12.3 Local and Regional Agencies

LOCAL AND REGIONAL AGENCIES

LOCAL AND REGIONAL AGENCIES THAT SUBMITTED COMMENTS ON THE DRAFT PEIR

Comment Letter Format	Comment Letter ID	Name of Commenter	Title	Organization/ Affiliation	Page
Mail	L_ACCDA	Bruce Jensen	Senior Planner	Alameda County Community Development Agency	12.3-1
Email	L_ACFCWCD	Kwablah Attiogbe	Environmental Services	Alameda County Flood Control and Water Conservation District	12.3-2
Mail	L_ACWD	Paul Piraino	General Manager	Alameda County Water District	12.3-9
Email	L_BAWSCA1	Arthur Jensen	General Manager	Bay Area Water Supply and Conservation Agency	12.3-18
Hand-delivered, PH	L_BAWSCA2	Arthur Jensen	General Manager	Bay Area Water Supply and Conservation Agency	12.3-94
PH Sonora	L_BAWSCA3	Nicole Sandkulla	Senior Water Resources Engineer	Bay Area Water Supply and Conservation Agency	12.6-9
PH Modesto	L_BAWSCA4	Nicole Sandkulla	Senior Water Resources Engineer	Bay Area Water Supply and Conservation Agency	12.6-33
PH SF1	L_BAWSCA5	Steven Miller	Lawyer	Bay Area Water Supply and Conservation Agency	12.6-87
PH SF2	L_BAWSCA6	Arthur Jensen	General Manager	Bay Area Water Supply and Conservation Agency	12.6-125
Mail	L_BCDC	Sara Polgar	Planner	San Francisco Bay Conservation and Development Commission	12.3-97
Mail	L_Brisbane	Randy Breault	Director of Public Works	City of Brisbane	12.3-98
Mail	L_Burlgme	Syed Murtuza	Director of Public Works	City of Burlingame Public Works Department	12.3-100

LOCAL AND REGIONAL AGENCIES THAT SUBMITTED COMMENTS ON THE DRAFT PEIR (Continued)

Comment Letter Format	Comment Letter ID	Name of Commenter	Title	Organization/ Affiliation	Page
Mail	L_CalWater	Thomas Salzano	Water Resources Planning Supervisor	California Water Service Company	12.3-101
Mail	L_CCWD	Leah Orloff	Senior Water Resources Specialist	Contra Costa Water District	12.3-102
Email	L_CoastsideCWD	Joe Guistino / Cathleen Brennan	Interim General Manager / Water Resources Analyst	Coastside County Water District	12.3-103
Mail	L_DalyCty	Patricia Martel	City Manager	City of Daly City	12.3-109
Mail	L_DSRSD	Bert Michalczyk	General Manager	Dublin San Ramon Services District	12.3-116
Mail	L_EBMUD	William Kirkpatrick	Manager of Water Distribution Planning	East Bay Municipal Utility District	12.3-117
Mail	L_EBRPD	Chris Barton	Senior Planner	East Bay Regional Park District	12.3-118
Mail	L_FosterCty	Ramon Towne	Director of Public Works	City of Foster City	12.3-122
Email	L_Fremont	Rene Dalton		City of Fremont, Transportation and Operations Department	12.3-123
Mail	L_Hayward	Robert Bauman	Director of Public Works	City of Hayward Department of Public Works	12.3-124
Mail	L_Hillsb	Cyrus Kianpour	City Engineer	Town of Hillsborough	12.3-130
Mail	L_LAHCFD	Dorothy Price	President	Los Altos Hills County Fire District	12.3-133
Mail	L_LosAltosH	Craig Jones	Mayor	Town of Los Altos Hills	12.3-134
Email	L_Menlo1	Kent Steffens	Director of Public Works	City of Menlo Park	12.3-135
PH Fremont	L_Menlo2	Kirsten Keith	Employee	Menlo Park Planning Commission	12.6-55
PH Palo Alto	L_Menlo3	Kelly Fergusson	Mayor	City of Menlo Park	12.6-80
PH Modesto	L_MID	Walt Ward	President of the Board of Directors	Modesto Irrigation District	12.6-40
Email	L_MID-TID1	Walter Ward / Robert Nees	Assistant General Manager / Assistant General Manager	Modesto Irrigation District / Turlock Irrigation District	12.3-141

LOCAL AND REGIONAL AGENCIES THAT SUBMITTED COMMENTS ON THE DRAFT PEIR (Continued)

Comment Letter Format	Comment Letter ID	Name of Commenter	Title	Organization/ Affiliation	Page
Mail	L_MID-TID2	Walter Ward / Robert Nees	Assistant General Manager / Assistant General Manager	Modesto Irrigation District / Turlock Irrigation District	12.3-148
Mail	L_Millbr	Ronald Popp	Director of Public Works	City of Millbrae	12.3-148
Mail	L_Milpts	Thomas Williams	City Manager	City of Milpitas	12.3-149
Mail	L_MtnVw	Cathy Lazarus	Public Works Director	City of Mountain View	12.3-153
Email	L_Newark	John Becker	City Manager	City of Newark	12.3-154
Mail	L_PaloAlto	Yoriko Kishimoto	Mayor	City of Palo Alto	12.3-154
Mail	L_PHWD1	Daniel Seidel	President	Purissima Hills Water District	12.3-158
PH Palo Alto	L_PHWD2	Daniel Seidel	President	Purissima Hills Water District	12.6-70
Mail	L_RdwdCty	Peter Ingram (sent by Chu Chang)	Community Development Services Director	Redwood City	12.3-160
Mail	L_SanJose	Mansour Nasser	Deputy Director, Water Resources Division	City of San Jose	12.3-161
Email	L_SBruno	Barbara A. Brenner	Stoel Rives, Attorney at Law	City of San Bruno	12.3-164
Email	L_SClara1	Gloria Sciara	Development Review Officer	City of Santa Clara Planning Division	12.3-166
Mail	L_SClara2	Robin Saunders	Director of Water and Sewer Utility	City of Santa Clara Water and Sewer Utilities	12.3-167
Mail	L_SCVWD1	Keith Whitman	Deputy Operation Officer	Santa Clara Valley Water District, Water Supply Management Division	12.3-171
PH Palo Alto	L_SCVWD2	Amy Fowler	Staff Member	Santa Clara Valley Water District	12.6-73
Mail	L_SFBayTrl	Laura Thompson	Project Manager	San Francisco Bay Trail	12.3-172
PH SF1	L_SFCPC1	Christina Olague	Commissioner	San Francisco City Planning Commission	12.6-102
PH SF1	L_SFCPC2	Michael Antonini	Commissioner	San Francisco City Planning Commission	12.6-103

LOCAL AND REGIONAL AGENCIES THAT SUBMITTED COMMENTS ON THE DRAFT PEIR (Continued)

Comment Letter Format	Comment Letter ID	Name of Commenter	Title	Organization/ Affiliation	Page
PH SF1	L_SFCPC3	Kathrin Moore	Commissioner	San Francisco City Planning Commission	12.6-104
PH SF2	L_SFCPC4	Kathrin Moore	Commissioner	San Francisco City Planning Commission	12.6-121
PH SF2	L_SFCPC5	Michael Antonini	Commissioner	San Francisco City Planning Commission	12.6-121
Email	L_SFLandmarks	Robert Cherny	Vice President	Landmarks Preservation Advisory Board	12.3-173
Mail	L_SJVAPCD	Arnaud Marjollet	Permit Services Manager	San Joaquin Valley Air Pollution Control District	12.3-174
Mail	L_SLDWWKC	Daniel Nelson, Thomas W. Birmingham, and James Beck	Executive Director, General Manager, and General Manager	San Luis & Delta-Mendota Water Authority, Westlands Water District, and Kern County Water Agency	12.3-175
Email	L_Snnyvl	Jamie McLeod / James Craig	Associate Planner / Superintendent of Field Services	City of Sunnyvale	12.3-184
Mail	L_StanCoERC	Raul Mendez	Senior Management Consultant	Stanislaus County Environmental Review Committee	12.3-186
Email	L_Stanford	Clifford (Mike) Goff	Director of Utilities	Stanford University	12.3-187
Email	L_TCCC	George Segarini	President & CEO	Tuolumne County Chamber of Commerce	12.3-190
Email	L_TUD1	Peter J. Kampa	General Manager	Tuolumne Utilities District	12.3-190
Mail	L_TUD2	Barbara Balen	Board President	Tuolumne Utilities District	12.3-192
PH Sonora	L_TUD3	Peter J. Kampa	General Manager	Tuolumne Utilities District	12.6-17
Mail	L_Tuol1	Mark Thornton	Chairman, Tuolumne County Board of Supervisors	Tuolumne County	12.3-193
Email	L_Tuol2	Mark Thornton	District 4 Supervisor, Tuolumne County	Tuolumne County	12.3-197
Mail	L_Zone7	G.F. Duerig	General Manager	Alameda County Flood Control and Water Conservation District, Zone 7	12.3-198

ALAMEDA COUNTY COMMUNITY DEVELOPMENT AGENCY
PLANNING DEPARTMENT

James E. Sorensen
Agency Director

Chris Bazar
Planning Director

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OCT 18 2007
CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M.E.A.

October 15, 2007

Environmental Review Officer, WSIP PEIR
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: San Francisco Water System Improvement Program (WSIP) – County of Alameda General Comments on the Program and Program Environmental Impact Report (PEIR)

Dear Environmental Review Officer:

Alameda County Community Development Agency (CDA) staff have reviewed the available information for the proposed WSIP. The WSIP, if approved, would result in significant and necessary changes to the water treatment and delivery system that provides San Francisco and numerous Bay Area communities with a dependable source of high-quality water for all applications. The program would include upgrades to pipelines, aqueducts and water treatment facilities at many locations along the route from the Hetch Hetchy Reservoir to the service area, which includes local customers in four different counties.

Upon review by the County, the PEIR appears to be accurate in its description of possible environmental impacts. Impacts to land use, visual quality, biology, traffic and transportation, air quality and noise are identified, and where possible, mitigation measures are identified to reduce the levels of significance for the impacts. Where impacts cannot be mitigated, the PEIR identifies these as unavoidable impacts, for which Findings of Overriding Consideration would need to be adopted. Alameda County staff concurs with these analyses. 01

A significant portion of the program pertains to the water delivery route that crosses lands in unincorporated Alameda County, along the Hetch Hetchy Aqueduct. The program includes a number of improvements to portions of the system in eastern Alameda County from the eastern County boundary, across the Livermore Valley, across and through the coast ranges, through the Sunol Valley and on to the boundary with the City of Fremont. The program would largely affect facilities and lands currently owned and operated by the City of San Francisco for the purposes of water delivery and treatment; however, in some cases, lands not currently owned by San Francisco would need to be utilized in order to effect the improvements specified in the WSIP.

The lands owned by the City of San Francisco, in most cases, are designated for land use by the County of Alameda General Plan (the *East County Area Plan*, [ECAP], as amended, May, 2002) for Water Management (WM), while the private lands along the route are designated for either Large Parcel Agricultural (LPA) or Resource Management (RM). While these land use designations generally permit the presence and construction of necessary infrastructure, the ECAP also has a number of other issue-specific policies related to land use, biology, visual resources, growth-inducement, and other critical issues. Wherever the program would result in construction or modified operational activities on any of these lands, the SFPUC must apply to the County of Alameda for a Finding of General Plan Conformance under the State of California Government Code, Section 65402. 02

12.3-1

L_ACCDA

In addition, for any specific projects under the WSIP that would result in construction or operation on privately-owned lands within the unincorporated area of Alameda County, the SFPUC and/or landowner would need to apply to the County for either a Conditional Use Permit (CUP, for permanent program features or major activities that would last longer than six [6] months, or an Administrative CUP (for temporary or minor activities that would last less than six [6] months) (Reference Alameda County General Ordinance Code, Title 17, Zoning, Section 17.06.040, Conditional uses - Board of zoning adjustments, Paragraph J.). 02 cont.

Each of these matters would need to be addressed on a project-by-project basis.

The program also includes descriptions of projects that would be implemented in the Sunol Valley, on or near lands that may currently be under Alameda County Surface Mining Permits (SMPs), and possibly also on lands for which the State of California has determined include Regionally Significant Construction Aggregate Resources (RSCAR). The Hetch Hetchy Aqueduct route itself, as it currently exists, has been excluded from this designation; however, it is bounded on both sides by lands bearing the State RSCAR designation as it crosses the Sunol Valley floor.

If any project of the WSIP would include significant alterations to the pattern of mining currently being conducted under existing County SMPs, revisions to those SMPs and associated reclamation plans may be necessary under the County Surface Mining Ordinance (SMO), with possible review by the State Department of Conservation, Division of Mined Land Reclamation. These matters would also need to be addressed on a project-by-project basis. 03

Similarly, if any project constructed or use implemented pursuant to the WSIP would threaten the potential to extract any minerals in an area designated as a RSCAR, then under State Public Resources Code, Division 2, Chapter 9 (Surface Mining and Reclamation Act, SMARA), Sections 2762 and/or 2763, the lead agency would be required to initiate a duly noticed public process, wherein a statement is prepared specifying reasons why the new use would be permitted, that statement also being submitted to the State Geologist for review and comment. These matters would also need to be addressed on a project-by-project basis.

This concludes our comments on the WSIP. If you have any questions, please do not hesitate to contact me at (510) 670-6527 or at bruce.jensen@acgov.org.

Sincerely,

Bruce Jensen
Senior Planner,
Alameda County Planning Department

COUNTY OF ALAMEDA
PUBLIC WORKS AGENCY
399 Elmhurst Street • Hayward, CA 94544-1307
(510) 670-5480

October 1, 2007

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CITY & COUNTY OF S.F.
PLANNING DEPARTMENT
M E A

Mr. Paul Maltzer
Environmental Review Officer, WSIP PEIR
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
E-mail: wsip.peir.comments@gmail.com
Facsimile: 415.558.6409
Telephone: 415.558.6377

Dear Mr. Maltzer:

Subject: Comments on Draft Program Environmental Impact Report (Draft PEIR) for the San Francisco Public Utilities Commission's Water System Improvement Program (WSIP) Case # 2005.0159E SCH#200509026

The Alameda County Flood Control and Water Conservation District (District) has reviewed the City's Environmental Impact Report entitled: *Draft Program Environmental Impact Report (dPEIR) For the San Francisco Public Utilities Commission's proposed Water System Improvement Program (WSIP).*

Below are the District's comments on the dPEIR. The comments are in two categories: General and Specific. The general comments are followed by specific statements from the dPEIR. Each specific statement is followed by District comments *italicized.*

General District Comments

1. *Throughout the dPEIR, please provide temperature measurements in both degrees, Celsius (°C) as well as in degrees Fahrenheit (°F), or include in your conversion factors.* 01

2. *On July 31, 2007, the Alameda County Flood Control and Water Conservation District and the Alameda County Water District entered into an Agreement to design a fish passage facility over the BART weir and middle inflatable dam in the Alameda Creek Flood Control Channel. This is a logical step in the 10-year effort (in which the SFPUC has participated) to improve steelhead passage and habitat throughout the Alameda Creek watershed. The* 02

12.3-2

NOP for the improvement of the BART weir and middle inflatable dam for fish passage will be circulated by December 2007. 02 cont.

3. *Prior to circulating the NOP for this dPEIR, the District, in accordance with Sections 21104 and 21153(a), provided a list of programmed projects which included the improvements to the BART weir for fish to your environmental consultants in December 2006. None of the projects on the list were considered in preparing this dPEIR. There are significant implications of your project on lower Alameda Creek. For example:* 03

- *Additional diversion of flows from Alameda Creek by up to 50% will further hinder the ability of steelhead to navigate through the lower reaches of the creek. Lower flows in the channel would result in higher water temperature and increased mortality. These direct impacts ("take" under Section 9 of the Endangered Species Act (ESA)) require thorough discussion to quantify the level of the obvious impacts and appropriately mitigated. Additional diversions will effectively eliminate anadromous species reestablishment anywhere in the watershed. This diversion of flows is inconsistent with the SFPUC's fish habitat improvement rationale for removal of the Sunol and Niles dams.* 04

- *The assertion in the NOP for this dPEIR was that "big picture" concept would be addressed. To this end, the effects of the project in light of climate change, including global warming, on the threatened species was inadequately addressed.* 05

- *Since 1997, multiple stakeholders, including the SFPUC, have spent countless resources to determine how best to enhance steelhead runs and improve steelhead habitat throughout the Alameda Creek watershed. To stress in the dPEIR that there is no steelhead habitat above the BART weir is erroneous and contrary to SFPUC's participation in the Alameda Creek Fisheries Workgroup effort to restore steelhead in this watershed.*

- *Upstream habitat has been compromised by diversion of flows into reservoirs. This is one of the principal reasons that the Central California Coast ESU became listed as threatened by USFWS in 1997. The BART weir is only a barrier to upstream migration precisely because there are insufficient flows through that corridor! Besides, the species is known for its persistency to navigate over structures higher than the BART weir, and there have been periodic sightings of the species upstream of the BART weir. The flows necessary during critical period to get to the spawning grounds are missing!* 06

- *The dPEIR uses of hypothetical scenarios to support no impacts to steelhead are flawed and misleading and renders the dPEIR inadequate. Please revise the dPEIR to address the potential "take" of Onchorynchus mykiss under Section 9 of the ESA and provide appropriate mitigation for these impacts.*

4. *The proposed increased diversions of flows from Alameda Creek will further subject steelhead to greater stress and possibly lead to the extinction of the species in this watershed! The District recommends that SFPUC scale back flow diversions to levels below*

the current rate of diversion to support and improve the habitat of the threatened steelhead species. SFPUC should emphasize conservation measures which are on par with 21st century technologies and comply with current environmental laws and regulations.

5. *SFPUC diverts 86% of surface runoff from Upper Alameda Creek watershed above Sunol Valley (specifically San Antonio and Arroyo Hondo tributaries), yet impacts to steelhead are not addressed in the dPEIR. A reason the species was listed by USFWS includes habitat destruction due to a lack of sufficient flows. In 2006, SFPUC removed two (2) barriers to improve the habitat. Construction of a fish passage structure over the BART weir and the middle inflatable dam are scheduled for 2010. The dPEIR failed to discuss effects of the proposed additional diversion of flows on these known projects in accordance with CEQA Sections 15065 (a) and (b) and 15130, and Sections 9 and 10 of the ESA. Furthermore, how would this increased flow diversion rate affect emergency response downstream?*

6. *It appears that much of the discussion in the dPEIR is focused on the BART weir. The fact is steelhead habitat currently exists within the project limits and is independent of the BART weir. This obvious omission renders the dPEIR incomplete requiring major rewrite and re-circulation in accordance with Public Resources Code, Section 21064.5; 21080 subd(c)(2); and CEQA guidelines 15070 subd.(b)(1).*

7. *Location of the SV-2 Alameda Creek Fishery Enhancement Project should be identified on a map. If there are no steelhead (I presume this is the species in question), why enhancement? To be consistent with the "big picture" as stated in the NOP, an explanation is warranted and any impact identified should be mitigated and the dPEIR re-circulated for public comments.*

8. *The flows suggested to be released from Calaveras Reservoir under the Alameda Creek Fisheries Enhancement Project (SV-2) should be available for steelhead below the proposed recapture facility; otherwise, it would impair steelhead upstream migration further downstream.*

06 cont.

9. *The justification for increased water diversions from Alameda Creek is seriously flawed because there is no rationale for using an older 2000 ABAG data for the demand analysis when more recent 2005 ABAG data that demonstrates less water use needs exists. Additionally, why was water use efficiency not adequately reviewed and analyzed? Why was no use analysis performed? Emphasis on aggressive recycling and conservation would negate the need for additional water diversion from Alameda Creek. Please revisit your analysis using the most current data and appropriately address the impacts and re-circulate the revised dPEIR for public comments.*

07

08

10. *The fact that the SFPUC has failed to address steelhead in the Calaveras Dam replacement project in this dPEIR to provide a context for the "big picture" is a serious inadequacy of the dPEIR. The SFPUC has been an active member of the Alameda Creek Fisheries Workgroup since its inception. There is, therefore, no rational basis for not acknowledging or not knowing that anadromous steelhead exists above the BART weir on SFPUC lands!*

09

09 cont.

11. *Existing SFPUC water pipelines that cross District Channel and creek inverts create hydraulic constriction and flooding potential upstream of the crossings. There is potential liability associated with said crossings. The District requests that none of the proposed pipelines crosses the District's facilities at any elevation above the invert bottom. Furthermore, any such crossings must provide a minimum of 3 ft clearance from the inverts bottom.*

10

12. *The proposed reservoir releases into Flood Control facilities would result in significant impact on the downstream segments of Alameda Creek. It is critical that Flood Control District be notified and agreed with the proposed SFPUC release protocols for both Calaveras and San Antonio dams.*

11

13. *Based on the general comments above, please change the following Initial Study checklist items:*

Transportation and Circulation
(a) Change from Less than Significant to Potentially Significant.

Biological Resources
(a, b, c, d) Change from Less than Significant to Potentially Significant.

Hydrology and Water Quality
b) and c) Change from Less than Significant to Potentially Significant.

12

Specific District Comments

The following Specific Comments are based principally on dPEIR discussions on sections of the WSIP in within Alameda County. The relevant section is identified (where possible) and the text is identified and followed by the District's comment in *italics*.

Statement

On page one of NOP, it states, "The PEIR will address the "big picture" issues (including the program's growth inducement potential and the associated secondary effects of growth, cumulative effects, system tradeoffs, and program alternatives) and will identify programmatic mitigation measures."

13

District Comment

An important missing aspect of the "big picture" in the dPEIR is the discussion of the federally listed species Oncorhynchus mykiss. Even if SFPUC is planning to undertake individual project level CEQA review sometime in the future (subsequent EIR), the "big

12.3-3

picture" now requires discussion of all the known impacts of the WSIP. How can a thorough evaluation of the project impact in a subsequent EIR be accomplished if it is not acknowledged in the programmed EIR, especially an obvious impact such as flow diversion on the threatened steelhead?

SFPUC has been a major player in the effort to restore steelhead to the watershed. In fact, in 2006, Sunol and Niles dams were removed to enhance fish habitat as SFPUC General Manager, Susan Leal, proclaimed in a press release dated September 19, 2006:

> *"The removal of these dams demonstrates our commitment to restoring steelhead on the Alameda Creek even as we work to rebuild the seismically vulnerable Calaveras Dam...."*
>
> *And SFPUC's Natural Resources Division Manager, Tim Ramirez, also stated:*
>
> *"This is an exciting time for those of us who care about Alameda Creek and steelhead restoration... we are working collaboratively with environmental groups, state and federal agencies and other water agencies to work towards the common goal of restoration of fish populations in Alameda Creek."*

What has happened to these pronouncements? How can the dPEIR then dismiss the effects of the WSIP on the restoration of steelhead in the Alameda Creek Watershed?

12.3-4

13 cont.

Statement

On page 20, 3.1, Program EIR Level of Analysis, it states: "According to the CEQA Guidelines, Section 15168, a program EIR is one type of environmental review document that may be used to evaluate a plan or program that has multiple components (projects and actions) or to address a series of actions that are related."

District Comment

This statement in the NOP set the tone for the preparation of the dPEIR. However, the dPEIR failed to adequately address the effects of the WSIP in accordance to the following bullets from the NOP:

- *"• Provide for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action"*
- *"• Ensure consideration of cumulative impacts that might not be evident in a case-by-case or project-by-project analysis"*

The dPEIR is not exhaustive and fails to acknowledge and consider the effects of the project on steelhead, a federally listed species. In 2006, SFPUC removed two dams within the watershed. The reason provided for the removal was to improve steelhead habitat. What has happened within a year to dismiss the species outright from the watershed? How does the SFPUC, a 10-year partner on steelhead restoration effort in

the Alameda Creek Watershed, reconcile the dismissive language in the dPEIR with the pronouncements by the General Manager and Natural Resources Manager of SFPUC? The dPEIR is inadequate and needs major work per Section 15168(c)(5) of CEQA.

Statement

On page S-67, the dPEIR states, "Reduced winter and spring flows in Alameda Creek above the BART weir would limit migration and spawning if steelhead were to gain access upstream."

District Comment

This statement is hypothetical and misleading. Reduced flows during winter and spring may be due to drought conditions or excessive diversion of water from the creek. By limiting the statement to a specific hypothetical scenario, the statement is at best confusing, misleading, and minimizes the significance of the upper watershed for full steelhead recovery. Indeed it ignores one of the reasons (habitat loss) the Central California Coast Steelhead ESU was listed "threatened" under Sections 9 and 10 of the Endangered Species Act. Please revise the statement to read: Normal or enhanced winter and spring flows in Alameda Creek above the BART weir (highly regulated by SFPUC and DWR) would increase migration and spawning opportunities for steelhead. By revising the statement, the impacts associated with the current and proposed increased diversion rates becomes clear.

13 cont.

Statement

On page 5.4.1-4, the dPEIR states, "In 2006, the SFPUC completed removal of the Sunol and Niles Dams as part of an effort to restore creek flows and fish habitat along this reach of Alameda Creek..."

District Comment

The District supports the effort to "restore creek flows and native habitat for threatened steelhead." Sunol and Niles dams removal for restoring steelhead habitat was a major step in the long effort to restore a viable steelhead fishery in the watershed. Statements elsewhere in the dPEIR contradict this stated purpose and would cause significant singular and cumulative impacts to the species and defeat the 10-year effort by the Alameda Creek Fisheries Workgroup to restore habitat, improve access, and remove barriers throughout the watershed. The Fisheries Workgroup effort is supported by SFPUC. The impacts of the WSIP requiring mitigation have not been adequately addressed and mitigated per Section 21001 of the Public Resources Code and, therefore, the dPEIR requires major revision and re-circulation for public comments.

Statement

The dPEIR states that there is "no current steelhead migration above the BART weir..."

District Comment

The dPEIR statement is inaccurate because steelhead migration over the BART weir has occurred every year, at least since 2001, when recordkeeping began. A steelhead implanted with a tracking device has also been remotely recorded above the BART weir moving towards the upper watershed.

The BART weir is a temporal, not total, barrier to steelhead, i.e., it is passable to steelhead under certain flows. At higher flows, steelhead migrates pass the BART weir. Furthermore, steelhead has been transported yearly above the BART weir under the auspices of the Fisheries Workgroup with authorization from California Department of Fish and Game (CADFG) and National Marine Fisheries Services (NMFS). With the removal of both Niles and Sunol Dams in 2006, and upon completion of the scheduled improvement to the BART weir by 2010 (or sooner), prior to WSIP construction start date in 2011, steelhead will be able to migrate up into Alameda Creek watershed to spawn. SFPUC is fully aware of these improvements. What provision is SFPUC making in the WSIP to provide adequate flows to support these efforts consistent with Section 15125 of CEQA?

Steelhead habitat exists throughout the watershed. The WSIP impacts on this fragile habitat are a "take" under the ESA requiring analysis of the impacts and providing mitigation accordingly.

12.3-5

13 cont.

Statement

On page 4.6-2 of the dPEIR, in reference to rainbow trout being a key special-status species within the Alameda Creek watershed, and footnote number 5, "...rainbow trout and steelhead are the same species of trout..."

District Comment

The District wishes to re-emphasize the statement made under footnote number 5 and suggests rainbow trout and steelhead be used interchangeably as special status species. Additionally, this footnote contradicts the assertion made throughout the dPEIR that no steelhead exists within the project limits. Since steelhead (or if you prefer rainbow trout) is acknowledged to be in the watershed, the dPEIR is inadequate. Please revise the dPEIR to discuss the impacts and re-circulate the dPEIR for public comments.

Statement

On page 4.6-19 to 20, the dPEIR states, "...other barriers, including the BART weir ...continues to block anadromous fish passage..."

District Comment

The BART weir is only a temporal and not a total barrier to steelhead, i.e., it is currently passable to steelhead under certain flows. Under higher discharges and minimal or no

diversion of flows, steelhead migrates pass the BART weir. Secondly, the dPEIR statement is inaccurate because steelhead has been recorded since 2001 upstream of the BART weir (even if it is due to assistance). This is an error based on faulty analysis that has led to an erroneous "no impact conclusion."

The question dPEIR failed to answer adequately is: what is the impact of the proposed additional diversion of flows from the Alameda Creek into reservoirs has on steelhead life cycle? The project environmental setting description needs to be revised to capture the presence of habitat for the steelhead within the WSIP project limits and the full effects of the proposed project on anadromous species and its habitat identified analyzed and mitigation provided.

Statement

On page 5.4.1-4, the PDEIR states, "...a flow control structure ...provides grade control and is a barrier to fish passage along this reach."

District Comment

The BART weir is not a grade control structure but rather a structure designed to protect the footings of the BART and UPRR bridge crossings and to describe it as such is misleading.

13 cont.

The BART weir is considered an upstream migration barrier under certain flows and not a downstream migration barrier, it and the middle inflatable dam are scheduled for improvement by 2010, well ahead of the WSIP construction schedule. Furthermore, SFPUC has been involved in the effort to facilitate fish passage over the weir for the last 10 years. To use the presence of the BART weir to justify a "no steelhead habitat" to avoid discussion of the potential impact of not removing the diversion dam, and denial of adequate flows to support steelhead migration in the dPEIR is misleading and disingenuous.

The real major "barriers" to steelhead migration in the watershed are the diversion of water into reservoirs and storage facilities which leave the species with no means of moving into upstream habitats. Fish needs water to swim!

The District requests that the document be revised to fully describe the project impacts as proposed in the context of the "big picture" as described in the project NOP and appropriate mitigation provided.

Statement

On page 5.4.5-2, the dPEIR states, "The Sunol and Niles Dams were partially removed in September 2006, eliminating them as obstacles to fish passage."

District Comment

The District supported the SFPUC on removing Sunol and Niles dams for steelhead habitat enhancement. The dPEIR failure to analyze the impact of its WSIP on steelhead in the context of the "big picture" is in stark contrast to the earlier pronouncements.

13 cont.

Statement

On page 5.4.5-3 of the dPEIR, in reference to lower Alameda Creek, "…the reach provides habitat for warm water fish such as largemouth bass."

District Comment

What was the basis for the statement that the lower reach of Alameda Creek provides habitat for warm-water fish? The statement leaves the reader with an erroneous impression that the lower reach solely provides warm-water fish habitat. The dPEIR fails to mention that lower Alameda Creek reach, including the estuarine zone, is an ideal transition zone suited for smolt development and acclimatization. There are ongoing studies in this reach to identify steelhead habitat enhancement opportunities.

14

Furthermore, the "big picture" which the dPEIR failed to address is the multi-agency, multidiscipline, multiyear ongoing South Bay Salt Pond Restoration along the Alameda Creek Estuary. The "lower reach" is thirsting from lack of flows principally due to existing diversion to reservoirs in the upper watershed. The failure to discuss the impact of water diversion on this reach of Alameda Creek is a significant omission rendering the dPEIR inadequate. The District requests that the dPEIR be revised and identified impacts mitigated.

Statement

On page 5.4.5-4, the dPEIR states, "rainbow trout and steelhead are the same species of trout (*O. mykiss*)."

District Comment

How can the dPEIR assert the absence of steelhead in the watershed while acknowledging that the rainbow trout and steelhead are the same species? If they are the same species, then the WSIP will have significant impact on the habitat warranting full discussion and mitigation. The dPEIR is inadequate.

15

Statement

On page 5.4.5-6, the statement, "In recent years, individual steelhead were captured near the BART weir by *citizen group*…"

District Comment

In addition to the statement, offspring of gravid-anadromous salmonids, which moved above the BART weir (either naturally or with assistance), invariable migrate back over the BART weir into the ocean only to return year in, year out into Alameda Creek. How else do you explain the annual occurrences of steelhead and intermittent occurrences of Chinook salmon in Alameda Creek? Does this not lend credence to the fact that steelhead habitat exists?

12.3-6

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Statement

On page 5.4.5-6, the dPEIR states, "the presence of migratory barriers, notably the BART weir, prevents upstream movement of migratory steelhead."

District Comment

Once again the statement is misleading. It is uncertain that steelhead cannot migrate upstream beyond the BART weir under higher flows. It is apparent that lower flows limit steelhead navigation over the BART weir. This structure pales in comparison to natural barriers that steelhead are known to navigate with ease. The dPEIR is incomplete because it focuses erroneously on the BART weir rather than on effects of the project on steelhead habitat within the project limits. This has resulted in failure to discuss the consequences of flows diversion on steelhead upstream migration into these habitats.

The existing conditions are best described as follows: [The presence of barriers, notably the BART weir, prevents upstream movement of migratory steelhead under low flows conditions]. The dPEIR should be revised to address the steelhead habitat within the project limits caused by water diversions. The "big picture" is flows and how it affects the species habitat and journey into the upper watershed habitat. These are both individually and cumulatively significant impacts requiring mitigation.

15 cont.

Statement

On page 5.4.5-7 to 9, the dPEIR states, "other migration barriers along the creek have been or are in the process of being removed…"

District Comment

The dPEIR rightly addresses the removal of dams by the EBRPD, and ACWD plans to provide fish passage at their upper inflatable dam. It, however, failed to mention the ACWD and the District's scheduled fish passage project over the BART weir and middle inflatable dam. The joint effort by the two entities is necessary to ensure that the entire corridor barriers are improved at the same time (information provided to SFPUC December 2006 per Sections 21101 and 21153(a)). The NOP for this joint effort will be out in December 2007. Please revise your dPEIR to address these omissions, erroneous conclusions, and provide mitigation to address the obvious impacts that water diversion and lack of flows to support the federally listed species in accordance with Sections 9 and 10 of the Endangered Species Act.

Statement

On page 5.4.5-9, in reference to the fish passage structure over the BART weir and the middle inflatable dam, the dPEIR states, "there is currently no schedule or budget for this project, and environmental review has yet to begin."

District Comment

This statement is incorrect. As acknowledged in the dPEIR, the District has sponsored several studies looking at various design options to provide steelhead passage over the BART weir. The results of these studies led the District to conclude that any structure which provides fish passage over the BART weir must also accommodate the ACWD Middle Inflatable Dam. It is for this reason that the District and ACWD entered into Memorandum of Agreement (MOA) to construct a fish passage facility over both barriers concurrently. The NOP for this project will be out in December 2007.

Statement

On page 5.4.5-9 of the dPEIR, in reference to the USGS Niles gauging station weir/concrete apron being a potential barrier.

District Comment

On February 28, 2007, a male steelhead was collected below the BART weir, surgically implanted with a radio-transmitter, and transported upstream to the scour pool below the USGS Niles gage located on SFPUC property. The steelhead was remotely monitored both up and downstream of the Niles gage structure. The structure did not appear to hinder movement and is not a barrier to upstream migration. Rather, the most significant barrier to the species use of the watershed habitats is lack of flows to which this document has woefully failed to address contrary to the "big picture" approached asserted in the NOP and inconsistent with Section 15168(5) of CEQA.

Habitat presence in the watershed is independent of the BART weir. Important conditions for the continual survival of the species are water and flows an important abiotic component of a functioning habitat. One gets the impression that the dPEIR for WSIP was written to avoid any discussion of the flows diversion impacts on sustainable viable fish population and habitat in the watershed.

The USGS Niles gage weir has recently been identified as falling apart and may not last another wet season. SFPUC has requested a multi-agency coordination meeting to address the future of this structure. The District supports this effort and is providing funding to coordinate the meeting. If SFPUC decides to remove or improve this barrier on their property to fish passage, the District will support that effort as long as the gage station functions are preserved.

Statement

15 cont.

12.3-7

On page 5.4.5-11, the dPEIR states, "there is no current steelhead migration above the BART weir…it is speculative to assess the specific impacts that system operations…might have on the potential future restoration of steelhead…"

District Comment

This statement is inconsistent with definition of special status on page xxx of Volume 1 of 5 of the dPEIR. Since 2001 steelhead have been sighted and moved over the BART weir to locations in Niles Canyon yearly under the auspices of the Alameda Creek Fisheries Workgroup. The recent removal of both Niles and Sunol dams in 2006 and the scheduled BART weir fish ladder by 2010, will assure steelhead migration upstream Alameda Creek and its tributaries in the watershed. Based on the past, current, and future projects described in the dPEIR, the WSIP will result in cumulative impact on the habitat (CEQA Sections 21061, 21002.1, and 15003(b)). The document requires major revision to address these impacts.

SFPUC has been a partner in the 10-year effort to improve steelhead habitat in the Alameda Creek Watershed and is aware of the projects downstream. Because the species is listed under ESA, Section 9 of the ESA requires projects that may affect listed species to provide mitigation. No mitigation for the species has been identified in the dPEIR even though the WSIP clearly will result in substantial impact on steelhead. Why?

Finally, what is speculative about the 10-year effort to restore fish habitat in the Alameda Creek Watershed? What is speculative about SFPUC staff advocating for stream flows analysis for the creek through the Fishery Workgroup? What is speculative about Section 10 of the ESA? What is speculative about the current rate of flow diversion from the Alameda Creek Watershed into reservoirs? This dPEIR is woefully inadequate. It requires major revision to address the impacts that it failed to acknowledge. Please revise your document to address these potentially significant impacts and re-circulate for public comments.

Statement

In reference to Table 5.4.5-2, Summary of Impacts – Fisheries in Alameda Creek Watershed, Stream, and Reservoirs.

District Response

The dPEIR failed to adequately address significant impacts on steelhead in Alameda Creek from the middle inflatable dam to its outfall with San Francisco Bay reach. This is 9.5 miles of unaccounted for creek segment that will be impacted with diversions of flows requiring mitigation.

Statement

On page C-2, regarding the statement, "…Calaveras Reservoir would operate to release up to 6,300 afy (5.5 mgd) of water to Alameda Creek in support of fisheries."

15 cont.

District Comment

Releases from Calaveras Reservoir should be operated for fisheries enhancement. The most important fisheries resources to support in this watershed are the threatened steelhead. Flow releases from Calaveras Reservoir must be sufficient to support all life stages of steelhead throughout the stream segments from the base of Calaveras Dam to the mouth of Alameda Creek at San Francisco Bay. The document failed to adequately address this impact in any detail in stark contrast to the increased diversions described in the dPEIR. This increased diversion is a significant "take" requiring mitigation and need not be deferred until a subsequent EIR phase. Please revise your document to identify this impact and provide appropriate mitigation.

Statement

On page C-21, in reference to SV-1 (Alameda Creek Fishery Enhancement) preliminary construction schedule occurring in 2011 and SV-2 (Calaveras Dam Replacement) preliminary construction schedule occurring during 2009 to 2011.

District Comment

The District and the Alameda County Water District entered into an MOA to construct a fish passage facility over the BART weir and middle inflatable dam within the Alameda Creek Flood Control Channel by 2010. The NOP for this project is due in December 2007. The BART Weir construction timeline is well ahead of the 2011/2012 completion schedule of the SV-1 and SV-2 projects.

The SFPUC staff has openly commented that they would rather construct the WSIP (SV-1 and SV-2) prior to entertaining the construction of the fish ladder over the BART weir and middle inflatable dam. Could this be the reason for not addressing the WSIP project impacts on the Steelhead in the dPEIR, subsequent EIR notwithstanding?

15 cont.

Statement

In reference to Table III.E-3: Special Status Animals Species Potentially Occurring in the Alameda Watershed dPEIR in Appendix D Biological Resources: Special Status Species in Alameda and Peninsula Watersheds.

District Comment

The lack of reference to any fish, including steelhead, as a special-status species within the Alameda Creek watershed appears to be misleading. The Central California Coast Steelhead (Oncorhynchus mykiss) ESU was listed in 1997 as threatened and identified as such in the CNDDB. Every year since 2001, steelhead have been observed in the Alameda Creek watershed. Occurrence of the species in the watershed affirms the potential "take" associated with the WSIP dPEIR requiring mitigation.

12.3-8

Thank you for the opportunity to comment on this dPEIR. Given the substantial errors documented in this dPEIR, a revised document would need to be re-circulated in accordance with Section 150703.5 of CEQA. We would appreciate a response to our comments. If you have any questions, please contact Mr. Emmanuel da Costa at 510.670.6479, mannyd@acpwa.org. 16

Very truly yours,

Kwablah Attiogbe
Environmental Services

KA
cc: Arthur Valderama

L_ACWD

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September 26, 2007

Mr. Paul Maltzer, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103-2414

Dear Mr. Maltzer:

Subject: SFPUC Water Supply Improvement Program: Draft Program Environmental Impact Report

12.3-9

The Alameda County Water District (ACWD) appreciates this opportunity to comment on the Draft Program Environmental Impact Report for the SFPUC's Water Supply Improvement Program (WSIP). ACWD's specific comments on the WSIP Draft Program EIR (DPEIR) are provided in the attached table. The following narrative addresses ACWD's reliance on San Francisco Regional Water supplies, ACWD's support for improving the Regional Water System, and the need for the DPEIR to adequately address local impacts in the Alameda Creek Watershed.

ACWD Background and Future Purchase Estimates

ACWD supplies water to a population of over 320,000 in the cities of Fremont, Newark and Union City and relies on purchases from the San Francisco Regional Water system for approximately 20% of its supplies. ACWD's other supplies include imported water from the State Water Project (40%) and local sources (40%). ACWD's local supplies include groundwater from the underlying Niles Cone Groundwater Basin and runoff from the Alameda Creek Watershed. This local runoff, along with State Water Project (SWP) water, is percolated into the Niles Cone Groundwater Basin through recharge in Alameda Creek itself and through recharge ponds within and adjacent to the Quarry Lakes Regional Recreational Area. The water is subsequently recovered through groundwater production wells and provided as a potable supply to ACWD's customers.

In 1995 ACWD completed its Integrated Resources Planning Study which provides the foundation for ACWD's long-term water supply strategy. This multi-faceted strategy includes:

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- Water conservation;
- Local conjunctive use;
- Off-site groundwater banking;
- Desalination of brackish groundwater; and
- Recycled water.

Over the past twelve years ACWD has implemented many components of this strategy including: a comprehensive water conservation program; improvements to the local groundwater recharge program; securing 150,000 acre-feet of off-site groundwater storage in Kern County; and implementation of Northern California's first brackish groundwater desalination facility. ACWD is currently in the process of expanding the capacity of this desalination facility and also has begun planning for a recycled water supply. Implementation of this comprehensive water management program means that ACWD will be able to meet its projected 2030 demands with no increase in its purchases from the SFPUC above ACWD's historical purchases, or ACWD's existing contractual entitlement (13.76 mgd). 01

Support for Implementation of the WSIP

As one of the SFPUC's larger wholesale customers, ACWD has a profound interest in seeing the SFPUC successfully execute its multi-billion dollar WSIP. We share with the residents of San Francisco the same desire for a high quality water supply and a reliable storage and conveyance system that will serve the present and future needs of the San Francisco Bay Area at a reasonable cost. 02

ACWD also supports the Bay Area Water Supply and Conservation Agency's (BAWSCA's) proposal that the final PEIR further describe and analyze the DPEIR's Modified WSIP Alternative (the environmentally superior alternative) and that the final PEIR explore the feasibility of the Bay Area water customers financially supporting water conservation with agricultural interests on the lower Tuolumne River that will result in no net decrease in flows on the lower Tuolumne. BAWSCA's proposal is to conserve even more agricultural water resulting in a net increase in lower Tuolumne River flows. This additional water could then be available to support greater flows in the lower Tuolumne River, deployed at times and in volumes most beneficial for salmon and other important species in the lower Tuolumne River. Under BAWSCA's proposal, the implementation of the WSIP can improve, rather than degrade, flow conditions in the lower Tuolumne River. 03

Need to Address Alameda Creek Watershed Impacts

Similar to addressing the Tuolumne River impacts, the DPEIR should also include a program to fully mitigate for flow impacts in the Alameda Creek Watershed. At almost 700 square miles, the Alameda Creek Watershed is the largest local watershed tributary to San Francisco Bay. This watershed is an important local resource in the Bay Area with much of the upper watershed remaining in pristine, natural condition. Alameda Creek provides many beneficial uses including 04

Attachment: ACWD Comments on San Francisco Water Supply Improvement Program Draft PEIR

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution
1	Section 3.8 Proposed Facility Improvement Projects, Table 3.10 Page 3-50	The DPEIR provides a description of the Alameda Creek Fishery Project in which is stated that the project would recapture the water released as part of the Calaveras Dam project.	The DPEIR does not indicate that the quantity of water to be "recaptured" would be limited to the quantity being released upstream. If more water is diverted at this recapture facility than is being released upstream, then there would be downstream flow impacts, including potential fishery impacts and water supply losses at ACWD's groundwater recharge facilities.	The DPEIR should clarify that the recapture facility would not capture any additional quantity of water than that which is being released upstream. If this is not the case, then the DPEIR should quantify the additional amount of water (beyond the upstream releases) and provide for measures to mitigate for downstream impacts.
2	Section 4.5, Hydrology and Water Quality; Bay Division Region, Page No. 4.5-6 to 4.5-7	This section provides information for the major water bodies and watersheds with beneficial use that could be affected by the Bay Division Region projects.	The DPEIR fails to address the Niles Cone Groundwater Basin which coincides with WSIP Facility Construction Projects BD-1, BD-2, and BD-3. The Niles Cone Groundwater Basin underlies the ACWD service area and provides approximately 40% of the water supply to a population of over 320,000 in Fremont, Newark and Union City	The DPEIR should include hydrology and water quality information, including an impact analysis and mitigation measures, for the Niles Cone Groundwater Basin wherever it coincides with WSIP Facility Construction Projects.
3	Hydrology and Water Quality: Section 4.5-2, Impact 4.5-1: Construction Impacts, Pages 4.5-21 to 28	The DPEIR describes possible water quality impacts during construction due to erosion, sedimentation and hazardous materials release.	The DPEIR should acknowledge that possible discharges to creeks and waterways in the Alameda Creek watershed could have impacts on downstream water intakes (i.e. at ACWD diversion facilities in the Flood Control Channel). ACWD would need immediate notification of any spills or discharges that could impact water quality.	The DPEIR should include an analysis of possible impacts on downstream water intakes at ACWD's facilities in the Flood Control Channel, and include in the mitigation measures development of a notification plan between SFPUC and ACWD in the event of a spill or release to any waterways in the Alameda Creek system.

05

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fisheries and riparian habitat for a wide variety of species, as well as serving as a vital source of water supply to the communities in ACWD (Fremont, Newark and Union City).

For that reason, ACWD's comments on the DPEIR, provided in the attached table, focus on ensuring that potential downstream impacts in the Alameda Creek Watershed, including the fishery resources and water supply to the Niles Cone Groundwater Basin, are adequately evaluated, and that full mitigation is provided for any adverse impacts. As these comments illustrate, the DPEIR is inadequate because of its failure to address: (1) downstream impacts to ACWD's water supplies from Alameda Creek and the Niles Cone Groundwater Basin, and (2) potential impacts to steelhead trout, a federally-protected species. Both of these impacts need to be addressed prior to finalization of the DPEIR.

04 cont.

We look forward to your consideration of this comment letter and continuing to work with the SFPUC throughout the implementation of the WSIP. If you have questions, please contact Doug Chun, Water Quality Manager at (510) 668-6510, or Eric Cartwright, Water Resources Planning Manager at (510) 668-4206.

Sincerely,

Paul Piraino
General Manager

Attachment
ec

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
4	Hydrology and Water Quality: Section 4.5-2, Impact 4.5-3, Pages 4.5-31 to 37	The DPEIR describes possible water quality impacts from dewatering and construction-related discharges in the Alameda Creek watershed.	The DPEIR does not mention that discharges could impact downstream water users in the Alameda Creek watershed if control measures fail. ACWD would need notification of any discharges to the Alameda Creek system that may contain contaminants due to failure of the proposed control measures.	The DPEIR should include a discussion of possible control measure failures and downstream impacts on ACWD's diversion and groundwater recharge facilities. Include in the mitigation measures development of a notification plan between SFPUC and ACWD in the event of contaminants being released to any waterways in the Alameda Creek system.	05 cont.
5	Hydrology and Water Quality: Section 4.5-2 Impact 4.5-4 Pages 4.5-37 to 41	The DPEIR describes possible flooding and water quality impacts associated with impeding or redirecting flood flows. In the Sunol Valley region, flooding impacts are considered potentially significant.	The DPEIR does not mention that flooding and possible sediment and contaminant releases could affect downstream water users. ACWD would need notification of flood events with known contaminant releases related to construction, or flood events related to construction that could have an impact on ACWD's inflatable dam and groundwater recharge operations.	The DPEIR should include a discussion of possible impacts on ACWD's diversion and groundwater recharge facilities. Include in mitigation measures development of a notification plan between SFPUC & ACWD.	06
6	Hydrology and Water Quality: Section 4.5-2, Impact 4.5-5 Pages 4.5-41 to 49	The DPEIR describes impacts due to degradation of water quality and increased flows due to discharges to surface water during operations	The DPEIR does not mention that changes in flow conditions in Alameda Creek could affect ACWD's rubber dam and diversion operations in the Alameda Creek Flood Control Channel.	The DPEIR should include a discussion of possible impacts of discharges on Alameda Creek flow conditions and ACWD's downstream inflatable dam and diversion operations. Include in the mitigation measures development of a notification plan between SFPUC and ACWD for such events.	07

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
7	Section 4.11 "Pipelines" (subsection) This subsection discusses the setting and impacts of the pipeline projects. Page 4.11-10, 11, 12	The DPEIR states that pipeline construction activities could result in disruption and/or damage to existing utilities if they are not properly identified prior to construction. The section text indicates that pipelines would be identified during design, and detailed engineering and construction plans would be prepared as a condition of approval "…for either a utility excavation permit or an encroachment permit."	The ACWD water distribution system pipelines cross the existing BDPL Nos. 1 and 2 at many locations along the SFPUC right-of-way between Irvington Portal and the Newark Valve Lot. Construction of the proposed welded steel pipeline within this right-of-way is expected to impact many, if not all, of these pipeline crossings. ACWD wants to ensure potential utility conflicts are identified and resolved well in advance of the project construction phase.	In order to avoid any problems that may adversely impact ACWD's pipelines and/or ACWD's ability to provide water service to our customers, the SFPUC should coordinate with ACWD during the project planning and design phases to minimize the impacts associated with conflicting water facilities.	
8	Section 4.11, various pages including: 4.11-14, "Bay Division Region" 4.11-22 & 23, "Siting Impacts"	The DPEIR states that the WSIP projects may result in the need for relocation of utilities and such relocations would have the potentially significant impacts. However, these impacts would be mitigated to a less than significant impact by implementation of "SFPUC Construction Measure #1, neighborhood noticing and identification of public utility lines prior to commencing construction".	Neighborhood noticing and identification of utilities *will not* reduce the potential for construction impacts to a less than significant level.	ACWD requests that SFPUC coordinate with ACWD and obtain ACWD review and concurrence with the project design and planned protective measures, prior to releasing the plans for construction (this would entail a modification to Mitigation Measure 4.11-1h, see below).	08
9	Attachment 4-A, "Public Services and Utilities" (subsection), page 41 Mitigation Measure 4.11-1g (erroneously listed as -2g)	The mitigation measure indicates that SFPUC or its contractor will reconnect any utility lines disconnected in the course of construction.	Without an on-site ACWD inspector, disconnection and/or reconnection of ACWD pipelines may result in damages to ACWD facilities and/or water service disruptions to ACWD's customers.	The proposed mitigation measure should also include prior notification and coordination with ACWD such that either ACWD can perform necessary work in advance of SFPUC construction, or ACWD can provide an inspector for any construction work that involves ACWD facilities, whichever ACWD determines to be most appropriate. Disinfection,	

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
				flushing and bacteriological testing of reconnected lines should be done in accordance with AWWA Standard C651.05 for main disinfection.	08 cont.
10	Attachment 4-A, "Public Services and Utilities" (subsection), page 41 Mitigation Measure 4.11-1h	The mitigation measure indicates SFPUC or its contractors will coordinate final construction plans and specifications with affected utilities.	Coordination needs to take place long before plans are finalized in order to allow for preparations (such as utility relocations) to be completed in an orderly way. Also, SFPUC should commit that the plans and specification shall be *approved* by ACWD in advance of being finalized.	The mitigation measure should state that SFPUC will coordinate plans and specifications with affected utilities throughout the design process. Plans and specifications relating to ACWD facilities shall be approved by ACWD before being released for construction.	
11	Section 5.4.1.1 – Alameda Creek Watershed Streams and Reservoirs, Stream Flow and Reservoir Water Levels, Setting Page 5.4.1-1 to 5.4.1-4	The DPEIR description of the Alameda Creek Watershed Boundary covers the entire upper watershed, but downstream, extends only to Niles Canyon (as shown on Figure 5.4.1-1).	This description of the watershed boundary is not complete. From Niles Canyon, Alameda Creek extends downstream approximately 12 miles to San Francisco Bay. Correspondingly, the watershed also extends to San Francisco Bay, and includes portions of the Cities of Fremont, Newark and Union City. This downstream section of the creek (channelized in the 1970's by the US Army Corps of Engineers and called Alameda Creek Flood Control Channel) provides multiple beneficial uses including groundwater percolation and water supply, flood control, recreation, fish habitat and migratory corridor, and riparian habitat. The Niles Cone Groundwater Basin underlies the Flood Control Channel and has historically been recharged from flows in Alameda Creek. This groundwater basin, managed by ACWD, provides approximately 40% of the water supply to a population of over 320,000 in Fremont, Newark and Union City. The Flood Control Channel also provides fish habitat and a riparian corridor. By not including this downstream segment in	The DPEIR should be revised to include the downstream section of the watershed to San Francisco Bay. Analyses of potential impacts to stream flows, flood control, fisheries and riparian habitat in the Flood Control Channel and groundwater percolation and water supply in the underlying Niles Cone Groundwater Basin should be included in the DPEIR. The DPEIR should include mitigation measures, if necessary, for any significant impacts in this downstream section of the watershed.	09

L_ACWD

Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
			the DPEIR analyses, the DPEIR does not provide an adequate analysis of potential downstream impacts to water supply, flood control and fisheries in this section of the creek and watershed.		09 cont.
12	Section 5.4.1.2 – Alameda Creek Watershed Streams and Reservoirs, Impacts, Approach to Analysis Page 5.4.1-17 to 5.4.1-18	The Baseline Conditions used in the analyses of impacts downstream of Calaveras Reservoir is based on existing operating conditions of Calaveras Reservoir. This includes the 2001 Division of Safety of Dams (DSOD) requirements that Calaveras Reservoir be operated at approximately 40% of its maximum capacity (due to DSOD's concern about the seismic stability of the dam). This Baseline Condition also includes the associated operation of the Alameda Creek Diversion Dam (ACDD), which diverts water to fill Calaveras Reservoir. Under existing conditions with DSOD restrictions, the Alameda Creek Diversion Dam has passed significantly more Alameda Creek flows downstream then under pre-2001 operations (prior to the DSOD restriction).	The DPEIR indicates that the Calaveras Dam project will not be fully implemented until 2012, thereby resulting in over ten years of operations under the current DSOD restrictions. Because of this extended timeframe, it is appropriate to utilize the operations of Calaveras and ACDD under the DSOD restrictions as the Baseline Conditions. In order to determine downstream impacts on flows, the DPEIR should rely solely on these Baseline Conditions to compare against the projected flows under the proposed Program.	ACWD supports the use of the Baseline Conditions under the existing DSOD requirements for Calaveras Reservoir and the associated diversions at Alameda Creek Diversion Dam.	10

L_ACWD

Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution
13	Section 5.4.1.2 – Alameda Creek Watershed Streams and Reservoirs, Impacts, Approach to Analysis Page 5.4.1-18	As documented in the DPEIR (Appendix H), projected changes to streamflows and reservoir levels attributed to implementation of the WSIP are evaluated through the use of the Hetch-Hetchy/Local Simulation Model (HH/LSM). All modeling of impacts to Alameda Creek flows was conducted on a monthly time step. These results are presented as average monthly flows. In the discussion of model limitations, the PEIR notes that "the model results were not solely relied upon when evaluating flows in creeks immediately downstream of SFPUC reservoirs that normally have minimal flow or are affected by SFPUC operations for time periods less than a month in duration." Operator experience and knowledge are cited as additional considerations for the evaluation.	The monthly model time step is not sufficient to capture day-to-day flow impacts that may be significant. In addition, the PEIR does not provide enough detail about the day-to-day evaluations that were based on "operator experience and knowledge." Winter and spring flows in Alameda Creek and its tributaries are highly variable, and are primarily a function of the daily rainfall conditions. It is common for daily flows within a month to vary widely, with peak flows occurring during and directly after a rainfall event. Flows quickly recede after these periods of rainfall. Because of these wide variations in daily flows, the use of a monthly time step to evaluate downstream flow impacts is not adequate. For instance, implementation of the WSIP program may significantly reduce stream flows for a portion of a month (with significant impacts to fisheries and downstream water supplies) while keeping water in the creek for the remainder of the month. However, with the use of average monthly flows in the HH/LSM, the impacts of significantly reducing flows during a portion of the month would be obscured, or entirely overlooked in the DPEIR impact analysis.	The DPEIR should analyze downstream flow impacts utilizing a daily time-step for the Alameda Creek watershed. Given the highly variable flow conditions in the watershed, a daily time step is necessary to analyze and properly assess impacts to both fisheries and water supply. As an example, ACWD utilizes a spreadsheet based operational model, utilizing a daily time step, with over 70 years of daily hydrology on Alameda Creek. This ACWD model is used for the planning and operation of ACWD water supply facilities in the Alameda Creek Flood Control Channel. In order to facilitate the implementation of a similar daily hydrologic model of the SFPUC's Alameda Creek watershed operations, ACWD can provide the SFPUC with daily input data, including hydrologic data from the watershed.

11

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution
14	Section 5.4.1.2 – Alameda Creek Watershed Streams and Reservoirs, Impacts, Impact 5.4.1-4: Effects of flow along Alameda Creek below the confluence of San Antonio Creek Page 5.4.1-39 to 5.4.1-40	The DPEIR analyzes impacts to downstream flows on Alameda Creek below the confluence with San Antonio Creek. This represents the furthest downstream flow impact analysis that is provided in the DPEIR. The results from the impact analyses indicates that winter/spring flows would be reduced by an average of approximately 50% during normal years, and approximately 30% during above normal and wet years. The DPEIR states that these impacts would be dampened by inflows from downstream tributaries and characterizes this impact as "less than significant".	The DPEIR does not adequately address potential downstream impacts to flows. Specific deficiencies include: 1. The DPEIR does not include an evaluation of flow impacts downstream in Niles Canyon or in the Flood Control Channel. An impact assessment in both of these reaches is required to determine potential impacts to fisheries, riparian habitat and water supply (see comment no. 11 above, regarding need to address full extent of Alameda Creek Watershed in impact analysis). 2. The impact assessment is based on a hydrologic model utilizing a monthly time step. As discussed in comment no. 13 above, the impact analyses for flows in the Alameda Creek watershed should utilize a daily time step. This is necessary to account for the highly variable flow conditions that occur within any given month during winter and spring conditions. 3. The DPEIR's assertion that flow impacts would be "dampened" by inflows from other tributaries is not supported by any technical analyses or documentation.	In order to adequately address potential downstream impacts to flows in Alameda Creek, the DPEIR should be revised: 1. The impact assessment should include downstream Alameda Creek flow impacts both in Niles Canyon and in the Flood Control Channel. The impact assessment should address potential flow related impacts to fisheries as well as water supply impacts to ACWD groundwater recharge operations. 2. The flow impact analyses should be performed with a daily hydrologic model in order that potential impacts under the wide variations in daily flows can be accurately evaluated. 3. The DPEIR should provide technical evaluation of the mitigating impacts of "flow dampening" from downstream tributaries. This analysis should also be performed with a hydrologic model with a daily time step. 4. The impact conclusions should be re-evaluated based on the revised technical analysis, as described above. The level of significance of the downstream flow impacts in Niles Canyon and

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
				the Flood Control Channel should be made in consultation with ACWD to determine potential water supply impacts, and with qualified biologists to determine impacts to fisheries, aquatic and riparian habitat. 5. The DPEIR should also include mitigation measures to develop a joint communications/notification plan between SFPUC and ACWD to minimize the impacts of day-to-day and hour-to-hour changes in streamflows that could affect ACWD's downstream operations and facilities.	12 cont.
15	Section 5.4.2.2 – Geomorphology, Impacts: Page 5.4.2-2 to 5.4.2-4	The PEIR notes that under WSIP, uncontrolled reservoir releases could result in increased erosion, sediment transport and deposition downstream of Calaveras Dam compared to current conditions, but that it would be similar to long-term conditions that formed the channel and would be less than significant.	Given that Baseline Conditions should be used as the basis to determine impacts, it is inappropriate to base the level of significance on a comparison with conditions other than Baseline Conditions (i.e. before Calaveras DSOD restrictions). Also, the DPEIR does not consider any impacts on geomorphology and sediment transport in Alameda Creek downstream of Calaveras Creek and through Niles Canyon and the Flood Control Channel. In addition, the DPEIR does not address the possible impact of additional debris loading downstream due to changes in flows; this can be a significant issue for ACWD's downstream facilities. For instance, logs and other floating debris can damage or puncture ACWD inflatable dams in the Alameda Creek Flood Control Channel.	1. The DPEIR should evaluate the significance determination based solely on the Baseline Conditions, (as described in the DPEIR on pages Page 5.4.1-17 to 5.4.1-18). 2. The DPEIR should include an evaluation of downstream impacts on geomorphology and sediment transport in Niles Canyon and the Alameda Creek Flood Control Channel. 3. The DPEIR should also include an evaluation of downstream debris loading as a possible downstream impact at ACWD's groundwater recharge facilities in the Alameda Creek Flood Control Channel.	13

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
16	Section 5.4.3.1 Setting/Surface Water Quality, (including Tables 5.4.3-3 and 5.4.3-4) Pages 5.4.3-4 to 5.4.3-6	The DPEIR cites ACWD temperature data from Alameda Creek at the mouth of Niles Canyon with a reference to "ACWD, 2007," but the reference at the end of the section is to ACWD's website, which does not contain this data.	ACWD has several concerns regarding this item: 1) Reference is incorrect; 2) ACWD temperature and TDS data may not be subject to the rigorous QA/QC procedures that would be required for data used in scientific studies, and therefore should not be used for purposes other than an indication of general conditions (unless otherwise specified by ACWD); 3) Text on 5.4.3-4 notes that the data is from the monitoring station at the mouth of Niles Canyon near Mission Blvd., but Tables 5.4.3-3 & 4 cite the location as "near Sunol." These appear to be two different locations.	The DPEIR should be modified to: 1) Provide appropriate reference; 2) Include disclaimer that data QA/QC is not to the level of scientific studies; 3) Clarify monitoring location.	14
17	Section 5.4.3.1 Setting/Surface Water Quality Page 5.4.3-5	The DPEIR states "… most of the summer and fall flows in Alameda Creek below its confluence with Arroyo de la Laguna originate from the South Bay Aqueduct. This South Bay Aqueduct water may be warmer and is higher in total dissolved solids (TDS) than the flows in Alameda Creek originating from the Sunol Valley watershed."	The statement that most summer & fall flows below the confluence of Arroyo de la Laguna are due to releases of South Bay Aqueduct (SBA) water into Alameda Creek is incorrect. The amount of SBA contributions to Alameda Creek flow can vary greatly from year to year depending on the year type, and from day to day depending on operations. Flows in Alameda Creek during these times are also highly dependant on other discharges within the watershed, and often a significant portion of the flow passing through Niles Canyon originates in Arroyo de la Laguna. Additionally, no data is provided to substantiate the claim that SBA water is warmer and higher in TDS. Air and water temperature studies conducted by Hanson Environmental (October 2002) concluded that, based on the available data, "no apparent pattern or trend was detected in (Alameda Creek) water temperature that could be directly attributable to releases from the South Bay Aqueduct into Alameda Creek".	Remove generalized statement about SBA water or expand discussion about the variations in SBA contributions to flow conditions and the other variables (Arroyo de la Laguna flow, quarry discharges, etc.) that can contribute flow during summer and fall. Unless the SFPUC can cite specific data or studies, remove incorrect statements that claim that SBA water released into Alameda Creek is warmer than local watershed inputs.	15

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
18	Section 5.4.3.2 Surface Water Quality – Impacts	The DPEIR determines that water quality impacts are less than significant based on an analysis of a small number of water quality parameters, including temperature, dissolved oxygen and nutrients.	This section does not address the possibility of turbidity impacts due to changing operational and flow conditions under the WSIP. Increased turbidity at lower flows could affect ACWD groundwater recharge operations. Specifically, high turbidity in flows captured by ACWD's downstream facilities may significantly reduce the percolation capacity at ACWD's recharge ponds. In addition, ACWD may lose significant water supplies if, because of high turbidity, ACWD cannot divert and percolate this water and must instead bypass it.	This section should include an analysis of the impacts of WSIP operations and flows on downstream turbidity in the Flood Control Channel and potential impacts to ACWD's groundwater recharge operations. Any water supply or operational impacts to ACWD should be fully mitigated.	16
19	Section 5.4.4, Groundwater Page 5.4.4.1 and Impact 5.4.4-1 Page 5.4.4-6	The PEIR states that, "Because the proposed program would not affect upstream areas in the Livermore Valley or lower areas in the Niles Cone (which is below the SFPUC's infiltration galleries), this section focuses on describing the groundwater conditions and potential WSIP impacts in the Sunol Valley". Under a later discussion of groundwater impacts (Impact 5.4.4-1) the DPEIR states that "impacts on groundwater in the Niles Cone would be dampened by inflow from non-SFPUC watershed streams and aquifers, removal of the Sunol and Niles Dams, and ongoing withdrawals at the infiltration galleries above the water temple; as a result, impacts are expected to be minimal."	The DPEIR incorrectly states that the proposed program would not impact the Niles Cone Groundwater Basin. As described above, the Niles Cone Groundwater Basin underlies the Alameda Creek Flood Control Channel (which historically has provided the majority of the recharge for the basin) and provides approximately 40% of the water supply to the communities of Fremont, Newark and Union City. The DPEIR has already acknowledged that winter and spring flows in Alameda Creek (below the confluence with San Antonio Creek) will be reduced by over 50% in normal years. Given ACWD's reliance on these winter and spring flows to replenish the Niles Cone Groundwater Basin (and to protect the Basin from seawater intrusion from San Francisco Bay), the Niles Cone would, in fact, be affected by the proposed WSIP. Under Impact 5.4.4-1, the DPEIR is incorrect	The DPEIR should include an analysis of potential impacts to the Niles Cone Groundwater Basin and ACWD's water supplies from the Niles Cone Groundwater Basin. This impact analysis should consider potential impacts due to changes in timing, quantity, and quality of flows in the Alameda Creek Flood Control Channel. The impact analyses should use the Baseline Conditions as described in Section 5.4.1.2 (post DSOD requirements for Calaveras operations) and should consider ACWD's facilities and operations utilized for groundwater recharge in the Flood Control Channel and adjacent percolation ponds. The DPEIR should also include mitigation for any resulting impacts to water supply or water quality in the Niles Cone	17

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
			in stating that impacts to Niles Cone would be dampened by inflow from other streams, removal of Sunol and Niles Dam, and ongoing withdrawals at the infiltration gallery. First, the removal of Sunol and Niles Dams is not part of the WSIP, and in fact occurred several years prior to the release of this Draft PEIR. Second, the infiltration galleries referred to result in a net loss of supplies to Niles Cone, and thus would provide no "dampening" effects. Third, inflows from non-SFPUC tributaries would not change as a result of the WSIP program, and therefore would not offset the loss of water supplies to the Niles Cone Groundwater Basin.	Groundwater Basin.	17 cont.
20	Section 5.4.5.1 - Alameda Creek Fisheries: Potential Steelhead Restoration Page 5.4.5-11	The DPEIR does not include any analysis of the WSIP's potential impacts to steelhead in the Alameda Creek Watershed. The DPEIR's rationale for this approach is that, under existing conditions, steelhead cannot access the upper watershed (i.e. upstream of the BART weir), and therefore, the WSIP implementation would not impact steelhead upstream of the BART weir. The DPEIR also states that since a number of steps are required before steelhead can access the upper watershed, it would be "speculative" to assess the specific impacts that the WSIP operations may have on a future restored steelhead fishery.	The DPEIR's failure to evaluate steelhead impacts is based on an incorrect and incomplete assessment of the current status of steelhead fishery in Alameda Creek and the ongoing steelhead fishery restoration efforts. The DPEIR does not consider the following facts in its approach to evaluating impacts to a steelhead fishery: (1) Under existing conditions, there are annual sightings of steelhead in the Alameda Creek system. Multiple sightings of steelhead in the Alameda Creek Flood Control Channel have been documented every year since 1998 by Alameda Fishery Workgroup members. These steelhead are attracted to the Alameda Creek watershed by the winter and spring flows. As noted above, implementation of the WSIP would substantially reduce winter and spring Alameda Creek flows (by up to 50% in normal years according to the WSIP's impacts analysis for Alameda Creek flows below the	The DPEIR should correctly describe: (1) the current status of steelhead in the lower watershed (i.e. under existing conditions steelhead are sighted annually in the flood control channel below the BART weir) and (2) the on-going efforts to provide access to the upper watershed, including the recent ACWD/ACFC&WCD Agreement that provides for preliminary design of a fish passage facility with a goal of constructing this facility by the year 2010. Given this corrected information, the DPEIR should address potential impacts of the WSIP on both the existing steelhead downstream in the Flood Control Channel, and a future restored steelhead population in the	18

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution
			confluence below San Antonio Creek). Flow reductions of this magnitude may adversely impact steelhead that currently access Alameda Creek below the BART weir. (2) There is an active program to restore steelhead to the upper watershed through the Alameda Creek Fisheries Restoration Workgroup. A MOU signed by the Workgroup stakeholders, including the SFPUC, documents the process that the Workgroup members are taking to restore steelhead. This MOU also provides a commitment to conduct the studies necessary to determine flow requirements for a restored steelhead fishery. The first phase of these studies is near completion. (3) There is an active and on-going program to address fish passage in the Alameda Creek Flood Control Channel. For example, ACWD and Alameda County Flood Control and Water Conservation District (ACFC&WCD) have prepared conceptual designs for fish passage at the BART weir and ACWD's inflatable dams. More recently ACWD and ACFC&WCD governing boards approved an Agreement to provide for preliminary design of a fish ladder to provide passage at the BART weir and middle inflatable dam. Under this Agreement, the timeline for constructing the fish ladder is by the year 2010 (two years before the completion of the Calaveras Dam project). ACWD's Capital Improvement Program, adopted by the ACWD Board in 2007, also provides for funding for ACWD's share of this project costs in the years 2007 through 2010.	upper watershed. The DPEIR should include mitigation measures to avoid adverse impacts to flows needed for the existing steelhead returning to the Alameda Creek Flood Control Channel and the planned future restored steelhead fishery. This analysis should consider impacts along the full length of Alameda Creek, from SFPUC facilities in the upper watershed downstream to San Francisco Bay.

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution
21	Section 5.4.5.2 - Alameda Creek Fisheries: Impacts – Impact 5.4.5-6 Effects on fisheries along Alameda Creek downstream of San Antonio Creek Page 5.4.5-21 to 5.4.5-22	The DPEIR impact analysis focuses primarily on fishery impacts related to San Antonio Creek and reservoir operations. DPEIR conclusion is that impacts would be "less than significant". The DPEIR provides no discussion of downstream fishery impacts in Sunol Valley, Niles Canyon or the Flood Control Channel.	The DPEIR discussion of impacts to fishery resources along Alameda Creek below the confluence with San Antonio Creek is incomplete. Under existing conditions there is significant fishery habitat in Alameda Creek downstream of the confluence with San Antonio Reservoir. The fishery resources have been documented by the Department of Fish and Game, the Alameda Creek Fishery Workgroup, and others. The DPEIR's flow analyses also indicates that winter/spring flows below in Alameda Creek below the confluence would be reduced by approximately 50% during normal years. Given these substantial flow reductions, and the extent of the existing downstream fishery resources in Sunol Valley, Niles Canyon and the Flood Control Channel, the DPEIR evaluation of fishery-related impacts is incomplete without an evaluation of potential impacts in these downstream reaches.	The DPEIR should include an evaluation of potential impacts to Alameda Creek fishery resources downstream of the San Antonio confluence. This impact evaluation should address potential impacts to fisheries downstream to San Francisco Bay and include Sunol Valley, Niles Canyon, and the Alameda Creek Flood Control Channel.
22	Section 5.7 Cumulative Projects and Impacts Related to WSIP Water Supply and System Operations Page No. 5.7-55	Figure 5.7-3 Future Projects in the Alameda Creek Watershed Considered in the Cumulative Analysis.	The figure shows facilities in wrong locations.	The DPEIR should be revised to correct the following facility locations: 1.) ACWD Wells (actual location is south of Alameda Creek) 2.) The BART Weir 3.) ACWD Upper Inflatable Dam, AC-6 "Upper Inflatable Dam Fish Passage Project", and AC-2b "Alameda Creek Pipeline No. 1 Fish Screen." These projects are all in the same vicinity just downstream of the Mission Blvd. bridge.

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
23	Surface Water Hydrology and Water Quality: Section 6.3.4, Pages 6-9 to 10	The DPEIR outlines mitigation measures for water quality and hydrology.	The DPEIR does not provide mitigation measures that include notification of ACWD in the event of any flow changes or water quality contamination events that could affect ACWD's downstream rubber dam and diversion facility operations. (See comments on impacts 4.5-1, 4.5-3, 4.5-4, 4.5-5.) A coordinated notification plan is vital to protection of ACWD's water resources.	The DPEIR should include an additional mitigation measure that includes a commitment to develop a coordinated notification plan between SFPUC and ACWD for events that could unexpectedly alter flows or release contaminants that could affect ACWD's downstream operations.	21
24	Section 6.4.3 – Alameda Creek Watershed Streams and Reservoirs: Mitigation Measure 5.4.1-2: Diversion Tunnel Operation Page 6-51 to 6-52	This mitigation item directs the SFPUC to "establish and implement written operational criteria" for Alameda Creek Diversion Dam (ACDD) operations. As described in the DPEIR, the operating criteria would give priority to diverting water to Calaveras, and once Calaveras storage targets are met, the water would be passed downstream.	The proposed "mitigation" measure does not provide any real mitigation for downstream flow impacts since the operational criteria will simply document the operation of the facility.	This mitigation measure should be revised to provide actual mitigation of the impacts due to reduced flows downstream of the ACDD.	
25	Section 6.4.3, Streamflow & Reservoir Water Levels - System Measures Pages 6-51 to 52	The DPEIR does not include any mitigation for altered streamflows and the possible effects on ACWD's downstream operations.	Alterations of streamflows caused by the WSIP (on a day-to-day and hour-to-hour basis) could have significant impacts on real-time operations at ACWD's downstream rubber dams and diversion facilities.	The DPEIR should include an additional mitigation measure that includes development of a joint communications/notification plan between SFPUC and ACWD to minimize the impacts of day-to-day and hour-to-hour changes in streamflows that could affect ACWD's downstream operations and facilities.	22

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution	
26	Section 6.4.3 – Alameda Creek Watershed Streams and Reservoirs: Mitigation Measure 5.4.5-3a: Minimum Flows for Resident Trout on Alameda Creek Page 6-52 to 6-54	Under this mitigation measure, the SFPUC would provide a minimum flow downstream of the ACDD from Dec 1 to April 30 to support resident trout spawning and egg incubation. The quantity of flow is not specified – rather the DPEIR states that the SFPUC will complete the studies needed to "determine the appropriate minimum stream flow for this reach of the creek". The DPEIR notes that a minimum flow of 10 cfs "has been suggested".	The proposed flow releases under this mitigation measure are contingent on future studies by the SFPUC. Therefore this measure will not provide for any real mitigation if the SFPUC chooses to release minimal amounts based on its own staff recommendations. The SFPUC has already conducted numerous fishery and hydrologic studies of this section of the creek. Indefinite deferral of a determination of the amount of flow is impermissible under CEQA.	Based on the existing studies and consultation with Department of Fish and Game biologists, the DPEIR should commit to a minimum level of flow releases for fisheries, rather than rely on future studies by SFPUC staff.	23
27	Section 7.3.4 Growth in Water Demand Compared with Growth in Population and Employment Page 7-32 to 7-36	The DPEIR provides a comparison of projected growth in water demands versus projected growth in employment and population. This section includes a table (Table 7.10) that provides a comparison for specific agencies that lists the customer's demands as "Percentage of Total 2030 Demand". A discussion is also provided for each wholesale customer, including ACWD (page 7-35). Under the ACWD discussion it is stated that ACWD's 2030 water purchase estimate is approximately 15% higher than its 2001 water purchase. This section also states that the employment projection used in the SFPUC's demand study is about 25% higher than the employment projections incorporated in the general plans of the cities in ACWD service area (Fremont, Newark, and Union City).	ACWD has the following concerns regarding this section of the DPEIR: 1. Table 7.10 expresses the wholesale customers' projected demands as a function of the total demand in the area served by the San Francisco Regional Water System. However, the table does not indicate that, in ACWD's case, only approximately 25% of ACWD's projected demand will be met by purchases from the San Francisco system. As currently configured, this table provides a misleading characterization that ACWD has the highest projected demand of water from the San Francisco System. 2. The DPEIR does not recognize that ACWD's estimated 2030 purchase of water from the SFPUC (13.76 mgd) is within its existing contractual maximum, and is no greater than ACWD's historical purchases. For instance in fiscal year 2006/07, ACWD purchased its full contractual quantity from	The DPEIR should be revised as follows: 1. Table 7.10 should be revised to note that ACWD's estimated 2030 water purchases from the SFPUC are only 25% of ACWD's 2030 demand. 2. The DPEIR should correctly state that ACWD's 2030 purchase estimate is: (a) no more than ACWD's existing contractual entitlement (13.76 mgd), and (b) no more than ACWD has historically purchased from the SFPUC. 3. Rather than compare the 2030 ABAG employment projections against the 2020 general plan employment projections, the DPEIR should be revised to	24

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BAWSCA
Bay Area Water Supply & Conservation Agency

COMMENTS ON THE DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE SAN FRANCISCO PUBLIC UTILITIES COMMISSION'S WATER SYSTEM IMPROVEMENT PROGRAM

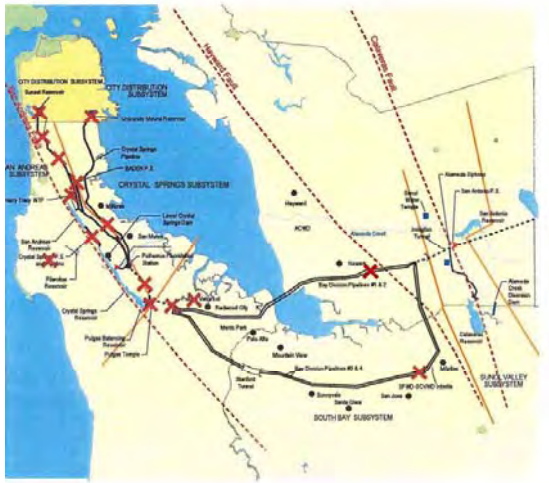

Figure shows water system facilities expected to fail in major earthquake on the San Andreas Fault

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Comment No.	WSIP DPEIR Item of Concern	Summary of DPEIR Coverage of Item	ACWD Concerns regarding adequacy of DPEIR	ACWD Proposed Resolution
			the SFPUC, and is not requesting an amount greater than this historical usage for its 2030 purchase estimate. 3. The comparison between the employment projections provided by ABAG and the cities's general plans is misleading. The planning horizon for the cities' general plans is the year 2020, whereas the ABAG projections are for the year 2030. If the ABAG projections for the year 2020 are utilized, the difference between the two approaches (ABAG versus general plans) is much less (approximately 10%).	compare the 2020 ABAG employment projections versus the 2020 general plan projections.
28	General Comment		Since ACWD relies on the BDPLs as sources for blending and water distribution, any potential disruption of these sources may impact ACWD's ability to meet customer demands and fire flow requirements.	SFPUC should work with ACWD to review potential operational impacts of any project options which may involve disruption of the operation of the BDPL Nos. 1 and 2.

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COMMENTS ON THE DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE SAN FRANCISCO PUBLIC UTILITIES COMMISSION'S WATER SYSTEM IMPROVEMENT PROGRAM

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BAWSCA
Bay Area Water Supply & Conservation Agency

Hand Delivery

October 1, 2007

Paul Maltzer, Environmental Review Officer
San Francisco Planning Department
WSIP PEIR
1650 Mission Street, Suite 400
San Francisco, CA 94103

Re: Program Environmental Impact Report; Water System Improvement Program

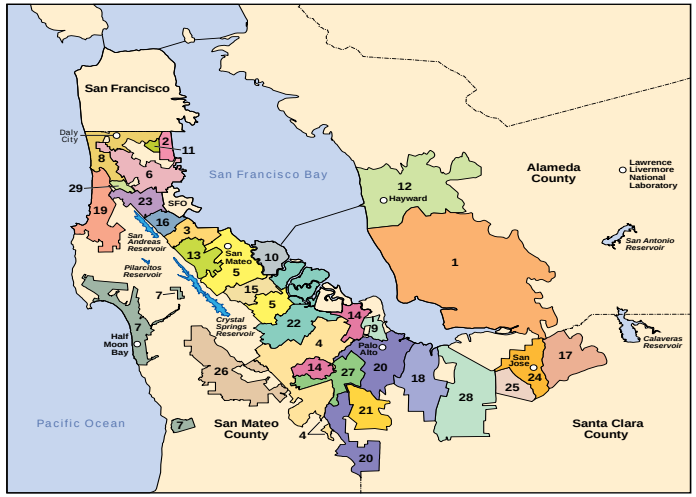
Dear Mr. Maltzer:

The Bay Area Water Supply and Conservation Agency (BAWSCA) appreciates the opportunity to offer comments on the comprehensive draft Program Environmental Impact Report (PEIR) which the Planning Department has prepared for the Water System Improvement Program (WSIP) being developed by the San Francisco Public Utilities Commission (SFPUC).

1. BAWSCA'S INTEREST IN THE WSIP

BAWSCA is an independent special district whose board of directors represents the 27 long-term contract customers of San Francisco in Alameda, San Mateo and Santa Clara counties. These neighboring communities include 16 cities, 9 water districts, an investor-owned public utility and Stanford University. The individual customers are listed, and their service areas are depicted, on Figure 1.

Figure 1. Map of BAWSCA Service Area



1 Alameda County Water District
2 City if Brisbane
3 City of Burlingame
4 CWS - Bear Gulch
5 CWS - Mid-Peninsula
6 CWS - South San Francisco
7 Coastside County District
8 City of Daly City
9 City of East Palo Alto
10 Estero Municipal Improvement District
11 Guadalupe Valley MID
12 City of Hayward
13 Town of Hillsborough
14 City of Menlo Park
15 Mid-Peninsula Water District
16 City of Millbrae
17 City of Milpitas
18 City of Mountain View
19 North Coast County Water District
20 City of Palo Alto
21 Purissima Hills Water District
22 City of Redwood City
23 City of San Bruno
24 City of San Jose (North)
25 City of Santa Clara
26 Skyline County Water District
27 Stanford University
28 City of Sunnyvale
29 Westborough Water District

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Many of these customers rely on San Francisco for 100% of the water they distribute. All but one obtain more than 50% of their supply from the San Francisco regional system. Collectively, they purchase over two-thirds of the water which the SFPUC distributes, and pay over two-thirds of the cost of the regional water system. (In fiscal year 2006-07, customers represented by BAWSCA paid SFPUC over $100 million.) The water purchased from San Francisco is redistributed to over 1.7 million residents in the neighboring communities that rely on the San Francisco regional system. Their interest, individually and collectively, in a reliable water system, and therefore in the Water System Improvement Program evaluated in the draft PEIR, is plain to see.

2. ORGANIZATION OF BAWSCA'S COMMENTS

This letter addresses the major themes of the PEIR, with particular emphasis on the basic purpose of, and urgency for, the WSIP, and on the alternatives to it described in the draft PEIR. Attachment 1 to this letter contains our more specific, section-by-section review of the draft PEIR. We are also submitting separately bound volumes that provide additional information on, and illustrations of, wholesale customers' water conservation and efficiency measures, recycled water projects, and the "Smart Growth" that is encouraged by land use policies of San Francisco's neighboring communities. Finally, many of the individual wholesale customers which are members of BAWSCA will be submitting comments separately, addressing the elements of the draft PEIR that affect them directly and providing their individual perspectives on the PEIR and the program itself.

01

3. SUMMARY OF BAWSCA COMMENTS

- The draft PEIR is a conscientious, and largely successful, effort to satisfy the requirements of the California Environmental Quality Act (CEQA) for program EIRs.
- However, the description of the program in the draft PEIR does not convey to the reader the fundamental purpose of, and driving motivation for, the WSIP: to protect the 2.5 million people who live in the area served by the San Francisco regional water system from the catastrophic consequences of the system's failure during an earthquake. Nor does it convey the urgency with which those residents, their elected officials, and the State Legislature expect the WSIP to be prosecuted to completion.

- Several of the alternatives to the WSIP presented in the draft PEIR are considerably worse from the environmental, public safety, public health, resource allocation and urban planning perspectives than the WSIP.
- The variant which would limit maximum systemwide rationing to 10% of normal use avoids significant environmental and economic harm in the Bay Area and can be achieved with no additional impact on flows in the lower Tuolumne River or to the agricultural economy in the San Joaquin Valley lands bordering the River. The economic impacts of the proposed program, which tolerates systemwide rationing up to 20% of normal use, are severe and are not adequately described in the draft PEIR.
- By contrast, the "Environmentally Superior Alternative" does indeed appear to be superior to the basic WSIP. It is described in only the most abbreviated, outline form in the draft PEIR. If we understand it correctly, its cornerstone is water agencies in the Bay Area providing economic incentives to encourage the Turlock Irrigation District and/or the Modesto Irrigation District, which currently divert large amounts of water from the Tuolumne River, to implement additional water conservation and reuse practices, thereby conserving at least the same amount of water as that to be diverted by the SFPUC over and above the City's existing contractual commitments to its wholesale customers. BAWSCA endorses this alternative, although we believe its environmental values can be further enhanced, as we describe below in Section 7.

01 cont.

12.3-22

4. THE FUNDAMENTAL PURPOSE OF THE WSIP -- PROTECTION AGAINST DISASTER

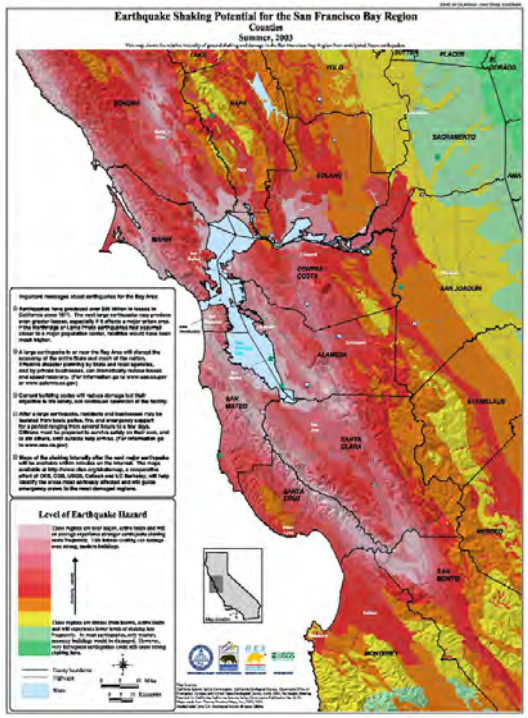
The need for the WSIP is rooted in the hard science of plate tectonics. The San Francisco Bay Region lies on the boundary zone between two of the tectonic plants (the Pacific Plate and the North American Plate) that make up the Earth's outer shell. The relentless motion of these plates as they grind past each other builds up strains that will eventually be released on the region's many faults. A stark reality which those who live or work in the Bay Area must face is that geological forces of immense power will inevitably, violently and without warning be released in the earth beneath their homes, schools, hospitals, offices, factories, public utilities, and transportation systems. The map included below as Figure 2, entitled "Earthquake Shaking

02

Potential for the San Francisco Bay Region Counties" graphically illustrates the potential of high intensity seismic activity concentrated in the four counties served by the San Francisco regional water system.

02 cont.

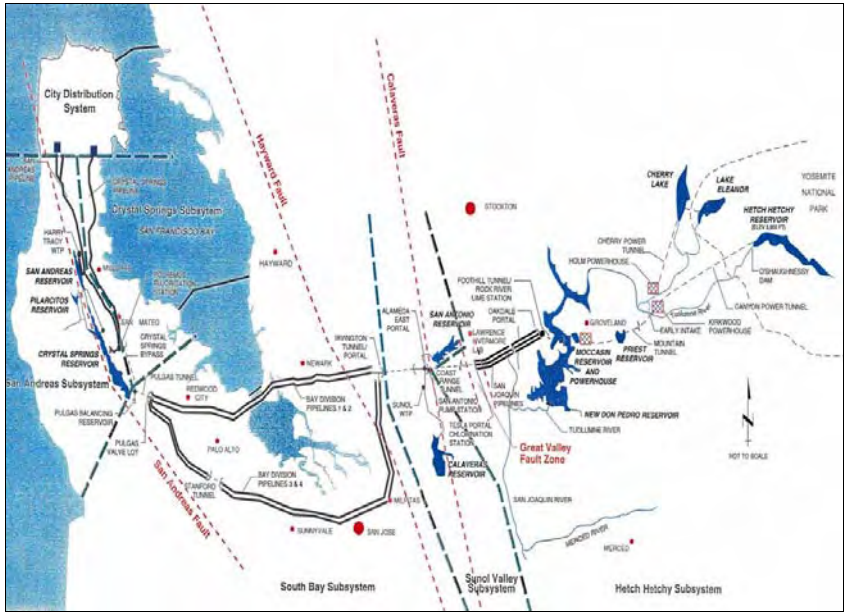
Figure 2.



Many of the regional water system facilities are located on, or very near, one or more active faults. The map reproduced as Figure 3 shows the location of the "backbone" storage, transmission, and treatment facilities in relation to the faults. The Calaveras Fault is directly below Calaveras Reservoir in Alameda County and crosses the pipelines that carry Hetch Hetchy water into the Bay Area. The San Andreas Fault is directly below both San Andreas and Crystal Springs Reservoirs in San Mateo County. The Hayward Fault intersects all four of the pipelines that deliver water from the East Bay to San Francisco, the Peninsula, and South Bay communities.

02 cont.

Figure 3. Water System Facilities Cross Four Active Faults



Source: San Francisco Public Utilities Commission

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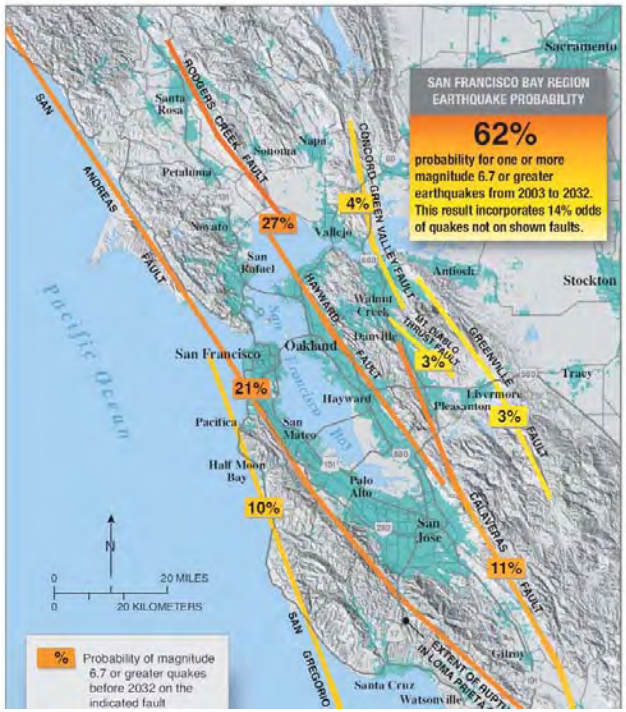
The odds of a major earthquake striking the Bay Area in the near future are high. On the basis of research conducted since the 1989 Loma Prieta earthquake, U.S. Geological Survey (USGS) and other scientists have concluded that there is a better than 60% chance of at least one magnitude 6.7 or greater earthquake, capable of causing widespread damage, occurring before 2032. (See Figure 4.)

02 cont.

Figure 4. San Francisco Bay Region Earthquake Probability



Source: USGS at http://earthquake.usgs.gov/regional/nca/wg02/media.php

The San Francisco earthquake of 1906 toppled buildings and shattered water systems from Santa Clara to Santa Rosa. Without water, San Francisco was unable to fight the fires that eventually consumed the City. The 1989 Loma Prieta earthquake caused billions of dollars of damage in San Francisco, Oakland, Santa Cruz and other communities. More recently, the consequences of the 1991 Oakland Hills firestorm would have been unimaginable had the municipal water system been inoperable. The following photographs (Figures 5 through 7) demonstrate the urgent need for the WSIP.

Figure 5. Damage to San Francisco Marina District Buildings from 1989 Loma Prieta Earthquake

Source: U.S. Geological Survey

02 cont.

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Figure 6. Aftermath of 1906 San Francisco Earthquake

Source: Karl V. Steinbrugge Collection, Earthquake Engineering Research Center, University of California, Berkeley.

Figure 7. 1991 Oakland Hills Firestorm

Source: NASA Ames Research Center

02 cont.

San Francisco Water System is old and poorly maintained. Most of the backbone facilities of the regional water system are over 40 years old; many date from the 19th Century, as can be seen from Table 1 below, which identifies key components of the regional system that the SFPUC considers at high risk of failure.

TABLE 1
SFPUC Regional Facilities at High Risk of Earthquake Damage

Facility	Location (County)	Constructed
Calaveras Dam	Alameda	1925
San Antonio Pump St.	Alameda	1968
Sunol Valley Treatment Plant	Alameda	1966
Alameda Siphons (3)	Alameda	1934,1953,1967
Irvington Tunnel	Alameda	1930
Bay Division Pipelines (4)	Alameda/Santa Clara/ San Mateo	1932,1936,1952,1967
Crystal Springs Pump St.	San Mateo	1975
Crystal Springs Bypass	San Mateo	1970
Lower Crystal Springs Dam	San Mateo	1898
Pilarcitos Dam	San Mateo	1866
San Andreas Dam	San Mateo	1875
San Joaquin Pipelines (3)	San Joaquin	1932,1953,1968
Coast Range Tunnel	Alameda/San Joaquin	1934

Source: San Francisco Public Utilities Commission

These structures were not designed to modern seismic engineering standards, and they have suffered decades of neglect. In June 1994, the San Francisco Board of Supervisors received a "Management Audit" of the San Francisco Water Department from the Board's Budget Analyst.

The audit reported:

> The Water Supply and Treatment Division [of the San Francisco Water Department] performs practically no preventive maintenance on the water supply facilities other than to its water treatment plants and certain valves in the Sunol area. As a result of this poor maintenance program, the Department's water supply and treatment facilities are deteriorating more rapidly than they would if they had been maintained well. The water supply system has aged and, without proper maintenance, the potential for outages has increased. Pipeline corrosion, inoperable valves, and aged support structures contribute to reduced reliability.

03

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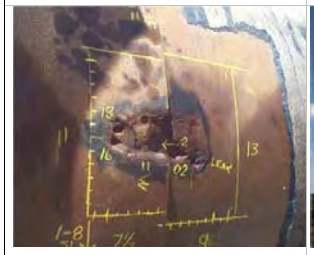
Eight years later, a Public Utilities Infrastructure Task Force appointed by then-Mayor Willie Brown confirmed the assessment of a system in disrepair:

> The Task Force and the PUC agree that the City's 100 year old public utility infrastructure is suffering from decades of deferred maintenance and less than benign neglect . . . .

As shown in Figure 8 below, the current state of disrepair of the regional water system infrastructure can no longer be tolerated.

Figure 8. Deteriorating Water System Infrastructure

San Joaquin Pipeline showing extensive corrosion damage.	Water erupts from break in San Joaquin Pipeline in 2002.	One of two 70 year old pipelines crossing San Francisco Bay.
		
Source: San Francisco Public Utilities Commission	*Source: San Francisco Public Utilities Commission*	*Source: Arthur Jensen*

The system is likely to fail in a major earthquake. Given the facilities' age, physical condition and proximity to active faults, it is not surprising that the engineering consensus is that many of these critical facilities would fail in a serious earthquake.

03 cont.

Calaveras Reservoir is normally the SFPUC's largest reservoir in the Bay Area. But, as shown in Figure 9, it has been drained to 30-40% of its capacity by order of the California Division of Safety of Dams, due to that agency's concern that it would not survive a large earthquake.

Figure 9. Calaveras Reservoir at Reduced Capacity

Source: San Francisco Public Utilities Commission

The following excerpts from engineering reports submitted to the SFPUC are illustrative. The reports consider three facilities that connect the Bay Area to the Hetch Hetchy water system and to Calaveras Reservoir.

03 cont.

12.3-26

Bay Division Pipelines: Given a large earthquake on the Hayward Fault in Fremont, it is very likely that both the Bay Division Pipelines No. 3 and 4 will break open. Leak rates will approach 300,000 gallons per minute. Total loss of water will be about 178 million gallons before breaks can be valved off. *Source: "Analysis of Bay Division Pipelines 3 & 4 at the Hayward Fault," prepared for the City of San Francisco Utilities Engineering Bureau, G&E Engineering Systems Inc., Report 22.02.06, Revision 0, August 24, 1999.*

Alameda Siphons: The Alameda siphons are three buried pipelines, each 3,000 feet long, which cross the Calaveras fault. The pipelines, the oldest of which was constructed in 1934, are suffering from joint separation damage due to fault creep. Recent studies indicate that horizontal and vertical movements of up to 3 feet and 1.5 feet, respectively, can be expected during a maximum credible earthquake on the main trace of the Calaveras fault. None of these siphons were designed to withstand the movements associated with such a major seismic event. *Source: "Irvington Tunnel # 2 and Siphons Modifications," Executive Summary, Woodward-Clyde Consultants, prepared for the City of San Francisco Utilities Engineering Bureau, November, 1991.*

Irvington Tunnel: All Hetch Hetchy water plus that supplied by reservoirs located in the East Bay flows through this 3.5 mile long tunnel. It is a critical

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lifeline facility to the 2.7 million people served by the system. Constructed in 1930, the tunnel has not been inspected or maintained since 1966 because it cannot be taken out of service due to high water demands and the lack of redundant facilities. Recent seismic studies have found the tunnel is subject to 6-inch movements on local minor faults that would result from major earthquake events on the nearby Hayward and Calaveras faults. The tunnel was not designed to accommodate even these small movements. Either fault is likely to generate, within the next 30 years, a maximum credible earthquake. *Source: "Irvington Tunnel # 2," Preliminary Engineering Study, Phase 4, Woodward-Clyde Consultants, prepared for the City of San Francisco Utilities Engineering Bureau, November 27, 1991.*

The maps reproduced as Figures 10 through 13 show the facilities that SFPUC expects to fail as a result of earthquakes.

Figure 10. SFPUC Facilities Assumed to Fail in the Event of an Earthquake on the San Andreas Fault (Red Xs Indicate At-Risk Facilities)

Source: San Francisco Public Utilities Commission

03 cont.

Figure 11.
SFPUC Facilities Assumed to Fail in the Event of an Earthquake on the Calaveras Fault
(Red Xs Indicate At-Risk Facilities)

Source: San Francisco Public Utilities Commission

Figure 12.
SFPUC Facilities Assumed to Fail in the Event of an Earthquake on the Hayward Fault
(Red Xs Indicate At-Risk Facilities)

Source: San Francisco Public Utilities Commission

03 cont.

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Figure 13.
SFPUC Facilities Assumed to Fail in the Event of an Earthquake on the Great Valley Fault
(Red Xs Indicate At-Risk Facilities)

Source: San Francisco Public Utilities Commission

03 cont.

Losing access to water for 30 days or more will create severe public health and safety dangers for millions of people. In 2001, the Bay Area Water Users Association (predecessor to BAWSCA) commissioned G&E Engineering Systems to describe the consequences to Bay Area communities from earthquake damage to SFPUC's water system. The report, a copy of which is included as Attachment 2, was prepared by John Eidinger, a civil engineer greatly respected for his expertise in water system performance during and after earthquakes.

After confirming the SFPUC's own estimates of outages on the SFPUC water system from 20 to 60 days, Dr. Eidinger pointed out some of the very practical consequences:

- Water will be unavailable for basic sanitation: bathing and flushing toilets will not be possible.
- Water will be unavailable for drinking or preparing food.
- Hospitals, skilled nursing facilities and other institutions such as universities, will have to close and relocate patients and students elsewhere.

04

- After a few days, firefighters will be without water necessary to fight fires, the incidence of which increases after earthquakes. 04 cont.

Extended Loss of Water Will Have Disastrous Economic Consequences. In October 2002, the Bay Area Economic Forum issued a report entitled "Hetch Hetchy Water and the Bay Area Economy."[1] The report based its conclusions on previous engineering analyses prepared for the SFPUC of the water system facilities likely to fail in a major earthquake on each of four active faults and on the time required to restore service.

The report is sobering:

> A major reduction of water supplies will have serious effects on many of those most vulnerable -- the homebound elderly, children, hospital and nursing home patients, families displaced from their homes by earthquakes and fire. In attempting to minimize those impacts, local water agencies must make difficult choices within their service territories in assigning priority for water delivery. It is only after emergency, public health and drinking water needs are met that water might be made available for commercial and industrial uses. At the end of the rationing queue, and with few cost-effective alternatives, many businesses will be at serious risk.
>
> Interviews with Bay Area commercial and industrial water users suggest the serious operational and economic impacts that would result from a Hetch Hetchy system failure. The most immediate and damaging impacts from a service interruption are in two areas:
>
> *Health and Safety*. Businesses across the board say they would feel compelled to close buildings that could not provide running water in sinks, toilets and drains, and adequate water or pressure for fire sprinkling systems. Bottled water and portable toilets would be a limited and temporary solution at best.
>
> *Plant operations*. Most large commercial and industrial complexes have rooftop cooling towers that run water through fan powered chillers. The water is then routed to building subsystems for drinking and sanitation, for filtration and use in industrial processes, and into closed fire protection and cooling system loops. Even a closed loop system loses water through evaporation and needs replenishing, or chillers will overheat and automatically close down. That in turn shuts off air conditioning, temperature-controlled laboratory environments, computer server clusters

05

[1] The Bay Area Economic Forum is a partnership between the Association of Bay Area Governments and the Bay Area Council. The economic analyses in the Report were carried out by Dr. David Sunding and other economists from the University of California at Berkeley.

12.3-28

> and water cooled equipment such as electrical generators and vacuum pumps.
>
> Based on these considerations alone, most businesses experiencing a loss or severe reduction in water supply beyond 2-3 days would probably suspend operations or close down altogether.
>
> *(Hetch Hetchy Water and Bay Area Economy, p. 14)*

The Bay Area Economic Forum report estimated that potential economic losses from a water supply interruption to the portions of the Bay Area served by the San Francisco regional water system would total at least $28.7 billion for a major earthquake on the San Andreas Fault and $17.2 billion for a similar event on the Hayward Fault. The components of the loss are quantified as shown Table 2:

TABLE 2
Economic Loss From Water Supply Interruption

	San Andreas Fault	Hayward Fault
Business Losses		
Manufacturing	$4.35 billion	$3.45 billion
Wholesale/retail	7.70 billion	5.60 billion
Professional/scientific Technical	1.60 billion	.63 billion
Accommodations/Food Services	.54 billion	.20 billion
Total Business Losses	**$14.2 billion**	**$9.9 billion**
Residential Losses	**$3.8 billion**	**$1.5 billion**
Fire Damage (water related)	**$10.7 billion**	**$5.8 billion**
TOTAL ESTIMATED LOSSES	**$28.7 billion**	**$17.2 billion**

Source: Bay Area Economic Forum Report "Hetch Hetchy Water and the Bay Area Economy," p. 29.

In addition to these quantifiable near-term damages, the report observed that "the Bay Area economy would suffer irreversible long-term damage due to the failure of many businesses to reopen because of losses incurred during disruption, the permanent relocation of other businesses outside the region due to water security concerns, and the reluctance of new businesses to locate here for similar reasons. These permanent economic losses are difficult to estimate without more study, but would almost certainly be on a large scale."

05 cont.

The State Legislature Acts

In 2002, the California legislature enacted AB 1823, the Wholesale Regional Water System Security and Reliability Act (Water Code Section 73500 *et seq.*). In passing this landmark legislation, the Legislature made specific and important findings about the risks the WSIP is designed to minimize.

> The reliability of [the San Francisco regional] water infrastructure system is of vital importance to the health, welfare, safety, and economy of the region that it supplies.
>
> In turn, this region is of vital importance to the entire State of California, because of the resident industries, universities, and commercial enterprises that employ millions of Californians and generate billions of dollars in exports and tax revenues to the state.
>
> The regional water system is old, and designed to outdated seismic safety standards. The system either crosses, is located on, or is adjacent to, three major active earthquake faults, including the Calaveras fault, the San Andreas fault and the Hayward fault. Engineering investigations have disclosed that the system is at risk of catastrophic failure in a major earthquake. Many areas in all four counties served by the system face interruptions in their supplies of potable water for up to 30 days, and some areas could be without water for as long as 60 days.
>
> Interruptions in water supply of this magnitude and duration to a densely populated metropolitan region would be disastrous for public health and safety and for the regional and state economy. In addition, uncontrolled releases of water from pipelines, tunnels, and reservoirs could create severe flood damage and environmental harm to fish and wildlife habitat in the communities in which water facilities are located.
>
> Californians in neighboring counties, including those Californians outside the immediate service area of the regional system, will benefit from the implementation of the act adding this section. Access to a reliable supply of water is an important component of the infrastructure necessary to a prosperous metropolitan economy.
>
> The state has concerns for the health, safety, and the economic strength of the region that warrant requiring San Francisco to take prudent steps to upgrade the regional water system in a timely manner.
>
> *(Stats. 2002, Chapter 831, Section 1(c) through (h))*

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06

San Francisco's Response

While San Francisco opposed AB 1823, once it became law San Francisco political leadership, and its voters, took action. Measures passed by the voters in November 2002 embodied San Franciscans' recognition of the dangers posed by the fragile condition of the regional water system and their intention that the system be rehabilitated without delay.

Measure A authorized the SFPUC to issue $1.6 billion in revenue bonds to restore the system, by far the largest bond issue in the City's history. The principal argument in favor of the measure, signed by a majority of the Board of Supervisors, warned:

> If a serious quake were to occur today, there is a high probability that water delivery to San Francisco could be interrupted for more than two months. This would threaten our ability to fight fires after an earthquake and lead to an economic disaster as we attempted to recover without a stable water supply.
>
> (Arguments in favor, including that submitted by former San Francisco Mayor and current United States Senator Diane Feinstein, are attached as Attachment 3.)

07

Measure E amended the City's Charter to give the SFPUC direction to fix the system and new authorities to enable it to do so quickly and efficiently. The measure added Section 8B.120 to the Charter; the new section reads, in part:

> Hetch Hetchy Water and Power System is an irreplaceable asset of the people of the City and County of San Francisco. The system is fundamental to the economic vitality of San Francisco and the Bay Area. The voters of the City and County of San Francisco are committed to preserving and protecting the system as well as safeguarding the extraordinary quality of the water from Yosemite and local watersheds. The voters find that the protection, maintenance and repair of the system are among their highest priorities.
>
> San Francisco faces an unprecedented challenge: to restore its aging water system to ensure a reliable Bay Area water supply through the next century. Repairs must be accomplished as quickly as possible to avoid system outages, which could be caused by natural disasters such as earthquake.

Conclusion

It is now over five years since Governor Gray Davis signed AB 1823 into law. Much planning and analysis (including this draft PEIR) has been completed since then. But very little actual construction has been accomplished. The City and its neighboring communities remain at risk of being cut off from water after a major earthquake. 07 cont.

5. MOST OF THE ALTERNATIVES CONSIDERED IN THE DRAFT PEIR ARE WORSE THAN THE WSIP 08

A. No Program Alternative. The No Program Alternative is unacceptable as a matter of social policy. It offers no environmental benefits when compared to the WSIP as proposed, and it risks an environmental, as well as human, disaster. Finally, it is of doubtful legality. 09

Abandoning the program will extend indefinitely the period of time that 2.5 million people remain exposed to the risks that the WSIP is designed to avoid. The draft PEIR identifies several of the consequences of the No Program Alternative under the heading of Feasibility. 10

> The No Program Alternative would place the regional system at significant risk to seismic hazards, increased facility failures, and increased supply shortages on a day-to-day basis, as well as result in prolonged service disruptions to many customers in the event of an earthquake or other emergency due to inadequate facility redundancy and operational flexibility. In addition, this alternative could add substantial long-term costs due to the increased likelihood of facility failures and increased need for emergency repairs and replacement in the event of an earthquake or other emergency." We agree. We also agree that it "would raise some fundamental institutional issues regarding the ability of the SFPUC to fulfill its basic mission to provide reliable, high quality and affordable water to its customers.
>
> *(draft PEIR p. 9-27)*[2]

[2] While only feasible alternatives to a project need to be evaluated in an EIR (14 Cal. Code Regs. §15126.6(a)), consideration of the No Project Alternative, even if infeasible, is mandatory (14 Cal. Code Regs. §15126.6(e)(1)).

From the perspective of environmental harm, if an earthquake were to disrupt the supply of water to the Bay Area and the fires that typically accompany earthquakes in cities were to burn through large areas, a significant amount of carbon would be released to the atmosphere and polluted runoff would contaminate local streams and San Francisco Bay. The uncontrolled release of water from damaged pipelines could result in erosion and other environmental harm. In terms of human impact, water cascading from a shattered dam could result in far more serious consequences for those unfortunate enough to live or work in the path of the flood waters. 11

Moreover, a conscious adoption by San Francisco of the No Program Alternative would violate its contract obligation to wholesale customers to use its best efforts to keep the system in "good working order and repair" and would trigger reviews by the California Department of Public Health and the California Seismic Safety Commission, under AB 1823. 12

B. The "No Purchase Request Increase" Alternative. The stated purpose of this Alternative is to "avoid or minimize the potential growth-inducing effects and secondary effects of growth associated with providing more water to the regional customers." (draft PEIR p. 9-41) But the draft PEIR acknowledges that limiting the amount of water San Francisco sells to its neighboring communities to 184 mgd (instead of the 209 mgd anticipated by the WSIP) is unlikely to have the desired effect. ("Thus, the growth-inducement potential under this alternative could be similar to that of the proposed program…. [T]he growth would occur anyway[.]" (draft PEIR p. 9-47) Furthermore, the draft PEIR also states that "withholding additional supply from the regional system to the wholesale customers would not necessarily reduce the growth in the communities within the service area." (draft PEIR p. S-77) The draft PEIR observes on page 9-40 that, in the event that the SFPUC were to limit future water sales, the neighboring communities that purchase water from San Francisco would most likely pursue supplemental supply sources to accommodate the growth that is already planned for their communities. The draft PEIR also recognizes that tapping these alternative sources would itself have negative environmental impacts, but does not rigorously analyze those impacts. 13 14

Assuming that this Alternative could achieve its objective (limiting growth in the neighboring communities), the environmental impacts associated with growth would not be avoided. If growth were not to occur in the neighboring communities, it would be displaced to the periphery of the Bay Area, and eastward into the Central Valley. We agree with the draft PEIR's conclusion that the environmental impacts associated with such displaced growth, largely low-density and dispersed, would likely be far greater than those associated with the high-density, infill development which the WSIP seeks to accommodate in the existing SFPUC service area.

15

(1) Growth Within the Existing Service Area Minimizes the Environmental Impacts of Development. "Smart Growth" is a philosophy of land-use planning that is designed to avoid urban sprawl by advocating compact, transit-oriented development, with a range of housing choices. Why is Smart Growth smart? In addition to significant social and economic benefits of providing housing near where people work, Smart Growth offers considerable environmental benefits. Increased use of public transportation results in less traffic congestion, with a decrease in environmentally damaging emissions. Compact, dense housing results in lower per capita use of water and energy, with attendant environmental benefits. (See U.S. Environmental Protection Agency: *What Are The Environmental Benefits of Smart Growth*) A 2000 study found that compact development in New Jersey would produce 40 percent less water pollution than more dispersed development patterns. (Rutgers University, Center for Urban Policy and Research. *The Costs and Benefits of Alternative Growth Patterns: The Impact Assessment of the New Jersey State Plan* 2000, available at http://www.nj.gov/dca/osg/plan/impact.shtml.)

16

A concise, comprehensive statement of the purpose and benefits of Smart Growth appears in a recent issue of The Yodeller, published by the San Francisco Bay Chapter of the Sierra Club. Its author, Katie Crecelius, a founding member of the Marin Environmental Housing Collaborative, makes the following points:

17

- The Bay Area economy needs thoughtful, controlled, "smart" development. Stopping real-estate development would stifle

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our economy, upon which we depend for jobs and for tax income to pay for parks, police, schools, roads, etc.

- The lack of housing affordable to workers creates significant difficulties for Bay Area employers in recruiting and retaining employees.
- To support thoughtful development while protecting Bay Area open-space buffers and greenbelts, elected officials need to allow higher densities in infill areas.
- To begin to reduce greenhouse-gas emissions, we need increased opportunities for public transportation. Public transportation ridership depends upon population and job concentration near transit stops.
- To reduce vehicle miles traveled, the Bay Area needs housing located near job centers. This housing needs to be affordable for households of all income ranges.
- Land within walking distance of public transportation is precious. Such a scarce resource should be fully utilized.

(The Yodeller, September-October, 2007, p.4)

17 cont.

Planned growth in San Francisco's neighboring communities is consistent with these goals and realities. Most of San Francisco's neighboring communities are already built up and largely urbanized, located close to transit corridors and transportation hubs. Most of the large development projects recently built or currently planned within the SFPUC service area will utilize compact building design in already existing communities near a variety of transportation choices. Such development creates a range of housing opportunities and choices while preserving open space, natural beauty, and critical environmental habitats.

18

Four examples indicated below as Figure 14 demonstrate the Smart Growth trend in San Francisco's neighboring communities. Other examples are collected in Volumes 2 through 6.

Figure 14. Examples of Smart Growth

Bay Meadows Project in San Mateo, is a mixed-used development located on a former practice horseracing track adjacent to the actual horseracing track. It is a thriving residential, office and retail community that includes 734 housing units for multifamily and single family residents, 98,000 square feet for retail purposes as well as 750,000 square feet of office space. It is also approximately a half a mile away from the Hillsdale Commuter Rail Station, providing a convenient commute to San Jose and San Francisco. The Sierra Club currently features Bay Meadows in "Building Better, A Guide to America's Best New Development Project" and has also endorsed an expansion of the Bay Meadows Project to create Bay Meadows II.

Whisman Station in Mountain View, is located on the former 40-acre GTE complex site. This project features 500 units, all within easy walking distance from a new lightrail station.

The Crossing in San Bruno, is a 20-acre mixed use master planned development located on a former U.S. Navy facility. The Crossing is located near shopping and is less than one half mile from the new San Bruno BART Station. The Crossing has received national attention for both its transit-oriented development characteristics and its potential to redefine the City of San Bruno. The Crossing will include 1,063 multifamily and senior housing residences, 300 to 500 hotel rooms, a recreation center and commercial uses.

Rivermark in Santa Clara consists of 1800 units of medium and high density housing. Its compact design requires significantly less irrigation than more traditional single family developments. Rivermark makes extensive use of recycled water. In April 2004, Rivermark won 17 awards from the Home Builders Association of Northern California including the Community of the Year Award for High Density Homes in Northern California.

18 cont.

12.3-32

(2) The PEIR Should Include a More Thorough Analysis of the Consequences of Displaced Growth. The California Department of Finance forecasts that, by 2030, more than 45 million people will live in California, an increase of 37% over the State's population in 2000. (Cal. Dept. of Finance Projections available at http://www.dof.ca.gov) These people will live somewhere. If growth does not occur in the SFPUC service area, it is likely to occur instead on the eastern and southern fringes of the Bay Area, as well as in the communities on the western borders of the San Joaquin Valley. These fast growing communities are already under extreme development pressure. A recent California Supreme Court case indicates that the environmental consequences of displaced growth should be considered in the preparation of an EIR. (*Muzzy Ranch, Co. v. Solano County Airport Land Use Commission* (2007) 41 Cal. 4th 372.) However, the draft PEIR does not compare the impacts of such displaced growth to the impacts of the growth the WSIP will accommodate in San Francisco and its immediately adjacent neighboring communities. At a minimum, such a comparison should address the following four potential impacts.

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(a) Air Pollution. One consequence of the expansion outward from the urban core of the Bay Area is the need to drive. Although most Californians (even city dwellers) love their cars, residents of more compactly developed areas drive less than those who live in low-density, suburban/exurban areas where driving is a necessity. (Sierra Club, *Sprawl Report 2001*; see also Sierra Club *Fact Sheet. Population Growth and Suburban Sprawl: A Complex Relationship*) The Metropolitan Transportation Commission estimates that the weekday vehicle miles traveled (VMT) per person in Solano County will increase by 71% between 2007 and 2030. (MTC *Projections 2007* and *Projections 2030*) By contrast, the MTC projects VMT in San Mateo County to increase over the same time period at less than a third of that rate. Increased air pollution is the one of the most obvious effects of increased automobile traffic. Pollution caused by motor vehicles has demonstrable environmental and health impacts, as well as contributing to the inexorable warming of our planet's atmosphere.

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(b) Water Pollution. Increased driving can also affect water quality. Exhaust particles from tailpipes are deposited on roadways, leaving a toxic residue that is washed into waterways by rainfall. Such storm water runoff is a major contributor to water

21

quality problems. (EPA, *Our Built and Natural Environment* (2001) at p. 15; see also NRDC *Paving Our Way to Water Shortages*) More cars require more roads, impervious to runoff. Not only does increasing the area of impervious surfaces lead to higher runoff volumes, but it can cause larger and more frequent incidents of local flooding, longer periods of below-normal stream levels, reduced groundwater recharge, and other negative effects such as increased sedimentation, increased water acidity, and higher water temperatures. (EPA, *Our Built and Natural Environment* at p.19)

21 cont.

(c) Water Demand and Infrastructure. Displaced growth outside of the service area will not only impact water quality, but will also put increased stress on water supplies. People living in the hotter inland counties have substantially higher per-capita water use than those living in more urbanized coastal areas. Unlike the Smart Growth within the SFPUC service area, characterized by dense, compact housing, inland areas generally have single family homes on large lots. These larger lots have higher water use--especially outdoor water use. In fact, outdoor water demand for typical residential lots in an inland area is between two and three times higher than in the more compactly developed areas that make up most of the SFPUC service area. (Public Policy Institute, *Lawns and Water Demand in California*, (2006))

According to the Sierra Club, households in low density subdivisions (one-acre lots) use more than twice as much water per household as households in more densely developed areas (1/3 acre lots). (www.sierraclub.org/sprawl/density/water.asp) Water consumption is again reduced by half when there are ten households per acre. Much of San Mateo County's population lives in areas where there are between 10 and 25 people per acre. This population density is expected to increase by 2030, as most areas will add 1-5 people per acre, and some areas of the county will add as many as 25 people per acre. (MTC *Projections 2005* as expressed in *Focusing Our Vision: Network of Neighborhoods*, available at http://gis.abag.ca.gov/website/fov/viewer.htm.) By comparison, average density in San Joaquin County is only eight persons per acre.

22

12.3-33

Adding population to already built-up areas requires little in the way of increased infrastructure. By contrast, displaced growth in the outer fringes of the Bay Area will require new roads, treatment plants, storage tanks, and water distribution and sewer collection mains, all of which carry their own environmental impacts.

22 cont.

(d) Loss of Agricultural Land and Endangered Species Habitats. Outside San Francisco itself, and the densely populated Bay Plain, the Bay Area still supports orchards, ranches, and farms. Indeed, these agricultural lands are essential components of the increasingly popular Farmers' Markets which provide local produce to urban residents. According to the Greenbelt Alliance, these are the lands most directly threatened by development, while San Francisco and the neighboring communities to which it supplies water contain very few such areas.

The Greenbelt Alliance's 2006 report "At Risk: The Bay Area Greenbelt" stresses that the neighboring communities that are San Francisco's wholesale customers are NOT the communities at risk of conversion to sprawl. (See excerpts from Report included as Attachment 4.) In a county-by-county analysis, the report highlights the following about the BAWSCA area:

- San Mateo County is singled out as "a leader in protecting land over the last five years." The report notes that since 2000, "four new BART stations in the County and the connection of BART to Caltrain at Millbrae have created valuable new opportunities for regional integration and smart growth in San Mateo County."
- Since 2000, the City of San Jose has protected more than 20,000 acres of land. The City envisions the gradual redevelopment of the industrial North First Street area (served only by SFPUC water) as a high density residential area.
- In Alameda County, the report acknowledges Fremont's hillside protection ordinance and describes the County as having "made significant progress in securing its greenbelt." The "hot spots" at risk of conversion to sprawl are outside the SFPUC service area, mainly in the east county cities of Livermore, Pleasanton, and Dublin.

23

While sprawl is a concern in the eastern portion of Alameda County, the Central Valley is at even greater risk of losing its agricultural base to overdevelopment. The Central Valley's best farmland is being developed quickly and with alarming inefficiency, often by converting actively farmed land into "ranchettes." (American Farmland Trust, *The Future is Now: Central Valley Farmland at the Tipping Point*) These properties can be as large as 20 acres and are not farmed at all. Not only do such ranchettes house very few people on a large amount of land, they also pose challenges to agriculture from land use conflicts, making it increasingly expensive for those who wish to continue to farm the land. Finally, they contribute to land price inflation, which provides incentives for farmers to sell even more land for development.

Displaced growth will also destroy land that is the habitat of important species. In fact, habitat destruction is the main factor threatening 80 percent or more of the species listed under the Endangered Species Act. (EPA, *Our Built and Natural Environments* at p. 13) For example, in 2001, the U.S. Fish and Wildlife Service designated more than four million acres of land near Livermore, on the eastern fringe of the Bay Area, as essential for the recovery of the threatened California red-legged frog, which breeds in the weedy creeks hidden in the hollows of this landscape. Today, only 11 percent of that original landscape remains as a viable habitat for this threatened species. (See Attachment 4.)

The Natural Resource Defense Council lists ten ways to improve the Bay Area's environment. The top four are: conserve energy, conserve water, drive less, and move to a compact neighborhood. (*The Green Gate: NRDC's Environmental Guide to the San Francisco Bay Area*) The WSIP accommodates growth while permitting all four of these goals to be achieved. Displaced growth that is likely to occur under the "no more water" alternative likely will achieve none of them.

23 cont.

(3) Most of the Planned Growth to be Accommodated by the WSIP Has Already Been Analyzed in CEQA-Approved Documents. The draft PEIR compares the growth projections used as the basis for each of the wholesale customers' 2030 water demand estimates, and the growth projections presented in general plans of jurisdictions in the SFPUC service area that have already undergone CEQA analysis. The draft PEIR concludes that these

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two growth projections are generally comparable. We agree. Attachment 1 contains a more detailed discussion of the adequacy of the draft PEIR's analysis of growth-induced impacts.

24 cont.

(4) A Decision by San Francisco to Restrict Water Deliveries to Neighboring Bay Area Communities Jeopardizes San Francisco's Water Rights. A fundamental principle of California water law is that appropriative water rights, including those obtained prior to 1914, may be lost through non-use. *Smith v. Hawkins* (1895) 110 Cal. 122. A pronouncement by San Francisco that it will forego any future increase in diversions from the Tuolumne River, beyond those necessary to satisfy existing contractual commitments, risks the permanent loss of those valuable rights, with consequences that need to be described in the final PEIR.

In addition, such a decision, motivated by a desire to exercise control over development outside San Francisco's jurisdictional boundaries, would be inconsistent with (1) the premises underlying the Raker Act, (2) BAWSCA agencies' status as co-grantees of the Raker Act, (3) San Francisco's responsibility under California law as fiduciary of assets acquired from the federal government, and (4) the existing policy of the SFPUC Resolution No. 93-0084.

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Conclusion

The "No Purchase Request Increase" Alternative is not likely to achieve its stated goal of limiting growth in San Francisco's neighboring communities. Moreover, this goal runs counter to sound public policy. This Alternative will discourage Smart Growth in the urbanized core of the Bay Area, and will encourage instead sprawl at the periphery and in the Central Valley, with environmental impacts far more significant those of the WSIP. Finally, its feasibility is questionable given the hazardous legal and political uncertainties that surround this misguided alternative.[3]

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[3] Under CEQA, a program's legality must be considered in determining feasibility. (See Guidelines section 15364 ("Feasible" means "capable of being accomplished . . . taking into account economic, environmental, legal, social, and technological factors.")

C. The Aggressive Conservation/Water Recycling/Local Groundwater Alternative. The wholesale customers already have a diverse supply portfolio, including water recycling and local groundwater, as well as desalination. These alternative sources meet one third of the customers' supply needs. Given the wholesale customers' current low water use and the conservation and local supply projects that they already have in place or have built into their projections of demand, we agree with the draft PEIR's conclusion that it is not feasible to reduce demand for water from the regional system by an additional 19 mgd. 27

(1) The Draft PEIR Rightly Concludes that the Assumption of an Additional 19 Mgd of Water Conservation and Recycling is Infeasible.

(a) Residential per capita water use in the Bay Area is lower than in any other region of California. BAWSCA member agencies and their customers are dedicated to conserving and recycling water. While residential per capita use in the San Francisco Bay Area is the lowest of any of the ten hydrologic regions in the State, the 1.7 million residential customers of BAWSCA members use less than the average for the Bay Area as a whole. (See Table 3.)

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TABLE 3
Total Residential Demand by Hydrologic Region

Region	Total Residential Demand (Gallons Per Person Per Day)
Colorado River	338
South Lahontan	265
Tulare Lake	242
San Joaquin River	220
South Coast	132
North Lahontan	133
Sacramento River	177
Central Coast	116
North Coast	123
San Francisco Bay Region*	97
SF Wholesale Customers	**88**

Source: California Department of Water Resources, The California Water Plan Update, May 2005, Bulletin 160-05 Public Review Draft

** The San Francisco Bay Region includes all or portions of nine Bay Area counties*

28

Even though the wholesale customers' per capita use is less than that in all other regions of the State, residential per capita water demand is still projected to decrease 3%, from 88 gallons per capita per day (gpcpd) in 2005 to 86 gpcpd in 2030. (*Projected Water Usage for BAWSCA Agencies*, Brown and Caldwell (2006)) Gross per capita water demand (which includes water use by industrial, commercial, institutional, and municipal customers) in the wholesale service area is also projected to decrease, from 165 gpcpd in FY 2005 to 160 gpcpd in 2030. (*BAWSCA Annual Survey*, FY 2005/2006, *Projected Water Usage for BAWSCA Agencies*, Brown and Caldwell)

(b) Wholesale customers have outpaced southern California companies in water conservation.. Some have argued that the Bay Area should be able to achieve savings similar to those achieved by the Metropolitan Water District in Southern California: a 16% reduction in water use from 1990 to 2003 despite a 14% increase in population. (*From Tuolumne to Tap: Pursuing a Sustainable Water Solution in the Bay Area,* Tuolumne River Trust (July 2007) p. 22) In fact, the customers served by the BAWSCA agencies have reduced their use significantly over a similar period. Despite an 18% increase in population between 1986 and 2003, overall water demand remained flat and residential per capita demand decreased by 11%. Today's residential per capita water use is 15% less than it was in 1986, before the last drought, and 23% less than before the drought of 1976-1977. (*BAWSCA Annual Survey*, FY 2005/2006) 28 cont.

Moreover, despite its recent downward trend, per capita use in Southern California is still higher than that of the wholesale customers, and will remain higher in 2030. (*Regional Urban Water Management Plan* (MWDSOC, November 2005); *Projected Water Usage for BAWSCA Agencies*) Consider the following comparisons:

- In 1986, the gross per capita water use in Metropolitan Water District's service area was 200 gpcpd, 10% higher than for the wholesale customer area in that year (182 gpcpd).
- Metropolitan Water District's gross per capita water use in 2030 is projected to be 191 gpcpd, 19% higher than the corresponding projected demand of 160 gpcpd in the

wholesale customers' service area in 2030. (*Projected Water Usage for BAWASCA Agencies*)

Looking to the future, the wholesale customers are projecting a 19% increase in population and 31% increase in employment. (*SFPUC 2030 Purchase Estimates Technical Memorandum*, URS (2004)) Despite this increase in population and jobs, wholesale customer water demand (including sources other than the regional system water) is predicted to increase by only 19%. (*SFPUC 2030 Purchase Estimates Technical Memorandum*)

28 cont.

(2) The Neighboring Communities Have Committed to Increased Water Use Efficiency as Part of Their Plans for 2030. The wholesale customers, collectively, anticipate 13 mgd savings from implementation of conservation programs in their service areas as well as 25 mgd of conservation savings due to continuous implementation of the existing plumbing codes. These conservation savings have already been built into the forecast of demand used in the PEIR. In developing their 2030 purchase estimates, the wholesale customers examined the nine quantifiable California Urban Water Conservation Council Best Management Practices for Urban Water Conservation plus an additional 23 water conservation measures. (*SFPUC Wholesale Customer Water Conservation Potential*)

In addition to conservation "best management practices" implemented by individual wholesale customers, BAWSCA has implemented regional water conservation programs since 1998 and has expanded these programs to include:

- Water Efficient Residential Washing Machine Rebate Program
- School Water Education Program
- Large Landscape Audit Program
- Low Water Use Landscape Education Classes (for landscape designers and gardeners)
- Water Efficient Landscape Educational CD-ROM
- High-Efficiency Toilet Rebate Program

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In addition, in fiscal year 2007-2008, BAWSCA will be adding a commercial washing machine rebate program. BAWSCA has joined with the SFPUC in the "Water Saving Hero" public

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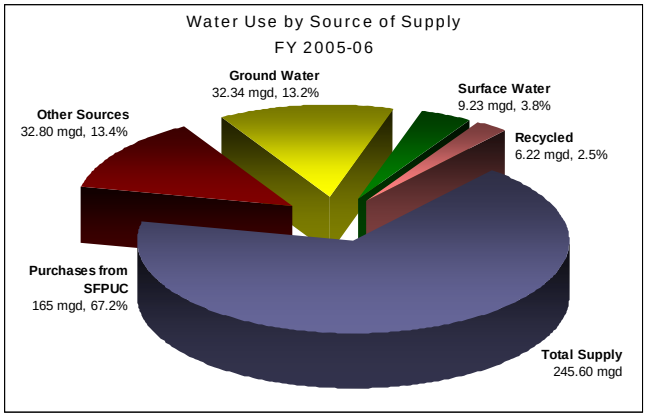
education campaign, with billboards, posters, newspaper display ads, and radio spots featuring ordinary people adopting simple water conservation practices in everyday life. The Fiscal Year 2006-2007 report on BAWSCA's conservation programs, along with a Water Efficient Landscape educational CD, is included as Attachment 5.

29 cont.

(3) Collectively, the Agencies that Purchase Water From the SFPUC Have a Diversified Portfolio of Water Supplies to Meet the Demands of Their Customers. In addition to purchases from the regional water system, BAWSCA agencies have already developed local water supplies (including surface water, desalinated water, groundwater, and recycled water), as well as contracts with the State Water Project and Santa Clara Valley Water District.

Figure 15 below shows the distribution of supply sources utilized by the BAWSCA agencies in FY 2005/2006. (*BAWSCA Annual Survey*, FY 2005/2006)

Figure 15.

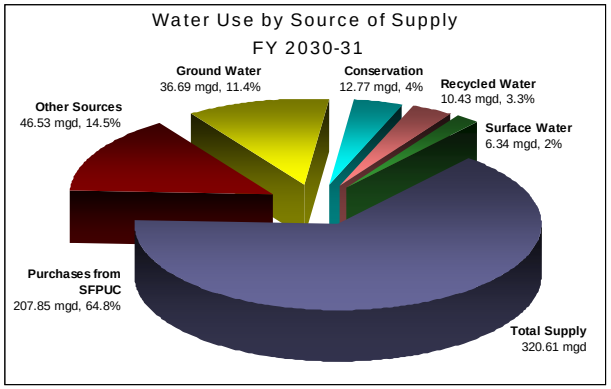


30

Currently, 81 mgd (about 33% of the total wholesale customer water demand) is provided by sources other than the San Francisco regional water system.

By 2030, the contribution from sources other than the San Francisco regional system is projected to increase by 40%, to 113 mgd. (*BAWSCA Annual Survey*, FY 2005/2006) Desalination will increase from 5 mgd to 10 mgd and recycled water from 6 mgd to 10 mgd. The largest contribution to increased water supply from a non-regional system source will come from water conservation: 38 mgd, which includes the 13 mgd in new conservation programs shown in Figure 16, and the 25 mgd attributable to installation of water-efficient, code-compliant plumbing fixtures which is embedded in the wholesale customers' demand projections themselves and therefore not evident in Figure 16.

Figure 16.



By contrast, San Francisco is nearly 100% reliant on the regional system for meeting demands of its in-City and other retail customers such as the San Francisco Airport. San Francisco has had plans for decades to increase its groundwater and recycled water supplies, but San Francisco's only recycled water plant, the McQueen Treatment Plant in Golden Gate Park, was shut down in 1981. Since that time, San Francisco has developed less than 1 mgd of tertiary-treated

recycled water which is used for wash-down operations within the water treatment plant itself. (*San Francisco Urban Water Management Plan* (2005)) The additional 10 mgd of conservation, recycling and groundwater in the San Francisco retail area that the WSIP projects to be achieved by 2030 will finally bring San Francisco more in line with the water supply operations of its wholesale customers.

(4) There are Significant Negative Impacts Associated with this Alternative Including Impacts on Public Health, Demand Hardening and Environmental Impacts Identified in the Draft PEIR. The goal of the Aggressive Conservation Alternative is to address the impacts to the Tuolumne River, Alameda Creek, and the Peninsula watershed that are associated with the preferred Program. In fact, the Modified WSIP alternative does a significantly better job at reducing the overall identified impacts. Moreover, the Aggressive Conservation Alternative creates three additional potentially significant water supply and system operations impacts when compared to the Modified WSIP. Specifically, the Aggressive Conservation Alternative would have the following impacts beyond the Modified WSIP:

- Impacts on the rainbow trout fishery resources between Alameda Creek and Calaveras Reservoir;
- Impacts on the recreational experience of hikers on the Alameda Creek in the Sunol Regional Wilderness resulting from reduced in stream flows during winter and early spring months; and
- Impacts on visual effects along the Alameda Creek in the Sunol Regional Wilderness area resulting from WSIP-induced reduction in stream flows.

(a) <u>Demand Hardening makes droughts harder to bear, such that increased rationing may have significant economic and lifestyle impacts</u>. One by-product of the Aggressive Conservation Alternative is the hardening of demand in the service area. Water conservation activities "harden" demand since they incorporate continuous water savings into baseline demands. Therefore, the next increment of water use reduction becomes significantly more difficult to achieve. When demand is hardened, a water supplier faces greater challenges

in achieving rationing targets without significant impacts on residential, business and industrial customers. [4]

A recently released study "Measures to Reduce the Economic Impacts of a Drought-Induced Water Shortage in the SF Bay Area" (Public Financial Management/Bay Area Economic Forum (PFM/BAEF) (May 2007)) examined the economic impacts of water rationing on the commercial and industrial sectors in the SFPUC's service area. One key finding of this analysis addressed the impact of demand hardening and acknowledged that "Residential demand becomes more difficult to reduce as additional conservation measures are implemented; demand hardening is real." (PFM/BAEF Report)

The draft PEIR also recognizes the consequences of demand hardening:

> As a result of the water use efficiency or demand "hardening" that would be further institutionalized through this alternative, customers would have limited options for accommodating a period requiring 20 percent or more rationing in terms of what water uses they could cutback. Customers would have already increased their water use efficiency and eliminated less efficient uses such as many types of conventional outdoor use (e.g., landscape irrigation, car washing). In these cases, the water use cutbacks required to achieve 20 percent or more rationing would involve reductions in more essential water uses, such as indoor uses for cleaning and bathing, which could cause greater hardship on customers.
> *(draft PEIR, p. 9-54.)*
>
> Although the information on effects of water shortages during drought is limited, studies completed to date indicate that rationing cutbacks of 15 to 20 percent can have substantial economic impact on commercial, industrial and residential sectors as well as lifestyle effects on residents. [R]equiring rationing of up to 20 percent during a drought of customers who have already implemented aggressive conservation and water recycling would result in more severe economic and lifestyle effects.
> *(draft PEIR, p. 9-31)*

37 cont.

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[4] Consider the example of toilet upgrades. In the past, a common toilet may have used seven gallons per flush ("gpf"). Today, the current standard toilet uses 1.6 gpf. The latest High Efficiency Toilets ("HET") improve performance by at least an additional 20%, to 1.28 gpf or less. Whereas in the 1980s a residential customer could save seven gallons by the simple act of flushing the toilet only once every other use, similar conservation-driven behavior now will save less than two gallons. The State of California has recognized the existence of demand hardening and the negative impact it has on the ability of retail water users to duplicate their response to previous droughts (DWR, 2005).

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As a water agency and its customers significantly increase water use efficiency and harden the water demand, the planned level of drought rationing and its impacts on the customers and community must be given serious consideration. Just because customers have been able to reduce water use historically during a drought by some percentage does not mean that the same customers can achieve similar water reductions in the future with similar efforts. See discussion in Section 6 below for more detail about the impacts of rationing.[5]

37 cont.

(b) Aggressive conservation could negatively impact greenscapes.

While residences in most of the neighboring communities have higher outdoor water use than those in the completely urbanized San Francisco, the water used to maintain these green spaces is by no means wasted. The California Legislature has recognized the social and environmental values of greenscapes in metropolitan areas. "Landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development." (California Water Code Section 65593)

Trees and shrubs not only sequester carbon, thereby reducing emissions of greenhouse gasses, but provide shade that can lower energy costs. According to the Sierra Club, mature trees and tall shrubs around homes can lower air-conditioning costs by up to 40 percent. (*Sierra Magazine*, July/August 2007 at p. 50) Indeed grass sequesters CO_2 and stories it underground in roots and soil. (M. Pollan, The Omnivore's Dilemma, p. 197-98)

38

San Francisco itself appreciates the benefits of the urban forest. The San Francisco Department of the Environment's 2007-2009 Strategic Plan notes that "trees provide environmental and economic benefits through improving air and water quality, increasing property values, lowering building energy use, and providing an experience of nature." (Department of the Environment, City and County of San Francisco: *Strategic Plan 2007-2009*, December 4, 2006 at p.

[5] Demand hardening is, in itself, not a reason to limit water-conserving activities. However, conservation must be accommodated by providing greater reliability during drought, through measures such as increased surface or groundwater storage or water transfers. The environmental impacts of increased storage sufficient to bolster the drought reliability of the system have not been considered in the draft PEIR, although the option of additional dry year water transfers from agricultural areas has.

37 cont.

12; see also *City and County of San Francisco Urban Forest Plan* (2006)) In addition, "trees improve public health and well being by reducing UV radiation exposure, providing restorative healing for people with illness, and creating safe public spaces." (Department of the Environment, City and County of San Francisco: *Strategic Plan 2007-2009* at p. 12) In order to maintain its urban forest, the San Francisco's Department of Public Works has a total of ten water trucks that water the City's trees on a weekly basis.

38 cont.

(c) Increased water use during summer/fall is not just for landscaping. Contrary to recent suggestions, the increase in water use in the wholesale customers' service area during the warm summer and fall months is not due solely to outdoor irrigation. Rather, the increased water use in warmer weather is substantially caused by the use of water for cooling critical public health, educational, commercial, and industrial facilities.

San Francisco's climate differs from that of the majority of its neighboring communities. In the summer, fog typically blankets the western half of San Francisco -- cooling the entire city -- while most other parts of the Bay Area enjoy a moderate Mediterranean climate with sunny warm days. While these weather differences impact water use for outside irrigation, other important uses of water are also affected by warmer weather, uses that have nothing to do with lawn watering.

- Water is used for cooling purposes in many industrial processes (such as chip fabrication), other manufacturing facilities, and computer server "farms" essential to operation of the internet.

- Hospitals, schools, libraries, and other commercial/industrial buildings contain people and equipment that generate heat and must be cooled. Cooling towers that recycle water are one cost-effective method of heat exchange and use less electrical power, and have fewer environmental impacts than some alternatives.

Cooling towers are used in many buildings inside San Francisco. However, since San Francisco's weather pattern is cool in summer and relatively uniform throughout the year, its building cooling demands are also relatively consistent throughout the year. Water used for

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cooling inside San Francisco cannot therefore readily be segregated as a seasonal use through the inspection of water records. Conversely, in the warmer portions of the Bay Area, where summer temperatures typically hover in the high 70s to 90s, use of water for cooling purposes shows up as a seasonal increase in water use during the summer and fall periods.

39 cont.

It therefore is wrong to assume that the increased seasonal use in the BAWSCA service area is driven solely by outdoor landscaping.

6. THE "VARIANT" WHICH LIMITS WATER RATIONING DURING DROUGHTS TO 10% OF NORMAL SYSTEMWIDE USE IS ENVIRONMENTALLY AND ECONOMICALLY SUPERIOR

40

The WSIP preferred program incorporates a goal of limiting rationing during droughts to a maximum of 20% systemwide. We believe that presenting this goal as a single systemwide percentage without describing how the reductions will be allocated between San Francisco's retail users and the wholesale customers is misleading. For example, if San Francisco were to administer the rationing program so that reductions within San Francisco were limited to 10%, achieving a 20% systemwide reduction would require an average cutback in use by wholesale customers collectively of nearly 25%.

41

The environmental and economic consequences of a 25% year round reduction in water use in the wholesale service area would be severe and are not addressed in the draft PEIR. For example, the draft PEIR does not address the impact on commercial and industrial entities, for which water is either a significant component of the end product or essential to manufacturing processes, or both. While the draft PEIR does not address such impacts, there is good research on this issue. A copy of the report, "An Economic Evaluation of the Water Supply Reliability Goal in the SFPUC Water System Improvement Plan," prepared by William Wade, Ph.D., a resource economist, is included as Attachment 6.

42

The report's principal findings are troubling, though not surprising. Two points stand out:

- A small number of industrial sectors, for which water is a critical component of the production process, represent a very large share (over 80%) of total manufacturing output in the region. Chief among these industries are computer/electronic products and food and beverage products ($207 billion in 2001). The emerging biotech industry is also water-dependent.

- These industries are particularly sensitive to curtailments in water supply. The impact of a 20% water supply deficiency on shipments from these industries located in the wholesale customer service area is estimated at nearly $7.7 billion annually, whereas a 10% cutback results in "only" a $2.5 billion cost. The difference ($5.2 billion) far exceeds the $181 million cost estimated by the SFPUC staff of improving the SFPUC system's reliability from 80% to 90%, as shown on the SFPUC's Water Supply Matrix: Water Supply Options 2030 included as Exhibit A to the Wade Report.[6]

The impact of this potentially extreme rationing is severe when considered in light of the City's experience in the last drought. The Governor's Advisory Drought Planning Panel in its December 2000 Critical Water Shortage Contingency Plan reported:

> Among large urban agencies' water development projects, the City and County of San Francisco experienced the greatest reduction in storage, having only about 22 percent of its total system storage capacity left by 1991.

The implications of that depletion in storage was made evident in the SFPUC's response to a survey distributed in 1990 by the California Department of Water Resources:

> Q: What are your alternatives if 1991 is as dry or drier than 1990 and if 1991 is as dry as 1977?
>
> A: If 1991 is as dry or drier than 1990 or 1977, a rationing program to cut normal use by 50 percent will be necessary to avoid running out of water if 1992 is also dry.

The SFPUC itself summed it up clearly in its June 1993 Report to the Federal Energy Regulatory Commission:

> "Nowhere else in the state was rationing imposed on a major urban area to such a degree for so long a period."

42 cont.

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[6] As discussed previously, based on the experience of the last drought, a 20% reduction on a systemwide basis would require reductions greater than 20% in San Francisco's neighboring communities. The economic impacts would therefore be more severe than those projected in the Wade report, which assumes that a 20% reduction in industrial/commercial customers' water supply would be the worst case.

In addition, the SFPUC's then-General Manager, Anson Moran, in a 1994 affidavit submitted to the Federal Energy Regulatory Commission, eloquently described the consequences of shortage:

> The consequences of potential shortages include economic, socio-economic, environmental, and personal (human) impacts.
>
> What makes San Francisco's situation unusual is the consequence of being wrong in our forecast. Because of our entitlement structure, and limited conveyance and treatment capacity, an additional, unforecasted year of drought could literally result in empty reservoirs, no entitlements, and little or no alternate source of water. We could have no water to serve our 2.3 million customers.
>
> In the spring of 1991 these consequences achieve a sobering clarity. I became acutely aware of the physical constraints of the City's water conveyance, treatment and delivery facilities; the availability of, and limitations to movement of supplemental emergency water supplies into the City's system; and the uncertainty as to when the drought would finally end. Due to the extremely limited conveyance and treatment capacity system to bring other emergency sources of water to the City, the City must rely on storage in the Tuolumne River basin to ride out droughts. The City just does not have other sources to call on during drought, such as turning on pumps. In addition, I had first-hand information as to the direct and indirect adverse impacts that were occurring to the City's customers as the result of water shortages.
>
> Situated within the drought, I weighed all the above factors and supported the operation rule that is currently used by the City in practice, and incorporated in the planning studies submitted to FERC. That plan was tested as it was developed and is the direct product of real, on-the-line decision making. When considering all the factors associated with the City's entitlements to water, its physical system, and the dire consequences of just being wrong in the forecasting of the length of drought that may hit the City, I can not agree with any comment that the City's operation rule is overly conservative.
>
> Mr. Moran's complete affidavit is included as Attachment 7.

42 cont.

Furthermore, the WSIP must also be analyzed in light of the City's own policy, found in the City Charter, to assign a higher priority to water delivery than to power generation. Limits on generation of electric power to avoid impacts on water availability should be incorporated into all variants and alternatives in order to both reduce the need to impose rationing, as well as

43

stress on other water supply sources required to offset avoidable shortages in SFPUC water deliveries during droughts. 43 cont.

The WSIP anticipates that water to offset San Francisco's diminished entitlements to Tuolumne River which occur during dry years will be secured through agreements with Turlock Irrigation District (TID) and/or Modesto Irrigation District (MID), to utilize "credits" to San Francisco's water bank account" in New Don Pedro Reservoir. A dry-year transfer with TID/MID, providing access to additional Tuolumne River water for the Bay Area during drought, need not (and should not) come at the expense of either diminished flows in the lower Tuolumne River nor agricultural production. Rather, it could be supplied through conjunctive use of the substantial groundwater reserves available. Central Valley growers, including those in TID/MID, regularly rely on short-term increases in groundwater pumping during dry years -- precisely what conjunctive management of groundwater is intended to do. 44

The draft PEIR states that the 10% "variant" would "result in slightly increased average annual Tuolumne River diversions over the 82-year hydrologic record compared to the proposed program, but due to rounding, the levels of diversion appear to be the same." (draft PEIR, Table 8, fn. a) The final PEIR should describe more precisely the volumetric difference in a dry year to meet the 10% goal, although we expect that this amount will be relatively modest, particularly when compared to MID and TID diversions. 45

12.3-41

7. BAWSCA SUPPORTS THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE AND RECOMMENDS THAT THE FINAL PEIR EVALUATE IT IN MORE DETAIL

The draft PEIR describes a Modified WSIP Alternative, which it identifies as the Environmentally Superior Alternative. This alternative differs from the WSIP as proposed, by incorporating three interrelated components:

One: Modifications to the planned operations of three local reservoirs intended to lessen the impact of the WSIP on local streams (Alameda Creek and Pilarcitos Creek) and on riparian habitat (the oak woodlands near Crystal Springs Reservoir).

Two: Additional water conservation, local groundwater and recycling projects to be carried out by the wholesale customers, intended to compensate for the reductions in system 46

supply caused by the three operational modifications described above and, potentially, to reduce demand for additional diversions from the Tuolumne River.

Three: A "transfer" of "conserved water" from Turlock Irrigation District (TID), Modesto Irrigation District (MID), or some other agency which would reduce demand within their service areas for water from New Don Pedro Reservoir, thereby avoiding the reduction in flows in the Tuolumne River below New Don Pedro that would otherwise occur as San Francisco's diversions to the Bay Area gradually increase as envisioned by the WSIP.

The draft PEIR explains why this is considered to be the environmentally superior alternative:

> The Modified WSIP Alternative is considered to be the environmentally superior alternative. It would reduce key impacts of the proposed WSIP on natural resources along the lower Tuolumne River, along Alameda Creek below the diversion dam, at Pilarcitos Creek, and in Crystal Springs Reservoir, but it would continue to meet the WSIP's primary goals and objectives. Like the WSIP, this alternative would maximize the use of existing facilities and the largely gravity-driven system without also requiring the construction of additional major facilities called for under many other alternatives, or substantially increasing the energy demand of the system or need for pumping. While some of the other alternatives would avoid or lessen certain WSIP impacts, they would also result in substantial additional impacts that the WSIP would not generate, because these alternatives would require substantial additional major facilities and affect other environmental resources in different geographic locations in addition to those affected by the WSIP. . . .
>
> The Modified WSIP Alternative includes implementation of more conservation, water recycling and local groundwater projects within the regional service area than under the WSIP, which would require construction of some additional facilities in some areas not affected by the WSIP. However, while construction of these facilities would cause temporary construction disruption and related environmental impacts, long-term implementation of these regional conservation, water recycling, and local groundwater projects would offset impacts of the operational modifications proposed under the Modified WSIP Alternative on the Tuolumne River. Depending on the extent of these projects implemented by wholesale customers in collaboration with the SFPUC, they could also help reduce the amount of additional diversion required from the Tuolumne River to serve the 2030 customer purchase requests.
>
> *(draft PEIR, p. 9-96)*

46 cont.

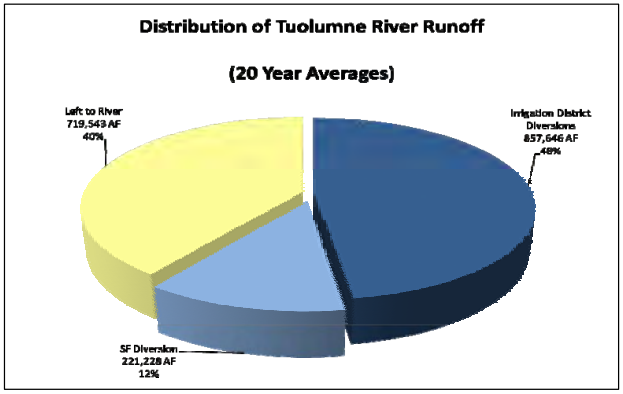
BAWSCA supports the Environmentally Superior Alternative and recommends that the Final PEIR provide a more detailed description of how its centerpiece (the reduction in demand for water from New Don Pedro) is to be achieved.[7]

46 cont.

Agricultural Conservation

As Figure 17 indicates, San Francisco and the wholesale customers are not the most significant users of Tuolumne River water. In fact, almost half of the Tuolumne River runoff is used for agricultural production. San Francisco's diversion currently represents about 12% of that flow and would increase only to 13% by 2030, assuming the increase in demand projected in the WSIP.

Figure 17.



Source: Turlock Irrigation District

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Central to the Modified WSIP is the "transfer" of water conserved by TID and MID such that demand from New Don Pedro Reservoir would be reduced, avoiding the reduction in flows in

[7] A more in-depth analysis would also be responsive to San Francisco Board of Supervisors' Resolution 321-08.

46 cont.

12.3-42

the Tuolumne River below La Grange that would otherwise occur under the WSIP, and where the WSIP's significant environmental impacts would occur.[8]

The large majority of the water currently diverted by TID and MID is, as their names suggest, used for agricultural irrigation. The draft PEIR does not describe how approximately 15,000-20,000 acre feet per year (AF/Y) of the approximately 800,000 AF/Y applied to irrigated agriculture in the two districts could be conserved. Some possibilities are mentioned indirectly in the portion of the draft PEIR that addresses possible environmental impacts of mitigation measures themselves:

- Water use efficiency and conservation for agricultural, residential and commercial users
- Land use changes, either agricultural to urban, or more water intensive (e.g., pasture) to less intensive (e.g., orchard)
- Conjunctive use of groundwater
- Recycled water
- Tiered water pricing
- Land fallowing of agricultural lands.

(draft PEIR, p. 6-63)

Agriculture in the Central Valley is part of our shared history and culture and contributes significantly to California's economy. For this reason, BAWSCA does not support the notion of permanently fallowing agricultural lands as an on-going source of water for the Bay Area. Similarly, decisions about which crops to cultivate are best made by individual growers familiar with local conditions and market forces.

47 cont.

[8] Two of the subsidiary aspects of the Environmentally Superior Alternative uniquely affect individual BAWSCA member agencies and warrant specific caveats. First, BAWSCA support for meeting Coastside County Water District's increased demand by pumping from Crystal Springs rather than by gravity flow from Pilarcitos Lake is conditioned on the economic impact of that approach (increased power costs) being borne by all users of the regional water system, including San Francisco, rather than solely by Coastside County Water District. Second, BAWSCA support for increased stream flow in a particular reach of Alameda Creek despite its possible impact on system yield is not meant to suggest that BAWSCA disagrees with Alameda County Water District comments that more water should be released and allowed to flow through lower Alameda Creek to the Bay, in order to support restoration of steelhead to the upper reaches of the Creek.

Nor do we believe that greater urbanization of the Central Valley is likely to result in less water use, on a per acre basis, than agriculture.[9] Finally, the pricing of water is an internal matter statutorily delegated to the elected governing boards of the irrigation districts, whose informed judgment should be respected, particularly by urbanized communities 100 miles away.

Rather, we propose a bold and visionary approach, suggested only obliquely by the Environmentally Superior Alternative, in which Bay Area water agencies would provide economic incentives to encourage TID and/or MID, the Cities of Modesto and Turlock, or individual growers, canners and orchardists to voluntarily implement water conservation measures at no cost to them, that would save both money and water, with resulting benefits to all stakeholders. There appear to be several opportunities available in both districts to conserve water.

The point of this comment is not to identify the most promising of these opportunities. The irrigation districts are much more capable of doing that. Rather, the point of the comment is merely to corroborate the feasibility of the concept at the center of the Environmentally Superior Alternative and demonstrate the benefits that it can provide to agriculture, the urban Bay Area, and to the lower Tuolumne River.

Arrangements of this precise kind are now in place in California, on a much greater scale. For example, the Imperial Irrigation District has contracted to transfer over 300,000 acre feet a year to San Diego and other coastal cities served by the Metropolitan Water District of Southern California. The IID's "Efficiency Conservation Definite Plan" adopted in May 2007 contains very detailed analyses of the costs/benefits and water savings achievable by a range of irrigation efficiency measures. It provides a possible road map for the Bay Area and TID and/or MID to follow.[10]

47 cont.

12.3-43

[9] In the TID/MID area, an acre of homes uses about the same amount of water as an acre of irrigated crops.

[10] The Environmentally Superior Alternative has the additional benefit of not jeopardizing San Francisco's water rights. And the water rights of MID and MID can also be fully protected by virtue of Water Code provisions designed to encourage water conservation and the use of recycled water and groundwater in lieu of surface water, e.g., Water Code Sections 1010-1011. We understand that TID has utilized these statutory filing mechanisms to document savings achieved through installation of drip irrigation systems that have already replaced flood irrigation in areas of that district.

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From a purely financial perspective, Bay Area water agencies should be willing to provide monetary contributions sufficient to support implementation of the most cost-effective mix of these alternatives. Many might be prepared to subsidize water conservation in the TID/MID area at levels that go beyond those necessary to simply offset the diversions by San Francisco to meet gradually increasing urban demands in the Bay Area. In fact, BAWSCA's board of directors has recommended that the final PEIR should explore the feasibility of Bay Area water customers financially supporting water efficiencies in TID/MID that will result in more water remaining in New Don Pedro than is currently the case, even after taking increased diversions by San Francisco into account. This additional water could then be available to support greater flows in the lower Tuolumne River, deployed at times and in volumes most beneficial for salmon and other important species in the lower Tuolumne River.

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In sum, BAWSCA believes there are opportunities for partnerships with agricultural interests such that more water can flow through the lower Tuolumne while still providing the water necessary to accommodate environmentally sound, infill growth planned in San Francisco and its neighboring communities.

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Additional Conservation and Recycling in the BAWSCA Service Area.

BAWSCA also supports the component of the Environmentally Superior Alternative that calls for additional water conservation, recycling and local groundwater development to be achieved in the BAWSCA service area. But, just as we believe the agricultural conservation component of this alternative can be improved, so that the WSIP results in more water being made available in the lower Tuolumne River than would be the case under any of the other alternatives, we also believe that this component can be improved. Specifically, rather than involve SFPUC in this aspect, we recommend that BAWSCA and its member agencies be given the responsibility for achieving these results.

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In enacting the Bay Area Water Supply and Conservation Act in 2002, the Legislature took note of the anomalous situation which the wholesale customers of SFPUC occupy in relation to San Francisco. They are dependent for a vital and limited resource on a monopoly supplier not

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48 cont.

regulated by the California Public Utilities Commission and in which they have no political representation. (Water Code Section 81301(a))

The Legislature also found that:

> The San Francisco regional system is . . . susceptible to severe water shortages during periods of below average precipitation because of insufficient storage and the absence of contractual arrangements for alternative dry year supplies.
>
> The lack of a local, intergovernmental, cooperative governance structure for the San Francisco regional system prevents a systematic, rational, cost-effective program of water supply, water conservation, and recycling from being developed, funded, and implemented.
>
> *(Water Code Section 81301(b), (c))*

BAWSCA has express statutory authority to:

- "Plan, finance, acquire, construct, maintain and operate facilities for the collection, transmission, treatment, reclamation, reuse and conservation of water." (Water Code Section 81420);
- "Conduct studies of the water supplies available to its members and their current and future demand for water," as well as "develop plans for projects and programs that can assist its members to meet those future water needs." (Water Code Section 81445);
- Carry out any "project" or "work" which are broadly defined to include water conservation measures and programs, facilities for the conjunctive use of surface water and groundwater and facilities for the transmission of recycled water." (Water Code Sections 81306, 81308, and 81420)

52 cont.

Since its formation in 2003, BAWSCA has developed, and implemented, at its own expense, effective water conservation programs that augment those administered by is member agencies. The range of these programs has steadily expanded, as the current Water Conservation Report (Attachment 5) demonstrates. We submit that the development of an additional 5 to 10 mgd of

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water savings through conservation, local groundwater or recycled water within communities that are members of BAWSCA (over and above those agencies' current commitments) will be far more feasible if the initiative and coordination is taken by BAWSCA -- an independent government agency established specifically for that purpose, which is representative of and responsive to the communities in which those projects and programs are to be built or implemented.

In order to generate funds for these programs, SFPUC should include in wholesale rates a "water conservation" charge. The amount of this charge should be determined by BAWSCA's board of directors, the revenue should be collected by SFPUC and forwarded to BAWSCA regularly, and the utilization of the funds should be decided by BAWSCA's board of directors. The SFPUC should limit its conservation, groundwater, and recycling activities to programs and projects within the limits of the City and County of San Francisco or on outside properties owned by the City, such as the Sharp Park Golf Course in Pacifica.

53 cont.

Thank you for considering this letter, the detailed comments which appear at Attachment 1, and the materials in the accompanying Volumes.

Sincerely,

Arthur R. Jensen
General Manager

Enclosures

cc: Board of Directors, Bay Area Water Supply and Conservation Agency

ATTACHMENT 1

12.3-45

Detailed Section-by-Section Comments on the Program Environmental Impact Report for the Water System Improvement Program

Below are the comments from the Bay Area Water Supply and Conservation Agency that are more narrowly focused and presented as a section-by-section review of the draft PEIR.

Summary Section

p. S-2 to p. S-23: The summary section does not highlight historical examples of problems encountered with operation of the existing regional water system which need immediate attention and which are the premise of the need for the WSIP. Below are some examples of failures on the regional water system over the last twenty years:

- San Joaquin Pipeline No. 3 (SJPL 3) failed in the San Joaquin Valley at the same time that the Sunol Valley Water Treatment Plant was shutdown for maintenance. This situation caused an immediate loss of water supplied from two sources including the Hetch Hetchy and Calaveras Reservoir supplies.
- San Andreas Pipeline No. 3 ruptured, flooding school property on the Peninsula.
- A loss of supply from Hetch Hetchy was caused by failures on the SJPL system near Mountain Tunnel.
- During heavy rains the Hetch Hetchy supply was lost for a period of six weeks at the same time power outages occurred at the Harry Tracy Water Treatment Plant.
- During heavy rains, San Mateo Creek was flooded in an attempt to lower Crystal Springs Reservoir elevation which rose to within inches of spilling over the 4 foot high stop logs. DSOD demanded that the reservoir be lowered to avoid the stop logs from floating out of their holding rack which can cause disastrous flooding. Lack of reservoir storage capacity can also cause uncontrolled spills. During one such event the Mills Hospital first floor in San Mateo was flooded.
- A valve-exercising program that is part of necessary maintenance of the transmission system has been nonexistent due to fear that valve might be able to be reopened, leaving major pipelines closed and causing regional water losses.
- A planned dewatering of the Stanford Tunnel to inspect the integrity of the tunnel was halted to avoid risks involved in having an extended shutdown.
- A landslide occurred on the peninsula near the existing Crystal Springs Bypass Tunnel. This tunnel was shut down as a precaution so that if further land movement caused the tunnel to break it would not result in flooding. If the line failed it could produce an estimated 900 mgd rush of water into San Mateo Creek causing public health, safety and

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environmental harm. The Harry Tracy Water Treatment Plant is the only source of water to the north of the tunnel, serving the northern peninsula and San Francisco. SFPUC staff stayed on site around the clock to put the tunnel back in service in case treatment plant operations were disrupted.

- Multiple emergency shutdowns of the water treatment facilities have been made due to aging and unreliable equipment.
- The San Antonio Pipeline failed causing immediate shutdowns and flooding.

54 cont.

p. S-2, Program Description, 2nd paragraph: This paragraph should clarify that the City and County of San Francisco is the single largest customer of the regional water system, using 1/3 of the total water developed, and being nearly 100% dependent on the regional water system.

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p. S-2, Program Description, 2nd paragraph: The draft PEIR states "Some of the wholesale customers have sources of water in addition to what they receive from the SFPUC regional system, while others rely completely on the SFPUC for supply." In fact, 13 of the BAWSCA agencies have diverse water supply portfolios that include recycled water, desalinated water, local groundwater, and local or imported surface water. Figure A below provides detail on the current diversified water supply portfolios of the combined BAWSCA agencies. BAWSCA agencies have committed to increasing the diversity of their water supply portfolio in the future with increased use of recycled water, conjunctive use of groundwater supplies, and implementation of water conservation as shown in Figure B below.

Figure A

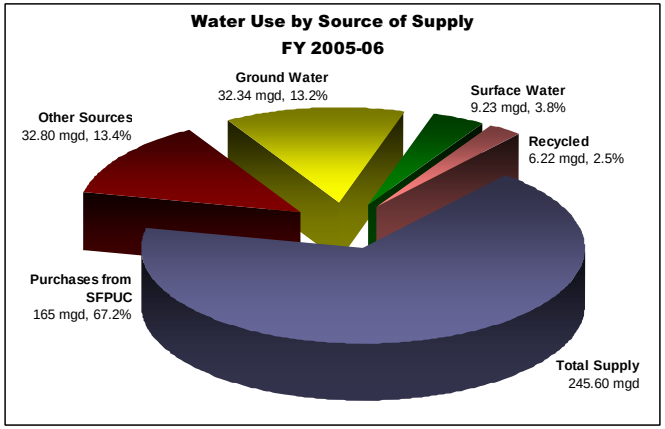

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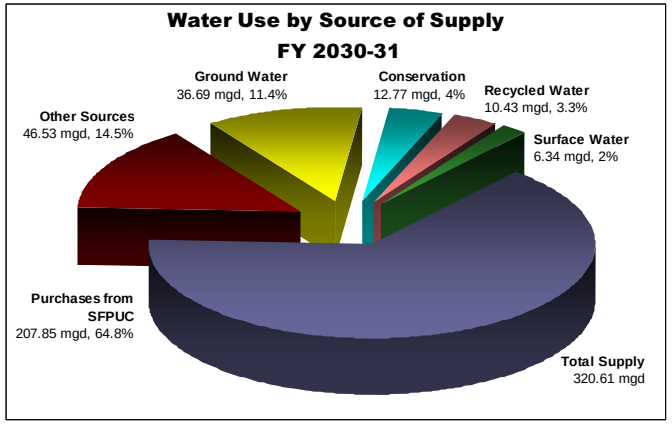
Figure B



56 cont.

p. S-5, Figure S.3 and p. 5.1-6, Figure 5.1-2: This figure shows historical and projected water deliveries, not water demands. Some of the projected water demand will be met by sources other than purchases from the SFPUC regional water system. The data label for the projected period (right-hand side of graph) should be changed to read "Annual Average Forecasted Deliveries" (not ".....Forecasted Demand").

57

p. S-23, Figure S.7: The Master Schedule shown should be updated to reflect most current WSIP Quarterly Report. Also, please clarify whether this timeline shows the project close-out dates adopted by the Commission or revised project close-out dates that have not yet been formally adopted by the Commission.

58

p. S-26, Facility Construction Effects, 4th bullet: The report identifies certain facilities as having historical significance. Information about whether these identified sites are classified in local or state registries as historical sites should be provided.

59

p. S-65, 1st bullet (Proposed Program): Regarding the concern raised by some commentors about the impact of this program objective, fundamental principals dictate that water quality from the best source is the most reliable means of eliminating uncertainties associated with contamination and public health risk. Water quality regulations are becoming more stringent

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with many more trace organics being detected, raising public health concerns. Options for source water downstream of the current intake are influenced by runoff and contamination from many other sources due to human activity. The uncertainty about endocrine disruptors and other contaminants may result in increased health risk and higher levels of treatment. A treatment scheme capable of producing a similar water quality would include reverse osmosis and activated carbon among other processes which require more energy and disposal problems that have negative impacts on the environment. Public concern over drinking water is a leading issue resulting in diminished public confidence and higher use of bottled water which carries its own set of issues related to trace organic contamination and disposal of packaging and containers. 60 cont.

Chapter 2 – Existing Regional Water System

p. 2-8, Sunol Valley Faculties: Please add a description of the San Antonio Pumping Facility to this section and explain its importance to reliable operation of the overall system. 61

p. 2-12, Bay Division Facilities: Further clarity would be helpful regarding the SCVWD intertie and its function. The statement is made that SCVWD is currently returning supplies to the SFPUC at an average rate of 5 mgd through the intertie. This is confusing since it does not state whether this is short-term or long-term. In fact, this action is in accordance with the agreement with SCVWD and the action is short-term. Please clarify since statement implies the intertie supplies a long-term supplemental supply of 5 mgd. 62

p. 2-27, System Maintenance: It is important that this section be modified to highlight problems with the existing system operation which require resolution by the WSIP. Specifically, this section should:

- Highlight that the WSIP improvements are necessary to overcome aging infrastructure and operational problems impacting the health and safety of the 2.5 million customers of the system.
- Clarify those operational areas and issues which act as drivers for the WSIP. There is no information on what is expected to occur during a major seismic event or other facility failures which occur too frequently. Include examples of how operations and maintenance are being impacted.
- Provide information on the difficulty operations staff currently face whenever it is necessary to shutdown portions of the existing system for maintenance purposes. The most extreme examples include no ability to take Irvington and Pulgas Tunnels out of service. The report should clarify why the Irvington Tunnel inspection frequency is different than the desired 10-year cycle for tunnel inspections. 63

12.3-47

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Attachment 1

p. 2-28, System Maintenance: Some additional examples of recent outages that support the need for the WSIP are:

- San Joaquin Pipeline No. 3 (SJPL 3) failed in the San Joaquin Valley at the same time that the Sunol Valley Water Treatment Plant was shutdown for maintenance. This situation caused an immediate loss of water supplied from two sources including the Hetch Hetchy and Calaveras Reservoir supplies.
- San Andreas Pipeline No. 3 ruptured causing flooding of school property on the Peninsula.
- A loss of supply from Hetch Hetchy was caused by failures on the San Joaquin Pipeline system near Mountain Tunnel.
- During heavy rains the Hetch Hetchy supply was lost for a period of six weeks at the same time power outages occurred at the Harry Tracy Water Treatment Plant.
- During heavy rains, San Mateo Creek was flooded in an attempt to lower Crystal Springs Reservoir elevation which rose to within inches of spilling over the 4 foot high stop logs. DSOD demanded that the reservoir be lowered to avoid the stop logs from floating out of their holding rack which can cause disastrous flooding. Lack of reservoir storage capacity can also cause uncontrolled spills. During one such event the Mills Hospital first floor in San Mateo was flooded.
- A valve-exercising program that is part of necessary maintenance of the transmission system has been nonexistent due to fear that valve might be able to be reopened, leaving major pipelines closed and causing regional water losses.
- A planned dewatering of the Stanford Tunnel to inspect the integrity of the tunnel was halted to avoid risks involved in having an extended shutdown.
- The text cites one example related to the landslide that occurred on the peninsula near the existing Crystal Springs Bypass Tunnel. The text should cite the consequences if the endangered portion of the system had been damaged: It was estimated that if the line failed it could produce a 900 mgd rush of water into San Mateo Creek causing public health and safety and environmental concerns. The Harry Tracy Water Treatment Plant is the only other source of water to the north of the Crystal Springs Bypass Tunnel, serving the northern peninsula and San Francisco. SFPUC staff were stationed at the site on a 24 hour-7 day basis to put the tunnel back in service in case the treatment plant operations were disrupted.
- Multiple emergency shutdowns of the water treatment facilities have been made due to aging and unreliable equipment.
- The San Antonio Pipeline failed causing immediate shutdowns and flooding of rights of way.

63 cont.

Chapter 3 – Program Description

p. 3-9, Table 3.2: The WSIP goal for seismic reliability is different than what was presented in the NOP for this PEIR. The demand level for basic service 24 hours after a major seismic event has been increased from 215 mgd to 229 mgd. The text discusses detailed analyses conducted since the level of service goals were formulated by the Commission. Clarifying language is needed to explain how these subsequent studies support refining this goal. 64

p. 3-14, 3rd paragraph, Water Supply Studies: The statement is made "As described below, the Commission selected the 20 percent maximum system wide reduction in water service during drought periods for further study." The draft PEIR does not provide sufficient justification for the stated 20% rationing goal. Such a critical decision should be an informed, well-documented decision. The justification for the decision to have a 20% rationing goal should be included in the PEIR. The document should provide more analysis of the possible extent of rationing throughout the service area, up to 40% in some communities. It should also address the environmental and public health impacts of extreme rationing. These include loss of greenspace and landscaping and loss of water for sanitation, cooling and domestic use. In addition, a comparison to the rationing goals of other major water utilities having comparable levels of water use and demand hardening should be presented. 65

p. 3-14, 4th paragraph, Water Supply Studies: The last sentence of this paragraph should be changed to provide greater clarity. Specifically, the sentence should clarify that the "12 to 40 percent" reductions apply to the wholesale customers NOT the individual retail water customers within each jurisdiction, who will also experience different levels of reduction. 66

p. 3-18, Table 3.3: It is important to note that the BAWSCA agencies have **already committed** to the identified levels of water conservation (13-15 mgd) and recycling (9-10 mgd) in 2030 shown on this table in comparison to the conservation (0-4 mgd) and recycling (0-4 mgd) values identified for the SFPUC. To date, the SFPUC has not committed to any level of increased water conservation or recycling in 2030, and have treated water conservation and recycling in San Francisco as a component of the WSIP. 67

p. 3-19, Table 3.4: City of Menlo Park is 100% reliant on water from the SFPUC. Footnotes "a" and "c" should not be used for this city. 68

p. 3-22, Purchase Estimates: The draft PEIR does not fully describe how the wholesale customers have included conservation potential into their demands. Each wholesale customer conducted a cost-effectiveness analysis to select conservation measures to which it would commit above and beyond implementation of the plumbing codes and the measures recommended by the California Urban Water Conservation Council. In addition, the draft PEIR should describe in detail the wholesale customers' diversified water supply portfolio. 69

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Attachment 1

p. 3-22, Recycled Water Potential, second sentence: The numbers in this sentence need to be corrected. The corrected sentence should read "The studies indicated that there is a range of about 20.1-25.0 mgd recycled water potential in addition to the existing and planned recycled water supply within the BAWSCA area." (RMC, 2004). 69 cont.

p. 3-25, bullet "E. Regional Recycled Water Projects," WSIP Project Refinement and Other WSIP Components: This bullet refers to the SFPUC consideration of the development of recycled water projects in areas outside of their jurisdiction in coordination with other agencies. While the SFPUC and other willing jurisdictions can partner to implement mutually agreeable projects, it is important to note that SFPUC participation is not necessary and in fact, may not be desired. The Bay Area Water Supply and Conservation Agency (BAWSCA) was created by the wholesale customers of the San Francisco regional water system with an expressed power to develop, implement, and fund regional water resources programs, including recycled water projects, as may be deemed appropriate by the Board of Directors. In addition, San Francisco may not necessarily be the lead agency in any such joint project. As a public agency, BAWSCA can be the lead agency in any project that it chooses to develop. Please clarify text accordingly. 70

p. 3-27, Water Quality Level of Service: Other water quality regulations of significance to the SFPUC that should be referenced are the Stage 2 disinfection by-products rule, Candidate Contaminant List, California Action Levels, and California Public Health Goals. 71

p. 3-27, Section 3.5.2 & 3.5.3: System performance under major seismic and reliability event scenarios with a completed WSIP show deliveries surpassing the some level of service objectives. For example, the last paragraph on p. 30 states "With implementation of the WSIP projects, this delivery capability would increase to 313 mgd, surpassing the level of service objective." Clarifying language is needed to explain which level of service objective is the limiting criterion for sizing a particular project and how, in some scenarios, meeting some objectives allows other level of service objectives to be exceeded. In general, if a facility is sized to meet one of several objectives, the facility may be able to operate beyond other minimum levels of performance. 72

p. 3-31, Table 3.7: The phrase "Delivery During a Hetch Hetchy Water Quality Event" should be clearly defined with a footnote to this table and language in the text. If there is a "water quality event," it is unclear whether <u>any</u> water can be served. 73

p. 3-32, Other Goals and Objectives, 1st paragraph: The statement is made "The SFPUC has included these program goals as fundamental elements of the WSIP, although the WSIP does not establish quantitative levels of service for the sustainability and cost-effectiveness goals." Do guiding principles exist regarding these goals in the absence of quantifiable levels of service? 74

p. 3-39, Proposed System Operations Strategy: BAWSCA is pleased that the future regional system operations assumed in this PEIR includes "Assigning a higher priority to water delivery over hydropower generation." The continuation of this priority, called "Water First Policy," is consistent with the legislature's intent upon passing AB1823. 75

p. 3-39, Proposed System Operations Strategy: The text should add other operating objectives that are used by the SFPUC in operating the regional water system: minimizing reservoir spillage; meeting local reservoir replenishment requirements; and providing effective emergency response and recovery. 76

p. 3-39, Proposed System Operations Strategy: When citing the operating objective of maximizing local reservoir storage, there is no mention that this strategy can result in reservoir spills and, in extreme cases, downstream flooding. The WSIP should address downstream flood control improvements to support this operating strategy. 77

p. 3-43, 1st paragraph, Water Supply and Storage Operations Strategy: Section 6 of the current Interim Water Shortage Allocation Plan sets forth an Annual Schedule which is to be followed by the SFPUC and its wholesale customers during periods of water shortage. Under this schedule, the SFPUC is to provide to its wholesale customers an estimate of the available water supply and, by March 31st of any drought year, a formal declaration of the existence of a water shortage emergency. 78

p. 3-43, Instream Flow Releases: The draft PEIR assumes that the SFPUC's current agreement with TID and MID, to pay them to provide all the additional water, if any, required for fishery releases when FERC imposes new requirements in 2016, will continue. Please provide specific strategies or approaches which may be used to provide additional water for fishery releases if needed. 79

p. 3-46, 1st full paragraph, Water Delivery Operations Strategy: The statement is made "At present, depending on hydrologic conditions and the transmission capacity of pipelines, the replenishment of local reservoirs can take more than one year to complete." Will the WSIP increase replenishment rates and decrease replenishment time? If so, by how much in terms of mgd or months? 80

p. 3-46, 1st full paragraph, Water Delivery Operations Strategy: The statement is made "The addition of redundant facilities and hydraulic capacity upgrades would also increase the system's transmission capability so that local reservoirs in the Alameda and Peninsula watersheds can continue to be replenished during maintenance periods to maintain higher average annual storage levels, thus ensuring that water would be available for use during emergencies or droughts, while also continuing to meet ongoing customer demands." BAWSCA concurs that this is an important operational necessity. The ability to replenish the local reservoirs is a critical component of providing water supply reliability. 81

p. 3-48, 1st paragraph, Maintenance and Asset Management Strategy: The statement is made "The SFPUC has limited ability to shut down some of the tunnels and pipelines while still meeting customer demand. The transmission system needs additional tunnels and/or pipelines to provide redundant capabilities to enable shutdown, inspection, and maintenance of some major components of the existing system." The PEIR should strongly state the fact that currently some tunnels and pipelines cannot be taken out of service for inspection, routine maintenance or emergency repairs without major reductions in water delivery. 82

p. 3-49, Table 3.10, Project SJ-3: The project description for the San Joaquin Pipeline System states "Note: While the current preferred alternative would construct 16 miles of pipelines, as much as 22 miles of pipelines could be constructed depending on the results of a conditions assessment of the existing pipelines." BAWSCA supports this statement and has expressed support for the continued retention of this modification as part of its comments on the NOP for this specific project: 83

> The project scope indicates that an 86 inch pipeline connected to the west of the San Joaquin River from the cross over to Tesla portal be constructed. The CER [Conceptual Engineering Report] for this project indicates that, depending on the condition assessment of the existing San Joaquin River crossings, a fourth crossing denoted as Alternative 5 may be considered. This potential should be included in the NOP for review until the final determination is made.

p. 3-51, Table 3.10, Project SV-4: The project description makes the statement "The new tunnel would be a redundant water transmission facility to the existing Irvington Tunnel." While this is a true statement, it fails to address why this redundancy is important. The statement made earlier in the PEIR on p. 3-48, 1st paragraph should be referenced as part of this description ("The transmission system needs additional tunnels and/or pipelines to provide redundant capabilities to enable shutdown, inspection, and maintenance of some major components of the existing system.") so that the purpose for this tunnel is clearly understood. 84

p. 3-63, Table 3.12: Table 3.12 indicates significant overall need for staffing increases, however does not refer to a staffing plan that demonstrates whether or how the work can be accomplished. . The staffing needs for shutdown support during construction should be analyzed and addressed in such a plan and the final PEIR should more fully analyze and disclose the staffing challenges. 85

p. 3-82, Proposed Construction Schedule: The statement is made "there would be an intense period of construction from 2009 to 2010, when 18 of the 22 projects would be constructed concurrently." Is this correct? Will all the projects be constructed concurrently in one year or rather will they be "in construction" during this period? Change wording as appropriate. 86

p. 3-86, Required Actions and Approvals: Affected wholesale customers must review, approve and possibly fund any additional conservation, recycling and groundwater projects that are proposed in their service areas as part of an alternative. 87

Chapter 4 – WSIP Facility Projects – Setting and Impacts

p. 4.16-13, Geology, Soils, and Seismicity, Impact 4.16-2: It is stated "implementation of the WSIP would collectively result in *beneficial* effects related to the seismic safety of the regional water system." The "beneficial effects related to the seismic safety of the regional water system" after implementation of the WSIP should be illustrated with graphic and tabular data from previous seismic vulnerability studies. 88

Chapter 5 – WSIP Water Supply and System Operations – Setting and Impacts

p. 5.1-4, Section 5.1.3, Proposed Water Supply Option and System Operations: The text describes the proposed water supply option for non-drought year and drought year water supplies. One identified component of the drought year water supply is rationing. The following sections of the chapter discuss the impacts of the various water supply components, but give very little detail about the direct and indirect impacts of the rationing component beyond what is identified with associated drought year groundwater pumping. Additional information about rationing impacts should be presented in this section. 89

p. 5.1-5, 1st full paragraph, Proposed Water Supply Option and System Operations: The statement is made "Although no major changes are proposed under the WSIP with respect to regional system operations, there would be some operational refinements (described in Chapter 3, Section 3.7)." These refinements to operations should be clarified to include modification of reservoir seasonal storage levels and more flexibility for system maintenance. 90

p. 5.1-17, Proposed Water Supply Option and System Operations: The report states that spills or releases from local reservoirs will occur and states that they will last only a few days. The report does not acknowledge that a full reservoir cannot control a maximum credible event or storm which will then cause the reservoir to spill uncontrolled. Downstream impacts due to flooding should be addressed. 91

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Attachment 1

Chapter 6 – Mitigation Measures

p. 6-189, References: The tables in Section 6.6 refer to a number of published regulations and policies. Full citation (derived from reference lists embedded in Chapters 4 and 5) would enhance the utility of Tables 6.3 through 6.7. 92

Chapter 7 – Growth-Inducement Potential and Indirect Effects of Growth

Part 1 of BAWSCA's comments stressed that the large majority of the planned growth to be accommodated by the WSIP has already been analyzed in CEQA-approved documents. There are two areas in which analysis of the impacts of growth can be expanded. However, the potentially un-analyzed impacts of growth are either the same as those already analyzed, or so small as to be insignificant.

The first category of potentially un-analyzed growth impacts are those that have been analyzed in CEQA documents, mostly general plans from jurisdictions served by the regional water system, although not for the same length of time as called for in the WSIP. The reason for this potential discrepancy is that none of the general plans' horizons extend to 2030. The draft PEIR concludes that the growth accommodated by the WSIP in years beyond those analyzed in general plans (mostly the years 2020-30) would have impacts that are substantially similar to, though incrementally greater than, the impacts identified in local general plan CEQA documents (p.7-60; see also Table E.5.1.) We agree with this assessment.

The second category of potentially un-analyzed growth impacts are those that might occur in territories not covered in prior CEQA documents at all. However, this growth represents an insignificant portion of the total planned regional growth. Appendix E.5 of the draft PEIR lists those planning documents that have already received CEQA analysis. Table 7.4 shows the projected changes in population and employment for all the jurisdictions within the service area. A comparison of these two documents reveals that less than 8% of the total population growth in the wholesale service area, and less than 5% of the employment growth, has not undergone CEQA review for the effects of the WSIP's planned growth. Put another way, the impacts of over 90% of the growth that will be accommodated by the WSIP have already been addressed in previous CEQA analyses. 93

Chapter 8 – WSIP Variants and Impact Analysis

Chapter 8 describes and analyzes the potential environmental effects of three identified WSIP variants: All Tuolumne (Variant 1); Regional Desalination for Drought (Variant 2); and 10% Rationing (Variant 3).

The use of variants in a proposed program is not common in CEQA documents. The overview clearly distinguishes the discussion in this chapter from the CEQA alternatives presented in Chapter 9. The text needs to further explain the utility of the analysis in the context of CEQA. One of the variants (Variant 2 – Regional Desalination for Drought) is carried forward into the formal CEQA alternatives analysis. 94

A comparison of the results of the impact analyses for each of these variants provides a useful sensitivity analysis for the project components in the proposed WSIP as well as some of the early policy decision making. For example:

> With the exception of the Bay Area Regional Desalination Project (BARDP) component of Variant 2, all three variants would have the same significant unavoidable or potentially significant unavoidable impacts as the proposed program….The greatest differences among the proposed program and the variants are associated with facilities-related impacts of the BARDP (p. 8-77, WSIP Variants and Impact Analysis)
>
> ...although the water supply and system operations impacts of the variants differ somewhat from those of the proposed program, the magnitude of the differences is small and not sufficient to change either the significance determinations or the mitigation measures identified for the WSIP. (p. 8-77, WSIP Variants and Impact Analysis)
>
> ...with the exception of the BARDP component of Variant 2, the variants would have the same areas of controversy, the same unavoidable effects, and the same irreversible environmental changes as the proposed program. (p. 8-83, WSIP Variants and Impact Analysis)

95

By slightly changing the proposed water source or level of rationing for each of the variants, the resulting impacts analysis provides an understanding of the sensitivity of impacts associated with the proposed program. Two important conclusions can be made based on the results of this sensitivity analysis:

1. The environmental impacts of a Bay Area Regional Desalination Project are far greater than the impacts of providing additional water supply reliability through increased diversions from the Tuolumne River.
2. Greater reliability can be provided with a 10% rationing limit without causing any increased impacts to the environment.

12.3-51

Chapter 9 - CEQA Alternatives

p. 9-4, Table 9-2: There should be an attempt to quantify the existing level of service beyond "not defined" in order to better correlate with the conclusions presented in Table 9-6 "Summary of Ability of Alternatives to Meet Program Objectives." Quantitative data on existing system performance for this purpose could be extracted from Chapter 3, Tables 3.6 and 3.7. 96

p. 9-16, Table 9-6: While this table identifies whether the individual alternatives meet the program objectives, including "Ensure cost-effective use of funds," nowhere in this chapter are the actual total costs of individual alternatives presented. CEQA does not require an economic analysis, however a presentation of the economics of the proposed program and identified alternatives is crucial as part of the final decision making process. Given the wide range of costs associated with the supply components of the various alternatives, full disclosure of the known costs of the alternatives being considered is important as part of the public debate concerning the decision being made. 97

p. 9-16, Table 9-6, Water Quality Objectives: One water quality objective is "Design improvements to meet current and foreseeable future federal and state water quality requirements." In evaluating whether an alternative meets this objective, consideration must be given to the fundamental principles that dictate that water quality from the best source is the most reliable means of eliminating uncertainties associated with contamination and public health risk. Water quality regulations are becoming more stringent with many more trace organics being detected, raising public health concerns. Options for source water downstream of the current intake are influenced by runoff and contamination from many other sources due to human activity. The uncertainty about risks from endocrine disruptors and other contaminants may result in increased health risk and higher levels of treatment. A treatment scheme capable of producing a similar water quality would include reverse osmosis and activated carbon among other processes which require more energy and disposal problems that have negative impacts on the environment. Public concern over drinking water is a leading issue resulting in diminished public confidence and higher use of bottled water which carries its own set of issues related to trace organic contamination and disposal of packaging and containers. 98

p. 9-17, Table 9-7: Another column should be added to this table showing the results of the water supply and system operations impact analysis results for the Proposed Program to more easily see the comparison to the alternatives. In reviewing this table, some summary comparisons can be made: 99

- Comparing to the Proposed Program, the Modified WSIP reduces 17 water supply and system operations impacts from "Potentially Significant, Mitigatable" to "Less than Significant"

- Comparing to the No Purchase Request Alternative, the Modified WSIP reduces 7 water supply and system operations impacts from "Potentially Significant, Mitigatable" to "Less than Significant"

- The No Action Alternative has the same identified "Potentially Significant, Mitigatable" water supply and system operations impacts as the Proposed Program

99 cont.

p. 9-26, last paragraph, No Program Alternative, Sec. 9.2.2: If the wholesale customers were to seek alternative supplies, they would have to use some, if not most of the Bay Area portion of the of the existing San Francisco regional waster system infrastructure. The draft PEIR does not fully disclose the constraints on this system. Understanding of these constraints is essential to know if the environmental impacts of the potential use of alternative supplies by the wholesale customers has been thoroughly analyzed and disclosed. For example, if the existing San Francisco regional system infrastructure is not available for these purposes, then the environmental impacts from the construction of a new supplemental water distribution system necessary to deliver alternative supplies could be greater than the impacts of the WSIP and should be disclosed as part of the final PEIR.

100

p. 9-26, last paragraph, No Program Alternative, Sec. 9.2.2: Regarding the statement that agricultural water use is decreasing because agricultural water users are selling water rights or contracts to urban agencies, another model to explain this result has also appeared. Specifically, some urban customers are investing in conservation in the agricultural regions and contracting to buy the conserved water, without land fallowing or selling of water rights.

101

p. 9-28, first paragraph, No Program Alternative, Sec. 9.2.2: The draft PEIR states that the wholesale customers have factored in additional conservation and recycling into their 2030 demands. In fact, by 2030, the wholesale customers expect to have an additional 9 mgd of recycled and desalinated water as well as 13 mgd from active conservation. (BAWSCA Annual Survey, FY 2005-06.)

102

p. 9-48 and 9-49, Aggressive Conservation/Water Recycling and Local Groundwater Alternative: The evaluation and analysis of the Aggressive Conservation/Water Recycling and Local Groundwater Alternative in the PEIR must consider the existing water demands and supply sources as well as projections for future water demand and water supply diversity.

First, the diversification of water supplies today is very different when comparing the City and County of San Francisco with the BAWSCA agencies. Thirteen of the BAWSCA agencies have diverse water supply portfolios that include recycled water, desalinated water, local groundwater, and local surface water. Figure C below provides detail on the current diversification of existing water supply portfolios. By comparison, Figure D shows the sources of supply for the San Francisco Retail System in the year 2000.

103

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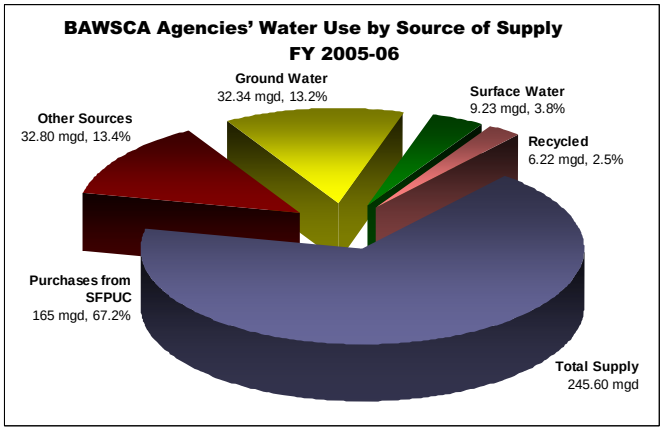
Attachment 1

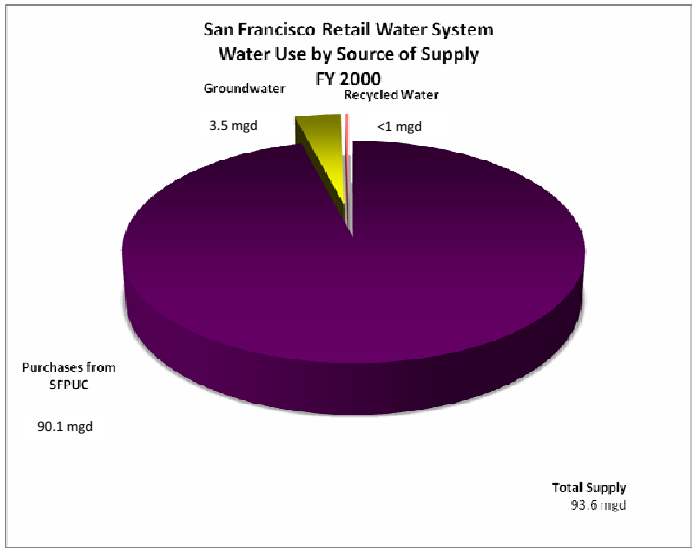
Figure C



103 cont.

[Remainder of page intentionally left blank.]

Figure D



103 cont.

BAWSCA agencies have committed to increasing the diversity of their water supply portfolio in the future with increased use of recycled water, conjunctive use operation of groundwater supplies, and implementation of water conservation in 2030 as shown in Figure E below. Again, for comparison purposes, Figure F shows the planned sources of supply for the San Francisco Retail System in 2030 including an assumption that the conservation and water recycling component of the WSIP is implemented.

12.3-53

Figure E

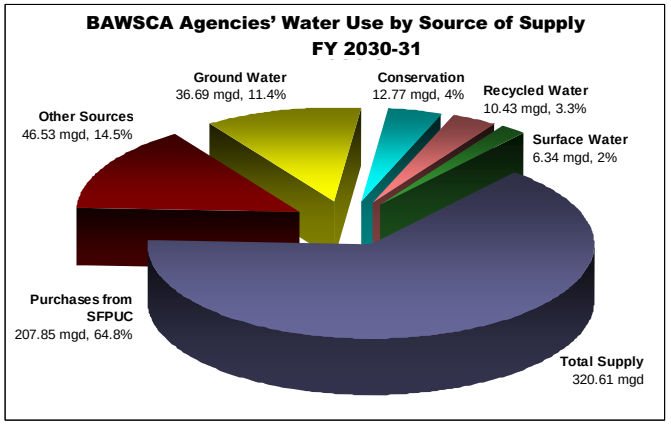
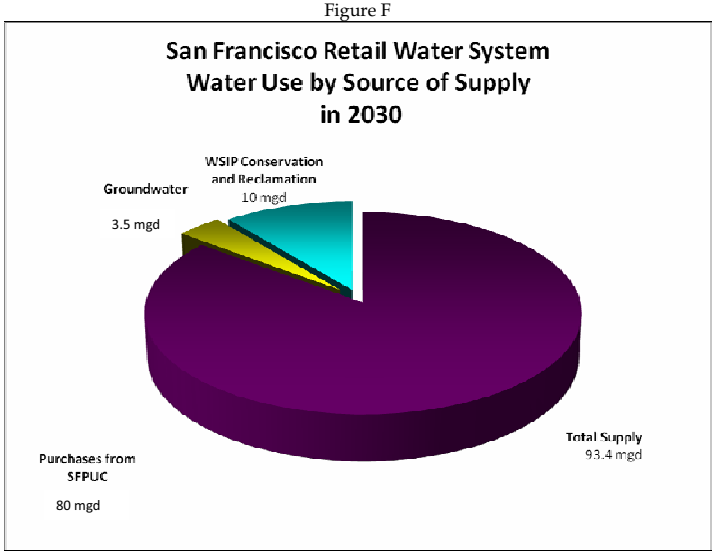


Figure F



103 cont.

Other Comments Relating to Section 3.4.4, Water Demand Studies, and Supporting Studies for PEIR

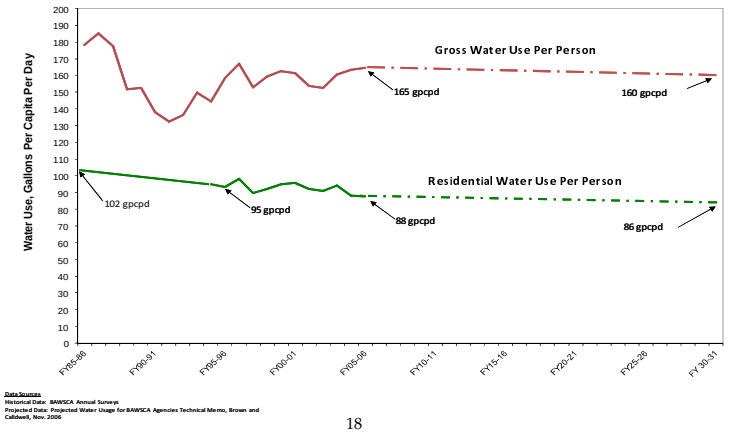
Since the release of the draft WSIP PEIR, several organizations have made critical statements questioning BAWSCA member agencies' water use characteristics and demand projections, which are included in the PEIR's supporting documents.

BAWSCA would like to offer the following comments and information on Section 3.4.4 "Water Demand Studies" of the PEIR and in response to the statements that have been made. Below is a summary of those comments made and BAWSCA's responses for purposes of clarifying similar issues in the PEIR.

- Critical Statement: The wholesale customers anticipate that the single-family residential per-capita outdoor water use will increase from 39 gpcpd in 2001 to 40 gpcpd in 2030; Per capita water use is projected to increase for the wholesale customers, further indicating that they lack effective conservation programs.

  BAWSCA Response: As documented in the technical memorandum "*Projected Water Usage for BAWSCA Agencies*" (Brown and Caldwell, Nov. 2006), while the single-family residential per-capita outdoor water use for the BAWSCA member agencies will increase from 39 gpcpd in 2001 to 40 gpcpd in 2030, total single family residential per-capita use will *decrease* from 96 gpcpd to 86 gpcpd over the same period (although current 2005-06 per capita use is actually 88 gpcpd) and gross per capita use will *decrease* from 165 gpcpd currently to 160 gpcpd in 2030. Figure G below presents historical and projected gross and residential per capita use in the BAWSCA area.

  Figure G



104

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- Critical Statement: The SFPUC's "Proposed Program" ignores conservation, efficiency, and recycling measures that their own studies found could eliminate the need to divert more water from the Tuolumne by at least 74%.

  BAWSCA Response: This statement is incorrect. In fact, the WSIP includes implementation of over 23 mgd of conservation and recycling in the BAWSCA service area by 2030 as well as an additional 10 mgd of conservation and recycling in San Francisco by 2030.

105

- Critical Statement: The SFPUC should conduct a study to determine the maximum technical potential for conservation and efficiency savings within the SFPUC service territory.

  BAWSCA Response: Such a study was completed in March 2006, the "*SFPUC Investigation of Regional Water Supply Option No. 4 (RWSO4)*" (URS, March 2006). This study presented the results of a comprehensive analysis of water conservation, water recycling, and naturally renewable groundwater projects that could be implemented to meet future water demands without additional diversion from the Tuolumne River. While this report does identify areas of potential additional opportunities that could be implemented to reduce the need for additional Tuolumne River diversion, the study concludes:

  > The total "high range" yield for the three categories of RWSO4 projects is approximately 28.5 mgd. The "high range" yield is the **maximum** possible from the combination of water conservation, recycling, and renewable groundwater projects. Because some of these projects are only considered potentially eligible and because the feasibility of many of the projects is unknown, this Technical Memorandum concludes **that RWSO4 will not meet** the 35 mgd increase in normal year SFPUC system demand by the year 2030. (emphasis added)

106

- Critical Statement: "the non-residential sector is responsible for over 80% of the projected 2030 demand increase."

  BAWSCA Response: This statement is incorrect. 53.4% of the projected total increase in demand is associated with non-residential water use. The difference in the non-residential sector between 2001 actual (91 mgd) and 2030 projected (120.5 mgd) is 29.5 mgd, which represents 53.4% of the total increase in demand.

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- Critical Statement: "over 40 percent of the increase in non-residential demand is due to outdoor use."

  BAWSCA Response: This statement is incorrect. As documented in the technical memorandum "*Projected Water Usage for BAWSCA Agencies*" (Brown and Caldwell, Nov. 2006), the difference in the non-residential sector between 2001 (actual) and 2030 (projected) is 29.5 mgd. Of this amount, the increase in *outdoor use* is 9.4 mgd, or 32%. 108

- Critical Statement: The PEIR and associated demand studies failed to account for the impact rising price of water has on consumption.

  BAWSCA Response:

  First, all of the BAWSCA agencies meet the CUWCC Best Management Practice #11 for Pricing.

  Second, the demand studies that form the basis for the PEIR did incorporate the future cost of water (estimated at $1,070/acre-foot) when analyzing the cost-effectiveness of each individual conservation and water recycling measure. This allowed the individual BAWSCA member agencies to identify the cost-effective water supply alternatives available to them based on the future cost of water.

  Third, the demand studies that form the basis for the PEIR are based on an end-use model. This type of model differs from straight per capita or land use-based forecasting approaches in that it uses growth in number of accounts and a complete breakdown of water uses by account type (end uses) to forecast water demands. Using an end-use model allows more consideration of the effects of targeted conservation measures than is possible with a per capita or land use demand model. One characteristic of utilizing an end-use model is that very specific conservation measures are identified and evaluated for all end uses of water that can be identified. The result is that water use and available conservation activities are broken down very specifically. These individual conservation measures are then applied to end uses and the resulting water demand after conservation activities is determined. Because of this, applying a general elasticity value to this resulting demand, in an attempt to "mimic" the effect of pricing increases, would in fact then double-count much of the already identified and planned savings. Put another way, the specific conservation measures evaluated as part of an end use model provide clarity and specificity as to how a customer would achieve conservation savings in response to pricing structures designed to encourage water conservation. 109

12.3-55

- Critical Statement: "A study conducted by the Irvine Ranch Water District in California, for example, showed that evapotranspiration controllers reduced outdoor water use for large residential users by 24 percent."

  BAWSCA Response: BAWSCA is currently awaiting results from a multi-year study being conducted on weather-based irrigation controllers and their effectiveness. This study is a grant-funded effort in the San Francisco Bay Area headed by EBMUD and includes EBMUD, SCWA, CCWD, ACWD, SCVWD, and the City of Davis. Results of the study will not be out for another year or so. It is important to review the results of this study prior to implementing any irrigation controller rebate program, as the study should demonstrate actual water savings potential in *climatologic and hydrologic areas similar to the BAWSCA agencies*, as opposed to studies from Southern California or elsewhere in the country. 110

- Critical Statement: "Recent conservation assessments indicate that there are a substantial number of cost effective technologies that can drastically reduce residential water demand – both indoor and outdoor – to levels far below those projected for the wholesale and retail customers. For example, a 1997 study by the American Water Works Association (AWWA) found that conservation could reduce indoor water use from 65 gpcpd to 45 gpcpd for single-family homes, a savings of over 30 percent."

  BAWSCA Response: According to the report *Water and Energy Savings From High Efficiency Fixtures and Appliances in Single Family Homes* (EPA, 2005):

  > The mean daily household indoor use for the three groups during the baseline was 175 gpcpd, which dropped 39 percent to 107 gpcpd after the installation of the new high-efficiency fixtures and appliances.

  For the houses studied in the service area of East Bay Municipal Utilities District in the San Francisco Bay Area, the pre-retrofit total residential water use was 187.6 gpcpd and the post-retrofit use was 123.9 gpcpd, a difference of 63.7 gpcpd or 33.95%. These findings support the fact that household retrofits with efficient plumbing fixtures can significantly reduce residential water use. However, the study shows that residential water use in other parts of the San Francisco Bay Area is significantly higher currently than that for BAWSCA, including that for BAWSCA's projected 2030 use. As stated earlier in these comments, total single family residential per capita water use will decrease from the current level of 88 gpcpd to 86 gpcpd in 2030. 111

ATTACHMENT 2

L_BAWSCA1

Impact of Earthquakes on BAWUA Customers

Summary Report

Prepared for:
Bay Area Water Users Association

Prepared by:

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Principal Investigator:
John Eidinger

G&E Report 54.01.01, Revision 0X
November 23, 2001
(includes minor revisions by BAWUA)

Introduction

This report describes what might happen to deliveries of water to BAWUA customers resulting from earthquake-induced damage to the SFPUC water system after two significant and likely earthquakes: a magnitude 7.9 earthquake on the San Andreas fault or a magnitude 7.1 earthquake on the Hayward fault. Unless otherwise noted below, estimated restoration times refer to SFPUC regional system. Damage to local distribution systems may further impede water from reaching the actual end-user. Water deliveries may be non-potable during the time water is restored to customers.

San Andreas M 7.9 Earthquake

This earthquake will be very damaging to the main pipelines, tunnels, water treatment plants and pump stations in the Peninsula portions of the SFPUC system. No new water supply from the SFPUC system will be available until repairs are made to the most critical pipeline and tunnel infrastructure; this will take between 20 and 30 days, depending on location within the SFPUC system. Projected impacts to BAWUA customers are as follows:

- 349,000 people (Brisbane, Burlingame, Colma, Foster City, Hillsborough, Millbrae, Pacifica, San Mateo, South San Francisco, parts of Belmont and Daly City): Water supply is lost to almost all customers in about 24 hours. No water via the piped system for about 30 days. After 30 days, about 35% of customers will have water restored, ramping up to 100% of customers in about 58 days.

- 140,000 people (San Bruno, most of Daly City): Water supply is lost to almost all customers in about 24 hours. There is no water to most of the piped system for several days. Then, water supply is restored to most people at severe rationing levels within 30 days. After 30 days water is supplied to most people at near normal levels.

- 277,000 people (East Palo Alto, Los Altos Hills, Menlo Park, Palo Alto, Redwood City, Woodside, parts of Belmont and North San Jose): Water supply is lost to almost all customers in about 24 hours. There is no water via the piped system for about 20 days. After 20 days, about 35% of customers will have water restored, ramping up to 100% of customers in about 34 days.

- 334,000 people (Mountain View. Santa Clara, Stanford University and Sunnyvale): Water supply is lost to almost all customers in about 24 hours. No water to most of the piped system for a few days. After 14 days, about two-thirds of customers will have water restored, ramping up to 100% of customers at near normal levels in about 34 days.

- 511,000 people (Hayward, Fremont, Newark and Union City). Damage to local distribution pipelines, especially those near the bay, will cause between 3% and 20% of customers to lose all water supply for up to a few days after the earthquake

- 800,000 people (San Francisco). Damage to local distribution pipelines, especially those serving the lower elevation north waterfront, downtown and South of Market areas, will lead to loss of all water supply to those areas within 8 to 24 hours after the earthquake. Water supply to the western and higher elevation parts of the City will be

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lost to localized areas within a few hours after the earthquake. Damage to all the major transmission pipelines serving San Francisco will prevent re-supply of the City, causing most of the City to lose nearly all water supply within about 72 hours. Limited portions of the City served by unbroken parts of the salt-water auxiliary water supply system may have access to salt water for fire fighting purposes. For up to 30 days, a portion of the City could get non-potable water if it is decided to pump Lake Merced water into the potable water system; most of the remainder of the City will have no water. Some of the transmission pipelines are restored to service 30 days after the earthquake, and about three-quarters of the City will then have water. Essentially all customers get water restored within 45 days.

Hayward M 7.1 Earthquake

This earthquake will be very damaging to the main pipelines, tunnels, water treatment plants and pump stations in the East Bay portions of the SFPUC system. No new water supply from the SFPUC system will be available to the East Bay and parts of the South Peninsula areas until repairs are made to critical pipeline and tunnel infrastructure; this will take between 20 and 30 days, depending on location within the SFPUC system. Given the expected damage patterns, BAWUA customers should expect the following:

- 200,000 people (East Palo Alto, Hayward, Woodside, parts of Menlo Park, North San Jose, Palo Alto and Redwood City). Water supply is lost to almost all customers in about 24 hours. There is no water via the piped system for about 20 days. After 20 days, about 35% of customers will have water restored, ramping up to 100% of customers in about 35 days. For up to 60 days after the earthquake, water supply will be intermittent (sufficient at night time, on-and-off in the day time).

- 725,000 people (Fremont, Milpitas, Newark, Santa Clara, Sunnyvale, Union City and parts of Stanford University). Water supply is lost to almost all customers in about 24 hours. There is no water to most of the piped system for a few days. Water supply to about one-half of customers is restored within 15 days. Then, water supply to about two-thirds of customers is restored within 20 days, which is when the SFPUC system is sufficiently repaired to start making limited deliveries again. For up to 60 days after the earthquake, water supply will be intermittent.

- 800,000 people (San Francisco). Damage to local distribution pipelines, especially those near the bay, will cause between 5% and 20% of customers to lose all water supply within 24 hours after the earthquake, with most of these customers reconnected to the system within ten days after the earthquake. For up to 60 days after the earthquake, there may be insufficient water available to supply all of San Francisco, if the decision is made to divert limited water supplies to meet the requirements of Peninsula and South Bay suburban customers. If the decision is made to divert water, then San Francisco customers will have to greatly reduce demand, or else there will be localized intermittent water outages.

- 710,000 people (northern Peninsula and areas not listed above). Damage to local distribution pipelines, especially those near the bay, will cause between 2% and 15% of customers to lose all water supply for up to a few days after the earthquake. For up

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to 60 days after the earthquake, water supply will be intermittent (sufficient at night time, on-and-off in the day time).

Impacts to Affected BAWUA Customers

For the first one to three days after either a San Andreas M7.9 or Hayward M7.1 earthquake, a large portion of affected people will likely stay home, to take care of immediate family matters and damage to local residences. If residential structures suffer little to moderate damage, most people will continue to live at home, while some will relocate to stay with friends or family outside the affected zone. If residential structures suffer considerable damage, people will have to relocate to various types of emergency shelters like school gymnasiums.

During the first few days, most people in the areas with water outages will obtain drinking and cooking water from bottled water suppliers. Within a day or two, water supply for sanitation and washing purposes will become a high priority for people. People without water at their residences beyond one or two days will either relocate to emergency shelters / hotels, move in with family outside of the affected area, or suffer the inconvenience of obtaining bottled water and/or water from emergency distribution locations for all of their needs.

Faced with water outages that could last up to 20 to 60 days, there will be substantial impacts to local communities. Most emergency care facilities (hospitals) will likely have to relocate their patients to other hospitals if their facility loses piped water supply for more than a day or so. People will tend to become "disillusioned" with their water agencies if piped water is not restored within about 4 to 10 days. Economic activity in the areas without piped water supply will drop by about 50-70%; most affected businesses will furlough their employees for the interim; "marginal" companies may not ever recover.

A large earthquake will ignite fires in many locations. Many of these fires will ignite due to leaking natural gas pipes; short circuits in electrical systems; unattended cooking and tipped-over heating appliances when PG&E electric power is restored; spillage of flammable materials, etc. Fire fighters will be able to make good use of local water supplies in tanks until the water within the tanks runs out, likely within 6 to 18 hours after the earthquake. Fire fighting efforts at fire locations that are located too far away from a water supply (either because of broken water pipes, or the system has become depressurized), will be largely ineffective; the buildings (and a few around them) will be left to burn down. If it is very windy at the time of the earthquake (about 2% to 5% chance), fires that cannot be rapidly controlled before the local water supply is exhausted will likely spread; in densely constructed areas, one or two uncontrolled ignitions could lead to conflagrations involving 10s to 100s to 1000s of structures.

Basis of this Report

This report was prepared using the findings described in the "Phase II – Regional System Overview" report of the SFPUC Facilities Reliability Program (January 2000), coupled with trends that have occurred to local water distribution systems in recent earthquakes around the world. Further engineering evaluations of individual components of each water system can refine the results presented herein. The water outages described in this report are no more severe than what has actually been experienced to modern metropolitan urban areas that have recently experienced large earthquakes. For example, the city of Kobe, Japan (population 1,500,000 people), was impacted by a magnitude 7 earthquake in 1995; the resulting damage to the water

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12.3-58

system resulted in water outages lasting up to 90 days. For BAWUA customers, the dominant reason for lengthy water outages is damage to pipelines that cross soil liquefaction areas (the San Francisco Bay Area has many such pipelines and many such soil areas); and that major pipelines cross faults (the SFPUC system has all 4 of its major pipelines cross the Hayward fault). Another important cause of damage is the intense level of ground shaking that will occur near the faults, which will greatly overload the vintage water facilities built near them, like reservoir outlet towers and tunnels – most of these facilities were not designed for anything much more than about one-quarter the level of ground shaking that they will likely be subjected to in future earthquakes.

For the interested reader, detailed reports on the performance of water systems in recent earthquakes are available from the American Society of Civil Engineers (www.asce.org), Technical Council on Lifeline Earthquake Engineering: Kobe, Japan, 1995 (monograph 15); Izmit, Turkey 1999 (monograph 17); Chi-Chi Taiwan, 1999 (monograph 18); Bhuj, India, 2001 (monograph 19). In all of these earthquakes, damage to water systems led to water outages lasting between weeks to several months for urban areas of 100,000s to 1,000,000s of population.

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ATTACHMENT 3

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A Water Bonds

Digest

by Ballot Simplification Committee

THE WAY IT IS NOW: San Francisco's water system supplies drinking water to about 2.4 million people in San Francisco and the Bay Area. This water is stored at Hetch Hetchy Reservoir and in other reservoirs in the Sierra and in Alameda and San Mateo counties. Some of the water is piped more than 150 miles to reach the Bay Area. Many of the water system's pipelines, tunnels and other facilities are in need of repair or replacement. Some of these are located on or near fault lines, and are vulnerable to damage in an earthquake.

THE PROPOSAL: Proposition A is a revenue bond that would authorize the City to borrow $1,628,000,000 to pay for improvements to its water system. The money would be used to:

- Upgrade and strengthen the system's pipelines, tunnels and other facilities against earthquakes;
- Upgrade the system used to store water and pipe it to the Bay Area;
- Upgrade the water distribution system in San Francisco;
- Meet future water quality standards; and
- Increase water system capacity.

Rates charged to water system customers in San Francisco would be increased over time to repay these bonds. San Francisco landlords could pass on to tenants in rent-controlled units half the increase in water rates resulting from the bond. Suburban water system users would finance and pay for their share of improvements to the water system.

If in the future the San Francisco Board of Supervisors determines that it is cheaper to pay for water system improvements by joining with suburbs to create a Regional Water Financing Authority, then a surcharge will be imposed on San Franciscans to cover the additional costs including to pay for the operating expenses of the Authority.

A "YES" VOTE MEANS: If you vote "Yes," you want the City to borrow $1,628,000,000 to make water system improvements, to be paid for with increased water rates.

A "NO" VOTE MEANS: If you vote "No," you do not want the City to borrow $1,628,000,000 for these purposes.

Controller's Statement on "A"

City Controller Edward Harrington has issued the following statement on the fiscal impact of Proposition A:

In my opinion, should the proposed bond issue of $1,628,000,000 be authorized and bonds issued at current interest rates, based on a single bond sale and level redemption schedules, the cost would be approximately $85,000,000 annually for thirty (30) years for a total approximate cost including debt service of $2,551,000,000.

This bond amount represents increases ranging between 5% and 12% annually between 2003 and 2015 in water rates for San Francisco consumers, the source of repayment for these bonds. For the average single family residential service in San Francisco this cost is equivalent to an increase of approximately $26.42 per month above the current rate of $14.43 per month, for a total of $40.85 per month by 2015.

The City typically does not issue all authorized bonds at one time; if these bonds are issued over several years, the actual debt service may be somewhat less than the maximum amount shown herein.

Before the bonds are issued, the City will need to amend the Residential Rent Stabilization and Arbitration Ordinance. This amendment is to provide landlords the ability to pass through 50% of the costs resulting from increased water rates to residential tenants. Under current financing assumptions, the average tenant in a four unit building would pay approximately $10.56 per month by 2015.

How Supervisors Voted on "A"

On July 22, 2002 the Board of Supervisors voted 8 to 3 to place Proposition A on the ballot.

The Supervisors voted as follows:
Yes: Supervisors Ammiano, Daly, Gonzalez, Leno, Maxwell, McGoldrick, Newsom, and Peskin.
No: Supervisors Hall, Sandoval, and Yee.

THIS MEASURE REQUIRES **50%+1** AFFIRMATIVE VOTES TO PASS.

ARGUMENTS FOR AND AGAINST THIS MEASURE IMMEDIATELY FOLLOW THIS PAGE. THE FULL TEXT BEGINS ON PAGE **P-19.**
SOME OF THE WORDS USED IN THE BALLOT DIGEST ARE EXPLAINED ON PAGE **P-3.**

A Water Bonds

PROPONENT'S ARGUMENT IN FAVOR OF PROPOSITION A

Should a major earthquake strike San Francisco's Hetch Hetchy water system must be ready.

If a serious quake were to occur today, there is a high probability that water delivery to San Francisco could be interrupted for more than two months. This would threaten our ability to fight fires after an earthquake and lead to an economic disaster as we attempted to recover without a stable water supply.

When San Franciscans came together in common purpose to build Hetch Hetchy nearly 100 years ago, we showed we were a city that knew how to do things right. Now, it is time for our generation to show that we know how to safeguard this civic treasure.

After years of study and rigorous review, the city is going forward with Proposition A to seismically-strengthen and repair the deteriorated system.

Hetch Hetchy brings more than vital water; it provides tremendous financial benefits to the people of San Francisco. Because of our ownership of the system, San Francisco will pay for just 30 percent of the cost of regional repairs. Our suburban customers will pay the rest - $2 billion. And our water rates will be competitive with neighboring counties in the Bay Area. Hetch Hetchy also provides San Francisco free water and power for critical city needs such as the Municipal Railway, Public Schools, San Francisco General Hospital and other city facilities.

Now is the time to safeguard this civic treasure. The system crosses three major earthquake faults and is vulnerable.

A city cannot live without water. That's why Board President Tom Ammiano and Supervisors Peskin, Maxwell, Daly, Leno and McGoldrick have joined with the Chamber of Commerce, environmental activists and leaders from throughout San Francisco to support Proposition A.

Please Vote YES on Proposition A.

Supervisors Tom Ammiano, Aaron Peskin, Sophie Maxwell, Chris Daly, Mark Leno and Jake McGoldrick

San Francisco Chamber of Commerce

12.3-60

REBUTTAL TO PROPONENT'S ARGUMENT IN FAVOR OF PROPOSITION A

Proposition A triples water rates, raises rents and gives away control of our water system to the suburbs.

Don't fall for the scare campaign. Though our water delivery system must be made seismically safe, there is an alternative plan that would cost 75% less - and keeps San Francisco voters, not suburban politicians, in control of our water system.

The political establishment supports this measure because it helps to create a new bureaucracy called The Regional Water Finance Authority. This Authority will control spending and set your water rates. You the ratepayer or renter will pay the costs of this new bureaucracy.

Current law requires a vote of the public to increase water rates. This important decision must remain in the hands of voters and certainly not the hands of politicians.

Please read the ballot question and you will see that the devil is in the details. See through the fear campaign and keep what Congress gave San Francisco more than 80 years ago.

Please join us in saying **NO to THE WATER GRAB.** Vote No on Prop A!

The Coalition for San Francisco Neighborhoods

San Francisco Taxpayers & Homeowners Association

San Francisco Hotel Council

The Residential Builders Association

The Coalition for Better Housing

The San Francisco Association of Realtors

San Francisco Apartment Association

Professional Property Management Association of San Francisco

Golden Gate Restaurant Association

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A Water Bonds

PAID ARGUMENTS IN FAVOR OF PROPOSITION A

SENIORS SUPPORT THE REPAIR AND RENEWAL OF OUR WATER SYSTEM! PAY NOW OR PAY MUCH MORE LATER. **VOTE YES ON PROP A.**

Margaret Griffin, Vice-President, SENIOR ACTION NETWORK
Denise D'Anne, Treasurer, SENIOR ACTION NETWORK

The true source of funds used for the printing fee of this argument is SENIOR ACTION NETWORK.

Hetch Hetchy is the largest source of high quality drinking water in California. It delivers water to all San Franciscans and several peninsula communities -- about 3 million people are served.

The Hetch Hetchy water system needs overhauling: new pipes that are seismically upgraded to meet modern safety standards; reinforcement of city reservoirs, such as in the Sunset, that provide water to 60% of San Francisco and serve as emergency supply; and modernized pump stations that move water throughout the city.

It would be foolhardy not to repair this system. Throughout California, there are communities searching for high quality drinking water. We have it and we must keep it.

I urge you to vote "Yes" on Proposition A.

Dianne Feinstein, U.S. Senator, former Mayor, former Supervisor

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

State Senator Jackie Speier says "it is not a question of ***if*** a major earthquake will strike the Bay Area. It is a question of ***when.***" I agree.

Hetch Hetchy's aging pipes cross three active earthquake faults: the Calaveras, the Hayward, and the San Andreas. A 7.0 earthquake could cut water to 2.4 million residents of the Bay Area for up to 60 days. Emergency crews would be unable to fight fires, and hospitals would be unable to function properly. This is a risk that we cannot afford to take.

Senator Speier and I speak with passion borne of a love of this great city when we implore you to help Save Hetch Hetchy for our generation and for generations to come.

History will judge us by our vote on November 5.

Please, vote yes on A.

Jane Morrison, Chair, San Francisco Democratic Party

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The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

Join the San Francisco Democratic Party in Voting YES on A.

Proposition A is a vital public safety priority for all San Franciscans. We must protect our water supply and preserve the Hetch Hetchy system.

A major earthquake will strike sooner, or later.

We must be ready.

Don't Delay. Vote YES ON A!

San Francisco Democratic Party

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The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

The San Francisco Chamber of Commerce Urges YES on A.

As representatives of the business community, we know that our economy will wither if we cannot protect our water supply. A major earthquake will knock out water to our city for months. That will create an immediate danger as we fight fires in the aftermath of an earthquake, and a long-term disaster as we try to rebuild our economy without water.

We have waited too long already. Now is the time for the entire city to unite behind Proposition A.

A. Lee Blitch, President and CEO, San Francisco Chamber of Commerce

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The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

The Harvey Milk Democratic Club Urges Yes on A.

Rebuilding Hetch Hetchy is a priority that must be shared by every San Francisco community. For our health, for our safety and for the economic security of our city - VOTE YES ON A.

Harvey Milk Democratic Club

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Water Bonds A

PAID ARGUMENTS IN FAVOR OF PROPOSITION A

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The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

It's a sound plan. Vote Yes on Prop A.

A Blue Ribbon Panel made up of experts in water supply, planning, finance and the environment met to independently evaluate the Prop A Capital Improvement Program.

We found the plan to be solid, well designed and achievable. We urge San Franciscans to support this long overdue measure.

Restoring the Hetch Hetchy water supply system is necessary to protect the public health and is good for all San Franciscans.

Please vote YES on A.

Jim Chappell, President, SPUR (San Francisco Planning & Urban Research Association), Blue Ribbon Panel Convener

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

The Hetch Hetchy system was an engineering marvel when it was constructed nearly 90 years ago. However, now it does not meet modern earthquake safety requirements. Many of the water system's pipelines and structures are at the end of their useful life and require replacement or rehabilitation before they fail.

Water from the dam in the Sierra Nevada flows across three major earthquake faults as it travels in pipelines over 167 miles to the City of San Francisco and the Bay Area. The risk of a significant earthquake is high. Furthermore, there are system components without redundancy. Standards and technology have improved dramatically since construction in 1914, and should be implemented to help protect this vital system and assure all City users of a constant water supply.

We mush rehabilitate and/or replace pipelines and structures as well as incorporate modern seismic safety standards to protect our water supply system.

Please join the American Society of Civil Engineers, San Francisco Section, in support of Proposition A.

Jennifer Webber

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

Vote Yes on Prop A.

The Hetch Hetchy water system is the pride of our city, but all agree that it is in need of repair.

We San Franciscans must demonstrate that we won't neglect one of our most precious possessions by protecting Hetch Hetchy from earthquakes and collapse. Proposition A will help preserve this vital system and keep it in the hands of San Francisco while maintaining our partnership with our suburban customers. The economic benefits that San Francisco enjoys will continue.

Proposition A should be a priority for everyone.

Please Vote Yes on Prop A.

Jim Lazarus, Former Deputy Mayor

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

Vote Yes on Prop A!

We work in San Francisco to keep your lights on, but we know it's just as important to have water come from the tap.

Please join us in supporting Proposition A it's about protecting a vital resource, it's about clean water, and it's about jobs.

Yes on A.

IBEW Local 1245

The true source of funds used for the printing fee of this argument is IBEW Local 1245.

Proposition A will allow San Francisco to produce recycled water for the first time. This can help recharge the Westside Basin Aquifer and reduce our dependence on the Hetch Hetchy reservoir.

Vote Yes on A!

San Francisco Tomorrow

The true source of funds used for the printing fee of this argument is San Francisco Tomorrow.

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A Water Bonds

PAID ARGUMENTS IN FAVOR OF PROPOSITION A

The Hetch Hetchy water system is San Francisco's life line. SPUR believes that Proposition A is a well researched, well-prepared investment in the long term future of our water system.

Improvements to the system will be paid for over time. Customers who live outside the city will pay their share up front. The plan puts the most important work first, in the interests of shoring up the system's ability to withstand earthquakes.

Because this is a revenue bond, it will be paid for out of customers' fees; it will not raise taxes.

Together with Proposition E, a companion measure that gives the Public Utilities Commission the tools it needs to get the job done on time and on budget, we can protect our water supply for the next century.

SPUR recommends a yes vote on Prop A.

For the full ballot analysis, see www.spur.org

SPUR

The true source of funds used for the printing fee of this argument is SPUR Urban Issues Committee.

The three largest contributors to the true source recipient committee are: 1. John Weeden 2. Frankie Lee 3. Vince Hoenigman.

Join me in voting Yes on Prop A.

The Hetch Hetchy water system is part of what makes San Francisco a unique place to live, but the system is aging and in need of repair.

Proposition A would direct our money to where it is needed to fix the rusting and decaying pipelines. These repairs will keep our water clean and make sure an earthquake will not leave us without water.

Now is the time to cast a vote that will keep San Francisco a one-of-a-kind city.

Please, vote yes on A.

Congresswoman Nancy Pelosi

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

San Franciscans Unite to Preserve Hetch Hetchy - Vote YES on A.

San Francisco has always been a city of great vision. Proposition A is our chance to renew that vision by preserving our water system.

Nearly 80 years ago, our city united to create the world-class Hetch Hetchy water system. Now, we must unite again to invest in system repairs and to ensure San Francisco's continued ownership of this vital utility.

Please join us in voting YES on A.

Senator John Burton
Assemblyman Kevin Shelley

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

Proposition A will ensure that we take the necessary steps to fix our water system. The repair of Hetch Hetchy will guarantee us clean water for years to come.

The rebuild will also create jobs and give people skills to continue in the industry after the Hetch Hetchy project is completed.

We must support Proposition A. The clean water and jobs are a win-win for all San Franciscans.

Please vote Yes on A.

Supervisor Sophie Maxwell

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The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

Help Keep San Francisco Safe - Vote Yes on A.

San Francisco didn't just fall down in 1906 - it burned down. One of the major reasons was lack of water in the aftermath of the earthquake.

Our Hetch Hetchy system is now more than 80 years old. Experts say it will not withstand a major quake. That is why we must unite and Vote Yes on A.

Sheriff Michael Hennessey

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

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Water Bonds A

PAID ARGUMENTS IN FAVOR OF PROPOSITION A

Proposition A is needed to protect one of the City's most valuable assets: Hetch Hetchy and our City's water supply. Failure to protect our water supply would place this City at great economic risk. Prop A will also make ecological improvements to our water system that is long overdue.

I ask all San Franciscans to join me in supporting Proposition A.

City Treasurer Susan Leal

The true source of funds used for the printing fee of this argument is Susan Leal.

Join District 11 Democrats and Vote Yes on Prop A.

Water is a precious resource that must be safeguarded, and fixing our our unique Hetch Hetchy water system will help do that.

Proposition A will allow San Francisco's entry into the use of recycled water - a much needed conservation measure.

Proposition A is a fair proposal.

Vote Yes on A.

District 11 Democrats

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

Organized Labor Supports Prop A.

Making prudent investment in vital infrastructure is the basis of a strong community.

Proposition A is a fair and balanced measure that creates jobs for working men and women and will allow us to upgrade our water system so it can withstand a major earthquake.

Please join us in voting Yes on Prop A.

Operating Engineers Local 3

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

The San Francisco Labor Council Urges Yes on Prop A.

Proposition A will create thousands of jobs and help preserve millions of dollars of city revenue we need to fund basic services. Organized labor urges all working people to join with us in supporting Proposition A.

Save Hetch Hetchy!

Robert Boileau, Vice President, San Francisco Labor Council

The true source of funds used for the printing fee of this argument is Save Hetch Hetchy Committee - Yes on A: A Business & Labor Coalition to Safeguard Our Water Supply.

The three largest contributors to the true source recipient committee are: 1. California Alliance for Jobs 2. Engineering and Utility Contractors Association 3. San Francisco Chamber of Commerce 21st Century Committee.

In life, until some unforeseen loss, we take for granted the commonplace - such as air, water, the social and physical infrastructure around us, and parenthetically, the municipal professionals who help support that network.

Our members kept Hetch Hetchy water flowing despite years of unconscionable deferred maintenance; Prop A provides the tools to repair and retrofit San Francisco's water-related infrastructure to safe, 21st Century standards.

Yes on Prop A.

Professional & Technical Engineers, Local 21 (IFPTE/AFL-CIO)
Howard Wong, A.I.A., President
Kathleen Price, P.E., San Francisco Vice President
Ron K. Dicks, Vice President, Legislative & Political Action

The true source of funds used for the printing fee of this argument is Professional & Technical Engineers, Local 21 (IFPTE/AFL-CIO).

12.3-62

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ATTACHMENT 4

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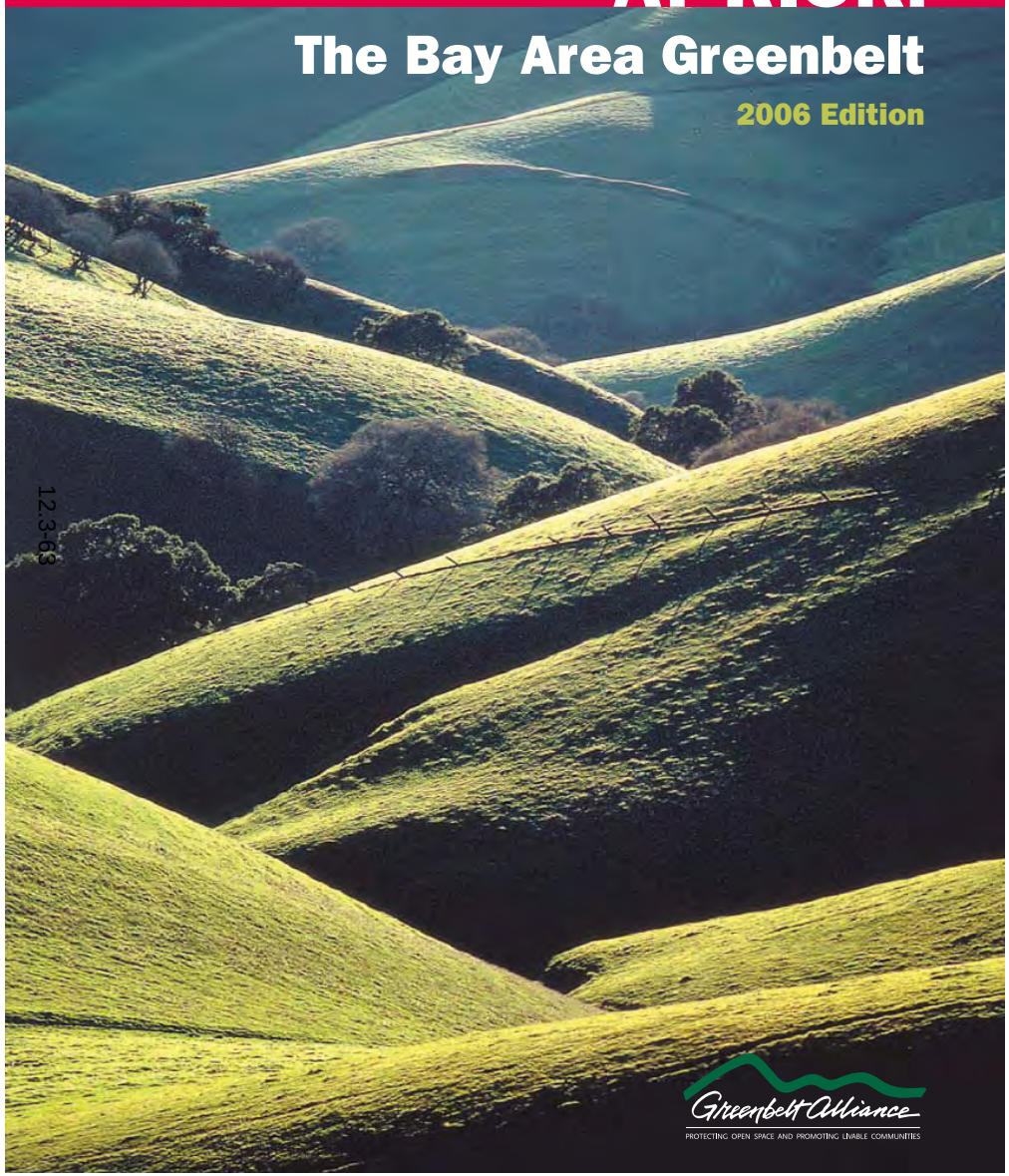
AT RISK:

The Bay Area Greenbelt

2006 Edition



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Greenbelt Alliance

PROTECTING OPEN SPACE AND PROMOTING LIVABLE COMMUNITIES

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Greenbelt Alliance would like to thank the many individuals around the Bay Area who helped to provide the information compiled in this report, as well as our generous supporters.

Funders:

The Bella Vista Foundation
The Richard and Rhoda Goldman Fund
The Gordon and Betty Moore Foundation
Resources Legacy Fund Foundation
The San Francisco Foundation
The Skoll Foundation
The members of Greenbelt Alliance

Greenbelt Alliance staff and consultants:

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Design
Karen Parry | Black Graphics

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Alameda County

County progress, Tri-Valley pressure

General Assessment

Alameda County has made significant progress in securing its greenbelt, but challenges remain. The 2000 elections in particular were a landmark in the county's land-use history, with voters passing crucial greenbelt protection measures. Going forward, more responsible city policies will be needed, as well as continued vigilance against developer-backed attempts to roll back growth limits.

Hot Spots

The east county cities of Livermore, Pleasanton, and Dublin remain the focus of land-use controversies in Alameda County. Virtually all of the county's 15,000 acres that remain at high risk are around these cities. The flat ranchlands north of Livermore remain a prime target of developers, despite an urban growth boundary protecting the area. Developer Pardee Homes placed an initiative on the 2005 ballot to allow 2,450 houses on 1,500 acres of the land, but failed thanks to the concerted efforts of local activists. Despite the progress made in recent years, the growth pressures in these Tri-Valley cities could still increase Alameda County's total urbanized area by more than 10% in just the next 10 years.

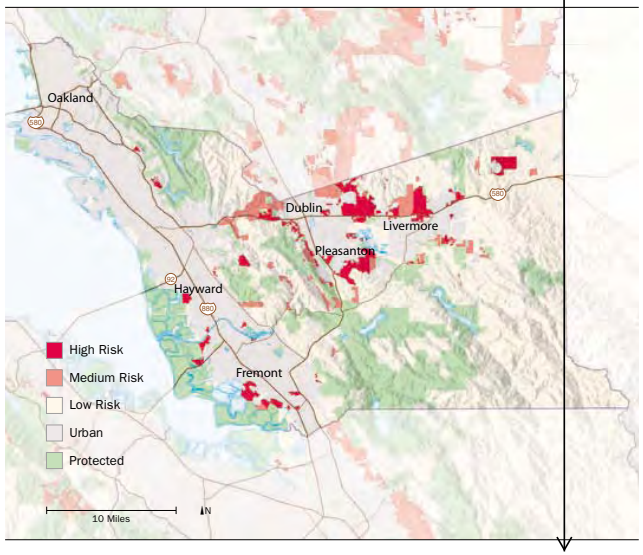
Bright Spots

The passage of Measure D by county voters in 2000 laid down a key cornerstone for long-term greenbelt protection in Alameda County. The measure established a county urban growth boundary, prohibited subdivision of ranchlands in the east county, and encouraged investment in existing urbanized areas, extending regulatory protection to as much as 150,000 acres of farm, ranch and habitat lands. In the same election, Dublin voters passed Measure M to protect 4,000 acres of hill country, and county voters overwhelmingly passed the transit-friendly transportation sales tax Measure B.

Progress continued in 2002, when Fremont also passed a hillside protection ordinance, and the Livermore City Council established the North Livermore Urban Growth Boundary, connecting to the existing South Livermore Urban Growth Boundary to complete the boundary around the city. In 2004, voters in the western parts of Alameda and Contra Costa County bolstered financial support for the western, more heavily used parts of the East Bay Regional Park District, by passing Measure CC in the 2004 elections.

	ACRES
High Risk	**15,000**
Medium Risk	**11,100**
Low Risk	203,000
Urban	144,000
Protected	104,700
Total	477,800

The County Board of Supervisors also has maintained its important policy of requiring large minimum lot sizes for rural parcels, helping to preserve the viability of remaining agricultural lands.



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San Mateo County

From greenbelt protection to smart infill

General Assessment

San Mateo County solidified its status as a leader in protecting greenbelt land over the last 5 years. With large public land holdings and active land protection activities by the Mid-Peninsula Regional Open Space District and the Peninsula Open Space Trust, San Mateo's total acreage of land at risk is relatively small, totaling 10,200 acres.

Hot Spots

As with Marin County, San Mateo's primary challenge lies in making its already urbanized areas more affordable and livable, so that it can continue to accommodate its share of future Bay Area growth and improve social equity. In general, a changing economic and political climate has contributed to a lessening of growth pressures around the coastal cities of Half Moon Bay and Pacifica, although much of the land around those cities remains at medium risk of development.

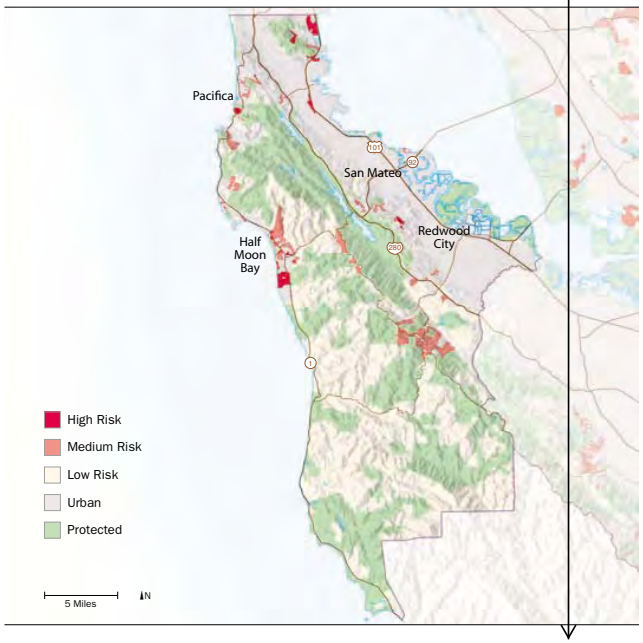
Bright Spots

The Mid-Peninsula Regional Open Space District won authorization to expand its jurisdiction all the way to the Pacific Coast in 2004, 6 years after voters recommended the change. This move complements the Peninsula Open Space Trust's "Saving the Endangered Coast" campaign, launched in 2001, which has protected more than 14,000 acres in western San Mateo County. A major effort to restore some of the Bay's lost wetlands by acquiring and restoring salt ponds has also protected baylands on the edge of Menlo Park.

In 2000, Mori Point, a coastal promontory above Pacifica that had been the focus of many development proposals, was permanently protected as part of the Golden Gate National Recreation Area.

Since 2000, four new BART stations in the county and the connection of BART to CalTrain at Millbrae have created valuable new opportunities for regional integration and smart growth in San Mateo County. In 2004, Measure A, a transit-friendly transportation sales tax, won voter approval, further enhancing San Mateo County's infill potential. In 2005, the City of San Mateo approved a good example of transit-oriented development, Bay Meadows Phase II, which would replace the aging Bay Meadows racetrack with a new neighborhood next to a CalTrain station. The "Grand Boulevard" effort to revitalize El Camino Real will also help accommodate new growth and better use urbanized land in both San Mateo and Santa Clara County.

	ACRES
High Risk	**2,000**
Medium Risk	**8,200**
Low Risk	100,400
Urban	71,100
Protected	107,800
Total	289,500



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Santa Clara County

A sprawling past and changing future

General Assessment

Today, Santa Clara County faces crucial decisions about its future. The proposal to develop housing for up to 80,000 people in Coyote Valley in southeast San Jose, and ongoing sprawl pressure in Morgan Hill and Gilroy, mean that planning actions made in south Santa Clara in the next few years will shape the county for decades to come.

Hot Spots

Ever since the City of San Jose began its latest round of planning for the development of Coyote Valley in 1999, it has been one of the largest development hot spots in the Bay Area. The City's goal is the creation of 25,000 homes and 50,000 jobs on 6,800 acres of land—essentially the creation of an entire new town. Unfortunately, the City's plans for the valley thus far have not lived up to its stated smart growth goals.

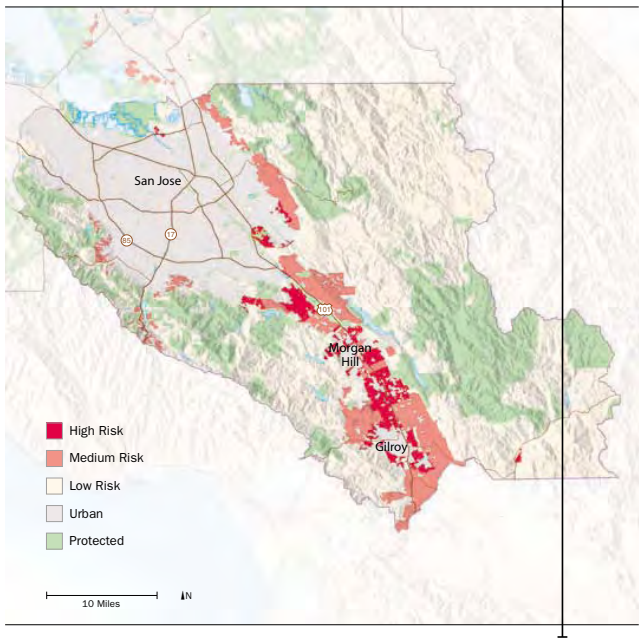
The far southern end of the county also remains a key hot spot, as Morgan Hill and Gilroy grapple with sprawl pressures both from Silicon Valley and the south. Morgan Hill began studying an expansion of its urban growth boundary in 2003; 1,250 acres of farmland outside the boundary are now at risk. Likewise, the Gilroy City Council voted in 2002 to allow development on 660 previously protected acres of the Santa Clara County Agricultural Preserve. In 2005, Gilroy passed up an opportunity to join the county's open space district. South of Gilroy, Sargent Ranch, 6,500 acres of farmland and wildlife habitat, remains under threat in spite of the defeat in 2001 of a major development proposal.

Bright Spots

With these threats, there have also been some important improvements in the county. In 2000, San Jose residents voted to strengthen the City Council's urban growth boundary, protecting more than 20,000 acres. In 2001, the City Council passed 15 general plan amendments encouraging infill and affordable housing, and the City now has large-scale plans to redevelop the industrial North First Street area and add thousands of new homes to the downtown. In 2002, county property owners voted to provide $80 million over 10 years to fund the Santa Clara County Open Space Authority.

	ACRES
High Risk	21,300
Medium Risk	54,000
Low Risk	377,600
Urban	185,100
Protected	201,800
Total	839,800

In 2006, Santa Clara County voters will decide on an initiative to prevent sprawl development and parcelization on rural county land.



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ATTACHMENT 5