.C-2	**Mitigation Measure 5.2.C-1a:** Conduct wetlands determination.	2009 DEIR, p. 5.2.C-2	1) EBMUD shall retain a qualified biologist to conduct a jurisdictional determination according to USACE guidelines prior to implementation of any component where wetlands and/or waters of the U.S. may be present. Waters of the State as defined under CDFG Code, the Porter Cologne Act and Section 401 of the Clean Water Act shall also be delineated. 2) Submit findings to the USACE for verification and to assess potential impacts. 3) Review local plans and policies regarding wetland buffers and incorporate into the project design to the extent feasible. 4) Design and construct the project to avoid and minimize adverse effects to waters of the United States or jurisdictional waters of the State of California within the project area.
		Mitigation Measure 5.2.C-1b: Acquire permits and implement all permit conditions.	2009 DEIR, p. 5.2.C-3	1) For impacts to jurisdictional wetlands and waters that cannot be avoided, obtain: ▪ Section 404 permit from the USACE ▪ Section 401 certification of

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
				waste discharge requirements for fill of jurisdictional wetlands from the RWQCB ▪ Section 1600 Streambed Alteration Agreement from the CDFG 2) Verify conformance with USACE "no-net-loss" policy for impacts to jurisdictional waters.
Impact 5.2.C-2: Potential temporary disturbance to, or permanent loss of special-status plant species, sensitive plant communities, or protected trees. *Impact 5.2.C-2 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs; and* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.C-3	**Mitigation Measure 5.2.C-2a:** Conduct habitat assessment.	2009 DEIR, p. 5.2.C-5	1) EBMUD shall retain a qualified botanist to determine the potential for special-status plants species to occur at a project venue. 2) If suitable habitat is found within the project area, EBMUD shall have a qualified botanist conduct surveys for special-status plants during the appropriate blooming period for each detected species (over at least one season).
		Mitigation Measure 5.2.C-2b: Delineate special-status plant species and sensitive plant communities.	2009 DEIR, p. 5.2.C-5	1) EBMUD shall retain a qualified botanist to determine the potential for sensitive natural communities to occur at a project venue. 2) Sensitive natural communities identified within the project area shall be delineated.
		Mitigation Measure 5.2.C-2c: Conduct tree survey.	2009 DEIR, p. 5.2.C-5	1) EBMUD shall retain a certified arborist to conduct a tree survey to determine if protected and/or heritage trees are present within the project area.
		Mitigation Measure 5.2.C-2d: Design and construct facilities to avoid and/or minimize impacts.	2009 DEIR, p. 5.2.C-5	1) EBMUD shall avoid special-status plant species and sensitive plant communities and protect heritage trees at a project venue, to the extent feasible.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
		Mitigation Measure 5.2.C-2e: Consult regulatory agencies and comply with their requirements.	2009 DEIR, p. 5.2.C-5	1) If avoidance of special-status plant species and communities is not feasible, EBMUD shall: – Replace with native and/or special-status plant species by means of harvesting and relocation of plants or seed, which shall be permanently preserved either in the project area, or at an equivalent off site location; – Prepare a detailed plan for habitat creation/ enhancement and guidance on managing and monitoring the replacement specimens
Impact 5.2.C-3: Potential disturbance to or loss of special status invertebrates or their habitats. *Impact 5.2.C-3 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir; and* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.C-6	**Mitigation Measure 5.2.C-3a:** Conduct habitat assessment.	2009 DEIR, p. 5.2.C-6	1) EBMUD shall retain a qualified biologist to determine potential for special-status invertebrate species to occur. 2) EBMUD shall have a qualified biologist conduct a habitat assessment prior to implementation of a project where special-status invertebrates may be present.
		Mitigation Measure 5.2.C-3b: Conduct focused surveys for special-status invertebrates.	2009 DEIR, p. 5.2.C-7	1) EBMUD shall retain a qualified biologist to conduct focused surveys to determine the presence of special-status invertebrates, according to USFWS or CDFG protocols.
		Mitigation Measure 5.2.C-3c: Avoid occupied habitat for special-status invertebrates or implement measures to minimize impacts.	2009 DEIR, p. 5.2.C-7	1) If avoidance of special-status invertebrate species and communities is not feasible, EBMUD shall: – Replace habitat at a location approved by the appropriate jurisdictional agency which may include the CEQA lead agency;

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
				– Prepare mitigation and monitoring requirements, and performance standards for habitat preserved or acquired for special-status invertebrates; – Participation in an in-lieu fee program, purchase of the required acreage in an approved mitigation bank, or implementation of an HCP.
<u>Impact 5.2.C-4</u>: Potential disturbance to or loss of special-status reptiles and amphibians, and their habitat. *Impact 5.2.C-4 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR, p. 5.2.C-7 and 2011 Revised DEIR p. 7-37	**Mitigation Measure 5.2.C-4a:** Conduct habitat assessment.	2009 DEIR, p. 5.2.C-8	1) EBMUD shall retain a qualified biologist to determine potential for special-status reptile and amphibian species to occur. 2) EBMUD shall have the qualified biologist conduct a habitat assessment prior to implementation of a project where special-status reptile and amphibian species may be present.
		Mitigation Measure 5.2.C-4b: Conduct pre-construction surveys.	2009 DEIR, p. 5.2.C-8	1) EBMUD shall retain a qualified biologist to conduct focused surveys to determine the presence of special-status reptile and amphibian species according to USFWS or CDFG protocols.
		Mitigation Measure 5.2.C-4c: Avoid critical habitat and areas with special-status reptiles and amphibians, or	2009 DEIR, p. 5.2.C-8	1) If avoidance of special-status amphibian and reptile species and communities is not feasible, EBMUD shall consult with USFWS and/or CDFG to determine and implement

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
		implement measures to minimize impacts.		appropriate mitigation.
Impact 5.2.C-5: Potential disturbance to or loss of nesting birds. *Impact 5.2.C-5 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR, p. 5.2.C-9 and 2011 Revised DEIR p. 7-38	**Mitigation Measure 5.2.C-5a:** Conduct habitat assessment and surveys.	2009 DEIR, p. 5.2.C-10	1) EBMUD shall retain a qualified biologist to conduct a habitat assessment for birds protected under the FESA including California clapper rail, California least tern, and western snowy plover. 2) If potential habitat is present, EBMUD shall have the qualified biologist consult with the USFWS and conduct a habitat assessment and focused surveys for the western burrowing owl. If burrowing owl habitat or burrowing owls are detected, EBMUD will develop mitigation measures per CDFG guidelines. 3) EBMUD shall have the qualified biologist conduct a nesting bird survey prior to construction activities that will occur during the nesting season, if nesting birds are known or expected to be present at the construction venue.
		Mitigation Measure 5.2.C-5b: Avoid construction during nesting season or conduct additional surveys.	2009 DEIR, p. 5.2.C-10	1) EBMUD shall retain a qualified biologist to conduct a nesting bird survey prior to the removal or disturbance of a potential nesting venue, or the initiation of other construction activities. 2) The biologist shall inspect potential nesting habitat (trees, shrubs, structures, grasslands, pastures, emergent aquatic vegetation, etc.) within 250 feet of the impact areas for nests, to the extent feasible. 3) EBMUD shall repeat the survey if construction is phased or if construction activities lapse for more than 14 days.
		Mitigation Measure 5.2.C-5c: Establish a buffer zone around nests during	2009 DEIR, p. 5.2.C-11	1) EBMUD shall direct its qualified biologist to flag vegetation and structures with active nests, and establish an appropriate non-

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
		construction.		disturbance buffer zone around the nest site. 2) Conduct pre-construction training to ensure that disturbance to nest sites and buffer zones are avoided.
		Mitigation Measure 5.2.C-5d: Monitor active nests for bird activity.	2009 DEIR, p. 5.2.C-11	1) EBMUD's qualified biologist shall monitor active nests to determine when the young have fledged, and determine when construction activities may resume in the vicinity of active nests.
Impact 5.2.C-6: Potential disturbance to or loss of special-status bat species and roosting habitat. *Impact 5.2.C-6 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR, p. 5.2.C-11 and 2011 Revised DEIR p. 7-39	**Mitigation Measure 5.2.C-6a:** Conduct pre-construction surveys.	2009 DEIR, p. 5.2.C-12	1) EBMUD shall retain a qualified biologist to conduct a pre-construction survey for roosting bats 30 days prior to removal of trees or structures at the construction venue. 2) Install an exclusion device to prevent bats from occupying the site during the post survey period if the roost has a history of bat use. 3) If a maternity roost or hibernacula is present, implement mitigation measures 5.2.C-6b through d.
		Mitigation Measure 5.2.C-6b: Avoid active maternity roosts.	2009 DEIR, p. 5.2.C-12	1) EMBUD shall, to the extent feasible, redesign the component to avoid the loss of the tree or structure occupied by an active maternity roost or hibernacula. 2) If the project cannot be redesigned to avoid removal of an active maternity roost, schedule demolition before maternity colonies form (prior to March 1) or after young are flying (after July 31). 3) EBMUD's qualified biologist, in coordination with CDFG, shall establish a buffer zone to be observed

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
				during the maternity roost season (March 1 - July 31).
		Mitigation Measure 5.2.C-6c: Evict bats prior to demolition activities.	2009 DEIR, p. 5.2.C-12	1) EBMUD's qualified biologist shall safely evict non-breeding bat individuals scheduled for removal.
		Mitigation Measure 5.2.C-6d: Create replacement roosts.	2009 DEIR, p. 5.2.C-12	1) If special-status bats are found roosting within trees or structures that requires removal, EBMUD shall create appropriate replacement roosts at a suitable location on or off-site, in coordination with a qualified biologist and CDFG.
<u>Impact 5.2.C-7</u>: Potential disturbance to or loss of special-status mammals. *Impact 5.2.C-7 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR, p. 5.2.C-13 and 2011 Revised DEIR p. 7-40	**Mitigation Measure 5.2.C-7a**: Conduct a habitat assessment.	2009 DEIR, p. 5.2.C-13	1) EBMUD shall retain a qualified biologist to conduct a habitat assessment for special-status mammals.
		Mitigation Measure 5.2.C-7b: Conduct pre-construction surveys.	2009 DEIR, p. 5.2.C-13	1) EBMUD shall retain a qualified biologist to conduct focused surveys to determine the presence of special-status mammal species according to USFWS or CDFG protocols.
		Mitigation Measure 5.2.C-7c: Avoid special-status	2009 DEIR, p. 5.2.C-13	1) If avoidance of special-status mammal species and communities is not feasible, EBMUD shall consult with USFWS and/or CDFG to

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
		mammal habitat. If avoidance is not feasible, consult with USFWS and CDFG to determine mitigation measures.		determine and implement appropriate mitigation.
Impact 5.2.C-8: Potential loss of or impacts to fish and aquatic habitats. *Impact 5.2.C-8 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir; and* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.C-14	**Mitigation Measure 5.2.C-8a**: Comply with NPDES general construction permit Best Management Practices.	2009 DEIR, p. 5.2.C-15	1) EBMUD shall prepare and implement a Stormwater Pollution Prevention Plan according to Mitigation Measure 5.2.A-1a.
		Mitigation Measure 5.2.C-8b: Implement a spill prevention and control plan.	2009 DEIR, p. 5.2.C-15	1) EBMUD shall prepare and implement a spill prevention control and countermeasures plan in accordance with Mitigation Measure 5.2.J-1.
Impact 5.2.C-9: Potential entrainment of special-status fish into pumps/intake pipes. *Impact 5.2.C-9 is potentially significant for the following Preferred Portfolio components:* ▪ *Regional Desalination; and* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR, p. 5.2.C-15	**Mitigation Measure 5.2.C-9**: Install fish screens.	2009 DEIR, p. 5.2.C-16	1) EBMUD shall design and install fish screens at potential new diversion intake(s), consistent with CDFG and National Marine Fisheries Service specifications.
Impact 5.2.C-10: Potential reduction of surface water quality. *Impact 5.2.C-10 is potentially significant for the following Preferred Portfolio*	2009 DEIR, p. 5.2.C-16	**Mitigation Measure 5.2.C-10**: Implement a groundwater monitoring plan.	2009 DEIR, p. 5.2.C-16	1) EBMUD shall implement a monitoring plan as described in Mitigation Measure 5.2.A-4

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
components: ▪ *Recycled Water;* ▪ *Bayside Groundwater Phase 2*				
Impact 5.2.C-11: Potential disruption of downstream flow releases. *Impact 5.2.C-11 is potentially significant for the Enlarge Lower Bear Reservoir component.*	2009 DEIR, p. 5.2.C-17	**Mitigation Measure 5.2.C-11**: Develop and implement a reoperation plan.	2009 DEIR, p. 5.2.C-17	2) EBMUD shall develop and implement a reoperation plan to ensure that adequate water is available to maintain required downstream releases to during construction.
Land Use and Recreation				
Impact 5.2.D-1: Potential reduction of agricultural productivity and conversion of farmland to non-agricultural uses.	2009 DEIR, p. 5.2.D-2	**Mitigation Measure 5.2.D-1a**: Avoid siting component facilities within State-designated important farmlands.	2009 DEIR, p. 5.2.D-5	1) EBMUD shall avoid siting recharge ponds, well sites, and other facilities within State-designated farmlands. If avoidance is not possible, EBMUD shall site these facilities at the edge of existing farms to the extent possible.
Impact 5.2.D-1 is potentially significant for the following Preferred Portfolio components: ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir; and* ▪ *San Joaquin Groundwater Banking / Exchange.*		**Mitigation Measure 5.2.D-1b**: Restore agricultural lands to pre-project conditions.	2009 DEIR, p. 5.2.D-5	1) Ensure that existing drainage systems at the proposed sites that are needed for agricultural uses are functioning as necessary so that agricultural uses are not disrupted. 2) Locate construction access and staging areas on fallow ground using existing roads to access construction areas to the extent possible. 3) Perform soil density monitoring during backfill and ripping to minimize excessive compaction. Remove topsoil prior to excavation in fields and return it to avoid detrimental inversion of soil profiles. Avoid excessive compaction of trench backfill. Rip excessively compacted soils to prevent adverse compaction effects. Control compaction to minimize changes to lateral groundwater flow which could affect both irrigation and internal drainage. 4) Coordinate construction scheduling to minimize disruption of agricultural operations.
Impact 5.2.D-2: Potential impairment of recreation facilities and activities.	2009 DEIR p. 5.2.D-6 and 2011 Revised	**Mitigation Measure 5.2.D-2a**: Repair and re-open affected recreational facilities.	2009 DEIR p. 5.2.D-7	1) EBMUD shall include in project specifications the requirement for the project contractor to repair recreational facilities damaged during

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Impact 5.2.D.2 is potentially significant for the following Preferred Portfolio components: ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie and Treated Water – New Intertie Options.*	DEIR p. 7-41			construction.
	2009 DEIR p. 5.2.D-6	**Mitigation Measure 5.2.D-2b:** Replace inundated recreational features as associated with the project-specific implementation of the Enlarge Pardee and Lower Bear Reservoirs.	2009 DEIR p. 5.2.D-8	1) EBMUD shall replace recreational features displaced by enlargement of the reservoirs 2) EBMUD shall implement an operational plan as appropriate that preserves the Electra whitewater run
Transportation				
Impact 5.2.E-1: Potential reduction of the number or available width of travel lanes on roads from construction, resulting in temporary disruption of traffic flows, increases in traffic congestion, and access to adjacent land uses for both general and emergency access. *Impact 5.2.E.1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater*	2009 DEIR p. 5.2.E-2 and 2011 Revised DEIR p. 7-43	**Mitigation Measure 5.2.E-1:** Prepare and implement a traffic control plan.	2009 DEIR p. 5.2.E-3,4	1) EBMUD shall prepare and implement a detailed traffic control plan for the affected roadways and intersections for the selected pipeline alignments. 2) Submit traffic control plan for review by public works agencies with jurisdiction.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Phase 2; ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Future Expansion Options.*				
Impact 5.2.E-2: Potential short-term increases in vehicle trips during construction. *Impact 5.2.E.2 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.E-4 and 2011 Revised DEIR p. 7-45	**Mitigation Measure 5.2.E-2**: Schedule construction truck trips to avoid peak traffic hours.	2009 DEIR p. 5.2.E-6	1) EBMUD shall require in project construction specifications that contractors schedule construction-related truck trips outside of weekday AM and PM peak commute traffic hours and peak recreational periods.
Impact 5.2.E-4: Potential deterioration of roadways on designated haul routes from construction vehicles. *Impact 5.2.E.4 is potentially*	2009 DEIR p. 5.2.E-7 and 2011 Revised DEIR p. 7-46	**Mitigation Measure 5.2.E-4**: Conduct pre-construction survey of road conditions.	2009 DEIR p. 5.2.E-8	1) EBMUD shall incorporate into contract specifications a requirement to conduct pre construction surveys of road conditions on key access routes to project sites. 2) Monitor pavement conditions of local

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
significant for the following Preferred Portfolio components: ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*				streets and designated roads for use by heavy truck traffic. 3) Repair roads damaged by construction to equal or better than pre-construction condition.
Impact 5.2.E-5: Potential temporary disruption of bus service along pipeline corridors during construction. *Impact 5.2.E-5 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Untreated Water Options.*	2009 DEIR p. 5.2.E-8 and 2011 Revised DEIR p. 7-47	**Mitigation Measure 5.2.E-5**: Relocate bus stops or detour bus routes.	2009 DEIR p. 5.2.E-9	1) EBMUD shall determine the necessity of roadway closure once pipeline alignments are selected. 2) EBMUD shall coordination with the local transit provider to temporarily relocate bus stops if pipeline installation would impede access thereto. 3) If complete road closure is necessary where a bus line traverses, EBMUD shall coordinate with the local transit provide to identify detour bus routes.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Impact 5.2.E-6: Potential adverse affect on rail operations during pipeline construction. *Impact 5.2.E-6 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination; and* ▪ *San Joaquin Groundwater Banking / Exchange.*	2009 DEIR p. 5.2.E-9	**Mitigation Measure 5.2.E-6a**: Implement trenchless construction techniques.	2009 DEIR p. 5.2.E-10	1) EBMUD construction specifications shall require us of trenchless construction techniques for the crossing of railroad tracks.
		Mitigation Measure 5.2.E-6b: Coordinate with the railroad entity.	2009 DEIR p. 5.2.E-10	1) EBMUD shall coordinate with the railroad entity to determine the necessary setback from the railroad tracks for placement of the pipeline along the railroad easement.
Air Quality				
Impact 5.2.F-2: Violate an air quality standard or contribute substantially to an existing or projected air quality violation. *Impact 5.2.F-2 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;*	2009 DEIR p. 5.2.F-6 and 2011 Revised DEIR p. 7-48	**Mitigation Measure 5.2.F-2a**: Implement control measures to reduce fugitive PM_{10} dust emissions during site preparation, grading, material hauling, and other construction activities.	2009 DEIR p. 5.2.F-9	1) At the Project-Specific level, EBMUD shall prepare project-specific analysis to estimate emissions of PM_{10} fugitive dust, and identify specific dust abatement requirements of the jurisdictional air quality management district. 2) Dependent on the results of the project-specific level analysis, EBMUD's contractor shall implement actions or mitigation measures that are designed to lessen air quality impacts.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*				
		Mitigation Measure 5.2.F-2b: Implement measures to reduce exhaust emissions of ozone precursors (ROG, NO_x, PM_{10}) from heavy duty off-road construction equipment and on-road mobile sources associated with material delivery and worker commute trips.	2009 DEIR p. 5.2.F-10	1) EBMUD shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles. 2) EBMUD's contractor shall use construction equipment that complies with the requirements of the California Air Resources Board for off-road diesel vehicles. 3) EBMUD's contractor shall comply with all applicable Air District / California Air Resources Board requirements.
		Mitigation Measure 5.2.F-2c: Implement measures to reduce emissions of Criteria Air Pollutants (CAPs) and ozone precursors if such emissions would otherwise exceed the significance thresholds established by the local air district.	2009 DEIR p. 5.2.F-10	1) EBMUD shall estimate the operational emissions of CAPs, and identify and implement the specific reduction measures pursuant to the requirements of the jurisdictional air quality management district.
Impact 5.2.F-3: Potential for cumulatively considerable net increase of criteria pollutants for which the region is in nonattainment under an applicable national or state ambient air quality standard. *Impact 5.2.F-3 is potentially significant for the following Preferred Portfolio components:*	2009 DEIR p. 5.2.F-11 and 2011 Revised DEIR p. 7-49	**Mitigation Measure 5.2.F-3**: Implement Mitigation Measures 5.2.F-2a, 5.2.F-2b, and 5.2.F-2c.	2009 DEIR p. 5.2.F-12	

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*				
<u>Impact 5.2.F-4</u>: Potential exposure of sensitive receptors to substantial pollutant concentrations. *Impact 5.2.F-4 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.F-12 and 2011 Revised DEIR p. 7-50	**<u>Mitigation Measure 5.2.F-4a</u>:** Implement Mitigation Measure 5.2.F-2a.	2009 DEIR p. 5.2.F-16	

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
		Mitigation Measure 5.2.F-4b: Implement measures to reduce construction-related emissions of diesel PM exhaust from heavy-duty off-road construction equipment.	2009 DEIR p. 5.2.F-16	1) EBMUD shall stage construction equipment as far as possible from any sensitive receptors to the extent feasible. 2) EBMUD shall designate haul routes to avoid sensitive receptors to the extent feasible. 3) EBMUD shall perform a review of new technology as related to heavy equipment to determine the potential to incorporate any advances in emission reduction technology into the planned construction effort, if economically and to the extent feasible.
		Mitigation Measure 5.2.F-4c: Implement measures to prevent exposure to airborne asbestos pursuant to the requirements of the local air district and/or other local jurisdictions.	2009 DEIR p. 5.2.F-17	1) EBMUD shall determine the likelihood of exposure to airborne asbestos. 2) EBMUD shall implement precautionary measures for asbestos-containing material handling and disposal prescribed by the jurisdictional air quality management district and other regulatory agencies to prevent exposure to airborne asbestos.
Impact 5.2.F-7: Potential to generate short-term and temporary greenhouse gas (GHG) emissions during construction of the proposed project. *Impact 5.2.F-7 is potentially significant for the following Preferred Portfolio components:* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.F-6 and 2011 Revised DEIR p. 7-52	**Mitigation Measure 5.2.F-7**: Implement Mitigation Measures 5.2.F-2b, and 5.2.F-2c from Section 5.2.F Air Quality of the 2009 DEIR.	2011 DEIR p. 7-52	
Noise				

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Impact 5.2.G-1: Potential exposure of sensitive receptors to noise levels in excess of applicable noise standards, and/or a noticeable increase in ambient noise levels from short-term construction activities. *Impact 5.2.G-1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Pardee and Lower Bear Reservoirs;* ▪ *IRCUP / San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.G-2 and 2011 Revised DEIR p. 7-53	**Mitigation Measure 5.2.G-1a**: Avoid siting proposed construction activities in close proximity to noise-sensitive land uses.	2009 DEIR p. 5.2.G-2	1) EBMUD shall avoid siting construction activities in close proximity to noise-sensitive land uses. 2) If avoidance is not possible, EBMUD shall site these construction activities as far from noise-sensitive land uses as possible.
		Mitigation Measure 5.2.G-1b: Implement measures to reduce short-term construction noise levels.	2009 DEIR p. 5.2.G-5	1) EBMUD shall implement the following actions, to the extent feasible, if locating short-term construction activities in close proximity to noise-sensitive land cannot be avoided: ▪ Maintain construction equipment per manufacturers' specifications and fit with the best available noise suppression devices; ▪ Fit impact tools intake and exhaust ports with mufflers or shielding; • Comply with construction operational hours in local ordinances where activities occur near noise-sensitive receptors;

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
				• Avoid idling construction equipment for extended periods of time near noise-sensitive receptors; and • Locate fixed/stationary equipment as far as possible from noise-sensitive receptors.
Impact 5.2.G-2: Potential exposure of noise-sensitive receptors to noise levels in excess of applicable standards resulting from long-term operational activities. *Impact 5.2.G-2 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Future Expansion Options.*	2009 DEIR p. 5.2.G-6 and 2011 Revised DEIR p. 7-55	**Mitigation Measure 5.2.G-2a:** Avoid siting proposed facilities in close proximity to noise-sensitive land uses.	2009 DEIR, p. 5.2.G-7	1) EBMUD shall avoid siting proposed facilities in close proximity to noise-sensitive land uses. If avoidance is not possible, EBMUD shall site these facilities as far from noise-sensitive land uses as possible.
		Mitigation Measure 5.2.G-2b: Implement measures to reduce long-term operational related noise levels.	2009 DEIR, p. 5.2.G-7	1) EBMUD shall prepare a site-specific acoustical analysis if a Preferred Portfolio component has the potential to expose noise-sensitive uses to noise levels exceeding the local exterior noise standards or result in a substantial (3 dB or greater) permanent increase in ambient noise levels. 2) EBMUD shall locate permanent operational machinery in mechanical equipment rooms, wherever possible. 3) EBMUD shall install noise barriers or rooftop parapets around the HVAC, cooling towers, and mechanical equipment as necessary

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
				to block the line of sight to the noise source from the property lines of the noise-sensitive receptors.
Impact 5.2.G-3: Potential for noticeable increase in traffic noise (3 dB or greater) along roadways designated as construction haul routes. *Impact 5.2.G-3 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR, p. 5.2.G-7 and 2011 Revised DEIR p. 7-57	**Mitigation Measure 5.2.G-3a**: Avoid designating construction haul routes on local roadways with adjacent noise-sensitive land uses.	2009 DEIR, p. 5.2.G-7	1) EBMUD shall avoid designating construction haul routes on local roadways with adjacent noise-sensitive land uses. If avoidance is not possible, EBMUD shall designate construction haul routes with the fewest adjacent noise-sensitive land uses.
		Mitigation Measure 5.2.G-3b: Implement measures to reduce construction-generated traffic noise levels at existing noise-sensitive receptors.	2009 DEIR, p. 5.2.G-7	1) For rural project venues, EBMUD will conduct site-specific analysis to determine the potential effects of construction traffic at noise-sensitive land uses adjacent to proposed haul routes. 2) EBMUD will implement the following measures to reduce exposure of sensitive receptors to project-generated traffic noise: • reduce operating speeds of construction traffic; and • install temporary noise barriers.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Impact 5.2.G-4: Potential exposure of sensitive receptors to excessive ground-borne vibration from construction activity. *Impact 5.2.G-4 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR, p. 5.2.G-9 and 2011 Revised DEIR p. 7-58	**Mitigation Measure 5.2.G-4a**: Avoid siting proposed construction activities in close proximity to vibration-sensitive land uses.	2009 DEIR, p. 5.2.G-10	1) EBMUD shall avoid siting construction activities in close proximity to vibration-sensitive land uses. If avoidance is not possible, EBMUD shall site these construction activities as far from vibration-sensitive land uses as possible.
		Mitigation Measure 5.2.G-4b: Implement measures to reduce construction-generated vibration levels from construction activities at existing vibration-sensitive receptors.	2009 DEIR, p. 5.2.G-10	1) EBMUD shall implement reduction measures such as conducting vibration monitoring during pile-driving operations; providing protective coverings for nearby historic features and using alternative pile-driving methods as needed to reduce the exposure of sensitive receptors to project construction-generated vibration levels
Cultural Resources				
Impact 5.2.H-1: Potential to alter or damage to known or unrecorded cultural resources, including human remains during construction. *Impact 5.2.H-1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;*	2009 DEIR p. 5.2.H-3 and 2011 Revised DEIR p. 7-59	**Mitigation Measure 5.2.H-1a**: Perform a record search at the appropriate information center and cultural and architectural resource surveys, and document results.	2009 DEIR p. 5.2.H-4	1) EBMUD shall retain a qualified archaeologist to perform a cultural resources record search at the appropriate information center or other repositories. 2) The archaeologist shall use the results of the record search to design and complete a cultural resources inventory and preliminary assessment program. 3) The inventory shall include

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*				appropriate treatment measures for identified resources, as well as a plan for dealing with unanticipated finds during construction. 4) Protection of known sites shall be completed prior to construction whenever feasible.
		Mitigation Measure 5.2.H-1b: Develop a plan to manage the discovery of as-yet unknown cultural resources.	2009 DEIR p. 5.2.H-4	1) EBMUD shall develop a plan to manage the discovery of as-yet unknown cultural resources. 2) 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 Stop work immediately within 100 feet of the find, notify relevant agencies; and retain a qualified archaeologist to assess the significance of the find and, develop appropriate treatment measures.
		Mitigation Measure 5.2.H-1c: Avoid disturbance to human remains.	2009 DEIR p. 5.2.H-5	1) If human remains are uncovered during construction, the contractor or EBMUD shall immediately halt excavation in the area of the burial. EBMUD or the contractor shall notify the County Coroner and a professional archaeologist to determine the nature of the remains. 2) Following the coroner's findings, the property owner, contractor or EBMUD, an archaeologist, and the NAHC-designated Most Likely Descendant shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
		Mitigation Measure 5.2.H-1d: Prepare a data recovery plan as associated with the Enlarge Pardee and Lower Bear Reservoirs and the IRCUP / San Joaquin Groundwater Banking / Exchange	2009 DEIR p. 5.2.H-6	1) At the project-level stage, for the Raise Lower Bear element or for the San Joaquin Groundwater Banking / Exchange element, EBMUD shall develop and implement a Data Recovery Plan and Prepare Historic American Engineering Record Documentation on appropriately identified resources if any.
Visual Resources				
Impact 5.2.I-1: Potential to adversely affect the existing visual character and scenic vistas at project venues. *Impact 5.2.I-1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.I-1 and 2011 Revised DEIR p. 7-60	**Mitigation Measure 5.2.I-1**: Integrate above-ground structures with the surrounding landscape.	2009 DEIR p. 5.2.I-6	1) EBMUD shall use design elements to enhance visual integration of above-ground facilities with their surroundings.
Impact 5.2.I-2: Potential to increase light and glare. *Impact 5.2.I-2 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;*	2009 DEIR p. 5.2.I-6 and 2011 Revised DEIR p. 7-62	**Mitigation Measure 5.2.I-2**: Incorporate design elements to reduce light and glare.	2009 DEIR p. 5.2.I-7	1) EBMUD shall prepare construction specifications to reduce lighting intrusion and glare on surrounding uses. 2) EBMUD shall work to exclude from the construction highly reflective building materials or finishes as part of the portions of the structures visible or exposed 3) EBMUD shall maintain landscaping to minimize off-site light and glare.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Future Expansion Option.*				
Hazards				
Impact 5.2.J-1: Potential exposure to uncontrolled releases of hazardous materials. *Impact 5.2.J-1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.J-2 and 2011 Revised DEIR p. 7-62	**Mitigation Measure 5.2.J-1**: Enforce on-site hazardous materials handling rules.	2009 DEIR p. 5.2.J-3	1) EBMUD's contractor(s) shall enforce strict on-site handling rules to prevent exposure of workers and the public to hazardous material releases and degradation of receiving water quality.
Impact 5.2.J-2: Potential exposure of construction workers to contaminated soil and water. *Impact 5.2.J-2 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin*	2009 DEIR p. 5.2.J-4 and 2011 Revised DEIR p. 7-63	**Mitigation Measure 5.2.J-2**: Conduct environmental site assessments and remediation.	2009 DEIR p. 5.2.J-5	1) EBMUD shall obtain a Phase 1 Hazardous Materials Site Assessment by a California Registered Environmental Assessor for project sites to ensure that known hazardous materials contamination will be avoided. 2) If the Phase I assessment indicates that hazardous materials may be present in soil or groundwater at the site, EBMUD shall obtain a Phase II assessment to determine the presence and extent of contamination at the site, in conformance with State and local guidelines and regulations.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
Groundwater Banking / Exchange; ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoirs;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*				3) If a Phase II assessment indicates the presence of hazardous materials, EBMUD shall modify facility design or conduct site remediation. 4) EBMUD shall require contractor compliance with EBMUD's Trench Spoils Field Management Practices Program.
Impact 5.2.J-3: Potential exposure to risk of wildland fires. *Impact 5.2.J-3 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.J-6 and 2011 Revised DEIR p. 7-64	**Mitigation Measure 5.2.J-3a**: Implement fire control plans.	2009 DEIR p. 5.2.J-6	1) EBMUD shall develop and implement fire control plans containing fire precaution, presuppression, and suppression measures consistent with the policies and standards of the affected jurisdictions and in compliance with fire regulations. 2) EBMUD shall coordinate fire protection requirements with local fire protection agencies.
		Mitigation Measure 5.2.J-3b: Implement EBMUD's Fire Management Plan.	2009 DEIR p. 5.2.J-6	1) EBMUD shall include in project construction specifications the requirement to comply with EBMUD's Fire Management Plan, where it applies, and coordinate fire prevention actions with fire protection agencies.
Public Services, Utilities and Energy				
Impact 5.2.K-1: Potential temporary damage to or disruption of public utilities, and impacts related to the relocation of utilities. *Impact 5.2.K-1 is potentially*	2009 DEIR p. 5.2.K-3 and 2011 Revised DEIR p. 7-65	**Mitigation Measure 5.2.K-1a**: Notify customers of potential utility service disruption.	2009 DEIR p. 5.2.K-5	1) EBMUD shall notify residents and businesses in areas of potential utility service disruption two to four days in advance of construction.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
significant for the following Preferred Portfolio components: ▪ *Recycled Water;* ▪ *Northern California Water Transfers* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*				
		Mitigation Measure 5.2.K-1b: Locate utility lines and confirm utility line information prior to excavation and reconnect utilities promptly.	2009 DEIR p. 5.2.K-5	1) Prior to excavation, EBMUD or its contractors shall locate overhead and underground utility lines that may be encountered during excavation work prior to opening an excavation. 2) EBMUD or its contractors shall find the exact location of underground utilities by safe and acceptable means before construction begins. 3) EBMUD or its contractors shall promptly reconnect any disconnected utility lines.
		Mitigation Measure 5.2.K-1c: Safeguard employees from potential accidents related to underground utilities.	2009 DEIR p. 5.2.K-6	1) While any excavation is open, EBMUD or its contractors shall protect, support, or remove underground utilities as necessary to safeguard employees.
		Mitigation Measure 5.2.K-1d: Prepare and implement an emergency response plan.	2009 DEIR p. 5.2.K-6	1) EBMUD or its contractors shall develop an emergency response plan in the event of a leak or explosion prior to commencing construction activities. 2) EBMUD or its contractors shall notify local fire departments when damage to a gas utility results in a leak or suspected leak, or whenever damage to a utility results in a threat to public safety.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
		Mitigation Measure 5.2.K-1e: Coordinate final construction plans with affected utilities.	2009 DEIR p. 5.2.K-6	1) EBMUD or its contractors shall coordinate final construction plans and specifications with affected utilities.
Impact 5.2.K-3: Potential temporary adverse effects on solid waste landfill capacity. *Impact 5.2.K-3 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*	2009 DEIR p. 5.2.K-7 and 2011 Revised DEIR p. 7-66	**Mitigation Measure 5.2.K-3**: Implement waste reduction measures.	2009 DEIR p. 5.2.K-9	1) EBMUD's contractor(s) shall obtain any necessary waste management permits prior to construction and shall comply with conditions of approval attached to project implementation. 2) EBMUD's contractor(s) shall submit a solid waste recycling plan to the affected agencies.
Impact 5.2.K-4: Potential for construction-related energy use and increased long-term energy use during operation. *Impact 5.2.K-4 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Northern California Water Transfers;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *Enlarge Lower Bear Reservoir;*	2009 DEIR p. 5.2.K-9 and 2011 Revised DEIR p. 7-67	**Mitigation Measure 5.4.K-4**: Incorporate energy efficiency measures into Preferred Portfolio component projects.	2009 DEIR p. 5.2.K-18	1) EBMUD shall include energy efficient processes and equipment in the design specifications for facilities developed as part of the Preferred Portfolio. 2) EBMUD will evaluate the use of renewable energy resources during project design.

Impact & Applicable Components	PEIR Page	Mitigation Measure	PEIR Page	Mitigation and Monitoring Tasks
▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie, Untreated Water and Future Expansion Options.*				
Environmental Justice				
Impact 5.2.L-1: Potential disproportionate impact to densely populated minority and low income communities. *Impact 5.2.L-1 is potentially significant for the following Preferred Portfolio components:* ▪ *Recycled Water;* ▪ *Bayside Groundwater Phase 2;* ▪ *Sacramento Basin Groundwater Banking / Exchange;* ▪ *Regional Desalination;* ▪ *San Joaquin Groundwater Banking / Exchange; and* ▪ *Los Vaqueros Reservoir Expansion: Treated Water – Boyd Road Intertie, Treated Water – New Intertie and Future Expansion Options.*	2009 DEIR p. 5.2.L-3 and 2011 Revised DEIR p. 7-72	**Mitigation Measure 5.2.L-1a**: Implement mitigation measures regarding transportation, air quality, noise and hazards.	2009 DEIR p. 5.2.L-5	1) EBMUD shall Implement Mitigation Measures identified in Transportation (5.2.E-1, 5.2.E-2, 5.2.E-4, 5.2.E-5, 5.2.E-6a, 5.2.E-6b); Air Quality (5.2.F-2a, 5.2.F-2b, 5.2.F-2c, 5.2.F-3, 5.2.F-4a, 5.2.F-4b, 5.2.F-4c); Noise (5.2.G-1a, 5.2.G-1b, 5.2.G-2a, 5.2.G-1b, 5.2.G-3a, 5.2.G-3b, 5.2.G-4a, 5.2.G-4b; and Hazards (5.2.J-1, 5.2.J-2, 5.2.J-3a, 5.2.J-3b) as needed within an Environmental Justice Study Area (EJSA).
		Mitigation Measure 5.2.L-1b: Conduct environmental justice screening analysis.	2009 DEIR p. 5.2.L-5	1) EBMUD shall conduct an environmental justice screening analysis as part of the project-level environmental review for each component. 2) EBMUD shall identify alternative project locations, if at the project level alterative locations can be found, and if significant impacts within an EJSA cannot be reduced to less than significant levels.

EBMUD

AGENDA NO. _____
MEETING DATE April 24, 2012

TITLE **APPROVE AND AUTHORIZE THE WATER SUPPLY MANAGEMENT PROGRAM 2040 REVISED FINAL PLAN**

☐ **MOTION** ☒ **RESOLUTION** ☐ **ORDINANCE**

RECOMMENDED ACTION

Approve and authorize the Water Supply Management Program (WSMP) 2040 Revised Final Plan.

INTRODUCTION

The WSMP 2040 Revised Final Plan documents the approach to provide for dry year water supply needs of District customers through the year 2040. The Plan now includes revisions based on the Draft and Final Revised Program Environmental Impact Reports (PEIR) for the WSMP 2040. The most significant revision is the replacement of the Enlarge Pardee element with a new element, participation in expansion of Los Vaqueros Reservoir. The Plan was presented to the Board at a public workshop on March 27, 2012. Minor revisions to the Plan were made based on Board comments at the workshop and the Final Plan was transmitted to the Board on April 12th.

DISCUSSION

The WSMP 2040 Revised Final Plan describes the WSMP 2040 planning objectives and the planning process, including the recently completed revision effort to address PEIR deficiencies. It also describes the District's water sources, hydrology, the water supply system and existing policies and procedures to reduce demand. The Plan defines the District's future water supply challenges including the water demand projections, need for water and the approach to accounting for climate change. The Plan describes the process for developing the WSMP 2040 Portfolio of demand management and supplemental supply components to address these challenges and the schedule for implementation. The information in the WSMP 2040 Revised Final Plan will provide direction for future water conservation, recycling and drought rationing efforts, and will provide guidance in the timing and implementation of supplemental supply projects.

Water Demand and Need for Water

The Plan describes the approach used to prepare the water demand projections through the year 2040. The demand in the District's service area will increase by an average of 0.8% per year or 60 million gallons per day (MGD) over the 30 years between 2010 and 2040. The need for water incorporates the projected

Funds Available	Budget Code:	
DEPARTMENT SUBMITTING Water & Natural Resources	DEPARTMENT MANAGER or DIRECTOR Richard G. Sykes	APPROVED General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

demands and the additional supplies needed to offset increased water use by senior water rights holders on the Mokelumne River, and it accounts for dry year rationing level identified by the Board. The need for water does not include additional supplies to address climate change. Rather, based upon a climate change analysis, the water supply portfolios were structured to provide the District with flexibility to adjust course as more information regarding the effects of climate change becomes known.

WSMP 2040 Portfolio

The Revised Final Plan describes the multiple alternative water supply portfolios evaluated to meet the need for water through the year 2040. A rigorous analysis was conducted to select the WSMP 2040 Portfolio, which includes the following elements:

- Dry-year water rationing at a 15% maximum level;
- Water Conservation Level D (39 MGD beyond current conservation);
- Water Recycling Level 3 (11 MGD beyond current recycling); and
- Supplemental supply projects including: Northern California Water Transfers; Bayside Groundwater Project Phase 2; Sacramento Basin Groundwater Banking/Exchange; Regional Desalination; Enlarge Lower Bear Reservoir; Mokelumne Inter-Regional Conjunctive Use Project (IRCUP)/San Joaquin Groundwater Banking/Exchange; and participation in Los Vaqueros Reservoir.

As part of the recent WSMP 2040 CEQA revision effort, staff recommended that a previous portfolio element, Enlarge Pardee Reservoir, be dropped from the above list of supplemental supply project elements and replaced by participation with Contra Costa Water District (CCWD) in their project to expand Los Vaqueros Reservoir. That project is currently under construction, increasing storage in the reservoir from 100 Thousand Acre Feet (TAF) to 160 TAF. EBMUD could potentially negotiate for 20 to 30 TAF in storage of that 160 TAF total.

Implementation of the WSMP 2040 portfolio will address the need for water as it grows over time. The environmental impacts associated with the full implementation of the portfolio of components were evaluated in the 2009 WSMP 2040 PEIR. Expanded discussion regarding matters identified as PEIR deficiencies, as stipulated in a ruling issued on May 25, 2011 by the Superior Court for the County of Sacramento is presented in the WSMP 2040 Revised PEIR. The Final Revised PEIR certification is the subject of a separate but related Board action.

Public Feedback Regarding the Revisions Proposed for the WSMP 2040 Final Plan

As a part of the WSMP 2040 PEIR revision scoping process, the public provided comments on the work that would be performed to address identified deficiencies. Following Draft PEIR release in December 2011, the public provided written comments as well as verbal comments at workshops in September 2011 and in March 2012. Forty-one comments were received, with most being supportive of the

recommendations contained in the Revised Draft PEIR. These comments and Board input at the workshops were considered in the revisions to the Draft Final Plan.

FISCAL IMPACT

Funding for the near-term work efforts described in the WSMP 2040 Revised Final Plan is included in the FY12-16 Capital Improvement Program (CIP). Funding for future efforts will be considered for inclusion in future CIP updates.

ALTERNATIVE

Do not approve the WSMP 2040 Revised Final Plan. This alternative is not recommended because the revised final plan was formulated based on a very comprehensive effort to define the District's future water supply needs and develop a portfolio to meet those needs. Without an approved final plan, the District will lack an adequate framework to move forward with water supply planning and the reliability of the District's future water supply could be reduced.

Attachment

Draft Prepared by:
Office of General Counsel

RESOLUTION NO. _____

AUTHORIZING THE WATER SUPPLY MANAGEMENT PROGRAM (WSMP) 2040 REVISED FINAL PLAN

Introduced by Director ; Seconded by Director

WHEREAS, the Board of Directors has certified the Revised Program Environmental Impact Report (PEIR) for the Water Supply Management Program (WSMP) 2040 and approved the associated mitigation monitoring and reporting program and made findings; and

WHEREAS, the WSMP 2040 Revised PEIR identified a Portfolio of interrelated actions, including multiple components consisting of policies and potential supplemental supply projects; and

WHEREAS, implementation of the Portfolio components will allow EBMUD to meet the delineated objectives of the WSMP 2040 and the overall goal of ensuring that EBMUD can meet dry year needs through the year 2040; and

WHEREAS, the WSMP 2040 Portfolio includes water rationing by EBMUD customers at a 15% level; and

WHEREAS, the WSMP 2040 Portfolio includes a policy of achieving an additional 39 million gallons per day (MGD) in conservation savings and implementation of a recycled water component to increase the amount of recycled water available for non-potable uses by 11 MGD, and EBMUD expects that these aggressive demand measures will further reduce its demands and provide environmental and public health and safety benefits by reducing future water use; and

WHEREAS, the WSMP 2040 Portfolio also includes multiple supplemental supply components to be pursued on multiple tracks to provide a diverse and flexible strategy to meet future water needs; and

WHEREAS, EBMUD's approach in the WSMP 2040 recognizes that the Portfolio components will be carried out in phases, taking into consideration funding availability, legal and institutional issues, as well as technical issues; and

WHEREAS, overall, the WSMP 2040 recognizes that in order to provide flexibility for uncertain future conditions and ensure that the objectives of WSMP 2040 are achieved, it is important that the Portfolio include the multiple supplemental supply components described in the Revised PEIR.

NOW, THEREFORE, BE IT RESOLVED that the Board does hereby find and determine that the WSMP 2040 Revised Final Plan is approved and authorized.

BE IT FURTHER RESOLVED that, based upon the Final Revised PEIR, the Findings in Exhibit A, the Mitigation Monitoring and Reporting Program in Exhibit B, and the provisions stated above, the General Manager is hereby directed to take such actions as shall be appropriate to carry out the WSMP 2040 Revised Final Plan, subject to all mitigation measures adopted by the Board.

ADOPTED this 24th day of April, 2012 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
President

ATTEST:

_____
Secretary of the District

APPROVED AS TO FORM AND PROCEDURE:

_____
General Counsel

W:\400\410\410.01\WSMP 2040 Revised Final Plan reso - 4-24-12.doc

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: April 19, 2012

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager

FROM: Lynelle M. Lewis, Secretary of the District

SUBJECT: Planning Committee Minutes – April 10, 2012

Chair Doug Linney called to order the Planning Committee at 10:01 a.m. in the Training Resource Center. Directors Katy Foulkes and Lesa R. McIntosh were present at roll call. Staff present included: General Manager Alexander R. Coate, General Counsel Jylana Collins, Director of Water and Natural Resources Richard G. Sykes, Director of Engineering and Construction Xavier J. Irias, Special Assistant to the General Manager Cheryl A. Farr, and Secretary of the District Lynelle M. Lewis.

Public Comment. None.

Lafayette Reservoir Parking Improvements. Senior Civil Engineer Dean A. DiGiovanni presented a status update on the remodel project identified as a key recommendation in the 2010 Business Plan for the Lafayette Recreation Area. Goals of the project are: repairing deteriorating pavement, reducing congestion, adding more short-term parking, replacing the single space quarter-only meters with electronic pay stations, and updating the card readers for annual pass holders. Additionally, the project will include new traffic signage and directional markings to guide customers quickly to available parking, new ADA-compliant sidewalks and striped pathways that will lead them to trails and restrooms, and an environmentally-friendly bioretention system that will treat storm water runoff from the parking area.

Mr. DiGiovanni reported that the project is scheduled for construction from August through November 2012 and the parking area will remain open with a reduced capacity throughout construction. The contractor will phase the work and maintain a minimum of 200 available spaces and unobstructed traffic circulation at all times. The estimated cost for the project is $1.6 million, and it was noted that increased parking fees will generate sufficient revenues to pay for the cost of the project in approximately six years.

Public outreach plans were discussed that include a presentation to the Lafayette Community Liaison Group and notifications to the Lafayette Chamber of Commerce, City of Lafayette, Rotary Club, annual pass customers, and groups that regularly use the park. The District's web site will notify customers of the construction project and related impacts. The Committee asked about the bioretention system, and staff explained that these systems are in use in other parking areas and are now required by the county. The Committee concurred with the staff recommended outreach and plans for the project.

Adjournment. Chair Linney adjourned the meeting at 10:20 a.m.

ARC/LML/slb
W:\Minutes\Minutes 2012\041012_planning_minutes.doc

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: April 19, 2012

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager

FROM: Lynelle M. Lewis, Secretary of the District

SUBJECT: Legislative/Human Resources Committee Minutes – April 10, 2012

Chair Lesa R. McIntosh called to order the Legislative/Human Resources Committee at 10:34 a.m. in the Training Resource Center. Director Frank Mellon was present at roll call and Director Andy Katz arrived at 10:40 a.m. Staff present included: General Manager Alexander R. Coate, Special Assistants to the General Manager Marlaigne K. Dumaine and Cheryl A. Farr, and Secretary of the District Lynelle M. Lewis.

Public Comment. None.

Legislative Report. Special Assistant to the General Manager Marlaigne K. Dumaine highlighted the recommended positions in Legislative Report No. 04-12 on the following bills: AB 1442 (Wieckowski) Pharmaceutical Waste; AB 2249 (Buchanan) Solar Water Heating and Efficiency Act of 2007; SB 1045 (Emmerson) Metal Theft: Damages. There was brief discussion on SB 1045 regarding policing of scrap metal thefts, and Ms. Dumaine pointed out that the bill is designed to raise awareness on this issue and provides a civil penalty. It was moved and seconded for the Legislative/Human Resources Committee to support the positions on the bills as recommended in the staff report.

Legislative Update. Next, Ms. Dumaine reported that the contracts for state employees have been extended by one year. She also reported on pension reform legislation, noting that several bills were still under consideration and that staff would include an update on this issue in the April 24 Legislative Report.

Adjournment. Chair McIntosh adjourned the meeting at 10:41a.m.

ARC/LML/slb

W:\Minutes\Minutes 2012\041012_lhr_minutes.doc