

15.4 Groups

GROUPS

GROUPS THAT SUBMITTED COMMENTS ON THE DRAFT PEIR

Comment Letter Format	Comment Letter ID	Name of Commenter	Title	Organization/ Affiliation	Page
Email	SI_ACA1	Jeff Miller	Director	Alameda Creek Alliance	15.4-1
PH Fremont	SI_ACA2	Jeff Miller	Director	Alameda Creek Alliance	15.4-19
Email	SI_ACT	David T. Smernoff, Ph.D.	Board Vice President	Acterra: Action for a Sustainable Earth	15.4-20
Email	SI_CAC1	Steve Lawrence	Vice Chair	Citizens Advisory Committee to the SFPUC	15.4-22
Email	SI_CAC2	Steve Lawrence	Vice Chair	Citizens Advisory Committee to the SFPUC	15.4-25
Mail	SI_Caltrout	Brian Stranko	Chief Executive Officer	California Trout	15.4-29
Email	SI_CAREP	Buddy Burke / Virginia Chang Kiraly	CA REP President & CA REP Vice President	Republicans for Environmental Protection, Protection Commissioner, California Commission for Economic Development	15.4-31
PH Palo Alto	SI_CI	Katherine Forrest	Member	Commonwealth Institute	15.4-33
Mail	SI_CNPS	Amanda Jorgenson	Executive Director	California Native Plant Society	15.4-34
Email	SI_CNPS-EB1	Laura Baker	Conservation Committee Chair	California Native Plant Society, East Bay Chapter	15.4-35
PH Fremont	SI_CNPS-EB2	Lech Naumovich		California Native Plant Society, East Bay Chapter	15.4-55
Email	SI_CNPS-SCV1	Kevin Bryant	President, Santa Clara Valley Chapter	California Native Plant Society, Santa Clara Valley Chapter	15.4-54
Mail	SI_CNPS-SCV2	Libby Lucas	Conservation	California Native Plant Society, Santa Clara Valley Chapter	15.4-61

GROUPS THAT SUBMITTED COMMENTS ON THE DRAFT PEIR (Continued)

Comment Letter Format	Comment Letter ID	Name of Commenter	Title	Organization/ Affiliation	Page
Email	SI_CNPS-WLJ	Tedmund Swiecki	Conservation Committee Co-Chair	California Native Plant Society, Willis Jepson Chapter	15.4-67
Email	SI_CRS	Meredith Wingate / Brad Drda	Director Clean Energy Policy Design and Implementation Program	Center for Resource Solutions	15.4-68
Email	SI_CSERC	Brenda Whited	Staff Biology	Central Sierra Environmental Resource Center	15.4-70
Email	SI_CWA1	Jennifer Clary	Water Policy Analyst	Clean Water Action	15.4-71
PH SF1	SI_CWA2	Jennifer Clary	Water Policy Analyst	Clean Water Action	15.4-72
Mail	SI_D3Dem1	Tony Gantner	President	District 3 Democratic Club	15.4-73
PH SF1	SI_D3Dem2	Tony Gantner	President	District 3 Democratic Club	15.4-74
Mail	SI_EcoCtr	Martin Bourque	Executive Director	Ecology Center	15.4-75
Email	SI_EnvDef	Spreck Rosekrans	Senior Analyst	Environmental Defense	15.4-76
Mail	SI_Greenp	Krikor Didonian		Greenpeace	15.4-80
Email	SI_GWWF1	Cindy Charles	Conservation Chair	Golden West Women Flyfishers	15.4-81
PH SF1	SI_GWWF2	Cindy Charles	Chairperson	Golden West Women Flyfishers	15.4-82
Email	SI_KSWC	Joseph Vaile	Campaign Director	Klamath-Siskiyou Wildlands Center	15.4-83
Mail	SI_MenloBP	J. Wesley Skow	Attorney	Menlo Business Park LLC (on behalf of by DLA Piper US LLP)	15.4-84
Email	SI_NCFFSC	Dougald Scott	Chair	NCCFFF Steelhead Committee	15.4-87
Email	SI_PacInst	Peter Gleick	President	Pacific Institute	15.4-90
Email	SI_PilarCrk	Tim Frahm	Chair	Pilarcitos Creek Advisory Committee	15.4-118
Email	SI_RHH1	Jerry Cadagan	Board Member/Founder	Restore Hetch Hetchy; Committee to Save Lake Merced	15.4-120

GROUPS THAT SUBMITTED COMMENTS ON THE DRAFT PEIR (Continued)

Comment Letter Format	Comment Letter ID	Name of Commenter	Title	Organization/ Affiliation	Page
Hand-delivered, PH	SI_RHH2	Bob Hackamack	Tech/Engineering Chair	Restore Hetch Hetchy	15.4-123
PH Sonora	SI_RHH3	Bob Hackamack	Tech/Engineering Chair	Restore Hetch Hetchy	15.4-126
PH Sonora	SI_RHH4	Jerry Cadagan	Board Member/Founder	Restore Hetch Hetchy; Committee to Save Lake Merced	15.4-127
Email	SI_SCCCC	Mondy Lariz		Santa Clara County Creeks Coalition	15.4-128
PH SF1	SI_SFNeigh	Joan Girardot		Coalition for San Francisco Neighborhoods	15.4-129
Mail	SI_SierraC1	Blaine Rogers		Sierra Club, Tuolumne Group	15.4-131
PH Modesto	SI_SierraC2	Sandra Wilson	Chair	Sierra Club	15.4-132
PH Palo Alto	SI_SierraC3	Bill Young	Member	Sierra Club	15.4-133
PH Palo Alto	SI_SierraC4	Richard Zimmerman	Member	Sierra Club	15.4-135
PH SF1	SI_SierraC5	Gwynn MacKellen	Member	Sierra Club	15.4-137
PH SF1	SI_SierraC6	John Rizzo	Executive Committee Member	Sierra Club, San Francisco Bay Chapter	15.4-138
PH SF2	SI_SierraC7	John Rizzo	Executive Committee Member	Sierra Club, San Francisco Bay Chapter	15.4-139
Mail	SI_SPUR	Laura Tam	Sustainable Development Policy Director	San Francisco Planning and Urban Research Association	15.4-142
Mail	SI_SWC	Terry Erlewine	General Manager	State Water Contractors	15.4-145
PH Sonora	SI_TCFB	Stan Kellogg	President	Tuolumne County Farm Bureau	15.4-146
Email	SI_TROA	Stephen Welch	President	Tuolumne River Outfitters Association	15.4-147
Email	SI_TRT1	Amy Meyer	Founding Member	Tuolumne River Trust	15.4-148
PH Sonora	SI_TRT2	Cynthia King	Sierra Nevada Program Director	Tuolumne River Trust	15.4-149
PH Sonora	SI_TRT3	Galen Weston	Part-time Employee	Tuolumne River Trust	15.4-150

GROUPS THAT SUBMITTED COMMENTS ON THE DRAFT PEIR (Continued)

Comment Letter Format	Comment Letter ID	Name of Commenter	Title	Organization/ Affiliation	Page
PH Modesto	SI_TRT4	Meg Gonzalez	Director of Community Outreach and Education	Tuolumne River Trust	15.4-152
PH Modesto	SI_TRT5	Patrick Koepele	Central Valley Program Director	Tuolumne River Trust	15.4-153
PH Modesto	SI_TRT6	Eric Wesselman	Executive Director	Tuolumne River Trust	15.4-155
PH Fremont	SI_TRT7	Eric Wesselman	Executive Director	Tuolumne River Trust	15.4-156
PH Palo Alto	SI_TRT8	Peter Drekmeier	Bay Area Program Director	Tuolumne River Trust	15.4-159
PH SF1	SI_TRT9	Eric Wesselman	Executive Director	Tuolumne River Trust	15.4-161
PH SF2	SI_TRT10	Peter Drekmeier	Bay Area Program Director	Tuolumne River Trust	15.4-163
Mail	SI_TRT-CWA-SierraC	Peter Drekmeier, Jennifer Clary, John Rizzo		Tuolumne River Trust, Clean Water Action, Sierra Club	15.4-165

Alameda Creek Alliance, Jeff Miller, Director, 10/01/07

SI_ACA1-01 This comment states that the Draft PEIR fails to address impacts on anadromous fish in Alameda Creek. This comment also states that the Draft PEIR's mitigation measures for special-status species are inadequate and jeopardize the SFPUC's schedule for implementation of the WSIP facility improvement projects. Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14) for an expanded discussion of existing fishery resources in Alameda Creek, potential WSIP impacts on steelhead in lower Alameda Creek below the Bay Area Rapid Transit District (BART) weir, and potential WSIP impacts under a future scenario in which steelhead have been restored to the reaches of Alameda Creek above the BART weir. Section 14.9 also includes a discussion of new protective measures that have been incorporated into the WSIP program description for the Calaveras Dam Replacement (SV-2) and the Alameda Creek Fishery Enhancement (SV-1) projects to address future-occurring steelhead in Alameda Creek above the BART weir, and text revisions to Mitigation Measure 5.4.5-3a (Vol. 3, Chapter 6, p. 6-52 and 6-53) that further define the fishery protection measures addressed in the PEIR.

SI_ACA1-02 Under the WSIP (through implementation of the Calaveras Dam Replacement project, SV-2), the SFPUC would reestablish historical diversions from upper Alameda Creek to Calaveras Reservoir such that diversions would be similar to those occurring prior to the 2001 Division of Safety of Dams (DSOD) restriction on Calaveras Reservoir. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.4.5 and 5.4.6) describes potential impacts on fisheries and other biological resources due to the proposed changes in system operations. Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Sections 14.9.3 and 14.9.4) for discussions addressing the commenter's concerns that implementation of the Calaveras Dam Replacement (SV-2) and the Alameda Creek Fishery Enhancement (SV-1) projects would divert additional stream flow from Alameda Creek and adversely affect native fish and other aquatic wildlife.

The commenter states that the SFPUC already diverts 86 percent of the stream flows tributary to the Sunol Valley from Alameda, Calaveras, and San Antonio Creeks. This statement is not derived from information contained in the Draft PEIR. Information on the current percentage of stream flow diverted by the SFPUC is not necessary for the impact analysis in the PEIR. Please refer to Draft PEIR, Vol. 3, Chapter 5, Section 5.4.1 for information used in the PEIR to analyze stream flows in the Alameda Creek watershed.

SI_ACA1-03 This comment states that the SFPUC's current operation of Calaveras and San Antonio Reservoirs does not include minimum bypass flows to keep native fish downstream in good condition. The commenter also questions the SFPUC's

legal water right to divert Alameda Creek stream flow at the diversion dam. The SFPUC's existing water rights and entitlements for the Alameda watershed water supplies are described in the Draft PEIR (Vol. 1, Chapter 2, pp. 2-35 to 2-37). The SFPUC is currently operating Calaveras and San Antonio Reservoirs in compliance with applicable regulations and institutional considerations, which are described in the Draft PEIR (Vol. 1, Chapter 2, Sections 2.4 and 2.5, respectively). In addition, the existing and proposed diversion of water from the Alameda Creek watershed is consistent with the City and County of San Francisco's (CCSF) water rights (Vol. 1, Chapter 2, Section 2.5.1).

Implementation of the WSIP would result in increased diversions from Alameda Creek compared to the existing condition, but the proposed level of diversions would be similar to the historical level of diversions that occurred for about 70 years prior to the 2001 DSOD restriction on Calaveras Dam. Under the WSIP, the SFPUC would continue to operate the regional water system in compliance with applicable regulations.

Impact 5.4.5-3 in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.4.5-18 to 5.4.5-20) analyzes effects on fishery resources along Alameda Creek downstream of the Alameda Creek Diversion Dam. Mitigation Measure 5.4.5-3a in the Draft PEIR (Vol. 4, Chapter 6, pp. 6-52 and 6-53) outlines minimum flows in Alameda Creek for maintaining habitat suitable for resident trout downstream of the diversion dam. **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4) discusses in detail the impact of the WSIP on habitat and fishery resources in Alameda Creek, including impacts on potential future-occurring steelhead, and describes minimum bypass flows (included as part of the Calaveras Dam Replacement project description) for protecting future-occurring steelhead. Please refer to **Response S_CDFG2-11** for additional information related to the future operation of Calaveras Dam and Reservoir under the WSIP; refer to **Response S_CDFG2-14** for additional information on Draft PEIR Measure 5.4.5-3b.

- SI_ACA1-04 Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4) for discussion of minimum flows for anadromous fish.
- SI_ACA1-05 Please refer to **Section 13.2, Program Description Changes Affecting System Operations** (Vol. 7, Chapter 13) and to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Sections 14.9.4 and 14.9.5) for discussion of protective measures for steelhead in Alameda Creek.
- SI_ACA1-06 This comment regarding the Alameda Creek Alliance's efforts to communicate its concerns and suggestions to the SFPUC regarding projects in the Sunol Valley is acknowledged.

SI_ACA1-07 As described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.2-24 and 5.2-25), the SFPUC's adopted Water Enterprise Environmental Stewardship Policy establishes a long-term management direction for CCSF-owned lands and natural resources affected by operation of the SFPUC regional water system, including lands within the Alameda Creek watershed. In addition, the WSIP's goals and objectives shown in Table 3.2 of the Draft PEIR (Vol. 1, Chapter 3, p. 3-9) include a system performance objective to "manage natural resources and physical systems to protect watershed ecosystems."

The Draft PEIR addresses impacts on biological resources, including special-status species and rare habitats, and mitigations for significant impacts in the following sections: Vol. 2—Section 4.5, Section 4.16 (pp. 4.16-16 to 4.16-19), and Section 4.17 (pp. 4.17-51 and 4.17-52); Vol. 3—Sections 5.3.6, 5.3.7, 5.4.5, 5.4.6, 5.5.5, 5.5.6, and 5.7 (pp. 5.7-31, 5.7-32, 5.7-41, 5.7-42, 5.7-63, 5.7-64, 5.7-77, 5.7-81, 5.7-82); Vol. 4—Sections 6.3.5, 6.4.2, 6.4.3, and 6.4.4; and Vol. 5—Appendix D.

SI_ACA1-08 Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Sections 14.9.4 and 14.9.5) for discussion of steelhead and other fish species in Alameda Creek.

SI_ACA1-09 Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.5) for discussion Chinook salmon, coho salmon, Pacific lamprey, and other fish species in Alameda Creek.

SI_ACA1-10 Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.5). The comment stating that there is historical evidence of steelhead trout in Arroyo de la Laguna, Arroyo Mocho, and Arroyo Valle is acknowledged. The existing setting related to fisheries in Arroyo de la Laguna, Arroyo Mocho, and Arroyo Valle, including a description of the historical setting, is discussed in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.4.5-2 and 5.4.5-3).

SI_ACA1-11 The regulatory status, life history, and distinctions between resident and migratory populations of steelhead and rainbow trout, as well as flows needed to support populations of these fish, are discussed in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.4.5-4 to 5.4.5-11). Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.2) for additional discussion of the regulatory status of steelhead and rainbow trout. The information provided by the commenter regarding background studies leading to the designation of steelhead as a federally listed threatened species is acknowledged.

SI_ACA1-12 The commenter's assertion that SFPUC currently operates Calaveras and San Antonio Reservoirs in violation of California Fish and Game Code is noted. California Fish and Game Codes relevant to the WSIP are discussed in **Response SI-TRT-CWA-SierraC-84**; please refer to that response for details. Whether or not the SFPUC is currently operating the regional water system in compliance with the California Fish and Game Code, including Section 5937, is not a CEQA issue. As described in the Draft PEIR (Vol. 1, Chapter 2, p. 2-41), Calaveras Dam and Reservoir is the only SFPUC facility in the Alameda Creek watershed operating under an agreement to make releases in support of fisheries, although due to the current DSOD restrictions on Calaveras Dam, the CDFG has agreed that implementation of the flow releases can be suspended until the Calaveras Dam Replacement project is completed. Operation of Turner Dam on San Antonio Reservoir is not currently subject to a release agreement to support fisheries.

The commenter states that the current operations and implementation of the WSIP, specifically the operation of the Alameda Creek Diversion Dam (ACDD), would violate California Fish and Game Code Sections 5901 and 5937. As described in Section 13.2 of this Comments and Responses document (Vol. 7, Chapter 13), the SFPUC has modified the project description of the Calaveras Dam Replacement project (SV-2) to include construction of a new bypass structure at the diversion dam and protective measures for fishery resources, including releases at the ACDD consistent with flows required under the 1997 CDFG MOU. The proposed modifications and protective measures included in the Calaveras Dam Replacement project are designed to minimize impacts on potential future-occurring steelhead in the upper Alameda Creek watershed in the event that man-made barriers in Alameda Creek are successfully removed and steelhead migration, spawning, and rearing have been restored in Alameda Creek above the BART weir. In addition, the Draft PEIR has identified Measure 5.4.5-3a, Minimum Flows for Resident Trout in Alameda Creek, to reduce potential impacts of the WSIP on fisheries.

For a discussion of WSIP impacts on potential future-occurring steelhead in Alameda Creek and a description of protective flow measures included as part of the WSIP program description (part of Calaveras Dam Replacement and Alameda Creek Fishery Enhancement projects) to minimize impacts on steelhead life stages and habitat requirements, including minimum bypass flows and releases at the Alameda Creek Diversion and Calaveras Dams, please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4). Additionally, refer to **Response SI_ACA1-03**, above, as well as **Responses S_CDFG2-11** and **S_CDFG2-14** for further discussion of minimum bypass flows for resident fish.

The San Francisco Planning Department received comments from the CDFG on the PEIR Notice of Preparation (NOP) in a letter dated January 19, 2007. The CDFG letter dated November 22, 2005 referred to by the commenter was in regard to the NOP for the Calaveras Dam Replacement project (SV-2). The information quoted from the CDFG letter regarding flows for anadromous steelhead and use of storage facilities to meet minimum bypass flows is noted.

Implementation of the WSIP would result in increased diversions from Alameda Creek compared to the existing condition, but the proposed level of diversions would be similar to the historical level of diversions that occurred for about 70 years prior to the 2001 DSOD restriction on Calaveras Dam. The Draft PEIR (Vol. 3, Section 5.4.5) addresses impacts on fisheries in the Alameda Creek watershed that would result from the WSIP. Draft PEIR Impact 5.4.5-3 (Vol. 3, Chapter 5, pp. 5.4.5-18 to 5.4.5-20) analyzes effects on fishery resources along Alameda Creek downstream of the ACDD. Impacts on fishery resources below Calaveras Dam and Turner (San Antonio) Dam are discussed in Impacts 5.4.5-2 and 5.4.5-5 (Vol. 3, Chapter 5, pp. 5.4.5-17 and 5.4.5-21), respectively. The Draft PEIR concluded that impacts on fishery resources below Calaveras Dam would be beneficial due to the instream flow releases that would be implemented as part of the WSIP, and that impacts on fishery resources below San Antonio Reservoir would be less than significant because the seasonal patterns of instream flow releases to San Antonio Creek would be similar under the existing condition and with the WSIP. The fact that Calaveras and Turner Dams currently act as a complete barrier to fish migration would be unchanged under the WSIP and are, therefore, not subject to review under CEQA.

- SI_ACA1-13 The description and implementation status of the 1997 CDFG MOU provided by the commenter corroborates the information presented in the Draft PEIR (Vol. 1, Chapter 2, p. 2-41 and Vol. 3, Chapter 5, p. 5.4.1-9). The commenter also provides an interpretation of the DSOD restrictions on Calaveras Dam and discusses the SFPUC fishery release flows from Calaveras Reservoir; those comments confuse regional water system firm yield and Calaveras yield (a subset of the regional water system), and a correction is provided here. Currently, due to the DSOD operating restrictions on Calaveras Dam, the system firm yield of the regional water system was reduced to 219 million gallons per day (mgd), a 7 mgd reduction from the normal system firm yield (i.e., prior to the 2001 DSOD restrictions) of 226 mgd (not 223 mgd as stated by the commenter). The DSOD restrictions reduced the total storage capacity of Calaveras Reservoir by about 60 percent, and the total working storage capacity of the SFPUC's local reservoirs by over 30 percent (see Draft PEIR, Vol. 1, Chapter 2, p. 2-10). Although the SFPUC is currently not releasing water from Calaveras Reservoir to meet the requirements of the 1997 CDFG MOU, the SFPUC reduced diversions from Alameda Creek above the diversion dam when the DSOD imposed the restrictions on Calaveras Dam in 2001, thereby increasing natural flow in Alameda

Creek downstream of the diversion dam. The Draft PEIR provides a detailed discussion of flows below the Alameda Creek Diversion and Calaveras Dams following the DSOD restrictions (Vol. 3, Chapter 5.4, pp. 5.4.1-9 to 5.4.1-13).

The commenter states that the resident trout population below Calaveras Dam is not in good condition, and that the Draft PEIR fails to adequately discuss minimum flows for anadromous steelhead and resident trout life stages and habitat requirements. **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4) provides a detailed discussion of minimum bypass flows to protect fishery resources on Alameda Creek. The information provided by the commenter from the CDFG letter dated November 22, 2005 was in regard to the NOP for the Calaveras Dam Replacement project (not the WSIP PEIR); please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4) for discussion of the issues identified by the CDFG in this letter. For further information related to the CDFG review of WSIP impacts on Alameda Creek fishery resources, please refer to **Responses S_CDFG2-01 and S_CDFG2-11 to S_CDFG2-15**.

- SI_ACA1-14 Under the WSIP, the SFPUC does not propose to increase diversions in excess of the water rights the CCSF now holds in the Alameda Creek watershed, and, consequently, the CCSF does not require new water rights from the State Water Resources Control Board. The diversion of water in and from the Alameda Creek watershed is consistent with the CCSF's water rights. The CCSF holds a water right to divert from Alameda Creek into Calaveras Reservoir along with the rights it holds to divert and store water in Calaveras Reservoir from Arroyo Hondo and Calaveras Creek (see Vol. 1, Chapter 2, Section 2.5.1).

The comment regarding the State Water Resources Control Board's estimate of impairment in the Alameda Creek watershed is acknowledged. This statement is not derived from information contained in the Draft PEIR, and this information on the current percentage of impairment in Alameda Creek is not necessary for the impact analysis in the PEIR. Please refer to Draft PEIR, Vol. 3, Chapter 5, Section 5.4.1 for information used in the PEIR to analyze stream flows in the Alameda Creek watershed. The comment stating that the Department of Water Resources considers the Alameda Creek watershed "fully appropriated" is also acknowledged.

- SI_ACA1-15 The Raker Act does not require San Francisco to develop and use local water sources before it can divert out of the Tuolumne River watershed. Rather, the Raker Act restricts San Francisco's use of Tuolumne River water in the Bay Area to municipal and domestic purposes only. Under the WSIP, the SFPUC would continue to maximize its use of local resources and develop those local resource projects and programs that are feasible, reasonable, and cost-effective consistent with responsible stewardship of Tuolumne River resources.

As stated in the Draft PEIR, the CCSF must adhere to the Raker Act (Vol. 1, Chapter 2, pp. 2-33 and 2-34). The WSIP is consistent with Raker Act requirements, including Section 9(h), with respect to the export of additional water from the Tuolumne River watershed, since the additional diversions under the WSIP would be for municipal and domestic purposes. Also refer to **Responses L_TUD1-05 and L_MID-TID-09**.

Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for a discussion of conservation and water recycling in San Francisco.

SI_ACA1-16 Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4) with regard to the effects of the WSIP on steelhead and SFPUC plans to consult with the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service, and CDFG for compliance with the Federal and California Endangered Species Acts.

The commenter correctly quotes the Draft PEIR regulatory status description relevant to steelhead (Vol. 3, Chapter 5, pp. 5.4.5-4 and 5.4.5-11); this description remains valid, although updated information on the SFPUC's proposed protective measures for steelhead is provided in **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14). The opinion of the commenter that steelhead trout could have access to Alameda Creek stream reaches affected by the SFPUC dams by 2010 is acknowledged, and Section 14.9 also addresses this potential future scenario.

With regard to the comment regarding consultation with federal wildlife agencies on listed species, the subsequent environmental review of individual WSIP project will include consultation with resource agencies as determined appropriate based on the project-level, site specific analysis. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14).

The Draft PEIR (Vol. 2, Chapter 4, pp. 4.6-33 to 4.6-37) describes habitat conservation plans for species listed as threatened or endangered under the Federal and California Endangered Species Acts that could potentially be affected by the WSIP. These include the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, the Draft Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan, the SFPUC Alameda and Peninsula Watershed Habitat Conservation Plans, and the San Joaquin River National Wildlife Refuge Comprehensive Conservation Plan. Impact 4.6-5 (Vol. 2, Chapter 4, pp. 4.6-73 and 4.6-74) describes the potential for conflict with the provisions of applicable plans; it was concluded that impacts from the WSIP

projects would be less than significant or could be reduced to a less-than-significant level through the implementation of identified mitigation measures.

SI_ACA1-17 The commenter correctly states that one of the goals of the WSIP is to enhance sustainability in all system activities (Draft PEIR, Table 3.2, Vol. 1, Chapter 3, p. 3-9). The commenter’s description of the SFPUC Water Enterprise Environmental Stewardship Policy corroborates the description presented in the Draft PEIR (Vol. 3, Chapter 5, p. 5.2-25). It should be noted that this policy is subsidiary to the overall mission of the SFPUC, which, as described in the Draft PEIR (Vol. 1, Chapter 3, p. 3-5), is “to serve San Francisco and its Bay Area customers with reliable, high-quality and affordable water, while maximizing benefits from power operations and responsibly managing the resources entrusted to its care.” The consistency of the WSIP with the stewardship policy is described in the Draft PEIR (Vol. 3, Chapter 5, p. 5.2-29).

In response to this comment, Table 2.3 (Vol. 1, Chapter 2, p. 2-45) is revised to include the Water Enterprise Environmental Stewardship Policy as the last row in the table:

TABLE 2.3
SFPUC WATER RESOURCES POLICIES RELATED TO THE WSIP

Date	Resolution Number	Description
June 2006	06-0105	<p><u>Water Enterprise Environmental Stewardship Policy</u></p> <p>The Environmental Stewardship Policy will be integrated into SFPUC Water Enterprise planning and decision-making processes and also directly implemented through a number of efforts, including:</p> <ul style="list-style-type: none"> • <u>Implementation and updating of the existing Alameda and Peninsula Watershed Management Plans</u> • <u>Development of Habitat Conservation Plans for the Alameda and Peninsula Watersheds</u> • <u>Development and implementation of the Watershed and Environmental Improvement Program, which will cover the Tuolumne River, Alameda Creek, and Peninsula watersheds</u> • <u>Development of the Lake Merced Watershed Plan</u> • <u>Active participation in local forums, including coordination with Yosemite National Park Service and Stanislaus National Forest in the Tuolumne River watershed, the Tuolumne River Technical Advisory Committee, the Alameda Creek Fisheries Restoration Workgroup, the Pilarcitos Creek Restoration Workgroup, and the Lake Merced Task Force</u> • <u>Integration of the policy into the WSIP and individual infrastructure projects (i.e., repair and replacement programs)</u> • <u>Reliance on the policy to guide the development of project descriptions, alternatives and mitigation for all SFPUC projects during the environmental review process under CEQA and/or NEPA</u> • <u>Providing support for and encouragement to all employees to integrate environmental stewardship into daily operations through communication and training</u>

SI_ACA1-18 The commenter makes reference to several cited technical reports (Vol. 3, Chapter 5, pp. 5.4.6-6 and 5.4.6-11), which are part of the administrative record for the PEIR, and therefore are available to the public on request from the San Francisco Planning Department. It should be noted, however, that CEQA does not require that an agency perform all research or study recommended by commenters, as long as a good faith effort at full disclosure is made in the EIR (CEQA Guidelines Section 15204[a]).

The commenter states that the Draft PEIR omits consideration of impacts on several special-status species. For a discussion of the issues raised by this comment, please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4). This master response describes the appropriate level of detail of a biological resources impact analysis at the program level versus the project level. As discussed in Draft PEIR Section 5.4.6, WSIP water supply and system operations in the Alameda watershed would not affect species dependent on upland habitats, such as the Callippe silverspot butterfly, San Joaquin kit fox, or Berkeley kangaroo rat. Impacts on upland-dependent special-status species as a result of WSIP projects, such as construction of the Calaveras Dam Replacement project (SV-2), are analyzed at a program level in the PEIR and will be analyzed in more detail in project-specific CEQA documents. Responses to species-specific comments are provided below.

Bay checkerspot butterfly and San Joaquin kit fox. At the programmatic level and using the best available data, the Draft PEIR analysis determined that Bay checkerspot butterfly and San Joaquin kit fox are not present in the Sunol Valley Region (Vol. 2, Chapter 4, pp. 4.6-18 and 4.6-22). However, the project-specific EIRs prepared for the individual WSIP projects will not be constrained by the species occurrence data presented in the PEIR, and must reevaluate all species identified in the PEIR as potentially affected by program elements. If new or additional data are available at the time the project-specific EIRs are prepared, or if the legal or identified status of species changes in the interim, potential impacts would be evaluated at that time and appropriate mitigations would be identified. If the determination is made that impacts on these species could occur, the standard mitigation measures presented in the Draft PEIR (Vol. 4, Chapter 6, Tables 6.1 and 6.2, pp. 6-14 through 6-20) would apply to Bay checkerspot butterfly (Measure I.3) and San Joaquin kit fox (Measure M.2). In addition, standard construction measures to reduce project footprints as well as construction monitoring would minimize potential impacts on all special-status species.

Berkeley kangaroo rat. The commenter notes that impacts on Berkeley kangaroo rat are not analyzed in the Draft PEIR. Please refer to the Draft PEIR discussion of the programmatic impact methodology (Vol. 2, Chapter 4, p. 4.6-1). The PEIR focuses on those special-status species and key sensitive habitats that are

formally listed or designated under the California and Federal Endangered Species Acts, as these species/habitats are considered to have the highest degree of ecological sensitivity and legal protection. Berkeley kangaroo rat has no formal status with either the CDFG or USFWS. Separate, project-level CEQA review will be conducted as appropriate for the WSIP projects; this review will describe project impacts on the full range of biological resources more precisely and, where necessary, tailor the mitigation measures presented in the PEIR. As noted above, no upland-dependent special-status species were found to be affected by WSIP operations.

Calaveras Reservoir Species. Although the commenter states that potential impacts on California red-legged frog, California tiger salamander, and Alameda whipsnake are not analyzed, Table 4.6-3 in the Draft PEIR (Vol. 2, Chapter 4, p. 4.6-41) and Table 5.4.6-3 (Vol. 3, Chapter 5, p. 5.4.6-8) list each of these species as present in program area, including Calaveras Reservoir, and the programmatic impact assessment for the Calaveras Dam Replacement project (SV-2) identifies impacts on these species as potentially significant (Vol. 2, Chapter 4, p. 4.6-63). Table 6.1 in the Draft PEIR (Vol. 4, Chapter 6, p. 6-14) identifies programmatic mitigation measures for these species that would apply to the Calaveras Dam Replacement project and other projects in the Sunol Valley Region.

SI_ACA1-19 The opinion of the commenter regarding the WSIP's effects on stream flow below the ACDD (Impact 5.4.1-2, Vol. 3, Chapter 5, p. 5.4.1-25) is noted. The PEIR concludes that this impact would be significant and unavoidable because the WSIP would substantially reduce stream flows and alter the stream hydrograph of Alameda Creek below the diversion dam compared to the existing condition with the DSOS restrictions on Calaveras Dam. As part of the WSIP water supply option, the proposed program would reestablish the historical level of diversions from Alameda Creek to Calaveras Reservoir (Vol. 3, Chapter 5, pp. 5.4.1-33 to 5.4.1-35).

The commenter correctly quotes Mitigation Measure 5.4.1-2, Diversion Tunnel Operation (Vol. 4, Chapter 6, p. 6-51), and the commenter's opinion of this measure is noted. The commenter states that Measure 5.4.1-2 is not adequate to protect fish and wildlife resources on Alameda Creek downstream of the diversion dam. However, Measure 5.4.1-2 was designed to mitigate impacts on creek hydrology below the diversion dam resulting from the reduction in peak flows (due to the resumption of historical diversions to Calaveras Reservoir)—not specifically to mitigate impacts on fish and wildlife due to WSIP flow reductions (see Mitigation Measures 5.4.5-3a and 5.4.5-3b, Vol. 4, Chapter 6, pp. 6-52 to 6-54). As stated, Measure 5.4.1-2 is intended to reduce the impacts of reduced stream flow below the diversion dam, but would not reduce the impact to a less-than-significant level.

Draft PEIR Impact 5.4.5-3 analyzes the effects of the WSIP on fisheries due to changes in stream flow below the diversion dam (Vol. 3, Chapter 5, pp. 5.4.5-18 to 5.4.5-20). Although the commenter correctly quotes excerpts from this impact analysis, the indented quotation is not accurate since it does not indicate that some intervening sentences are missing. The analysis in Impact 5.4.5-3 concluded that the WSIP would result in potentially significant but mitigable impacts on resident rainbow trout habitat along Alameda Creek immediately downstream of the diversion dam.

The commenter correctly quotes the first two paragraphs of Draft PEIR Mitigation Measure 5.4.5-3a; please refer to **Chapter 16, Staff-Initiated Text Revisions** (Vol. 7) for revisions made to this measure since PEIR publication to reflect changes in the project description of the Calaveras Dam Replacement project (SV-2). This measure includes performance criteria and would reduce Impact 5.4.5-3 to a less-than-significant level; in addition to providing for minimum flows in support of resident trout, it includes monitoring, adaptive management, and coordination with resource agencies as well as other agencies/organizations involved in fishery studies on Alameda Creek. The commenter is correct in noting that the PEIR does not contain detailed information to determine whether 10 cubic feet per second is sufficient to support trout spawning and egg incubation; however, Mitigation Measure 5.4.5-3a provides for site-specific studies to identify and implement the appropriate minimum stream flow. The measure specifies that minimum stream flows would be required when precipitation would naturally generate runoff in the creek below the diversion dam under unimpaired conditions between December 1 and April 30.

To ensure the adequacy and effectiveness of the mitigation, the Draft PEIR also includes Mitigation Measure 5.4.5-3b, which provides a timeline tied to a performance measure along with supplemental actions that would reduce the impact to a less-than-significant level. The commenter correctly quotes the first paragraph of Measure 5.4.5-3b.

The commenter raises the issue that the diversion tunnel may currently be injuring or harming fish; however, CEQA does not require that projects provide mitigation for existing conditions.

For impacts related to steelhead migration, please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4). For impacts on Pacific lamprey and Chinook salmon, refer to Section 14.9.5 of this master response. The information provided by the commenter on recent fishery monitoring results in Alameda Creek is acknowledged.

The commenter correctly quotes the provisions of Mitigation Measure 5.4.6-3, Operational Procedures for Calaveras Dam Releases (Vol. 4, Chapter 6, p. 6-55); however, the commenter incorrectly links this measure with impacts on resident rainbow trout below the diversion dam and incorrectly states that it would begin no earlier than 10 years after the construction of Calaveras Dam. Measure 5.4.6-3 was developed to reduce potentially significant impacts associated with Impact 5.4.6-3 (effects on riparian habitat and related biological resources along Calaveras Creek, from Calaveras Reservoir to the confluence with Alameda Creek) and would be implemented prior to the completion of Calaveras Dam.

The objectives of the flows specified in the 1997 CDFG MOU were developed prior to and independent of the WSIP and therefore are not a CEQA issue subject to evaluation in the PEIR. The Draft PEIR does not rely on the MOU flows to mitigate the WSIP's impacts on species, but rather evaluates the effects of implementation of the MOU as part of the WSIP. Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14) for a discussion of proposed changes related to the MOU releases and other bypass flows proposed as part of the Calaveras Dam Replacement project (SV-2). In addition, Section 14.9.4 of this master response presents a detailed analysis of WSIP impacts on steelhead as well as protective measures designed to provide minimum flows for potential future-occurring steelhead.

SI_ACA1-20 The commenter states that the Draft PEIR contains inadequate mitigations for significant WSIP impacts on steelhead, Chinook salmon, and Pacific lamprey. Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Sections 14.9.4 and 14.9.5).

The commenter refers to standard mitigation measure F1 listed in Table 6.2 in the Draft PEIR (Vol. 4, Chapter 6, p. 6-16). As indicated in the Draft PEIR, the measures listed in this table are generic measures and will be modified based on site-specific conditions and applied to each WSIP project as appropriate. These measures are intended to be the minimum necessary actions, and the project-specific CEQA analyses may identify additional measures for key special-status species once more site-specific information is available. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14).

The commenter suggests mitigation measures for the protection of aquatic wildlife, including fencing out cattle from streams to protect spawning habitat and riparian vegetation, eradicating bass from Calaveras and San Antonio Reservoirs, and increasing dissolved oxygen (DO) in reservoirs to provide habitat for reservoir-residing trout. As described below, these measures are either already being implemented by the SFPUC or have been determined to be unnecessary as programmatic mitigation for the WSIP.

Livestock Grazing. Livestock grazing on the Alameda watershed has been a standard practice for more than a century and is a crucial management tool for wildfire protection. The SFPUC has taken measures to reduce the potential impacts of erosion, native plant displacement, and water quality degradation often associated with grazing. Grazing management practices, including fencing creeks to keep out livestock and limiting the number of animals allowed in the watershed, have helped to maintain high water quality and reduce the threat of wildfire while also providing protection to aquatic wildlife. Grazing is an important tool in managing fire by reducing the amount of grass and other vegetation that presents a fire hazard if left unmanaged during the hot, dry summers typical of the region. The *Alameda Watershed Management Plan* (SFPUC, 2001) outlines management actions for periodically and systematically inspecting watershed perimeter fencing, access gates, and locks and for repairing/replacing them as required to minimize trespassing, straying cattle, and illegal dumping.

Specific grazing management actions listed in the *Alameda Watershed Management Plan* detail methods the SFPUC follows to effectively manage and contain grazing activities so that the beneficial aspects related to fire management can be realized without jeopardizing water quality/quantity and biological resources. These management actions specify the implementation of structural protection measures to reduce the risk of viable pathogen discharges into watershed streams and reservoirs, as well as the strategic placement of fencing around reservoirs and streams to restrict cattle access and around riparian pastures to restrict access by calves. The fencing prevents cattle from entering these areas while at the same time providing for adequate wildlife access.

Dissolved Oxygen Management. Currently, the SFPUC manages DO levels in Calaveras Reservoir through liquid oxygen supply based on a feasibility study conducted in 2003. As described in the Draft PEIR, levels of DO are managed to provide for and protect fish habitat and drinking water quality (Vol. 3, Chapter 5, p. 5.4.3-2). The oxygenation management system has the capability to provide this same protection in a larger reservoir and would continue to be operated once the dam is replaced and storage levels are restored to the historical levels in place prior to the 2001 DSOD operating restriction. Dissolved oxygen levels in Calaveras Reservoir would remain equal to or would possibly improve over those under the existing condition. Under existing conditions, the reduced water pool in the lowered reservoir has constrained reservoir habitat for trout, since the water column that provides suitable temperatures and oxygenation for trout survival has severely decreased. Higher water elevations with implementation of the WSIP would provide increased habitat for aquatic species and an increase in coldwater pool storage. Dissolved oxygen levels in San Antonio Reservoir are not expected to change significantly as a result of WSIP implementation. However, the SFPUC is investigating an oxygenation system for San Antonio Reservoir.

Predator Control. Draft PEIR Section 5.4.5 and Impacts 5.4.5-1 and 5.4.5-4 (Vol. 3, Chapter 5) discuss fishery resources and the impacts of WSIP implementation. For the Calaveras and San Antonio Reservoirs, the WSIP would increase the storage volume from that under current conditions. In assessing the fishery-related impacts due to this change, it was concluded that the increase would offer the potential for increased coldwater pool storage and would also benefit coldwater fish species downstream of Calaveras Reservoir. Additionally, this increased coldwater pool volume within the reservoirs would increase the volume of habitat available for resident fish species, including both warmwater and coldwater species. While this increase in habitat could increase the abundance of non-native predators, the overall impact on fishery resources is deemed beneficial due to the improved habitat conditions, along with greater connectivity and migration of fish between the reservoir and upstream tributaries; therefore, no mitigation measures are necessary.

- SI_ACA1-21 The comments regarding the Draft PEIR's programmatic mitigation measures for potential impacts on special-status butterflies, burrowing owl, and San Joaquin kit fox are noted. As stated above in **Response SI_ACA1-20**, these standard programmatic measures for biological resources are generic measures and will be modified based on site-specific conditions and applied to each WSIP project as appropriate. The measures are intended to be the minimum necessary actions and are consistent with mitigations currently accepted by the resource agencies. As more site-specific information becomes available, the project-specific CEQA analyses for the WSIP projects may identify additional measures for key special-status species. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4).

Butterflies. The location, quality, and extent of suitable habitat for special-status invertebrate species will be identified at the project-specific EIR level, and Mitigation Measure I.3 would be implemented (Vol. 4, Chapter 6, Tables 6.1 and 6.2, pp. 6-14 to 6-20). Fugitive dust can be a problem for the host plants of these butterflies; however, this type of impact is normally addressed at the project level when project footprints and construction methods have been better defined.

Burrowing owl. The commenter is correct in that passive relocation of burrowing owls does not ensure their survival, only that mortality is avoided. Passive relocation of owls as proposed is consistent with current CDFG guidance (*Staff Report on Burrowing Owl Mitigation*, memorandum dated October 17, 1995, signed by C.F. Raysbrook, CDFG Interim Director). However, PEIR mitigations do include habitat replacement, such as those under the Habitat Reserve Program. While long-term monitoring of the fate of relocated burrowing owls is an excellent conservation practice, it is not required under CEQA for owls or any other species.

San Joaquin kit fox. The commenter states that there should be no destruction of potential San Joaquin kit fox dens in the Sunol Valley. Potentially suitable dens (excavations with a minimum 4-inch aperture) are plentiful due to the presence of resident California ground squirrels and other fossorial (digging) animals; the availability of dens is not a limiting factor for kit fox. By contrast, active dens with known kit fox use are protected as endangered species habitat. Please refer to Mitigation Measure M.2 (Vol. 4, Chapter 6, Table 6.2, p. 6-19 and 6-20) for standard programmatic measures for the protection of San Joaquin kit fox and its habitat.

Mitigation ratios. This comment stating that mitigation ratios for impacts on wetlands and critical habitat for a listed species should be higher than 1:1 is acknowledged. The actual mitigation ratios for wetlands, sensitive habitats, key special-status species, and other species of concern affected by the individual WSIP projects will be developed at the project level when the extent, location, and quality of affected habitat are known. Mitigation Measure 4.6-1b states that, “SFPUC will develop and implement compensation plans that meet the appropriate regulatory requirements and permit conditions with respect to compensation ratios....” (Vol. 4, Chapter 6, p. 6-11).

In response to this comment, the Draft PEIR (Vol. 4, Chapter 6, p. 6-11, third paragraph) is revised as follows:

For each WSIP project, a qualified biologist will quantify the magnitude and extent of impacts to wetlands, sensitive habitats, and key special-status species and other species of concern, and the SFPUC will develop and implement restoration and/or compensation plans that meet the appropriate regulatory requirements and permit conditions with respect to restoration and/or compensation ratios. Compensation ratios typically range from a minimum of 1:1 for common habitats to 2:1 or higher for rare and sensitive habitats. If individual project requirements of the RWQCB, CDFG, or USFWS differ somewhat from these ratios, they are still intended to achieve the same purpose of full restoration and/or compensation, other ~~conservation measures and management requirements~~ to mitigate project impacts to less-than-significant levels, and to ensure no net reduction in the populations of any species listed as threatened or endangered by the state or federal resource agencies.

- SI_ACA1-22 This comment refers to and consists of comments from the Alameda Creek Alliance letter to the San Francisco Planning Department (dated August 28, 2007), which provides scoping comments on the Habitat Reserve Program. As described in the Draft PEIR (Vol. 1, Chapter 3, pp. 3-84 and Vol. 4, Chapter 6, p. 6-11), the Habitat Reserve Program is being designed as a comprehensive, coordinated approach to implementing mitigation measures for impacts on biological resources and related regulatory compliance for the WSIP projects. In most cases, the Habitat Reserve Program would augment the project-specific

mitigation measures, focusing on habitat compensation requirements. However, it should be noted that the Habitat Reserve Program is presented as one alternative for implementing offsite habitat compensation. Please refer also to **Response L_EBRPD-16** regarding the Habitat Reserve Program.

- SI_ACA1-23 This comment refers to and consists of comments from the CDFG letter to the San Francisco Planning Department (dated November 22, 2005) responding to the NOP on the Calaveras Dam Replacement project (SV-2).

As stated in **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2), the PEIR provides a foundation for any necessary future environmental review documents that focus on individual WSIP projects and presents a general, program-level analysis of the types of impacts that could occur under the individual WSIP facility improvement projects (see Vol. 2, Chapter 4). Thus, the requested site-specific analysis of construction and operation of the Calaveras Dam Replacement project (SV-2) is more appropriately addressed in the CEQA document for that project.

However, the PEIR does provide a project-level analysis of impacts related to the WSIP water supply and system operations, relevant in part to the operational component of the Calaveras Dam Replacement project (SV-2). The issues listed in this comment regarding the WSIP water supply and system operations include: flow issues related to steelhead (see Vol. 7, Chapter 14, **Section 14.9, Master Response on Alameda Creek Fishery Issues**); minimum bypass flows for fisheries at Calaveras Dam and ACDD (see Vol. 3, Chapter 5, Section 5.4.5); and impacts on fisheries upstream and downstream of San Antonio Reservoir (see Vol. 3, Chapter 5, Impacts 5.4.5-4 and 5.4.5-5, p. 5.4.5-21). The remaining issues listed in this comment are more appropriately addressed in the EIR for the Calaveras Dam Replacement project, especially in light of the fact that the intent of the CDFG letter was to provide guidance in the development of the scope of that EIR.

- SI_ACA1-24 Please refer to **Response SI_ACA1-22**, above.

- SI_ACA1-25 Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4).

- SI_ACA1-26 The SFPUC wholesale customers are represented by the Bay Area Water Supply and Conservation Agency (BAWSCA), which was created by the California legislature in 2002 with adoption of Assembly Bill 2058; BAWSCA, which was formerly known as the Bay Area Water Users Association (BAWUA), was founded in 1958 to oversee administration of the Master Water Sales Agreement. As part of the WSIP planning process, the SFPUC, in cooperation with its wholesale customers and BAWSCA, undertook a study to assess the potential for additional conservation and recycled water projects, including potential regional

projects that were not identified in the previous studies and already considered to be implemented locally by 2030. The study considered projects that would be feasible if implemented regionally, including projects that may have been found to be infeasible for individual customers. This study, the *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (URS, 2006), provided the basis for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative discussed in Draft PEIR Chapter 9 (Vol. 4, pp. 9-47 to 9-59). As indicated on p. 9-49, this alternative could meet about 75 percent of the additional projected 2030 average annual water supply need; however, at least 6 mgd of the 2030 purchase requests would be unmet.

Regarding the statement that the Draft PEIR underestimates the potential for water conservation and recycling, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). Regarding the comparison of SFPUC service area conservation to that in other metropolitan areas, refer to Section 14.2.3 under the heading Frequently Submitted Comments Addressing Conservation and Recycling. The commenter's opinion that recycled water use in the SFPUC service area is comparatively low is acknowledged.

Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18) and Table 7.2 (Vol. 4, Chapter 7, p. 7-15) show the estimated levels of water conservation and recycling assumed in the purchase estimates submitted by each water customer. The averages of the estimated ranges of conservation (13 to 19 mgd) and recycling (9 to 14 mgd) represent about 4 percent and 3 percent, respectively, of the total 2030 demand (417 mgd) for the service area, as this comment states. The commenter's opinion that these levels are unreasonably low is acknowledged. Note, however, that a comparison of per-capita water consumption in each hydrologic region of the state, as shown in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), indicates that per-capita consumption in the Bay Area is low compared to other parts of the state.

The commenter's opinion that there is a discrepancy between the conservation and recycling goals set by the SFPUC and those of its wholesale customers is acknowledged. This comment refers to BAWSCA's 2000 Water Supply Master Plan; this document was primarily authored by SFPUC, in conjunction with BAWSCA. The requirement in the master plan (according to this comment) that wholesale customers employ their best efforts to use all sources of water owned or controlled by them, including groundwater, is consistent with the Master Water Sales Agreement requirements discussed in the Draft PEIR (Vol. 1, Chapter 2, p. 2-44 and Vol. 4, Chapter 7, p. 7-13). Tables 14.2-6 and 14.2-7 in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) show the conservation measures

currently being implemented or planned for implementation under the WSIP by each wholesale customer and by the SFPUC for the retail service area.

The commenter incorrectly states that the Draft PEIR does not adequately analyze alternatives that include the potential for conservation, recycling, and groundwater by the wholesale customers. The Draft PEIR included multiple alternatives involving higher levels of conservation and recycling than were proposed under the WSIP, including the Aggressive Conservation/Water Recycling and Local Groundwater Alternative and the Modified WSIP Alternative, which are fully analyzed in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-59 and pp. 9-78 to 9-84, respectively). Also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Additional Conservation and Water Recycling Potential), **Section 14.10, Master Response on Modified WSIP Alternative**, and **Section 13.4, Phased WSIP Variant**, for more detailed discussion and analysis of additional conservation, water recycling, and groundwater projects in the wholesale customer service area.

Alameda Creek Alliance, Jeff Miller, Director, 09/18/07

[See Public Hearing Transcript, Fremont, pp. 17–20]

SI_ACA2-01 Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4).

The commenter is correct in noting that compliance with the law is not necessarily the same as mitigation for impacts under CEQA. As discussed in the Draft PEIR (Vol. 2, Chapter 4, pp. 4.1-6 and 4.1-7), there are some cases where compliance with regulations could avoid or minimize a significant impact; in other cases, there may be no applicable regulations or the regulations by themselves would not be sufficient to avoid or minimize a significant impact. In the latter case, the PEIR identifies whether feasible measures are available that could reduce significant impacts to a less-than-significant level.

The SFPUC is currently operating the Alameda Creek Diversion Dam in compliance with all applicable regulations and would continue to do so under the WSIP. The commenter's statement that this organization is calling on the SFPUC to remove the diversion dam is noted.

The Draft PEIR identifies programmatic impacts and mitigation related to construction and operation of the Calaveras Dam Replacement (SV-2) and Alameda Fishery Enhancement (SV-1) projects in Vol. 2, Chapter 4. Impacts of the proposed WSIP water supply and system operations as they relate to these two WSIP projects are analyzed in Vol. 3, Chapter 5, Section 5.4.

SI_ACA2-02 This comment expressing support for conservation, water recycling, and efficiency and opposition to additional diversions from Alameda Creek or the Tuolumne River is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

Acterra Action for a Sustainable Earth, David T. Smernoff, Ph.D., Board Vice-President, 09/28/07

SI_ACT-01 This comment expresses support for the seismic improvements proposed under the WSIP, but states that the commenter found the PEIR to be flawed. This is an opening statement, and the specific comments follow in Comments SI_ACT-02 through SI_ACT-05; please refer to **Responses SI_ACT-02 through SI_ACT-05** for the specific responses.

SI_ACT-02 This comment advocates for a two-tiered approach that separates the proposed seismic improvements from the proposed changes in water supply (i.e. additional Tuolumne River diversions). Comment acknowledged. Please refer to the discussion in **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) for more information on this topic.

Refer to **Response L_Tuol1-09** regarding the applicability of the federal Wild and Scenic Rivers Act to the Tuolumne River and the overall consistency of the WSIP with the act.

The opinion stating that public policy decisions should be based on the merits of the proposal is acknowledged. Extensive public comments, including several comment sets from the Bay Area Water Supply and Conservation Agency, were received on the Draft PEIR; these comments, representing a wide range of opinions, are reproduced in Volume 6 of the PEIR, and responses to all comments received on the Draft PEIR are included in Volume 7 of the PEIR.

SI_ACT-03 This comment, which expresses support for alternatives identified in the Draft PEIR that protect the Tuolumne River from new diversions, is acknowledged. The comment stating that additional water conservation, efficiency, and recycling is the best way to lessen impacts on the Tuolumne River is also acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to demand projections and to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

SI_ACT-04 This comment asserting that the demand projections are flawed is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). The impacts of water diversions on the Tuolumne River are addressed in the Draft PEIR (Vol. 3, Chapter 5, Section 5.3).

The Draft PEIR provides a discussion of impacts related to climate change on the Tuolumne River watershed (Vol. 3, Chapter 5, pp 5.7-92 to 5.7-96). Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of this issue. Section 14.11 provides detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP. The discussion includes a qualitative assessment of WSIP impacts with consideration of climate change effects and corroborates the conclusion that the Draft PEIR provides a reasonable assessment of environmental effects that accounts for potential climate change effects through the SFPUC planning horizon of 2030.

- SI_ACT-05 The SFPUC conducted thorough studies of water demand before estimating the total water demand (purchase request) that the regional water system must satisfy in 2030 (Vol. 1, Chapter 3, pp. 3-16 to 3-22). The estimate of SFPUC system demand assumed continued implementation of current water conservation programs as well as the implementation of a number of local water recycling projects and additional conservation programs. The 2030 SFPUC system purchase request was estimated to be 300 million gallons per day (mgd). Under the WSIP, about 8 mgd of the estimated 2030 SFPUC system demand would be satisfied through additional conservation and recycled water programs in San Francisco (that is, in addition to those already accounted for prior to estimating the 300 mgd purchase request). Another 2 mgd would be satisfied through the development of groundwater resources on the San Francisco Peninsula. For more information on this topic, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

The effects of climate change are described in the Draft EIR (Vol. 3, Chapter 5, Section 5.7.6). For more information on this topic, please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

- SI_ACT-06 This comment, which encourages the SFPUC to drop Tuolumne River diversions from the seismic upgrade projects and to revisit water demand issues at a later date, is acknowledged. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) for relevant response related to the integration of the seismic improvements and water supply option to meet program objectives. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) for a detailed discussion of the demand projections.

Citizens Advisory Committee to PUC, Steve Lawrence, Vice Chair, 08/17/07

SI_CAC1-01 The commenter states that the project schedule included in Figure 3.6 of the Draft PEIR (Vol. 1, Chapter 3, p. 3-62) is out of date, is “fanciful,” and does not accurately list the WSIP projects. As discussed in the Draft PEIR (Vol. 2, Chapter 3, p. 3-2 and pp. 3-23 to 3-25), the SFPUC classifies as part of the WSIP all capital improvements and projects that received financing from the 2002 voter-approved bond measure, which fall into six categories: key regional projects, regional projects, local projects, WSIP-related activities, regional recycled water projects, and Bay Division Pipeline No. 4 condition assessment. The Draft PEIR analyzes only the *key regional WSIP projects* (in addition to the WSIP water supply and system operations) as the proposed program for CEQA purposes (see Vol. 1, Chapter 3, pp. 3-23 to 3-25). Other WSIP-funded activities in the remaining five categories that are not evaluated as part of the proposed program are undergoing CEQA review independent of the PEIR and are therefore not included in Figure 3.6.

Figure 3.6 shows the preliminary construction schedule for each of the key regional WSIP projects described in Section 3.4.6 of the Draft PEIR. This schedule was provided by the SFPUC at the time of Draft PEIR preparation and was based on the priority of the project in terms of vulnerability to seismic damage, importance to system operations, system operational requirements, and projected funding. Figure 3.6 is presented in the Draft PEIR to provide general information on the construction timeframe of each project as well as to demonstrate which projects’ construction schedules might have a potential to overlap, which could exacerbate environmental effects due to construction activities. The collective effects of the WSIP projects analyzed in the Draft PEIR are addressed in Vol. 3, Chapter 4, Section 4.16. The cumulative effects of these WSIP projects, other SFPUC projects (including other WSIP projects deemed to have independent utility), and projects of other jurisdictions are addressed in Section 4.17 of the Draft PEIR.

As discussed in the Draft PEIR (Vol. 1, Chapter 3, p. 3-61), the preliminary schedule is subject to further refinement during the ongoing planning and development of each project. The project-level CEQA documentation prepared for each WSIP project will address changes in the schedule and will include an appropriate analysis of potential cumulative impacts based on the updated schedule.

SI_CAC1-02 The Draft PEIR (Vol. 3, Chapter 8, Section 8.3) analyzes a variant to the WSIP that would provide supplemental dry-year water through the Bay Area Regional Desalination Project (BARDP). As indicated in the Draft PEIR (pp. 8-18 to

8-21), a pre-feasibility study has been completed for the BARDP, and the commenter is referred to the references cited in the Draft PEIR for the assumptions used in developing this project (URS Corporation, *Bay Area Regional Desalination Project Pre-feasibility Final Report*, 2003). The Draft PEIR analysis was based on this preliminary information and, as the PEIR states, is a conceptual-level, generalized impact analysis that is intended to provide sufficient information to allow decision-makers to consider this variant to the WSIP, not to provide a site-specific environmental analysis. The level of detail of information requested by the commenter is not required for the purposes of this impact analysis in the PEIR.

- SI_CAC1-03 As indicated by the commenter, refer to **Response SI_CAC2-04**.
- SI_CAC1-04 The specific emergencies identified in this comment (e.g., epidemics) were not a factor in WSIP planning efforts, although water supply planning includes a margin of safety to address atypical conditions such as epidemics.
- SI_CAC1-05 Cost estimates for the Lower Tuolumne River Alternative are included in the Water Supply Options Report (SFPUC 2007). The alternative would require the construction of several new facilities that are not included in the WSIP, as described in the Draft PEIR (Vol. 4, Chapter 9, p. 9-60). The major new facilities would include an intake and pumping plant on the lower Tuolumne River, a 15-mile-long, 48-inch-diameter pipeline from the intake to near Tesla Portal, a 55-million-gallon-per-day water treatment plant, and a pumping plant to convey treated water to Tesla Portal. The capital cost of the new facilities, not including lifecycle costs, could be upwards of \$354 million; this cost estimate, provided in response to this comment, is not relevant under CEQA, which requires only consideration of the comparative environmental impacts of alternatives.

The elevation of the intake on the Tuolumne River would depend on the exact site chosen. The elevation of the land surface in the vicinity of the confluence of the Tuolumne River and the San Joaquin River is about 30 feet above sea level. Ideally, the intake would take the form of an infiltration gallery under the bed of the Tuolumne River. The San Joaquin River at its confluence with the Tuolumne River is not tidal, and saltwater from the Delta does not penetrate this far upstream.

Large-scale flooding in the Delta could occur if a major earthquake caused many of the levees to fail. However, it is expected that if this alternative is selected for further consideration and design, the intake and other facilities needed for the Lower Tuolumne River Alternative would be designed to comply with applicable standards for water supply facilities, including provisions for adequate flood protection. As described in the Draft PEIR (Vol. 4, Chapter 9, p. 9-65), this alternative would result in increased annual energy demand compared to the

proposed program, which in turn could result in secondary impacts from air pollution and greenhouse gas emissions, depending on the source of power.

SI_CAC1-06 The Draft PEIR presents the information in a way intended to be both comprehensive and understandable to decision-makers, regulatory and local agencies, and the public. The authors acknowledge that some of the topics covered in the Draft PEIR are technical, but a discussion of these topics is important for full disclosure of the changes proposed under the WSIP and its potential environmental impacts. A glossary of technical terms is included in Volume 1 to assist the reader in understanding the document. Further, the San Francisco Planning Department scheduled a 108-day public review period, rather than the 45-day public review period required under CEQA, to allow additional time for agencies and the public to review and evaluate the adequacy and accuracy of the Draft PEIR.

Citizens Advisory Committee to PUC, Steve Lawrence, Vice Chair, 10/15/07

- SI_CAC2-01 The opinions of the commenter regarding the merits of the proposed dry-year water transfer are noted. Please refer to **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14, Section 14.3.2) for further discussion of this component of the proposed program. Under CEQA, the purpose of the PEIR is to disclose the environmental effects of the proposed program to decision-makers, not to determine or judge its merits.
- SI_CAC2-02 The commenter is correct in noting that the regional water system is highly dependent on storage, since the majority of the water for the regional system is located about 150 miles from customers, and nearly all precipitation occurs in the winter months. Background studies conducted for the WSIP determined that the proposed seismic, delivery, and water reliability levels of service could be achieved by restoring the historical capacities of Calaveras and Crystal Springs Reservoirs (Vol. 1, Chapter 3, pp. 3-25 to 3-39). Information regarding storage capacities of the major facilities in the existing system is presented in Table 2.2 (Vol. 1, Chapter 2, p. 2-6), which shows both the existing (restricted) capacities of the Calaveras and Crystal Springs Reservoirs and the historical capacities. The reasons for rejecting an enlarged Calaveras Reservoir include uncertainties regarding water rights and environmental permits (see Draft PEIR Vol. 4, Chapter 9, pp. 9-118 and 9-119).
- SI_CAC2-03 This comment addresses future conservation in San Francisco. Under the proposed WSIP, up to 4 million gallons per day (mgd) of conservation savings¹ would offset total demand in the retail service area (including San Francisco), as shown in Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18). The conservation measures included in Packages A, B, and C for the retail customer service area are shown in Table 19, Selection of Conservation Measures by Package, which is included as an attachment at the end of Draft PEIR Appendix E.2 (Vol. 5): Tables 14.2-7 and 14.2-8 of **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) identify current and proposed conservation measures for the retail service area. As the discussion in this master response indicates, Package C is not the same as the “Aggressive Conservation” referred to in the Aggressive Conservation/Water Recycling and Local Groundwater Alternative evaluated in the Draft PEIR

¹ This is part of the 10 mgd from conservation, recycled water, and groundwater projects planned to offset retail service area demand under the WSIP.

(Vol. 4, Chapter 9, pp. 9-47 to 9-59). Rather, Package C was one of three suites of measures² considered for implementation by the individual water customers.

As described in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14), the SFPUC also conducted a study to identify additional water conservation, recycling, and groundwater projects that could be feasible if implemented regionally, including some projects that were determined to be infeasible when considered by the individual water customers. This study provided the basis for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative. The additional projects considered in this alternative are shown in Table 9.11 (Vol. 4, Chapter 9, pp. 9-50 and 9-51).

Under the Modified WSIP Alternative (Vol. 4, Chapter 9, pp. 9-78 to 9-84), the SFPUC would institute a program to work with the wholesale customers to develop an additional supply contribution of approximately 5 to 10 mgd from conservation, recycled water, and local groundwater projects in the wholesale service area, as identified in Table 9.11. This additional amount of water from conservation, recycled water, and groundwater projects is in addition to the amount from conservation, recycled water, and groundwater projects accounted for in the 2030 purchase request assumed under the WSIP. Because the specific projects have not been identified, the Modified WSIP Alternative provides a reasonable range of supply contribution that could feasibly be implemented. Please refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3) for further discussion.

SI_CAC2-04 The comment is correct in noting that the Draft PEIR analysis of impacts related to the WSIP water supply and system operations (Vol. 3, Chapter 5) is based on the 82-year period of hydrologic record, from 1920 to 2002. The Draft PEIR (Vol. 3, Chapter 5, Section 5.7.6) discusses the general types of climate change impacts that could affect water resources in California and presents the SFPUC's initial modeling of climate change effects on the regional system. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change effects on the regional system and how the analysis presented in the Draft PEIR remains valid when climate change effects are considered.

Table 9.5 in the Draft PEIR (Vol. 4, Chapter 9, p. 9-13) presents the anticipated frequency of rationing under the WSIP and the alternatives based on the 82-year hydrologic record. The commenter correctly states that rationing would be required about 10 percent of the time, corroborating the information shown in the

² These suites of conservation measures are referred to as Packages A, B, and C in the retail customer service area conservation potential study and as Programs A, B, and C in the wholesale customer service area study.

table—that under the WSIP, rationing would be required in 8 out of 82 years (6 years at 10 percent rationing and 2 years at 20 percent).

As indicated by the commenter, the proposed dry-year supplies would be required under the WSIP in 24 out of the 82-year hydrological record (about 29 percent of the time). Please refer to **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14, Section 14.3.2) for information on how and when the SFPUC would obtain water from the Turlock and Modesto Irrigation Districts (TID and MID).

- SI_CAC2-05 This comment presents a series of questions related to the recycled water component of the WSIP. As described in the Draft PEIR (Vol. 1, Chapter 3, p. 3-34), the proposed water supply option under the WSIP includes 10 mgd from a combination of conservation, recycled water, groundwater projects in San Francisco. The recycled water projects would be implemented through the WSIP facility improvement project, Recycled Water Projects (SF-3), and the preliminary project description for this project is presented in Table 3.10 (Vol. 1, Chapter 3, p. 3-56). However, since preparation of the Draft PEIR, the SFPUC has continued studies in support of planning and development of the Recycled Water Projects, and these studies have shown that the existing North San Mateo County Sanitation District recycled water treatment facility in Daly City has sufficient capacity to provide recycled water for irrigation of the Harding Park Golf Course. The necessary infrastructure to serve Daly City's recycled water to Harding Park under this project may be constructed and implemented in partnership between the SFPUC and Daly City. Although the Harding Park project is part of the Recycled Water Projects (SF-3), it will likely be implemented separately from SF-3; however, the amount of recycled water supplied to Harding Park would count towards the WSIP's goal to obtain 10 mgd from conservation, recycled water, and groundwater projects in San Francisco. The preliminary WSIP project descriptions provided in the PEIR will be updated and refined as part of the project-level environmental analyses, as described in **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2). Thus, additional details regarding the Recycled Water Projects are currently under development.

And, as noted in the Draft PEIR (Vol. 1, Chapter 3, p. 3-25), in addition to the recycled water projects under SF-3, the SFPUC expects to consider and develop recycled water projects that would be located outside of San Francisco in coordination with other jurisdictions.

- SI_CAC2-06 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

- SI_CAC2-07 The Draft PEIR (Vol. 3, Chapter 8, Section 8.3) analyzes a variant to the WSIP that would provide supplemental dry-year water through the Bay Area Regional Desalination Project (BARDP). As indicated in the Draft PEIR (pp. 8-18 to 8-21), a pre-feasibility study has been completed for the BARDP, and the commenter is referred to the references cited in the Draft PEIR for the assumptions used in developing this project (URS Corporation, *Bay Area Regional Desalination Project Pre-feasibility Final Report*, 2003). Please also refer to **Response SI_CAC1-02**.
- SI_CAC2-08 Table 9.5 of the Draft PEIR (Vol. 4, Chapter 9, p. 9-13) shows the SFPUC's estimated average annual Tuolumne River diversions, as determined by modeling results using the Hetch Hetchy/Local Simulation Model, which is based on the 82-year period of hydrologic record from 1920 to 2002. Under the proposed program, the SFPUC's average annual diversions would be 245 mgd. This volume of water is within the City and County of San Francisco's (CCSF) existing water rights and entitlements as provided for under the Raker Act (see Vol. 1, Chapter 2, pp. 2-36 and 2-37); in most years (nondrought), no compensation is required to TID and MID for this volume of water, other than the SFPUC's recognition and assurance of the senior water rights of these two districts. However, as described in the Draft PEIR (Vol. 1, Chapter 2, pp. 2-37 to 2-39 and 2-42), the CCSF has entered into several agreements with TID and MID that allow for bypass flows for downstream uses and may include appropriate compensation to the districts. Please also refer to **Section 14.3, Master Response of Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14, Section 14.3.2) for additional information.

California Trout, Brian Stranko, Chief Executive Officer, 09/28/07

SI_Caltrout-01 This comment expresses opposition to additional Tuolumne River diversions and requests that additional studies be conducted before the PEIR is finalized. As described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.1-7 to 5.1-18), the basic approach to the analysis of impacts on water and related resources was to first evaluate the changes in the river flow and reservoir levels that would occur with the WSIP, then to estimate changes in water quality and temperature, and finally to combine this information to determine potential impacts on fisheries and other biological resources. The analysis used the existing 82-year historical hydrologic record, coupled with the Hetch Hetchy/Local Simulation Model (HH/LSM), to depict the overall regional water system operations and to project the extent of changes in flow that could occur in the future. These results were used for the PEIR water supply and system operations impact analysis.

As described in **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4), the CEQA Guidelines (Section 15151) impose a standard of adequacy that is “reasonably feasible” and sufficient to allow decision-makers to make a decision that takes account of environmental consequences. Data gathering need not be “exhaustive.” The Draft PEIR analysis of the WSIP water supply and system operations with respect to fisheries and biological resources along the Tuolumne River was based on current knowledge of the composition and condition of the resources and in consideration of the potential interactive responses of plant and animal species to the hydrologic changes resulting from the WSIP as indicated by the model results. The analysis relied on ecological principles, scientific literature, existing data, and site visits. The Draft PEIR analysis was conservative in finding that an impact could be potentially significant if there was a possibility of impacts from the WSIP water supply and system operations.

The San Francisco Planning Department believes these data are sufficient to reasonably assess the general magnitude, frequency, and extent of the WSIP’s environmental consequences, and to identify appropriate mitigation measures to offset potentially significant impacts on the Tuolumne River watershed and related resources. The mitigation measures were developed to include performance standards based on ecological principles, with the understanding that data from ongoing and future studies could be useful in augmenting the baseline data and in refining the implementation of each measure. As described in Draft PEIR Measure 5.3.7-2 (Vol. 4, Chapter 6, pp. 6-49 and 6-50), **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2), and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.2), several studies of

the Tuolumne River are in progress by the SFPUC, National Park Service, USFWS, NMFS, CDFG, and other agencies. Data from these studies would be used to augment the existing data and allow for refinement of the implementation of the mitigation measure to meet the performance standards.

SI_Caltrout-02 This comment, which expresses support for alternatives identified in the Draft PEIR that protect the Tuolumne River from new diversions, and for additional water conservation, efficiency, and recycling, is acknowledged. Please see **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14), for additional information related to demand projections as well as conservation programs and recycling programs proposed by the SFPUC and its wholesale customers.

Republicans for Environmental Protection, Protection Commissioner, California Commission for Economic Development, Buddy Burke, CA REP President, and Virginia Chang Kiraly, CA REP Vice President, 10/14/07

SI_CAREP-01 This comment, which requests that additional studies of the Tuolumne River be conducted before the PEIR is finalized, is acknowledged. Please refer to **Response SI_Caltrout-01** for a response to this comment. Also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

SI_CAREP-02 The commenter expresses concern that flow reductions would degrade the Tuolumne River's "world-class recreation opportunities," which would also reduce visitors and tourism to Yosemite National Park and the surrounding region.

Section 5.3.8.1 of the Draft PEIR (Vol. 3, Chapter 5) describes current water and off-water recreational visitor use of the upper Tuolumne River corridor and evaluates the region's recreational resources. A particularly extensive analysis of whitewater recreation was performed to assess both the current use levels and the potential for WSIP-related changes to reduce future recreational use. The analysis of the timing and magnitude of the WSIP-related changes in water releases within the upper Tuolumne River concluded that effects on recreation would be less than significant, predominantly because shifts in water releases would reduce upper Tuolumne flows during the river's high-flow months (April through June) or during the low recreation season (November to March), which would not significantly impair use of the river for whitewater rafters or other recreationists. In addition, during the peak visitor months of July and August, SFPUC releases for whitewater rafting would continue to be provided when operationally practical. Furthermore, the flow reductions would only occur during drier-than-normal hydrologic years and would be relatively limited (i.e., 3 percent or less reductions in average monthly flows); such a reduction in flows would be imperceptible to most recreationists.

SI_CAREP-03 This comment expresses concern that the proposed WSIP water supply would delay implementation of the seismic facility improvements, increase water rates, and result in burdensome costs to business, which in turn would have a trickle-down effect with transaction costs being passed to consumers and taxpayers. Comment acknowledged. The commenter urges the SFPUC to be mindful of these fiscal impacts by not moving forward to divert water from the Tuolumne

River. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) for a discussion of this topic.

SI_CAREP-04 The commenter's support for water conservation, efficiency, and recycling measures and for alternatives that would eliminate increased diversions from the Tuolumne River is acknowledged. The commenter's suggestion that the SFPUC undertake additional studies is also acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for a discussion of this topic.

Commonwealth Institute, Katherine Forrest, Member, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 38–39]

SI_CI-01 This comment, which expresses an opinion on the role that state and local governments could play in providing incentives for water conservation and penalties for excessive use (such as permitting gray water systems for individual homes and limiting large irrigation systems), is acknowledged. Note that the California Department of Water Resources, Office of Water Use Efficiency and Transfers, is in the process of updating the existing Model Water Efficient Landscape Ordinance. The update must be completed by January 1, 2009, and local agencies must adopt the model ordinance, or one that is at least as effective as the updated model ordinance, by January 1, 2010.

The Draft PEIR describes local groundwater projects, recycled water projects, and additional conservation measures that would be implemented under the WSIP as part of the nondrought water supply (Vol. 1, Chapter 3, p. 3-34). Table 9.11 of the Draft PEIR (Vol. 4, Chapter 9, p. 9-50) identified additional conservation, recycled water, and groundwater projects that could be implemented by the wholesale customers to reduce demand and supplement supplies to meet future delivery requests, assuming the projects are feasible and implementable (refer to Vol. 7, Chapter 13, Section 13.4 for further discussion of the information presented in Table 9.11). For additional information regarding existing and proposed conservation measures by the SFPUC wholesale and retail customers, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

California Native Plant Society, Amanda Jorgenson, Executive Director, 09/25/07

SI_CNPS-01 This comment, which opposes additional Tuolumne River diversions and encourages additional efforts to conserve the equivalent of the projected customer purchase requests through 2030, is acknowledged. See **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), for additional information regarding the conservation and recycling programs proposed by the SFPUC and its wholesale customers. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9), for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. Also note that the projected increase in average annual purchase requests is 35 mgd, not 38 mgd. Please refer also to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8.2), for relevant response regarding the WSIP's impacts on the San Joaquin River and Delta.

California Native Plant Society, East Bay Chapter, Laura Baker, Conservation Committee Chair, 10/01/07

- SI_CNPS-EB1-01 Comment noted regarding potential impacts on native flora in the East Bay.
- SI_CNPS-EB1-02 This comment expressing support for the WSIP goals and objectives is acknowledged.
- SI_CNPS-EB1-03 This comment expresses the opinion that the WSIP overestimates the need for additional water supplies from rivers and creeks and underestimates the capacity of the SFPUC and its customers to conserve water. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Sections 14.2.2 and 14.2.3) for additional information related to demand projections as well as conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.
- SI_CNPS-EB1-04 Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling) regarding the Pacific Institute's comparisons of SFPUC conservation efforts to those of other water districts referenced in this comment. The information regarding the Helix Water District provided in this comment is acknowledged. In the SFPUC service area, population and employment are projected to increase (refer to Table 7.4 in Vol. 4, Chapter 7, p. 7-21) while per-capita demand is projected to decrease (refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling**, Section 14.2.2, under the heading Per-Capita Demand). The basis for the statement that "retail customers in San Francisco show a decline in demand of 4.7 mgd" is unclear. As shown in Table 7.3 (Vol. 4, Chapter 7, p. 7-18), demand in the retail service area is projected to decline by 0.2 mgd in 2030 (despite increases in population and employment). Refer to **Section 14.2** (Vol. 7, Chapter 14, Section 14.2.3) for detailed information on existing and proposed conservation by the wholesale and retail customers; Tables 14.2-7 and 14.2-8 in the master response show the California Urban Water Conservation Council's best management practices that the retail and wholesale customers are implementing or have committed to implement.
- SI_CNPS-EB1-05 The comment expresses the general opinion that certain methodologies and models used in the Draft PEIR were either flawed or the wrong tool. For each environmental issue, the PEIR includes a section entitled "Approach to Analysis" to describe and explain the methodologies and models used to assess and identify potential impacts. The methodologies and models used in

the Draft PEIR are standard, professionally accepted approaches employed in the respective fields of study, with the exception of the water resources model—the Hetch Hetchy/Local Simulation Model (HH/LSM)—which is unique to the regional system and is the best available tool (see Vol. 3, Chapter 5, pp. 5.1-9 to 5.1-17). Refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14) for additional information on the model itself and the appropriateness of its use for the PEIR. This comment summarizes the specific comments that follow in Comments SI_CNPS-EB1-06 through SI_CNPS-EB1-10; refer to **Responses SI_CNPS-EB1-06** through **SI_CNPS-EB1-10** for the specific responses.

SI_CNPS-EB1-06 Draft PEIR Impact 4.9-7 addresses the potential effects of the WSIP facility improvement projects with regard to greenhouse gas emissions (Vol. 2, Chapter 4, pp. 4.9-42 to 4.9-47). In addition, the Draft PEIR discusses the potential effects of climate change on water resources in Section 5.7.6 (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Draft PEIR Table 5.7-21 (p. 5.7-93) describes the report by Maurice Roos cited by the commenter. The reference to the article on conservation and innovative approaches to efficiency is acknowledged.

Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.

SI_CNPS-EB1-07 The commenter states that Figure 4.6-1a (Vol. 2, Chapter 4, pp. 4.6-3 to 4.6-5) is inadequate. In any CEQA analysis, a wide range of natural resource classification types is available to the analyst. Gap Analysis Project (GAP) mapping provides a good compromise between systems. The commenter observes that the GAP analysis is a “coarse filter” overview of the natural communities at this scale, but the text identifies a “fine filter” description of the presence of sensitive natural communities within the GAP analysis polygons potentially affected by WSIP operations. In addition, the sensitive natural communities identified in the California Natural Diversity Database are described for each region in Vol. 2, Chapter 4, pp. 4.6-9 and 4.6-17 for the program-level analysis; and in Vol. 3, Chapter 5, pp. 5.3.7-4 and 5.3.7-5, pp. 5.4.6-3 to 5.4.6-7, and pp. 5.5.6-3 and 5.5.6-4 for the project-level analysis of WSIP water operations.

SI_CNPS-EB1-08 With regard to the timescale used in the impact analyses, the hydrology section follows the CEQA-mandated requirement that impacts be analyzed relative to current prevailing conditions appropriate to the resource and the

nature of the impact. The Draft PEIR (Vol. 3, Chapter 5, p. 5.4.6-14) acknowledges that the existing structure and composition of natural communities are products of conditions that prevailed for decades prior to the current hydrologic regime. For this reason, the Draft PEIR impact analysis of terrestrial biological resources includes a discussion of historical surface water flows where appropriate because of their role in shaping existing conditions, such as the structure and composition of riparian vegetation. This broader view of relevant timescales is the context for the conclusion reached in the Draft PEIR (Vol. 3, Chapter 5, p. 5.4.6-22). Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4) for further discussion of the rationale for considering the effects of hydrologic flow regimes on riparian resources.

Although historical conditions are important for understanding ecological dynamics, analyses under CEQA must concentrate on changes relative to current conditions (see CEQA Guidelines Section 15125). Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4) for additional details regarding this issue.

SI_CNPS-EB1-09 The Draft PEIR provides a project-level analysis of the potential environmental impacts of the proposed changes in water supply sources and system operations under the WSIP. The Draft PEIR presents a summary of the significant water supply and system operations impacts within the Alameda Creek watershed that would occur under each of the CEQA alternatives (see Vol. 4, Chapter 9, Table 9.8, pp. 9-18 and 9-19). As indicated in the table, impacts on fisheries in the Alameda Creek watershed would be similar to those under the proposed program for all of the CEQA alternatives except for the Modified WSIP Alternative, which would result in fewer impacts than the proposed program. With respect to riparian habitat, impacts under all of the CEQA alternatives would be the same as those under the proposed program.

The Draft PEIR provides a program-level evaluation of the potential environmental impacts of constructing and operating each of the regional WSIP facility improvement projects (Vol. 2, Chapter 4) and describes the key regional projects proposed under the WSIP (see Vol. 1, Chapter 3, Table 3.10, pp. 3-39 to 3-56). The more detailed information regarding project facilities, locations, and permits provided in Vol. 5, Appendix C is based on the best information available when the Draft PEIR was prepared, at which time the exact location and alignment of the facility improvements may not have been known. The project description information is presented at a level of detail appropriate to identify the overall magnitude of effects expected from WSIP implementation. Once additional project details and

site-specific information are developed for the individual projects, the project-level environmental review will provide further evaluation of project-specific impacts. Refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2) for additional discussion regarding the level of detail at which the program-level impacts were evaluated for the individual WSIP facility improvement projects.

SI_CNPS-EB1-10 Comment noted. The preparers of the Draft PEIR concur with the commenter's observation about the benefits of coordination and of sharing biological information across various SFPUC activities and projects. The attached 2004 CNPS letter is not directed toward the proposed WSIP or PEIR, but its contents are noted.

SI_CNPS-EB1-11 Consistent with the CEQA definition of growth-inducement impacts and as discussed in the Draft PEIR (Vol. 4, Chapter 7, pp. 7-2 and 7-4), water supply projects are inherently growth inducing. The Draft PEIR compares the wholesale and retail customer-selected projections for 2030 with general plan projections because general plans present the level of growth adopted by the land use planning agencies in the areas receiving SFPUC water and, when considered in context with other local planning efforts (e.g., growth ordinances and amendments adopted subsequent to general plan approval), characterize potential buildout within these jurisdictions.

The commenter's statement that "...together the increase in purchase requests from these four cities [Hayward, Newark, Union City, and Fremont] accounts for a fifth of the total purchase estimates of the SFPUC's Wholesale Service Area" is correct if edited as follows:

...together the ~~increase in~~ total 2030 purchase requests from these four cities account for a fifth of the total purchase estimates of the SFPUC's wholesale service area.

The last two sentences in this comment do not correctly interpret the approach and intent of the PEIR's growth-inducement analysis. While the analysis does compare wholesale and retail customer-selected projections for 2030 with general plan projections (as described in the first paragraph of this response), and with the Association of Bay Area Governments' projections, these comparisons did not involve a formal statistical analysis as may be implied by the term "goodness of fit," and the aim of the analysis was not "to rectify the overall purchase requests from each wholesale customer." The approach to the analysis of growth inducement and secondary effects of growth is summarized in the Draft PEIR (Vol. 4, Chapter 7, pp. 7-4 and 7-5) and presented in more detail in Section 7.3 (Vol. 4, Chapter 7, pp. 7-19 to 7-59).

SI_CNPS-EB1-12 None of the four cities discussed in this comment letter (Hayward, Newark, Union City, and Fremont) currently has a growth ordinance, as this comment suggests.¹ According to city planners who were contacted during preparation of the Draft PEIR (three of the four cities cited in this comment), policies in the respective general plans are intended, in part, to guide and manage growth (Slafter, 2005; Leonard, 2005; Rizk, 2005). This comment correctly states that Hayward has the largest increase in 2030 estimated purchases, in absolute terms. (It is surpassed in terms of percentage increase in purchases by two small water customers; refer to Draft PEIR Table 7.3 in Vol. 4, Chapter 7, p. 7-18.) The Draft PEIR (Vol. 4, Chapter 7, pp. 7-45 to 7-47) explains why the increase in water demand projected for Hayward is considerably greater than the projected growth in population and employment used in the demand model. Part of the increase in demand is associated with Hayward's expectation that new housing developed in the city will have comparatively larger lots than former development and will have more landscaping. (The City of Hayward has indicated that former development was poorly designed, without adequate open space and residential landscaping, and the City is encouraging renovation efforts that include landscaping assistances for homeowners and landscaping in common areas within neighborhoods to improve the overall appearance of the city and the quality of life of its residents.) Some of this new housing may be in hillside areas, as suggested by the commenter; however, the specific examples of recent and planned development provided by the City of Hayward (see the attachment following Comment L_Hayward-03) are multifamily, mixed-use, transit-oriented developments that are not in hillside areas. Other factors contributing to the projected increase in demand include renovation efforts for existing residential accounts (including landscaping in common areas), new industrial uses (Hayward expects to attract high-technology manufacturing industries that would have higher water usage than the current warehousing operations in the city), and an adjustment in unaccounted-for water. For additional information, please refer to Comment L_Hayward-03.

The comment's suggestions for the City of Hayward to reduce future demand (capping or limiting irrigation water use, imposing a strict tier system for water rates, requiring fire-safe landscaping) are acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information on existing and planned conservation in Hayward (and other wholesale and retail customers). In Comment L_Hayward-03, the City states that it

¹ The comment states that none of the four cities has passed a growth ordinance. The City of Union City formerly had a growth management ordinance, which was revoked about 10 years ago (Leonard, 2005). Thus, none currently has a growth ordinance in place, as suggested by this comment.

envisions contemporary residential landscaping based on typically low-water-use plants and shrubs, consistent with its Water Efficient Landscaping Ordinance adopted 15 years ago, which will be updated in accordance with the provisions of Assembly Bill 1881.

- SI_CNPS-EB1-13 This comment states that the Alameda County Water District (ACWD) is in a good position, with assistance from the SFPUC, to institute a coordinated plan for recycling water in the three cities it serves and thus to reduce its dependence on Delta water sources that may be uncertain in the future. As described in the Draft PEIR (Vol. 1, Chapter 3, p. 3-22 and Vol. 5, Appendix E.2, pp. E.2-16 and E.2-17), the SFPUC undertook technical studies to identify recycled water potential in the wholesale and retail service areas. The ACWD currently uses 3.5 mgd of recycled water (refer to Table E.2.5, p. E.2-17), although this recycled water is used for marsh restoration and does not replace potable supplies (RMC, 2004). The ACWD plans to use an additional 1.4 mgd of recycled water in the future (for two future golf courses and some existing end-users), which will offset potable supplies (refer to Table 3.3 or Table 7.2 [Vol. 1, Chapter 3, p. 3-18 or Vol. 4, Chapter 7, p. 7-15]). The SFPUC also undertook a regional study (SFPUC, 2007, Appendix D) to identify any additional recycled water and conservation projects that would be feasible if implemented regionally, including projects that may have been found to be infeasible for individual customers. The results of this study provided the basis for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Vol. 4, Chapter 9, pp. 9-47 to 9-59). As indicated in Table 9.11 (p. 9-50), no additional potentially feasible recycled water projects were identified in the ACWD service area. (Approval of the WSIP would not preclude the ACWD from pursuing recycled water projects in the future; adoption of the Modified WSIP Alternative would establish and fund a program to provide 5 to 10 mgd from recycled water, conservation, and local groundwater projects within the regional wholesale service area.)

Refer also to Comment L_ACWD-01, in which the ACWD describes its water supply management strategies.

- SI_CNPS-EB1-14 The illustration presented in this comment (of an apparent gap between the City of Fremont's general plan and adoption of the Ahwahnee Principles for Resource-Efficient Communities on the one hand, and the City's pursuit of a baseball stadium and development on lands designated and zoned as open space on the other), is acknowledged.

As noted in the Draft PEIR (Vol. 4, Chapter 7, p. 7-2), the SFPUC does not have authority to make land use decisions in its service area or to approve or disapprove development proposals; this is the responsibility of the cities and

counties to which the SFPUC and its wholesale customers provide water. Although general plans may be amended and typically receive periodic updates to reflect new information and revised circumstances within the given jurisdiction, such changes involve a public process, including CEQA review, and are subject to approval by the local body responsible for making land use decisions. Substantial changes can occur to a project—either a development proposal or a general plan revision—from the initial proposal phase to the final project or plan that is approved or adopted, and proposed (unapproved) projects do not necessarily reflect the view of the decision-making body. Therefore, the Draft PEIR growth analysis appropriately references the adopted general plans for information on the *general* land use goals, plans, and policies of the jurisdictions in the service area, as well as the Association of Bay Area Governments’ projections.

SI_CNPS-EB1-15 This comment states that it is impossible to assess the wholesale customers’ individual commitment to water conservation without knowing the rationale for the particular composition of the programs (A, B, or C) or the specific reasons why certain customers chose to embrace or reject any of these programs. The Draft PEIR summarizes the process by which wholesale customers evaluated prospective conservation measures as follows (from Vol. 5, Appendix E.2, p. 12):

The DSS end-use model was used to estimate water savings and evaluate the cost-effectiveness of implementing the 32 measures. Taking into account the cost-benefit analysis and estimated water savings for each measure, as well as service area water characteristics, retail customer behavior patterns, budgetary considerations, and relative ease of implementation, each wholesale customer compiled three packages of conservation measures, referred to as Programs A, B, and C. Water savings resulting from the natural replacement of fixtures under current plumbing codes was assumed to occur with or without any of the three programs. In general, Program A consists of measures that are currently being implemented; Program B consists of the measures in Program A plus additional measures that were considered to be the most readily implemented; and Program C includes the measures in Programs A and B plus all other measures that appeared to be both feasible and cost-effective to implement.

More information can be found in the *SFPUC Wholesale Customer Water Conservation Potential Technical Report* (URS, 2004b); Appendix D of that report (entitled SFPUC Wholesale Customer Conservation Information) presents the results of the conservation measure evaluation for each wholesale customer. Also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

The commenter's opinion (that all Bay Area Water Supply and Conservation Agency members should be required to endorse the Ahwahnee Water Principles of 2005, and that the SFPUC is in a prime position to encourage a more systematic approach to conservation on the part of its customers) is acknowledged.

Note that the Modified WSIP Alternative (Vol. 4, Chapter 9, pp. 9-78 to 9-84) identifies several approaches to expanding conservation, water recycling, and groundwater projects that may not be cost-effective at the local level, but may be more economically viable if developed and funded as regional projects contributing to the overall regional water system. Refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3).

SI_CNPS-EB1-16 This comment contains several incorrect statements about the growth-inducement analysis presented in the Draft PEIR (Vol. 4, Chapter 7). The second sentence in the comment states that "...the PEIR uses locally derived information to buttress its position that the project itself is not growth inducing, that local governments are in good control of their own growth, and that they are appropriately mitigating for the impacts of development." Consistent with the CEQA definition of growth inducement, and as stated in the Draft PEIR (Vol. 4, Chapter 7, pp. 7-2 and 7-4 et seq.), the WSIP and other water supply projects that remove a potential obstacle to growth (lack of a reliable water supply) *are inherently growth inducing*. Regarding local government control of growth, cities and counties have the authority and obligation to conditionally approve or deny development proposals in a manner consistent with their general plans. Pursuant to CEQA Guidelines Section 15126.2(d), the Draft PEIR does not assume that growth is beneficial or detrimental (p. 7-2), but instead focuses on the secondary effects of growth.

The Draft PEIR uses "locally derived information" (180 general plans, general plan revisions, general plan amendments, specific plans, precise plans, updated land use and housing elements, and related CEQA documents (see Vol. 4, Chapter 7, pp. 7-78 to 7-91) and five project-specific EIRs (see Vol. 5, Appendix E.6, p. E.6-4) in several ways: (a) to determine whether the WSIP would support growth levels consistent with, or exceeding, levels identified by local land use planning agencies (i.e., planned versus unplanned growth); (b) to identify the environmental impacts associated with planned growth; (c) to identify mitigation commitments made by local agencies to reduce the environmental impacts of planned growth; and (d) to assess the efficacy of local agency implementation of mitigation strategies adopted for planned growth at the project-specific level.

The majority of growth that the WSIP would support is consistent with growth anticipated in the adopted general plans within the service area; consequently, the EIRs prepared for those general plans provide the appropriate analyses of impacts associated with that growth. The Draft PEIR reviewed those general plan EIRs that could be obtained and summarized the impacts and mitigation measures contained therein in Chapter 7 (Vol. 4, pp. 7-60 to 7-69) and Appendix E.5. The Draft PEIR also reviewed a selection of EIRs of major projects currently being undertaken in the SFPUC service area. The purpose of the review was to assess whether, at least for the small selection of EIRs reviewed, the mitigation measures identified in general plan EIRs were being implemented at the project level, and the Draft PEIR states the limited nature of the review (Vol. 4, Chapter 7, p. 7-71 and Vol. 5, Appendix E.6). As stated in the Draft PEIR, the review indicated that in these instances mitigation measures are being identified to reduce the impacts of growth consistent with measures identified in the general plan EIRs. To the extent that the WSIP would support a level of growth beyond that reflected in the adopted general plans, there could be additional or more severe impacts than those identified in the general plan EIRs. These impacts are discussed in the Draft PEIR (Chapter 7, pp. 7-69 to 7-71).

The comment questions the selection of the One Quarry Road project (one of five projects reviewed to determine whether project-specific EIRs were implementing the mitigation measures identified in the general plan EIRs) as an example because, since voters defeated that development, the commenter assumes the project was not environmentally suitable. The point of the exercise in the Draft PEIR was to compare the project-level impact assessment and mitigation with the city's general plan EIR; the PEIR analysis accomplished this irrespective of the ultimate disposition of the project. Reviewing the number of times that amendments and zoning changes have been made to accommodate development, as suggested in this comment, would not answer the question the PEIR analysis was, in essence, asking: Are the land use planning agencies requiring project-specific mitigation consistent with the mitigation measures adopted as conditions of approving their general plans?

SI_CNPS-EB1-17 This comment, which endorses the findings and recommendations of the Pacific Institute report, is acknowledged. The Pacific Institute's report recommendations are presented as Comments SI_PacInst-12 to SI_PacInst-24 and repeated in Comments SI_PacInst-85 to SI_PacInst-97. The six recommendations included in this comment do not exactly correspond to Pacific Institute recommendations, but verbatim copies of recommendations #1 through #3 were presented in numerous comment letters and are addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14). Regarding

recommendation #4, refer to Section 14.2.2 of that master response, under the heading Outdoor Water Use; regarding recommendation #5, refer to **Response SI_PacInst-24**; regarding recommendation #6, refer to **Response C_Raffa-12**.

- SI_CNPS-EB1-18 The commenter requests that biological surveys be conducted at each WSIP project site as part of the PEIR process, not just during preparation of the subsequent project-level EIRs. The Draft PEIR text excerpt cited by the commenter (Vol. 1, Chapter 3, p. 3-81) refers to SFPUC Construction Measure #8, which will be implemented as part of all SFPUC projects, including the WSIP projects identified in the Draft PEIR. The biological screening surveys required by Measure #8 were not performed as part of the PEIR process because project locations (construction footprints) and designs for most of the WSIP projects had not yet been precisely defined; these surveys will be carried out during project-level CEQA review, as appropriate.
- SFPUC Construction Measure #8 was developed to ensure that some level of biological resource assessment is carried out, even though it is expected that many of the WSIP facility projects would be sited in previously developed areas that are largely devoid of natural habitats. The initial surveys required under this measure do not represent the full biological resource assessment, but rather a screening step designed to confirm the presence or absence of sensitive resources, even in areas where they may not be expected. This requirement is amplified in Draft PEIR Mitigation Measure 4.6-1a, Wetlands Assessment (Vol. 4, Chapter 6, p. 6-11), which states that a qualified wetland scientist will conduct a site visit to determine whether wetlands are present and could be affected by a project, and, if wetlands could be affected, that a wetland delineation will be carried out. The biological screening survey required by SFPUC Construction Measure #8 will identify any sensitive habitats and heritage trees and will determine the potential for key special-status species or other species of concern to be present at the site. Mitigation Measures 4.6-2, Habitat Restoration/Tree Replacement, and 4.6-3a, Protection Measures During Construction for Key Special-Status Species and Other Species of Concern (Vol. 4, Chapter 6, pp. 6-12 and 6-13) call for avoidance, protection, minimization, restoration, and compensation with respect to impacts on these resources, including preconstruction surveys at an appropriate time of year as well as implementation of the applicable standard mitigation measures listed in Mitigation Measure 4.6-3b, Standard Mitigation Measures for Specific Plants and Animals (Vol. 4, Chapter 6, p. 6-13).
- The commenter advises better coordination of mitigation efforts as well incorporation of mitigation measures into the design of the WSIP as a whole. This comment identifies the additive effect of multiple projects in the same

area or on species affected by several projects. These effects are identified as the “Multi-regional Collective Impacts” and the “Localized Collective Impacts” of the WSIP, and are discussed under Impact 4.16-4 (Vol. 2, Chapter 4, pp. 4.16-16 to 4.16-19). Implementation of Mitigation Measures 4.16-4a, Bioregional Habitat Restoration Measures, and 4.16-4b, Coordination of Construction Staging and Access (Vol. 4, Chapter 6, pp. 6-13 to 6-21), would reduce identified multi-regional and localized collective impacts to a less-than-significant level, except in the Sunol Valley Region. The Draft PEIR (Vol. 2, Chapter 4, p. 4.16-18) identifies the collective impact of multiple WSIP project construction activities on sensitive biological resources in the Sunol Valley as potentially significant and unavoidable because of the number of WSIP projects to be implemented in this region, and the extent of overlap in terms of construction activity and timing. It is possible, however, that the project-level CEQA review for each project in this region will determine that this potentially significant collective impact can be mitigated to a less-than-significant level based on more detailed information about the project site locations, schedules, and construction methods. Refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4) for additional discussion regarding the level of detail of biological information presented in the PEIR.

SI_CNPS-EB1-19 The commenter requests that focused floristic surveys be conducted several times during the growing season, preferably over several years, to reliably determine the presence of special-status plants. The screening survey required at all WSIP project sites under SFPUC Construction Measure #8 will determine the potential for special-status species to be present based on the presence of suitable habitats. Due to the project schedules, the initial assessments might not be carried out at an optimum time of year for all biological resources. However, a qualified biologist who is familiar with the habitat requirements of special-status plants known to occur in the region would be able to determine whether further floristic surveys at appropriate times of the year should be carried out as part of the project-level CEQA review. Also refer to **Response SI_CNPS-EB1-18** for discussion of required project-level biological surveys.

SI_CNPS-EB1-20 Special-status plants with the potential to occur in the WSIP area are discussed at a program level for individual WSIP facility improvement projects, and at a project level for the proposed changes in water supply sources and regional water system operations. As discussed in the Draft PEIR (Vol. 2, Chapter 4, p. 4.6-1), “key special-status species” were analyzed at the program level only; these were defined as species listed under either the Federal Endangered Species Act or the California Endangered Species Act. Sensitive habitats were also discussed on the basis that most

other plant species of concern are found in sensitive habitats, such as vernal pools, seeps and springs, serpentine grasslands, and so forth. It was not practical to analyze the full suite of species in the Draft PEIR because of the large number of species involved throughout the program area and the lack of project definition at this time. When each WSIP project is analyzed at the project level (including those within the Alameda Creek watershed and the Bay Division Region), the evaluation will include a detailed review of all species relevant to specific project locations, which could include *all* CNPS List 1A and 1B species as well as CNPS List 2 plants (Vol. 3, Chapter 5, Section 5.4.6).

Although Dianne Lake's database of locally rare, significant, and unusual plant species in the East Bay was not cited, all of the CEQA-required plants appearing on her database were considered in the PEIR analysis. The commenter is correct that CEQA allows for the lead agency to recognize species of local concern, and impacts on unusual and significant plants of the East Bay may be discussed, if applicable, in the project-level EIRs for the individual WSIP projects.

With respect to the Alameda County moratorium on development along creeks in unincorporated areas of the county, all WSIP projects would be designed to avoid and minimize development on and near creeks to the extent feasible; however, Alameda County restrictions do not apply to the SFPUC.

- SI_CNPS-EB1-21 For the program-level analysis, the extent of affected sensitive natural communities could not be determined because individual project descriptions and construction footprints had not been defined. However, for all WSIP projects located near sensitive natural communities and that could cause impacts on these communities, the Draft PEIR determined that such impacts would be potentially significant (Vol. 2, Chapter 4, pp. 4.6-43 to 4.6-59). Once the project descriptions and construction footprints have been defined during the project-level analysis, the significance determination could change.
- SI_CNPS-EB1-22 The commenter is correct that impacts on special-status plants are not fully analyzed at the program level. Because the project descriptions and construction footprints are still in the development stage for most of the WSIP projects, the impacts could not be fully analyzed, even if protocol-level survey data were available. However, the Draft PEIR is conservative in its determination that impacts on special-status plants would be potentially significant for all WSIP projects, except for the HTWTP Long-Term Improvements at the Harry Tracy Water Treatment Plant (PN-3), which would be located entirely on graded surfaces that are maintained free of

vegetation, and three projects in the San Francisco Region (San Andreas Pipeline No. 3 Installation, SF-1; Groundwater Projects, SF-2; and Recycled Water Projects, SF-3), which would be located entirely in urbanized areas. In any event, the SFPUC would carry out reconnaissance-level surveys for all WSIP projects, and protocol-level botanical surveys for those projects where impacts on any natural habitat or potential habitat for special-status species could occur.

SI_CNPS-EB1-23 The significance criteria adopted for the Draft PEIR biological resources analysis (Vol. 2, Chapter 4, pp. 4.6-37 and 4.6-38) are fully described and consistent with CEQA guidelines and precedent. It is true that many of these rely on professional judgment by qualified biologists. The three components of determining the extent of impact (duration, sensitivity, and susceptibility) are cited by the commenter accurately, and form the basis of a defensible significance determination. However, to clarify an error in the comment letter, the San Francisco Planning Department is responsible for CEQA compliance for the City and County of San Francisco (not the SFPUC) and is responsible for determining appropriate significance criteria.

SI_CNPS-EB1-24 Quantified baseline data, detailed mapping of sensitive natural communities, and floristic surveys at appropriate times of the year will be carried out as deemed appropriate during the project-level analyses for all WSIP projects. All plant species that must be addressed under CEQA (CNPS List 1 and 2) will be surveyed and mapped according to standard CNPS protocols. Developing this level of information at the program level is infeasible for the WSIP facility improvement projects because many details of the project description have not been defined, such as the location of accessways, borrow and fill disposal sites, and staging areas. As a result, detailed surveys of the project footprints cannot be carried out or impacts assessed. Please also refer to **Section 14.4, Master Response** (Vol. 7, Chapter 14, Section 14.4.4).

For analysis of WSIP water supply and system operations, the Draft PEIR provided appropriate level of detail of analysis of biological resources based on modeled estimates of changes in hydrological conditions. Please also refer to **Section 14.4, Master Response** (Vol. 7, Chapter 14, Section 14.4.4) and **Response SI_Caltrout-01** for additional response.

SI_CNPS-EB1-25 As noted by the commenter, the CEQA Guidelines require an analysis of impacts based on existing conditions. However, as stated in the Draft PEIR (Vol. 3, Chapter 5, p. 5.4.6-14), "...riparian structure today is the result of physical responses that have prevailed over the lifetime of the plants.... Therefore, the condition, distribution, and abundance of short-lived or young plants in the Alameda Creek watershed reflect existing stream flow

conditions, and those of moderately aged trees and shrubs reflect a combination of both older (pre-2002) and existing flow conditions. The impact analysis uses the existing conditions baseline, but the history of flows in Alameda Creek is discussed in the impact analysis where appropriate because of the role of historical flow in shaping existing resources such as the riparian vegetation.” In this way, the Draft PEIR preparers endeavored to represent impacts more realistically rather than minimizing them by comparing them *only* with existing conditions. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4) for additional discussion.

The Draft PEIR discussion of impacts on riparian vegetation along Alameda Creek comparing existing “Calaveras Down” conditions versus pre-2002 “Calaveras Up” conditions addresses only willow and mixed riparian habitat along the creek channel (not sycamore alluvial woodland, which is formed and sustained only under very high periodic flows such as those found in unimpeded streams). The distribution of willow and mixed riparian habitats is primarily the result of prevailing flows over several decades; in other words, the operational conditions described as “Calaveras Up,” which maximized diversions at the Alameda Creek Diversion Dam prior to the 2001 Division of Safety of Dams (DSOD) restriction on Calaveras Reservoir operations. The CEQA baseline for the WSIP (i.e., Calaveras Down) reflects reduced diversions and therefore increased flows in Alameda Creek below the diversion dam. Although substantially lower than existing flows under the Calaveras Down scenario, the proposed WSIP flows would resemble prior Calaveras Up conditions. As a result, the PEIR concluded that the impact on these riparian habitats would be less than significant.

Consistent with the CEQA Guidelines, the Draft PEIR uses the conditions in 2005 to represent the baseline conditions for the analysis of impacts of WSIP water supply and system operations on Alameda Creek. This baseline condition, referred to as Calaveras Down due to the DSOD restriction on Calaveras Dam, provides for a worst-case environmental analysis since it represents the greatest change in stream flow conditions from those that would occur under the WSIP. As described in the Draft PEIR (Vol. 3, Chapter 5, Section 5.1), the impacts of water supply and system operations are analyzed using the Hetch Hetchy/Local Simulation Model, which uses the existing conditions (i.e., the SFPUC operating conditions and facilities restrictions in 2005) and predicts the reservoir spills and releases (i.e., stream flow conditions downstream from SFPUC reservoirs) over an 82-year record of historical hydrology, and not the actual “brief” period of time during which the Calaveras Reservoir has been operated under restricted conditions.

- SI_CNPS-EB1-26 With regard to the Draft PEIR conclusion that the impact on sycamore woodlands would be less than significant, the flow regime in the Alameda watershed under the WSIP would provide higher year-round flows in Alameda Creek because of fishery releases. It could thus facilitate the development of a different natural riparian community in a narrow band along the low-flow channel. Any of the other natural riparian communities that could form, such as willow scrub or mixed riparian scrub or forest, are also considered sensitive natural communities by the California Natural Diversity Database. Thus, one sensitive natural community could be replaced by another sensitive natural community. More importantly, in this instance the extent of such replacement would be limited to the edge of the low-flow channel and would most likely be very narrow. Although the sycamore alluvial woodland in this section of Alameda Creek is extensive, the sycamore trees themselves are very widely spaced. As a result, the number of existing individual sycamores experiencing any change in available groundwater would be low, and the increase in available water would be tolerated by them. Moreover, established, mature sycamores are expected to compete successfully with other riparian species that would grow as a result of increased flows. It is likely that few or no sycamore trees would be lost as a result of the modified flow regime proposed under the WSIP, and therefore the change in the structure and effective extent of sycamore alluvial woodland would be very slight. As a result, the Draft PEIR (Vol. 3, Chapter 5, p. 5.4.8-22) concluded that this potential impact would be less than significant. It is likely that this subject will be revisited, with more quantitative data, in the EIR for the Calaveras Dam Replacement project (SV-2).
- SI_CNPS-EB1-27 The commenter is correct that the adequacy of the mitigation, such as the Habitat Reserve Program (HRP), for the WSIP projects cannot be assessed in advance of a more detailed description of the exact nature of the biological resources and the presumed impacts upon them. The Draft PEIR does not attempt to propose the amount of mitigation required for the WSIP projects, since details on the magnitude, location, and type of impacts cannot be defined at the program level. Instead, the type and extent of adequate and appropriate mitigation would be determined at the project EIR stage. The HRP would not provide all mitigation for project impacts; avoidance, minimization, and restoration would also take place on the project site. Offsite compensatory mitigation could be provided by a program such as the HRP, and the type and amount of such mitigation would be determined by the resource agencies. If the HRP does not provide sufficient or appropriate mitigation, then other mitigations would be required. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4).

SI_CNPS-EB1-28 This comment, which states that the East Bay Chapter of the CNPS does not endorse any of the CEQA alternatives, is acknowledged. It is also acknowledged that this statement contradicts Comment SI_CNPS-EB2-01 by representatives of the same organization. This comment (SI_CNPS-EB1-28) states the opinion that the analysis of water supply and demand is flawed. Please refer to **Responses SI_CNPS-EB1-11 through SI_CNPS-EB1-14 and Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14) for a detailed discussion of why the water supply and demand analysis used in the Draft PEIR is appropriate and adequate for this planning level of study.

SI_CNPS-EB1-29 The comment is noted. The San Francisco Planning Department has determined that recirculation of the Draft PEIR is not warranted, consistent with CEQA guidelines.

SI_CNPS-EB1-30 This comment is comprised of a CNPS letter addressed to the SFPUC, dated July 19, 2004, which comments on the special-status species proposed for coverage in the Alameda Watershed Habitat Conservation Plan. The PEIR preparers appreciate the submittal, but the Habitat Conservation Plan process operates under different guidelines and for different purposes than the WSIP PEIR, focusing on species currently or anticipated to be protected under the Federal Endangered Species Act. The letter restates many of the points made in the body of the CNPS letter; see **Responses SI_CNPS-EB1-05, SI_CNPS-EB1-08, and SI_CNPS-EB1-18 through SI_CNPS-EB1-27** for the specific responses.

This letter notes the recent observation of several CNPS List 1B plants from the Alameda Creek watershed, mostly on East Bay Regional Park District lands. It also notes the existence of 162 unusual and significant plant species in the Alameda Creek watershed. As noted in the Draft PEIR (Vol. 2, Chapter 4, p. 4.6-1), the impact analysis addresses, at a programmatic level of detail, sensitive natural communities and “key” special-status species listed by the U.S. Fish and Wildlife Service or California Department of Fish and Game. The operational analysis presented in Chapter 5 in the Draft PEIR addresses, at a project level of detail, species recognized as rare and endangered (CNPS List 1B or 2), as required under CEQA. The project-specific analyses of the individual WSIP projects may present more detailed information, as deemed appropriate, on unusual and significant plants in the East Bay.

SI_CNPS-EB1-31 This comment is comprised of a CNPS letter addressed to the Alameda County Board of Supervisors, dated May 4, 2006. In this letter, the East Bay Chapter of the CNPS commented on the proposed moratorium on creek development in the unincorporated areas of Alameda County. The letter notes the high ecological value of Alameda Creek, especially upstream of the gravel quarries

near Interstate 680, and a list of rare and unusual plants of Alameda Creek is attached. Receipt of the letter and attachment is acknowledged. The actions of Alameda County are not necessarily applicable to the PEIR analysis, but please note that the rare and endangered (CNPS List 1 and 2) plants and sensitive natural communities referenced in the letter are discussed in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.4.6-1 to 5.4.6-12).

California Native Plant Society, East Bay Chapter, Lech Naumovich, 09/18/07

[See Public Hearing Transcript, Fremont, pp. 25–28]

SI_CNPS-EB2-01 This comment, which expresses the support of the California Native Plant Society, East Bay Chapter, for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative, is acknowledged. Note that this contradicts Comment SI_CNPS-EB1-28 by representatives of the same organization, who indicated that the California Native Plant Society, East Bay Chapter does not endorse any of the alternatives in the Draft PEIR.

SI_CNPS-EB2-02 This comment, which expresses an opinion in favor of the seismic improvements but against any additional Tuolumne River diversions, is acknowledged.

SI_CNPS-EB2-03 This commenter does not think it necessary to divert any water from Alameda Creek, and that WSIP implementation will undermine species and habitat restoration efforts by other organizations.

The Draft PEIR (Vol. 1, Sections 3.3 and 3.6, and Vol. 3, Section 5.4) discusses the purpose of and need for WSIP implementation and the need for diversions from Alameda Creek to meet current and future water supply and system reliability objectives. As shown in Figure 2.4 of the Draft PEIR (Vol. 1, Chapter 2, p. 2-18), the Alameda Creek watershed currently provides about 13 percent of the water supply to the regional system and, importantly, is the major source of local water supplies to the regional system. Implementation of the WSIP would result in increased diversions from Alameda Creek compared to the existing condition, but the proposed level of diversions would be similar to the historical level of diversions that took place for about 70 years prior to the Division of Safety of Dams operating restriction placed on Calaveras Dam in 2001. As described in the Draft PEIR (Vol. 1, Chapter 2, p. 2-10), the SFPUC considers the current reduced storage level in Calaveras Dam and the associated reduced diversion level to be an impaired operating mode that puts the regional system at risk of being unable to adequately meet existing customer water demand in the event of an emergency or a prolonged drought. The restoration of storage capacity in Calaveras Reservoir and the associated increased diversions from Alameda Creek are needed to meet existing customer demand during a drought or other emergency condition and to provide both delivery and seismic reliability; it is also needed to maximize use of local water supplies.

As described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.2-24 and 5.2-25), the SFPUC's adopted Water Enterprise Environmental Stewardship Policy establishes a long-term management direction for CCSF-owned lands and natural resources affected by operation of the SFPUC regional water system, including lands within the Alameda Creek watershed. It states "It is the policy of the SFPUC to operate the regional water system in a manner that protects and restores native fish and wildlife downstream of SFPUC dams and water diversions, within SFPUC reservoirs, and on SFPUC watershed lands." The SFPUC actively monitors the health of the terrestrial and aquatic habitats under CCSF ownership or otherwise affected by SFPUC operations in order to continually improve ecosystem health.

In addition, the SFPUC has entered into partnerships with various organizations (see Draft PEIR, Vol. 3, Chapter 5, p. 5.2-20). One of these partnerships, the Alameda Creek Fisheries Restoration Workgroup (ACFRW), is a multi-agency stakeholder group formed to pursue the restoration of steelhead to Alameda Creek. The ACFRW is composed of numerous community and citizens' groups, state and federal resource agencies, and local water management and flood control agencies, including the SFPUC. The SFPUC is also working with the U.S. Fish and Wildlife Service and National Marine Fisheries Service and is in the process of developing a Habitat Conservation Plan for the Alameda Creek watershed. Further discussion of these partnerships and restoration efforts is presented in **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14), which includes a description of proposed modifications to the Calaveras Dam Replacement project (SV-2) to include protective measures for steelhead.

- SI_CNPS-EB2-04 The information provided by the commenter (regarding water recycling practices in other parts of the world) is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2), for a detailed discussion of the water recycling assumptions used in developing the demand projections.
- SI_CNPS-EB2-05 Please refer to **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14, Section 14.3.2), regarding future water transfer agreements with the Turlock Irrigation District and the Modesto Irrigation District for supplemental Tuolumne River water as part of the proposed program.
- SI_CNPS-EB2-06 Please see **Response SI_CNPS-EB1-18**.

California Native Plant Society, Kevin Bryant, President, Santa Clara Valley Chapter, 10/01/07

SI_CNPS-SCV1-01 The commenter indicates that the public cannot determine the validity of the impact analysis and mitigation measures due to the Draft PEIR's lack of detail as well as reliance on project EIRs that are currently unavailable to the public. For discussion of the issues raised by this comment, please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2). This master response provides information on the appropriate level of detail of an impact analysis at the program level versus the project level. The Draft PEIR (Vol. 2, Chapter 4, pp. 4.16-1 to 4.16-38) also evaluates the multi-regional and localized combined or collective impacts associated with implementation of the WSIP (all WSIP facility projects combined), and provides mitigation measures (all those numbered 4.16-x) that address collective impacts (Vol. 4, Chapter 6, pp. 6-8, 6-13, 6-32, 6-38, and 6-42), including those impacts that cannot be effectively analyzed or mitigated through the CEQA process for projects individually.

This comment also expresses that the PEIR does not provide sufficient detail and analysis to support its conclusions regarding the future needs of the regional water system. For a discussion of this issue, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).

This comment also notes that of the 22 WSIP facility improvement projects, the SFPUC has published Notices of Preparation and EIRs for nine projects, and that considerable information is therefore unavailable to the public regarding impact and mitigation. The commenter requests that the SFPUC publish environmental documents for all 22 projects in a timely fashion so that they can be analyzed together in a coherent manner. As shown in Chapter 4 of the Draft PEIR, these projects are analyzed at a programmatic level of detail. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2) for discussion regarding the intent of the programmatic analysis versus the project-level analysis. The commenter also requests that the SFPUC provide local work sessions in the geographical areas affected by each project. Once the WSIP facility improvement projects begin, public scoping meetings and informational meetings will be held as necessary.

SI_CNPS-SCV1-02 This comment expressing concern about “water supply needs and measures to meet them” is acknowledged. Comment SI_CNPS-SCV1-03 details these concerns; refer to **Response SI_CNPS-SCV1-03**.

SI_CNPS-SCV1-03 Regarding the assertions that adequate consideration has not been given to conservation measures, and that the Draft PEIR substantially overestimates water demand in Santa Clara County because of faulty assumptions and flawed data sources, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

The basis for the assertion regarding invalid sampling methods is not specified and is thus unclear. The methodology used to develop the demand estimates and to identify conservation and water recycling potential is described in Draft PEIR Chapter 3 (Vol. 1, pp. 3-16 to 3-22) and in more detail in Appendix E.2 (Vol. 5); as the descriptions indicate, sampling was not an integral part of the process, but actual consumption among all billing categories was (see the paragraph below).

The “total population of users,” which the comment states is biased, apparently refers to the residential and nonresidential users within the service area. The comment provides no evidence to support or explain this general assertion, and no evidence of bias is apparent to the PEIR authors. As described in the Draft PEIR (Vol. 1, Chapter 3, p. 3-20), actual billing data along with published information on demographics and housing stocks, from such sources as the California Department of Finance and U.S. Census Bureau, were used to develop base-year water usage by end-use. Once base-year usage was established, future water demand was projected by using published population and employment projections to develop growth rates for residential and nonresidential water accounts, respectively. Each wholesale customer selected the published population projection source to be used for its service area; since the Association of Bay Area Governments (ABAG) *Projections 2002* was the current source of employment projections, it was used to develop the nonresidential demand estimates. Assuming the assertion of bias refers to the use of ABAG’s *Projections 2002*, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

The Pacific Institute’s evaluation of the demand estimates prepared for the WSIP, which this comment endorses, was submitted as Comment Letter SI_PacInst; please refer to the responses to that submittal. The commenter’s approval of the Loma Prieta chapter analysis is acknowledged.

The comment provides no evidence to support the assertion that implementation of the WSIP would have substantial growth-inducing effects on Santa Clara County that are “in no way covered by the proposed mitigations.” As explained in the Draft PEIR (Vol. 4, Chapter 7, pp. 7-59 to 7-77), measures to mitigate the indirect effects of planned growth have been identified in the EIRs prepared for the adopted plans of the jurisdictions in the areas served, including those in Santa Clara County. In approving a plan that could cause environmental impacts determined to be unavoidable, the decision-making body must indicate the reasons for approving the plan despite unavoidable impacts in a “statement of overriding considerations.” Draft PEIR Table 7.12 (Vol. 4, Chapter 7, p. 7-68) presents a summary of overriding considerations frequently cited by agencies. As shown in Draft PEIR Table E.5.1 (Vol. 5, Appendix E.5, pp. E.5-3 to E.5-18), the EIRs for the general or specific plans of several jurisdictions within Santa Clara County identified impacts on open space and public services, as this comment indicates, and provided measures to reduce those impacts.

SI_CNPS-SCV1-04 The commenter is concerned that the mitigations to compensate for biological resources impacts through the Habitat Reserve Program (HRP) would be implemented in advance of actual project-level impact analyses, and that there is insufficient site-specific data from which sound decisions can be made. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4, under the heading Habitat Reserve Program).

The commenter is correct that the quantity and type of compensatory action cannot be determined until the impacts of a proposed project have been analyzed at a project level of detail, as will occur in the project-specific CEQA documents prepared for the individual WSIP projects. The HRP is being designed to create habitat enhancements that would be applied as appropriate to WSIP project impacts, and while this is the preferred mitigation approach for impacts on biological resources associated with the WSIP projects, it is not the only option. As described in the Draft PEIR (Vol. 4, Chapter 6, p. 6-11), the HRP is presented as one option for implementing offsite habitat compensation for the WSIP projects; the SFPUC will compensate for affected sensitive habitats and will comply with applicable environmental regulations addressing sensitive habitats and species for each WSIP project, either on a project-by-project basis or through the HRP. Therefore, at a programmatic level of analysis, the Draft PEIR mitigation measures provide adequate guidance for the project-level impact analyses and mitigation development. Site-specific information on habitat compensation will be addressed as appropriate during project-level CEQA review. The level of detail at which the impacts

of the WSIP facility projects are evaluated and mitigation specified in the Draft PEIR is consistent with CEQA Guidelines Section 15168.

The project description for the HRP states that no habitat enhancements applicable to WSIP project impacts have been or would be applied as mitigation for other SFPUC projects, and that these enhancements would be separate from any compensation developed for the watershed's habitat conservation plans, the Watershed and Environmental Improvement Program, or other regulatory or permitting purposes. The commenter's description of the HRP is noted, and, as stated above, the application of the HRP as mitigation to individual WSIP projects will be determined as part of project-level CEQA review. Also, please refer to **Response SI_CNPS-EB1-18** for discussion of required project-level biological surveys, impact analyses, and mitigation requirements. Refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2) for discussion regarding the intent of the programmatic impact analysis.

- SI_CNPS-SCV1-05 This comment opposes additional Tuolumne River diversions and states that the impacts of the WSIP on the Tuolumne River cannot be adequately evaluated without additional data collection and analysis and the preparation of a comprehensive study of the watershed. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. Regarding the commenter's statement that additional studies are needed to evaluate the impacts of the WSIP on the Tuolumne River, refer to **Response SI_CRS-07**.
- SI_CNPS-SCV1-06 This comment summarizes more detailed comments presented in Comments SI_CNPS-SCV1-01 through SI_CNPS-SCV1-05 and in Comments SI_CNPS-SCV-07 through SI_CNPS-SCV-16; refer to **Responses SI_CNPS-SCV1-01 through SI_CNPS-SCV1-05 and Responses SI_CNPS-SCV-07 through SI_CNPS-SCV-16**. Also refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Sections 14.4.2 and 14.4.4) for additional discussion regarding the intent of the programmatic impact analysis and the level of detail of biological information presented in the PEIR.
- SI_CNPS-SCV1-07 The commenter identifies specific examples of concern, including the Calaveras Dam Replacement project (SV-2); the comment states that this project is included in the PEIR and HRP, but that without specifics on the extensive excavation related to this project, its proposed advance mitigation will compound cumulative impacts on vegetative habitat. Please

refer to **Responses SI_CNPS-SCV1-01** and **SI_CNPS-SCV1-04** and to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Sections 14.4.2 and 14.4.4), regarding program-level versus project-level analyses, the Draft PEIR's consideration of collective impacts from all WSIP projects, and concerns regarding advance mitigation through the HRP. Also refer to **Response SI_CNPS-EB1-18** for discussion of required project-level biological surveys, impact analyses, and mitigation requirements. In addition, the Draft PEIR (Vol. 2, Chapter 4, pp. 4.17-1 to 4.17-64) identifies cumulative impacts associated with the WSIP in combination with other approved and proposed development in the region.

- SI_CNPS-SCV1-08 In regard to potential effects of the WSIP on federal-threatened marbled murrelet, nesting habitat for this species consists of old-growth conifer forest (such as Douglas-fir forest), which is not considered riparian vegetation and is unaffected by stream flows in Pilarcitos Creek.
- SI_CNPS-SCV1-09 This comment points out a typographical error in the legend for Figure 5.7-4 (Vol. 3, Chapter 5, p. 5.7-71). The legend is revised as follows:
- PP-1a Peninsula Watershed Habitat Conservation Plan (sub-project of ~~Alameda~~ Peninsula WMP)
- SI_CNPS-SCV1-10 This comment, which states that the water demand projections used biased data sources and an invalid sampling of the total population of users and overstated future water needs, restates comments made in Comment SI_CNPS-SCV-03; please refer to **Response SI_CNPS-SCV1-03**.
- SI_CNPS-SCV1-11 This comment, which states that Draft PEIR Figure S.3 (Vol. 1, Summary, p. S-5) illustrates the difference in water usage by the SFPUC retail and wholesale customers, is acknowledged. Please refer to **Responses SI_PacInst-54** through **SI_PacInst-56** and to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand).
- SI_CNPS-SCV1-12 This comment states that the need for additional water is not substantiated by the requests of several wholesale customers that are located in areas where recycled water is readily available for anticipated shoreline development. As described in the Draft PEIR, the SFPUC conducted a study to identify the potential for using recycled water within the wholesale service area (RMC, 2004). Table E.2.5 in the Draft PEIR (Vol. 5, Appendix E.2, p. E.2-17) shows the potential recycled water projects at various stages of planning, and with various degrees of certainty, in the

service area. Some of the projects would serve jurisdictions cited in this comment, although not all of the recycled water produced would replace potable supplies. In addition, as described in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-51), the SFPUC, in cooperation with its wholesale customers and the Bay Area Water Supply and Conservation Agency, undertook a study to assess the potential for additional conservation and recycled water projects, including potential regional projects, that were not already considered to be implemented locally by 2030 as part of the WSIP purchase estimates. The results of this study provided the basis for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative evaluated in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-59) as well as an element of the Modified WSIP Alternative (Vol. 4, Chapter 9, pp. 9-78 to 9-84). However, the study identified no additional opportunities for recycled water use in the jurisdictions cited in this comment.

Regarding substantiation of the projected increases in demand, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

SI_CNPS-SCV1-13 This comment, which states that conservation capabilities exist for two wholesale customers requesting large increases (Stanford University and Purissima Hills Water District), is acknowledged. Tables 3.3 and 7.2 of the Draft PEIR (Vol. 1, Chapter 3, p. 3-18 and Vol. 4, Chapter 7, p. 7-15, respectively) show the projected conservation savings from measures to which these customers have committed. These measures are shown in Table 14.2-4 of **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

Please refer to **Response L_PHWD1-09** for a correction of the town's population.

SI_CNPS-SCV1-14 Consistent with CEQA Guidelines Section 15126, the Draft PEIR presents an analysis of all phases of the WSIP. Chapter 4 (Vol. 2) includes a program-level analysis of the construction and operational phases of the proposed facility improvement projects, and Chapter 5 (Vol. 3) includes a project-level analysis of the proposed water supply and system operations. Chapter 6 (Vol. 4) describes the mitigation measures identified in Chapters 4 and 5 that would (in most cases) reduce the potentially significant impacts to a less-than-significant level; however, in a few cases, impacts were identified as significant and unavoidable even with the implementation of mitigation measures.

- SI_CNPS-SCV1-15 Consistent with CEQA Guidelines Section 15130, the Draft PEIR analyzed the cumulative impacts of the WSIP (see Vol. 2, Chapter 4, Section 4.17 and Vol. 3, Chapter 5, Section 5.7).

The CEQA process consists of issuing a draft EIR and final EIR for public review, followed by certification of the final EIR by the CEQA lead agency. If a public agency, such as the SFPUC, decides to approve a project for which an EIR has been certified and which identifies one or more significant environmental effects, it must make “findings” for each of those significant effects, accompanied by a brief explanation of the rationale for each finding (CEQA Guidelines Section 15091). For the WSIP PEIR, the SFPUC will issue findings following certification of the Final PEIR and if/when it decides to approve or modify the proposed program.

According to CEQA Guidelines Section 15152, tiering refers to applying the general analysis contained in a broader EIR to subsequent EIRs and negative declarations on narrower projects. In the context of the WSIP PEIR, tiering refers to use of the analysis presented in the PEIR in subsequent project-level environmental review of the individual WSIP projects.

- SI_CNPS-SCV1-16 As described in the Draft PEIR (Vol. 1, Chapter 2, p. 2-36), the City and County of San Francisco has sufficient water rights for existing operations and facilities as well as for proposed operations and facilities under the WSIP. Proposed diversions, it should be noted, would be 27 mgd, not 25 mgd. Section 5.2 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.2-1 to 5.2-29) presents plans and policies relevant to the SFPUC regional water system and describes program consistency with the applicable, adopted land use and resource plans and policies; this section also includes plans relevant to the Tuolumne and San Joaquin Rivers. The Draft PEIR analyzes the potential effects of the WSIP on fishery and other biological resources associated with the Tuolumne River, including wildlife species and resident and migratory fish, in Sections 5.3.6 and 5.3.7 (Vol. 3, Chapter 5).

California Native Plant Society, Santa Clara Valley Chapter, Libby Lucas, Conservation, 10/15/07

SI_CNPS-SCV2-01 In 2002, the California Department of Water Resources, Division of Safety of Dams (DSOD) imposed interim restrictions on Calaveras Dam operations with the caveat that the SFPUC continue to pursue an aggressive schedule for the remediation of Calaveras Dam. The SFPUC has rejected the concept of an enlarged Calaveras Reservoir because of uncertainty about the ability to obtain the necessary water rights and environmental permits within the timeframe needed to satisfy DSOD requirements. As stated in the Draft PEIR (Vol. 4, Chapter 9, p. 9-118), the Calaveras Dam Replacement project (SV-2) includes a base design that would technically allow the dam to be raised in the future, but the currently proposed height of the reservoir would not accommodate reservoir storage beyond its historical capacity. In the future, any discretionary action by the SFPUC to raise the height of the dam and increase storage capacity would be subject to CEQA review requirements (including public disclosure), and water rights and environmental issues would need to be resolved at that time. The comment also asks why there are no sediment basins at Calaveras Reservoir. The reservoir is not expected to have the kind of sediment issues that warrant sediment basins, which are not usually suitable as mitigation due to the periodic maintenance requirements.

The commenter requests clarification on the design capacity of the Calaveras Dam Replacement project (SV-2) and mitigation related to wetlands, streams, and habitat. The project-level EIR for this project will present detailed project design information, provide a more detailed impact assessment, and refine PEIR mitigation measures to specifically address this project. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2) for detailed discussion of the issues raised by this comment.

SI_CNPS-SCV2-02 Please refer to **Response SI_CNPS-SCV1-08**. Within the Pilarcitos Creek watershed, suitable nesting habitat for the marbled murrelet is located within upland forest habitats that are unaffected by flows in Pilarcitos Creek.

The Draft PEIR (Vol. 3, Chapter 5, pp. 5.5.1-5 to 5.5.1-12) describes the SFPUC's operations in Pilarcitos Reservoir and along Pilarcitos Creek. Impact 5.5.1-2 (Vol. 3, Chapter 5, pp. 5.5.1-19 to 5.5.1-22) describes the effects of WSIP implementation on flow along Pilarcitos Creek based on a review of historical data and SFPUC reservoir operating practices (see the discussion of model limitations in Section 5.1, pp. 5.1-14 to 5.1-17); the

impact was determined to be less than significant with respect to stream flow changes in Pilarcitos Creek below both Pilarcitos and Stone Dams. Impact 5.5.4-1 (Vol. 3, Chapter 5, p. 5.5.4-3) describes the effects of changes in stream flow in Pilarcitos Creek on groundwater levels and water quality, which were determined to be less than significant because the WSIP would have very little effect on flow in Pilarcitos Creek below Stone Dam. Because inflow to Pilarcitos Creek below Stone Dam is the primary source of groundwater recharge, minor changes in upstream flow associated with the WSIP would not be expected to affect the groundwater and would not cause seawater intrusion during droughts.

The last part of this comment, asking whether the transfer of water from Crystal Springs Reservoir to Pilarcitos Reservoir would affect critical habitat, native grasslands, wetlands, or special-status species, is discussed in Impact 5.5.6-1 (Vol. 3, Chapter 5, p. 5.5.6-14 to 5.5.6-17). Impacts on these resources were found to be potentially significant, but implementation of Mitigation Measure 5.5.6-1a, Adaptive Management of Freshwater Marsh and Wetlands, Mitigation Measure 5.5.6-1b, Compensation for Impacts on Terrestrial Biological Resources, and Mitigation Measure 5.5.6-1c, Compensation for Serpentine Seep-Related Special-Status Plants (Vol. 4, Chapter 6, pp. 6-57 and 6-58), would reduce these impacts to less-than-significant levels.

SI_CNPS-SCV2-03 Please refer to **Response SI_CNPS-SCV1-09**.

SI_CNPS-SCV2-04 This comment regarding the salvage of *Lessingia arachnoidea* is noted. With the appropriate permits and approvals, this and other listed plants could be salvaged from areas where the populations would otherwise be lost. The commenter correctly states that much of the Peninsula is a state game refuge, and although this designation does not directly equate with an assessment of its biological value, the PEIR acknowledges the importance of its biodiversity and many unique natural features. Regarding the mitigation land for serpentine grassland, the SFPUC will work with county and non-governmental organizations to identify and protect high-quality serpentine grassland in San Mateo County, or will include such areas within the Habitat Reserve Program once specific impacts have been identified in project-specific EIRs. Lastly, the commenter appears to suggest either joining (combining) the Peninsula and Alameda Watershed Habitat Conservation Plans (HCPs) or perhaps avoiding the HCPs in some way. Regardless of the intent and meaning of the comment, the HCP process is consistent with the Draft PEIR, but is a separate process conducted under the Endangered Species Act rather than CEQA.

SI_CNPS-SCV2-05 Please refer to **Responses SI_CNPS-EB1-18, SI_CNPS-EB1-19, and SI_CNPS-EB1-20**. SFPUC Construction Measure #8, which requires the performance of screening surveys, is not offered as an adequate inventory but rather the start of the process for any construction action. For example, see Draft PEIR Mitigation Measure 4.6-3a (Vol. 4, Chapter 6, p. 6-12), which describes the role of detailed preconstruction surveys.

Regarding best management practices for invasive species, the SFPUC—like all land stewards in the Bay Area—is aware of the problems related to the introduction of non-native plant species. The commenter is referred to Draft PEIR Mitigation Measure 4.6-3a (Vol. 4, Chapter 6, pp. 6-12 and 6-13), which mandates a weed control plan for all WSIP projects.

SI_CNPS-SCV2-06 The commenter has asked whether oak mitigation would be compensated at a ratio of 1:1 and where such mitigation land would be reserved. The California Department of Fish and Game generally establishes mitigation ratios for the replacement of habitats such as oak woodland, but often at a ratio higher than 1:1 if the affected habitat is of good quality. The location of compensation land has not been determined, but would be located within the program region. Such compensation land may or may not be located within lands already managed by the SFPUC, but a higher compensation would apply if the land is already under some degree of protection and a lower compensation would apply if protection under a conservation easement were established on land not otherwise designated as such.

The commenter also asked what effect raising the water levels in Crystal Springs Reservoir would have on sediment basins sited around the reservoirs. Some of the sediment basins are within the proposed operational elevation range for the reservoir itself. If the reservoir were maintained at these higher levels during the rainfall season, the sediment basins would not function as designed; most likely, sediment would accumulate upstream where the flowing water slows as it encounters still water. More importantly for biological resources, some of the sediment catchment basins have been designed to function in an ecologically similar manner to sag ponds, with periods of inundation and seasonal drying. Operation of the reservoir at higher levels could alter the ecological function of these basins, changing the habitat quality for species such as California red-legged frog and San Francisco garter snake. This impact will be analyzed in detail in the EIR for the Lower Crystal Springs Dam Improvements project (PN-4).

SI_CNPS-SCV2-07 There are three issues discussed in this comment. Regarding the comment that the demand analysis is flawed and conservation measures are underestimated, please refer to **Section 14.2, Master Response on**

Demand Projections, Conservation, and Recycling (Vol. 7, Chapter 14, Section 14.2.3). Regarding Assembly Bills 1881 and 2717, refer to **Response SI_PacInst-73**. The comment regarding Assembly Bill 325, which was adopted in 1990 and requires jurisdictions to either adopt a landscape ordinance or issue findings that no ordinance is necessary, is acknowledged. Regarding the second part of this comment, stating that communities requesting sizable water supply increases should be required to substantiate the need for water and to document water conservation efforts, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Substantiation of the Need for Sizable Water Supply Increases and Documentation of Water Conservation Efforts). The third part of this comment, in which the commenter asks whether customers and water retail contractors should not also incorporate backup supply capabilities (in addition to SFPUC facilities) into their community water plans, is acknowledged.

SI_CNPS-SCV2-08 The commenter indicates that the analysis of cumulative impacts in the Draft PEIR should include San Francisco Bay saltmarsh conversion from increased sewage plant outflow. The commenter is correct in noting that changes in wastewater discharges into receiving waters in the SFPUC service area would be an indirect effect associated with implementation of the WSIP, since increases in water use directly correlate to increases in wastewater discharges. Insofar as the WSIP would result in changes to municipal and industrial water use patterns, there could be associated changes in wastewater discharge patterns for municipal and industrial uses. The Draft PEIR addresses the indirect effects of growth in Chapter 7 (Vol. 4, pp. 7-60 to 7-78), and it indicates that these effects, including impacts on wastewater treatment facilities and wastewater treatment capacities, have been identified as significant but mitigable in the environmental impact reports of the general and specific plans in the service area. Any incremental increases in sewage treatment plant discharges would not likely result in saltmarsh conversion, since the National Pollutant Discharge Elimination System permitting requirements associated with sewage treatment plant discharges are designed to protect the beneficial uses of San Francisco Bay, including saltmarsh habitat, where appropriate.

The potential impacts associated with flooding and increases in impervious surfaces are evaluated in the Draft PEIR under Impacts 4.5-4 and 4.5-6 (Vol. 2, Chapter 4, pp. 4.5-37 to 4.5-54). Growth-inducement impacts associated with the WSIP are analyzed in Chapter 7 (Vol. 4). The effects of global climate change on water resources are discussed in Section 5.7.6 (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96), although the WSIP is not

expected to increase water levels in the bay. Table C.6 (Vol. 5, Appendix C, p. C-26) shows the agency permits and approvals that may be required for the WSIP facility improvement projects, including possible review and approvals by the Department of Water Resources. Also refer to **Response S_DWR-01**.

SI_CNPS-SCV2-09 This comment, stating that recycled water use is behind projections in North San Jose and East Palo Alto, and that recycled water should be used before groundwater, is acknowledged. While it is unclear to what projections the comment is referring, note that the City of San Jose participates, along with the Cities of Milpitas and Santa Clara, in the South Bay Water Recycling Project. As shown in Table E.2.5 (Vol. 5, Appendix E.2, p. E.2-17), this project currently produces 3.1 million gallons per day (mgd) of recycled water and is projected to potentially provide an additional 2.1 mgd in the future. According to the *SFPUC Wholesale Customers Recycled Water Potential Study*, all of the current and projected recycled water from this project replaces potable supplies (RMC, 2004, Table 5). As discussed in **Response SI_CNPS-SCV1-12** and described in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-51), the SFPUC, in cooperation with its wholesale customers and the Bay Area Water Supply and Conservation Agency, also undertook a study (SFPUC, 2007) to assess the potential for additional conservation and recycled water projects, including potential regional projects, that were not already considered to be implemented locally by 2030 as part of the WSIP purchase estimates. The results of this study provided the basis for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative evaluated in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-59) as well as an element of the Modified WSIP Alternative (Vol. 4, Chapter 9, pp. 9-78 to 9-84). This study revised the 2004 study's estimates of recycled water potential for Milpitas and Santa Clara and provided the basis for the estimates shown for these cities (1.77 mgd and 4.0 mgd, respectively) in Draft PEIR Tables 3.3 and 7.2 (Vol. 1, Chapter 3, p. 3-18, and Vol. 4, Chapter 7, p. 7-15). North San Jose currently uses 0.59 mgd of recycled water; however, this amount was deducted from North San Jose's baseline and projected demand and therefore is not shown as a component of supply in the Draft PEIR tables. The 2004 RMC study estimated that future projects could provide an additional 1.91 mgd to North San Jose (revised to 2.07 mgd in the 2007 study). However, this recycled water from future projects for North San Jose is expected to serve users that are not part of the projected 2030 demand and therefore is also not shown in the Draft PEIR tables. The study identified no other opportunities for recycled water use in the jurisdictions cited in this comment.

- SI_CNPS-SCV2-10 Comment noted regarding an economic analysis of water rates, which is not within the scope of the PEIR.
- SI_CNPS-SCV2-11 This comment regarding City Charter mandate (4) is acknowledged.
- SI_CNPS-SCV2-12 This comment, requesting that the City and County of San Francisco avail itself “of all possible private volunteer assistance” in preserving natural habitat on SFPUC lands, is acknowledged.

California Native Plant Society, Willis Jepson Chapter, Tedmund Swiecki, Conservation Committee Co-Chair, 10/01/07

SI_CNPS-WLJ-01 This comment opposes the WSIP due to the additional withdrawal of 25 mgd from the Tuolumne River. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

The potential environmental impacts of the proposed changes in water supply sources and regional water system operations are evaluated at a project level and organized by watershed in the Draft PEIR (Vol. 3, Chapter 5, Sections 5.3 through 5.5). The potential impacts on biological resources related to individual WSIP facility improvement projects are evaluated at a programmatic level in Section 4.6 (Vol. 2, Chapter 4, pp. 4.6-37 to 4.6-74). As this comment does not address the adequacy or accuracy of the PEIR, no additional response is provided.

SI_CNPS-WLJ-02 This comment opposes additional Tuolumne River diversions and promotes additional water conservation to meet future water demand in the SFPUC service area. It should be noted that the projected increase in customer purchase requests through 2030 is 35 mgd, and not 38 mgd as implied by this commenter. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

Center for Resource Solutions, Meredith Wingate, Brad Drda, Director Clean Energy Policy Design and Implementation Program, 09/26/07

- SI_CRS-01 This comment expresses opposition to additional Tuolumne River diversions and requests that additional studies be conducted before the PEIR is finalized. Please refer to **Response SI_Caltrout-01** for response.
- SI_CRS-02 The background information related to the Tuolumne River provided by the commenter is acknowledged; however, as it does not address the adequacy or accuracy of the PEIR, no additional response is provided. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- SI_CRS-03 This comment incorrectly states that the WSIP ignores conservation, efficiency, and recycling measures. Please refer to the Draft PEIR, Section 3.6.1, Proposed Nondrought Water Supply (Vol. 1, Chapter 3, pp. 3-34 to 3-36) and the last three projects listed in Table 3.10, WSIP Facility Improvement Projects (Vol. 1, Chapter 3, pp. 3-49 to 3-56) for information regarding the conservation measures, recycled water projects, and groundwater projects that would be implemented under the WSIP. The topics raised in this comment have also been submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling, for additional information.
- SI_CRS-04 This comment, which expresses concern that the SFPUC risks delaying its capital improvement program, causing cost overruns, and failing to increase the reliability of the water supply, is acknowledged. The Draft PEIR evaluated the potential impacts of climate change/global warming on the implementation of the WSIP (Vol. 3, Chapter 5, pp. 5.7-92 through 5.7-96). Please also refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.
- SI_CRS-05 The recommendations included in this comment—that the SFPUC reevaluate water demand projections; that a study be conducted to determine maximum potential conservation and efficiency; and that any additional demand be met through increased investment in conservation, efficiency, and recycling—have been submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7,

Chapter 14). The Draft PEIR evaluated a No Purchase Request Increase Alternative (Vol. 4, Chapter 9, pp. 9-40 to 9-47) and an Aggressive Conservation/Water Recycling and Local Groundwater Alternative, one variation of which involved no supplemental water from the Tuolumne River (Vol. 4, Chapter 9, pp. 9-47 to 9-59). Neither of these was identified as the environmentally superior program alternative (refer to Vol. 4, Chapter 9, pp. 9-95 and 9-96). Regarding the suggestion to invest in conservation, refer to Tables 14.2-2, 14.2-3, and 14.2-4 (Vol. 7, Chapter 14, Section 14.2), which identify the measures the SFPUC is currently implementing and planning to implement under the WSIP. As the comment does not specify the particular issue(s) for which the commenter believes the demand and conservation studies are flawed or inaccurate, no additional response is provided.

- SI_CRS-06 The recommendation from the Center for Resource Solutions—that the SFPUC adopt a policy of reducing diversions from the Tuolumne River over time—is acknowledged. The Draft PEIR describes existing SFPUC water resources policies related to the WSIP in Table 2.3 (Vol. 1, Chapter 2, pp. 2-45 to 2-46).
- SI_CRS-07 This comment requests that a comprehensive watershed study be conducted to adequately assess the environmental impacts of the WSIP. Please refer to **Response SI_Caltrout-01** for response.
- SI_CRS-08 This comment, which expresses support for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (No Supplemental Tuolumne River Water) and the Year-round Desalination at Oceanside Alternative, is acknowledged.

Central Sierra Environmental Resource Center, Brenda Whited, Staff Biology, 09/10/07

- SI_CSERC-01 This comment, which supports the views of the Tuolumne River Trust regarding the WSIP, is noted.
- SI_CSERC-02 This comment, which expresses support for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative and for the implementation of additional conservation measures to offset the need for additional Tuolumne River diversions, is noted. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional response related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

Clean Water Action, Jennifer Clary, Water Policy Analyst, 10/01/07

SI_CWA1-01 The commenter states, albeit incorrectly, that the Stage 2 Disinfectants and Disinfection Byproducts Rule (DBP Rule) is neither mentioned nor analyzed in the Draft PEIR, and indicates that a justification for not including it should be provided. Chapter 2 of the Draft PEIR (Vol. 1, p. 2-32) lists the Stage 2 DBP Rule as one of the major federal drinking water regulations that would apply to the WSIP. As described in the Draft PEIR (Vol. 1, Chapter 3, pp. 3-26 and 3-27), the WSIP proposes a change in treatment processes so that the Hetch Hetchy water supply will meet the *Cryptosporidium* inactivation requirement stipulated in the U.S. EPA's Long Term 2 Enhanced Surface Water Treatment Rule. However, because the SFPUC implements chloramination of its water supply, no treatment changes would be required to achieve compliance with the U.S. EPA's Stage 2 DBP Rule. Since chloramination of the regional water supply began in February 2004, the average levels of the regulated total trihalomethanes and five haloacetic acids (as measured at compliance monitoring locations in San Francisco and throughout the transmission system) have been less than 50 percent of the corresponding maximum contaminant levels. The existing and ongoing chloramination treatment has substantially improved the SFPUC's ability to comply with the Stage 2 DBP Rule; therefore, the WSIP does not propose any further treatment processes or facilities to comply with this rule.

SI_CWA1-02 The commenter is correct in noting that the increased water demand by 2030 associated with the WSIP would result in increased water usage, which would in turn likely result in increased wastewater discharges. Changes in wastewater discharges into receiving waters in the SFPUC service area would be an indirect effect associated with implementation of the WSIP, since increases in water supply usage are directly correlated to increases in wastewater discharges. Insofar as the WSIP would result in changes in municipal and domestic water use patterns, there could be associated changes in wastewater discharge patterns for municipal and industrial uses. The Draft PEIR addresses the indirect effects of growth in Chapter 7 (Vol. 4, pp. 7-60 to 7-78); as the analysis indicates, these effects—including impacts on wastewater treatment facilities and wastewater treatment capacities—have been identified as significant but mitigable in the environmental impact reports prepared on the general and specific plans within the SFPUC service area. The analysis of impacts associated with increased wastewater discharges, if any, including potential increases in pollutant loading to San Francisco Bay, would be covered as part of the CEQA review of any changes to individual wastewater treatment and disposal facilities in the regional service area, if needed, although it is likely that minor, incremental increases in wastewater discharges may already be covered by existing environmental documentation.

Clean Water Action, Jennifer Clary, Water Policy Analyst, 09/20/07

**[See Public Hearing Transcript, San Francisco City Hall,
September 20, 2007, pp. 20–23]**

SI_CWA2-01 This comment requests that the PEIR evaluate the impacts of climate change as a result of the WSIP in greater detail. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 4.11 provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.

District 3 Democratic Club, Tony Gantner, President, 09/20/07

- SI_D3Dem1-01 The potential environmental impacts of the additional diversions from the Tuolumne River proposed under the WSIP are presented in the Draft PEIR in Vol. 3, Chapter 5, Sections 5.1 through 5.5. As this comment does not specify the particular issue(s) for which the commenter believes the Draft PEIR analysis is inadequate, no additional response is provided.
- SI_D3Dem1-02 This comment expresses the opinion that increases in future water demand due to population growth could be offset by additional conservation and recycling. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional response related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

District 3 Democratic Club, Tony Ganter, President, 09/20/07

**[See Public Hearing Transcript, San Francisco City Hall,
September 20, 2007, pp. 12–13]**

- SI_D3Dem2-01 This comment opposing additional Tuolumne River diversions is noted.
- SI_D3Dem2-02 The comment expresses the opinion that the Draft PEIR does not properly identify or address the impacts of taking more water from the Tuolumne River. The Draft PEIR identifies and addresses the impacts of taking more water from the Tuolumne River as required by CEQA (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.9). The projections of future water demand that would be satisfied by increased water diversions from the Tuolumne River, increased water conservation and recycling, and increased use of local groundwater are provided in the Draft PEIR (Vol. 1, Chapter 3, pp. 3-16 to 3-21). As the commenter accurately notes, the increased water demand is due to customers outside of the city of San Francisco.
- SI_D3Dem2-03 This comment expresses the opinion that increases in future water demand due to population growth could be offset by additional conservation and recycling. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional response related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

Ecology Center, Martin Bourque, Executive Director, 10/03/07

SI_EcoCtr-01 This comment requesting that the SFPUC undertake additional studies prior to finalizing the PEIR is acknowledged. Please refer to **Response SI_Caltrout-01** for response.

SI_EcoCtr-02 This comment expresses support for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (No Supplemental Tuolumne River Water) and the Year-round Desalination at Oceanside Alternative, and promotes greater conservation, efficiency, and recycling to prevent additional Tuolumne River diversions. Comment noted. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional response related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

Environmental Defense, Spreck Rosekrans, Senior Analyst, 10/01/07

- SI_EnvDef-01 This comment, which summarizes the WSIP goals and expresses support for the facility improvement projects necessary to repair existing infrastructure and protect the regional water system from seismic events and other disasters, is acknowledged.
- SI_EnvDef-02 This recommendation to pursue a two-tiered approach that separates the seismic improvements from the proposed changes in water supply sources is acknowledged. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply options to meet program objectives and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.
- SI_EnvDef-03 This comment incorrectly states that the alternatives considered in the Draft PEIR include up to 35 million gallons per day (mgd) in increased diversions from the lower Tuolumne River. Under the proposed program, 35 mgd represents the increase in purchase requests from the SFPUC regional system that are projected to occur by 2030 compared to the purchase requests under existing conditions (2005). Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the difference between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. Table 9.5 (Vol. 4, Chapter 9, p. 9-13) presents the average annual increase in Tuolumne River diversions under each of the CEQA alternatives evaluated in the Draft PEIR, and an updated table showing average annual Tuolumne River diversions under the Modified WSIP Alternative is included in **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Table 14.10-1). The commenter's opinion that it is time to put water back into California's rivers rather than take more water out is acknowledged.
- The commenter notes that the proportion of unimpaired flow diverted collectively by the SFPUC, Turlock Irrigation District (TID), and Modesto Irrigation District (MID) in dry and critically dry years is greater than it is in average years. The information cited by the commenter is generally consistent with assumptions used in the preparation of the Draft PEIR.
- SI_EnvDef-04 This comment indicates that the commenter agrees with the conclusions in the Draft PEIR—that the environmental effects of the WSIP on Chinook salmon in the lower Tuolumne River are potentially significant. However, as indicated in the Draft PEIR (Volume 3, Chapter 5, Sections 5.1 through 5.5), all potentially

significant impacts on resources in the lower Tuolumne River could be reduced to a less-than-significant level with implementation of mitigation measures prescribed in the PEIR. Mitigation measures developed for the purpose of offsetting the effects of the WSIP on the lower Tuolumne River include either Measure 5.3.6-4a (Vol. 4, Chapter 6, p. 6-48) or Measure 5.3.6-4b (pp. 6-48 and 6-49) for impacts on fisheries, and either Measure 5.3.6-4a or Measure 5.3.7-6 (pp. 6-50 and 6-51) for impacts on biological resources. Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 4.7.8 and 4.7.9) for supplementary information on Chinook salmon along this reach of the river, and for additional discussion of Measures 5.3.6-4a and 5.3.6-4b, including text revisions to Measure 5.3.6-4b that add further definition to the habitat enhancement effort.

- SI_EnvDef-05 This comment, which expresses concern about impacts on the San Joaquin River and the Bay-Delta estuary due to the WSIP, is acknowledged. Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8.3) for a review and update of the Draft PEIR analysis of these issues.
- SI_EnvDef-06 This comment, which expresses the opinion that it is time to reverse the trend of increased development of water supplies in the Bay-Delta and Central Valley watersheds and leave more water in these rivers, is acknowledged. Since this comment does not address the adequacy or accuracy of the Draft PEIR, no further response is necessary.
- SI_EnvDef-07 This comment, which supports opportunities for agricultural conservation along the lower Tuolumne River as a way to offset incremental increases in Tuolumne River diversions while providing water supplies for the Bay Area, is acknowledged. Please refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3) for a discussion of agricultural water conservation in the services areas of TID, MID, and/or another water agency as a means of securing water for the conserved water transfer to the SFPUC.
- SI_EnvDef-08 This comment expressing support for the Lower Tuolumne River Diversion Alternative is acknowledged. As indicated in the Draft PEIR (Vol. 4, Chapter 9, Table 9.5, p. 9-13), the average annual increase in Tuolumne River diversions under this alternative would be the same as under the proposed program.
- SI_EnvDef-09 This comment, which suggests that the SFPUC install the physical capacity and secure the appropriate institutional agreements to access Delta supplies as backup in case Tuolumne supplies are not available, is acknowledged. The alternatives analysis section of the Draft PEIR provides a discussion of Delta

diversions, including a potential connection to the California Aqueduct or Delta-Mendota Canal, as part of rejected strategies/concepts that affect water supply sources (Vol. 4, Chapter 9, pp. 9-125 and 9-126). This concept was eliminated from further consideration due to uncertainties regarding the availability of water supplies and pumping capacities.

- SI_EnvDef-10 This comment expresses support for aggressive urban water conservation programs and recommends that the discussion of urban conservation potential be continued throughout the development of future water supplies. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) and **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3) for additional response related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.
- SI_EnvDef-11 This comment supporting the use of groundwater as supplemental drought-year supplies is noted.
- SI_EnvDef-12 This comment supports the continued consideration of the Year-round Desalination at Oceanside Alternative and Regional Desalination for Drought Alternative (same as WSIP Variant 2), but cautions that a desalination project must address entrainment issues and must either include a plan to provide energy through renewable resources or implement full mitigation for emissions incurred by its energy use. These issues are addressed in the environmental analysis of these alternatives in Draft PEIR Sections 9.2.6 and 9.2.7 (Vol. 4, Chapter 4, pp. 9-66 to 9-78).
- SI_EnvDef-13 This comment, which supports implementation of the Calaveras Dam Replacement project (SV-2) to restore the design capacity of Calaveras Reservoir (96,800 acre-feet), is acknowledged.
- SI_EnvDef-14 The commenter's support of steelhead restoration in Alameda Creek and removal of the Alameda Creek Diversion Dam is acknowledged. Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14) for further discussion of steelhead in Alameda Creek.
- SI_EnvDef-15 Please refer to **Response SI_EnvDef-07**, above.
- SI_EnvDef-16 This comment supports opportunities for both agricultural and urban conservation and expresses Environmental Defense's interest in the restoration of Hetch Hetchy Valley and the protection of the Tuolumne River between Hetch Hetchy and Don Pedro Reservoirs. This comment is acknowledged. Refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3) for additional information related to agricultural conservation along the lower Tuolumne River. Refer to

Section 14.6, Master Response on Upper Tuolumne River Issues (Vol. 7, Chapter 14) for further discussion of the Tuolumne River between Hetch Hetchy and Don Pedro Reservoirs.

SI_EnvDef-17 In this comment, Environmental Defense expands on one of the themes contained in the Bay Area Water Supply and Conservation Agency's (BAWSCA) comments on the Draft PEIR related to the Modified WSIP Alternative, and expresses support for opportunities for BAWSCA member agencies to invest in water efficiency initiatives in the agricultural areas adjacent to the Tuolumne River itself. Please refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14) for relevant discussion.

Greenpeace, Krikor Didonian, 09/22/07

- SI_GreenP-01 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River. The commenter's opinion with respect to increased diversions is noted. Also refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14) for additional information.
- SI_GreenP-02 This comment, which states that the demand modeling in the Draft PEIR is flawed and inflates projected future needs, has been submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- SI_GreenP-03 This comment asserts that the PEIR fails to properly identify and address all of the impacts of taking more water from the Tuolumne River due to lack of adequate baseline data. Please refer to **Response SI_Caltrout-01** for a response to this comment.
- SI_GreenP-04 Please refer to the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96) and **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change effects on the regional water system. Section 14.11 provides detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.
- SI_GreenP-05 This comment promotes conservation, efficiency, and recycling as the best way to provide for the water needs of the Bay Area in a sustainable manner. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling water projects proposed by the SFPUC and its wholesale customers.

Golden West Women Flyfishers, Cindy Charles, Conservation Chair, 09/29/07

SI_GWWF1-01 This comment opposing any additional Tuolumne River diversions is acknowledged.

SI_GWWF1-02 This comment expresses concerns related to the effects of additional Tuolumne River diversions on restoration efforts aimed at protecting fall-run Chinook salmon and Central Valley steelhead below La Grange Dam. As described in the Draft PEIR, the San Francisco Planning Department determined that long-term WSIP-induced flow changes in the Tuolumne River below La Grange Dam could have a significant adverse effect on anadromous fish, including fall-run Chinook salmon, along this reach of river (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32). Regarding potential impacts on steelhead below La Grange Dam, the Draft PEIR provides setting information and a discussion on the presence of steelhead within the Tuolumne River (Vol. 3, Chapter 5, pp. 5.3.6-1 to 5.3.6-24). However, the data on habitat conditions within the lower Tuolumne River indicate that this reach of the river is unsuitable for significant populations of steelhead due to high temperatures during the summer months. Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.3) for additional information.

The Draft PEIR acknowledged that the WSIP's small but incremental contribution to adverse effects on the lower river would make planned restoration of habitat and fishery resources more difficult. As a result, the impact of the WSIP on these fishery resources in the lower Tuolumne River was determined to be potentially significant. Implementation of Mitigation Measures 5.3.6-4a, Avoidance of Flow Changes by Reducing Demand for Don Pedro Reservoir Water, or 5.3.6-4b, Fishery Habitat Enhancement, would reduce these impacts to a less-than-significant level (Vol. 4, Chapter 6, pp. 6-48 and 6-49). Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 14.7.2, 14.7.8, and 14.7.9) for supplementary information on the presence of Chinook salmon along this reach of the lower river, and additional discussion on Mitigation Measures 5.3.6-4a and 5.3.6-4b, including text revisions to Measure 5.3.6-4b that add further definition to the habitat enhancement effort.

Golden West Women Flyfishers, Cindy Charles, Chairperson, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall,
September 20, 2007, pp. 14–15]

- SI_GWWF2-01 The range of current urban and rural diversions from the Tuolumne River presented in this comment is inaccurate. Please refer to **Section 14.6, Master Response on Upper Tuolumne Issues** (Vol. 7, Chapter 14, Section 14.6.5) and **Section 4.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River.
- SI_GWWF2-02 This comment expresses concerns related to the effects of the WSIP facility improvement projects and changes in water supply and system operations on restoration efforts aimed at improving steelhead passage in the Alameda Creek watershed. Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4 and 14.9.5), for discussion of protective measures for steelhead in Alameda Creek.

Klamath-Siskiyou Wildlands Center, Joseph Vaile, Campaign Director, 09/27/07

- SI_KSWC-01 This comment requesting that additional studies of the Tuolumne River be conducted before the PEIR is finalized, is acknowledged. Please refer to **Response SI_Caltrout-01** for a response to this comment.
- SI_KSWC-02 This comment expresses support for the CEQA alternatives that do not include additional Tuolumne River diversions and promotes additional conservation, efficiency, and recycling to prevent the need for additional Tuolumne River diversions. Comment noted. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

Menlo Business Park LLC (on behalf of DLA Piper US LLP), J. Wesley Skow, Attorney, 12/12/2007

- SI_MenloBP-01 This is an opening statement regarding the detailed comments submitted by DLA Piper on behalf of Menlo Business Park LLC presented in Comments SI_MenloBP-02 through SI_MenloBP-09; refer to **Responses SI_MenloBP-02** through **SI_MenloBP-09** for the specific responses.
- SI_MenloBP-02 The commenter notes that easements located adjacent to the Menlo Business Park were purchased from the City and County of San Francisco (CCSF). The commenter is concerned with parking, access, and landscaping within the easements during construction of the Bay Division Pipeline (BDPL) Reliability Upgrade project (BD-1). Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2) for detailed discussion of the issues raised by this comment. The master response provides information on the appropriate level of detail of an impact analysis at the program level versus the project level. The project-level EIR for this project will analyze the impacts of construction in more detail based on the most up-to-date design details and will identify additional mitigation measures for significant impacts if needed.
- SI_MenloBP-03 The commenter summarizes more detailed comments presented under Comments SI_MenloBP-04 through SI_MenloBP-08; refer to **Responses SI_MenloBP-04** through **SI_MenloBP-08** for the specific responses. Please also refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2) for information on the appropriate level of detail of an impact analysis at the program level versus the project level.
- SI_MenloBP-04 The commenter acknowledges that the Draft PEIR appropriately considers impacts associated with construction under the BDPL Reliability Upgrade project (BD-1). However, the commenter raises concerns regarding the impacts of open-trench construction on access to driveways and streets as well as to buildings within the Menlo Business Park. In the Draft PEIR, Impact 4.8-3 (Vol. 2, Chapter 4, p. 4.8-23) acknowledges that access to local businesses could be disrupted during construction of this project. As part of the project's traffic control plan, Mitigation Measure 4.8-1a (Vol. 4, Chapter 6, p. 6-31) will require coordination with facility owners or administrators of sensitive land uses such as police, fire, etc. (see bullet item #14) and will require that pedestrian access be maintained during project construction where it is safe to do so (see bullet item #9). As indicated in **Response SI_MenloBP-02**, the project-level EIR for this project will analyze these construction-related access impacts in more detail based on the most up-to-date design details and will

identify additional mitigation measures for significant impacts. Please also refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2) for information on the appropriate level of detail of an impact analysis at the program level versus the project level.

- SI_MenloBP-05 The commenter requests that the project-level EIR for the BDPL Reliability Upgrade project (BD-1) include an assessment of construction impacts at the Menlo Business Park, which utilizes easements on SFPUC land for parking and for ingress and egress to the business park. The commenter is correct in stating that the localized impacts of project construction are more appropriately addressed in the project-level EIR. As indicated in **Response SI_MenloBP-02**, the project-level EIR for this project will analyze the localized impacts of construction in more detail. Please also refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.2) for information on the appropriate level of detail of an impact analysis at the program level versus the project level.
- SI_MenloBP-06 The commenter raises concerns regarding construction impacts within portions of the SFPUC right-of-way currently used for parking by Menlo Business Park tenants and customers. Draft PEIR Impact 4.8-4 (Vol. 2, Chapter 4, p. 4.8-26) acknowledges that on-street parking would be temporarily displaced at some locations during construction of the BDPL Reliability Upgrade project (BD-1). The Draft PEIR indicates that temporary parking impacts would be mitigated to a less-than-significant level through implementation of SFPUC Construction Measure #5 (Vol. 4, Chapter 6, p. 6-5), which requires preparation of a traffic control plan, and through the additional traffic control measures identified in Mitigation Measure 4.8-1a (Vol. 4, Chapter 6, p. 6-30). The project-level EIR for the BDPL Reliability Upgrade project will analyze the localized construction-related impacts in more detail, including temporary effects on parking capacity and access to adjacent land uses, and will identify additional mitigation measures for significant impacts.
- SI_MenloBP-07 The commenter identifies concerns related to the displacement of parking within the SFPUC right-of-way currently used by tenants and customers of the Menlo Business Park, and requests that the project-level EIR for the BDPL Reliability Upgrade project (BD-1) include coordination with the Menlo Business Park and individual business owners. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.3) for additional discussion of the issues raised by this comment. Requested coordination of the BDPL Reliability Upgrade project with the Menlo Business Park to minimize parking impacts has been added to Table C.6 (Vol. 5, Appendix C, p. C-26) for consideration in the project-level EIR for this project.

- SI_MenloBP-08 The commenter is concerned with the timeline of post-construction restoration along CCSF easements in the vicinity of the Menlo Business Park following implementation of the BDPL Reliability Upgrade project (BD-1). As required by SFPUC Construction Measure #10 (Project Site), in cases where construction easements or staging areas are located on non-SFPUC land, the SFPUC will restore these areas to their prior condition so that the owner may return them to their previous use, unless otherwise arranged with the property owner. At the time of Draft PEIR preparation, detailed information related to the construction of individual facility projects was not available. The project-level CEQA document for the BDPL Reliability Upgrade project will provide a more detailed analysis of the potential impacts of construction activities on surrounding land uses.
- SI_MenloBP-09 This is a closing statement. No response is needed.

Northern California/Nevada Council of the Federation of Fly Fishers Steelhead Committee, Dougald Scott, Chair, 09/23/07

SI_NCFFSC-01 The commenter states that under the WSIP the SFPUC would divert an additional 25 million gallons per day (mgd) from the Tuolumne River. The Draft PEIR indicates that the WSIP proposes to meet an increase in average annual purchase requests of 25 mgd and to divert an additional annual average of 27 mgd from the Tuolumne River to meet the requests. For clarification, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9).

The Draft PEIR describes the decline of the Chinook salmon population in the Tuolumne River (Vol. 3, Chapter 5, pp. 5.3.6-13 to 5.3.5-17). The most recent data (not included in the Draft PEIR) show the decline continuing, with very low numbers of salmon returning to spawn in the Tuolumne River in 2005 and 2006.

As the commenter notes, the San Francisco Planning Department concluded that WSIP-caused changes in river flow would have a potentially significant adverse effect on anadromous fish in the Tuolumne River below La Grange Dam (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32). In reaching this conclusion, the Planning Department considered both Chinook salmon and steelhead. However, implementation of Mitigation Measure 5.3.6-4a, Avoidance of Flow Changes by Reducing Demand for Don Pedro Reservoir Water, or Mitigation Measure 5.3.6-4b, Fishery Habitat Enhancement (Vol. 4, Chapter 6, pp. 6-48 and 6-49) would reduce these impacts to a less-than-significant level. One of the mitigation measures, Measure 5.3.6-4a, would greatly reduce the effects of the WSIP on flow in the Tuolumne River below La Grange Dam.

SI_NCFFSC-02 As the commenter notes, the WSIP would reduce flow in the San Joaquin River and the Delta. The San Francisco Planning Department concluded that the WSIP could potentially affect fish and fish habitat in the San Joaquin River, but that the impact would be less than significant (Vol. 3, Chapter 5, pp. 5.3.6-32 and 5.3.6-33). This determination was made because WSIP-caused flow reductions and increased water temperatures would only be of sufficient magnitude to adversely affect fish habitat conditions in the San Joaquin River very infrequently. Because the Planning Department concluded that WSIP-caused changes in river flow would have a potentially significant adverse effect on anadromous fish in the Tuolumne River below La Grange Dam, the Draft PEIR includes mitigation measures that would reduce the impacts a less-than-significant level (Measures 5.3.6-4a and 5.3.6-4b, Vol. 4, Chapter 6, pp. 6-48 and 6-49). Measure 5.3.6-4a, which was designed to reduce

the effects of the WSIP on flow in the Tuolumne River below La Grange Dam, would also reduce the effects of the WSIP on flow in the San Joaquin River and the Delta.

The State Water Resources Control Board has promulgated water quality and flow objectives for the Delta designed to protect anadromous fish. The California Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (USBR), the largest water diverters from the Delta, are responsible for maintaining compliance with the objectives for the Delta. Most of the time the changes in flow resulting from the WSIP would be too small to have any effect on the ability of the DWR and USBR to meet the Delta objectives. Occasionally, after a long sequence of dry years, the WSIP could change flows in the San Joaquin River at Vernalis and in the Delta by an amount that could affect the two agencies' ability to meet Delta objectives. During such times, the DWR and USBR would have to curtail diversions or release water from their reservoirs to meet the Delta objectives. For this reason, it was concluded that the flow changes associated with WSIP would have no effect on Delta fisheries. For additional information on the DWR and USBR obligations with respect to Delta standards, please refer to the Draft PEIR (Vol. 3, Chapter 5, Section 5.3.4) and **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8.2).

In recent years, it has become apparent that the water quality and flow objectives for the Delta are insufficient to protect all fish species. Delta smelt, an endangered species, has been in decline for many years. Many biologists attribute its decline to the large-scale diversion of water from the Delta by the State Water Project and Central Valley Project. A 2000 Record of Decision for the CALFED EIR/EIS established an Environmental Water Account that enables pumping curtailments at times when delta smelt are present in the vicinity of the pumps without a loss of water to the DWR's and USBR's contractors. Despite the creation and operation of the Environmental Water Account, the decline of delta smelt has continued. In December 2007, the Wanger Decision rejected a federal biological opinion with respect to delta smelt, a judgement that led to further curtailments of pumping by the State Water Project and Central Valley Project.

The Wanger Decision has accelerated efforts to find ways to better balance the need for water supply, flood reduction, and environmental protection in the Delta. The next decade is likely to see changes in physical facilities in the Delta, water management system operations, and environmental regulations. Whatever the future changes in facilities, operations, and regulations, it is not expected that the WSIP would have a substantial effect on environmental quality in the Delta. This is because the increment in diversion of water

associated with the WSIP represents a small proportion of all water diverted upstream of the Delta.

- SI_NCFFSC-03 This commenter's suggestion (to modify the minimum flow schedule set forth in the 1997 California Department of Fish and Game Memorandum of Understanding for Alameda Creek below the confluence of Alameda and Calaveras Creeks) is acknowledged. The commenter's support for minimum flows for Alameda Creek below the diversion dam is acknowledged.

Please refer to **Section 14.9, Master Response on Alameda Creek Fishery Issues** (Vol. 7, Chapter 14, Section 14.9.4) for more information on this topic.

- SI_NCFFSC-04 The commenter states that the WSIP and Draft PEIR do not adequately address strategies and conservation measures to replace increased diversions from the Tuolumne River. The Draft PEIR examined several WSIP variants and CEQA alternatives that would reduce diversions from the Tuolumne River compared to the WSIP (Vol. 4, Chapters 9 and 10). Several of the CEQA alternatives propose conservation measures that go beyond those included in the WSIP. The WSIP variants and CEQA alternatives include Variant 2, Regional Desalination for Drought, the No Program Alternative, the No Purchase Request Increase Alternative, the Aggressive Conservation/Water Recycling and Local Groundwater Alternative, the Year-round Desalination at Oceanside Alternative, and the Modified WSIP Alternative. Also, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2). In addition, see **Section 13.4, Phased WSIP Variant**, for updated strategies to augment conservation and water recycling and to reduce effects on the Tuolumne River.

The commenter's reference to a 25-mgd increase in diversions from the Tuolumne River is incorrect. Please refer to **Response SI_NCFFSC-01**, above.

Pacific Institute Dr. Peter H. Gleick, President, 10/1/2007

Introduction

The report presented as part of this submittal (beginning at Comment SI_PaciInst-25) was prepared in August 2006, before the WSIP Draft PEIR was published. References to information on the SFPUC service area apparently are largely based on material provided as background information for the Sustainable Water Supply Briefing held on September 28, 2006. The Sustainable Water Supply Briefing document (SFPUC, 2006a) is on file and available for review at the offices of the San Francisco Planning Department, Major Environmental Analysis Division. At the request of the participating groups, the SFPUC provided technical background information using its demand models. That information is not derived from the Draft PEIR but is consistent with it (and the underlying data used in the demand models is the same).

The responses presented below include information provided by the SFPUC's technical consultant Mr. Bill Maddaus. Mr. Maddaus has expertise in the development and evaluation of water demand projections and conservation programs; he assisted the SFPUC and Bay Area Water Supply and Conservation Agency (BAWSCA) in the development of the wholesale customer demand projections and conservation assessment conducted as part of the planning effort used to develop the WSIP.¹ Mr. Maddaus reviewed the Pacific Institute comment letter and provided information to assist in addressing questions about how water conservation potential in the SFPUC service area was evaluated and incorporated into the WSIP (Maddaus, 2008). Maddaus Water Management modeled demand and conservation potential in the wholesale customer service area using the Demand Side Management Least-Cost Planning Decision Support System (DSS) end-use model. In the following responses, Mr. Maddaus is referred to as the SFPUC's DSS technical consultant.

Many of the comments in this submittal were also submitted by other commenters and are addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14); more detailed and specific comments that concern the same issues but are unique to this submittal are addressed in the individual responses below. The comments addressed herein largely critique the SFPUC's demand projections as too high and the conclusions regarding conservation and recycled water potential as too low. As discussed in the responses below, and in Section 14.2, the SFPUC and its technical consultants relied on reasonable assumptions and used accepted methodologies to forecast demand as well as conservation and recycled water potential within the service area, and the Draft PEIR reflects the City and County of San Francisco's (CCSF) best efforts at analysis and disclosure. Even if the SFPUC overestimated demand and underestimated conservation and recycled water potential, the likely effect would be a reduction in the use of water from the Tuolumne River and local

¹ The *SFPUC Wholesale Customer Water Demand Projections Technical Report* prepared by URS Corporation and Maddaus Water Management, 2004 (URS, 2004a) and the *SFPUC Wholesale Customer Water Conservation Potential Technical Report* prepared by URS Corporation, Maddaus Water Management, and Jordan Jones and Goulding, 2004 (URS, 2004b).

watersheds, which could result in a reduction in impacts on those watersheds. Also, to the extent that the SFPUC has overestimated demand based on growth projections, the PEIR may overestimate the impacts associated with induced growth. The comments regarding the accuracy of conservation and recycled water potential may be taken into account by decision-makers in evaluating the feasibility of alternatives, but do not indicate that the PEIR underestimated the impacts of the WSIP.

SI_PacInst-01 This comment questioning the need for additional water supplies is prefatory to more detailed comments that follow; please refer to **Responses SI_PacInst-03 through SI_PacInst-97** and to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14) and other master responses as indicated. In addition, the Draft PEIR (Vol. 1, Chapter 3, pp. 3-16 to 3-22, and Vol. 5, Appendix E.2) describes the methodology used to develop demand projections and determine the portion of that demand that would be offset by conservation savings and the use of recycled water, groundwater, and other surface supplies. The demand projections and estimates of 2030 purchases necessarily entail the use of assumptions about factors that cannot be known or predicted with absolute certainty. With respect to forecasting, CEQA Guidelines Section 15144 states the following:

Drafting an EIR or preparing a Negative Declaration necessarily involves some degree of forecasting. While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.

The analysis in the Draft PEIR is consistent with CEQA Guidelines Section 15144. In addition to describing in detail the demand methodology (Vol. 5, Appendix E.2), the Draft PEIR presents a detailed review and comparison of the demographic projections used in the demand models with more recent projections (Vol. 4, Chapter 7, p. 7-22 and Vol. 5, Appendix E.3) and represents the CCSF's best efforts at disclosure. The PEIR does not need to accurately predict future growth and demand but rather to inform the public and decision-makers about how the alternative programs would perform in the future under consistent reasonable growth and demand assumptions in order to allow for an informed choice of program and implementation of mitigation measures. The evaluation of demand model forecasts contained in the PEIR represents the CCSF's best efforts and allows for informed consideration of the program, alternatives, and impacts.

Note also that the Draft PEIR includes an alternative that evaluates the implementation of aggressive conservation and recycling to enable the public and decision-makers to weigh the relative merits of such an alternative and the proposed program with respect to their feasibility in meeting program objectives

and minimizing environmental impacts. (Refer to Draft PEIR Vol. 5, Chapter 9, pp. 9-47 to 9-59.)

- SI_PacInst-02 This comment summarizes Pacific Institute's conclusions regarding its review of the SFPUC's demand projections and is a preamble to the comments that follow. Please refer to **Responses SI_PacInst-03 through SI_PacInst-97, Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14), and other master responses as indicated.
- SI_PacInst-03 This comment incorrectly states that per-capita demand for the wholesale customers is projected to increase over current (2001) per-capita demand. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand).
- SI_PacInst-04 This comment states that SFPUC retail and wholesale demand does not include price-driven efficiency improvements despite an estimated quadrupling of the price of water from the SFPUC by 2015. By efficiency improvements the commenter presumably refers to implementation of conservation measures that allow the achievement of given purposes using less water. Such measures may be technological, such as replacement of water-using appliances and fixtures with ones that use less water, or behavioral, such as changing a watering schedule to minimize water losses due to evaporation and transpiration.² In fact, contrary to this comment, the conservation potential studies for both the wholesale and retail service areas considered the future price of water. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Effects of Future Price on Water Demand). With respect to other comments on the use of water rates to encourage conservation and comparisons with studies on the effectiveness of conservation pricing raised in Comments SI_PacInst-46 and SI_PacInst-47, see **Responses SI_PacInst-46 and SI_PacInst-47**, below.
- SI_PacInst-05 This comment states that increased residential demand is largely due to outdoor water use and that the projected increase in per-capita outdoor use indicates that conservation does not adequately address outdoor residential use. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling**, (Vol. 7, Chapter 14, Section 14.2.2, under the heading Outdoor Water Use).
- SI_PacInst-06 This comment, which correctly states that the nonresidential sector is responsible for over 80 percent of the projected 2030 demand increase and that 35 percent of that increase is due to outdoor use, is noted. Also refer to **Section 14.2, Master**

² This description of the term is consistent with the discussion of conservation and efficiency in the Pacific Institute's *Waste Not, Want Not: The Potential for Urban Water Conservation in California*, cited frequently in the SI_PacInst comments.

Response on Demand Projections, Conservation, and Recycling (Vol. 7, Chapter 14, Section 14.2.2, under the heading Outdoor Water Use) for additional information on this topic.

- SI_PacInst-07 This comment, which summarizes more detailed comments made in Comment SI_PacInst-79, is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Use of Total Jobs Projections for the Wholesale Customer Service Area).
- SI_PacInst-08 This comment, which summarizes more detailed comments made in Comments SI_PacInst-76 and SI_PacInst-77, is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Employment Projections – Use of ABAG’s *Projections 2002*).
- SI_PacInst-09 This comment correctly states that conservation measures (not including plumbing code savings) reduce 2030 demand by 4 percent. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Regarding Conservation and Recycling) regarding the studies that were undertaken to identify conservation potential, the conservation measures the SFPUC and wholesale customers are implementing or have committed to implement under the WSIP, and response regarding comparisons to other areas. Also refer to the comparison of hydrologic regions within the state in Section 14.2.3 (also under the heading Frequently Submitted Comments), which indicates that the San Francisco Bay hydrologic region has low per-capita water usage compared to other regions in the state.
- SI_PacInst-10 This comment summarizes more detailed comments presented in Comments SI_PacInst-81 and SI_PacInst-82; refer to **Responses SI_PacInst-81 and SI_PacInst-82**.
- SI_PacInst-11 This comment is a preamble to recommendations made in Comments SI_PacInst-12 through SI_PacInst-24; refer to **Response SI_PacInst-12 through Response SI_PacInst-24**.
- SI_PacInst-12 This comment states that the SFPUC should reevaluate nonresidential demand for its wholesale customers using industry-specific growth projections, water use, and conservation potential; that the initial reevaluation efforts should be regional in scope or focused on the agencies with high non-residential use; and that if the results of this effort differ from the DSS demand study, new detailed analyses should be conducted for each wholesale customer. The DSS technical consultant retained by the SFPUC to model future demand in the wholesale customer

service area indicates that, in his professional judgment, it is unlikely that regional nonresidential water demand factors that would improve on the individual agency approach used in the wholesale customer demand study could be developed from available data, given that such water use factors are not available at the local level (Maddaus, 2008). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Use of Total Jobs Projections for the Wholesale Service Area). Regarding conservation, the SFPUC conducted studies, in consultation with each wholesale customer, to identify the potential for conservation measures to offset demand in the wholesale customer service area (refer to **Section 14.2, Section 14.2.3**). Note that those agencies with high nonresidential water use do not necessarily have high nonresidential water conservation potential, since conservation potential depends on how the water is being used and the current level of efficiency.

- SI_PacInst-13 This comment summarizes more detailed comments made in Comment SI_PacInst-62 and is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Effects of the Future Price of Water on Projected Demand).
- SI_PacInst-14 This comment states that the assessment of the cost-effectiveness of conservation measures should include benefits to consumers and quantification of the value of maintaining ecosystem flows in the Tuolumne River. A community perspective benefit-cost analysis, reflecting consumer benefits, was presented to the wholesale customers (refer to **Response SI_PacInst-52** below for more information). Neither the background reports on conservation and recycled water potential nor the Draft PEIR quantify benefits to the ecosystem of the Tuolumne River in the manner suggested in this comment. The intended focus of CEQA is on potential physical environmental effects rather than social or economic effects. Therefore, the Draft PEIR includes multiple alternatives that involve a reduction in diversions from the Tuolumne River to reduce attendant environmental impacts; several of these alternatives would involve increased levels of conservation and recycling (Vol. 4, Chapter 9, beginning on p. 9-4). The evaluation of alternatives will enable decision-makers to weigh the environmental tradeoffs associated with these various approaches.
- SI_PacInst-15 The statements in this comment regarding nonresidential account data and standardized reporting methods summarize more detailed comments made in Comment SI_PacInst-79, and are addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Use of Total Job Projections for the Wholesale Customer Service Area). The statement regarding a focus on outdoor water use apparently refers to more specific comments on nonresidential and outdoor use and conservation potential provided in Comments SI_PacInst-62, SI_PacInst-63,

and SI_PacInst-80, and may also refer to more detailed comments on residential outdoor use in Comments SI_PacInst-05, SI_PacInst-71, and SI_PacInst-72. Refer to **Responses SI_PacInst-62 and SI_PacInst-63**, below, and to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Outdoor Water Use, and Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling). Table 14.2-8 in Section 14.2.3 shows existing and proposed conservation measures for nonresidential accounts in the wholesale customers' service areas.

- SI_PacInst-16 This comment states that multiple scenarios should be included in order to determine a range of future demand. This comment is premised on the assumption that the projections method used is faulty and, as a result, demand is overstated. Comments SI_PacInst-75 through SI_PacInst-79 present the commenter's criticisms of the demand projection methodology. As indicated in **Responses SI_PacInst-75 through SI_PacInst-79** and in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the headings Employment Projections – Use of ABAG's Projections 2002 and Use of Total Jobs for the Wholesale Customer Service Area), these criticisms do not warrant the requested changes to the demand projections methodology. In addition, given the length of time required to implement water system improvements, the advantage of multiple scenarios over the approach taken is unclear, since a decision about future demand would still, ultimately, be required based on incomplete information.
- SI_PacInst-17 This comment regarding recycled water potential summarizes a conclusion from more detailed comments SI_PacInst-81 and SI_PacInst-82. Please refer to **Responses SI_PacInst-81 and SI_PacInst-82**.
- SI_PacInst-18 This comment recommending that the impact of climate change be the subject of future studies is noted. Also refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).
- SI_PacInst-19 This comment, which recommends that each agency assess the factors that drive demand and take a proactive role in identifying ways to reduce demand, is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Conservation Measures Suggested by Commenters).
- SI_PacInst-20 This comment, which recommends that the SFPUC and its wholesale customers implement water and wastewater rate structures that encourage water conservation and fund conservation programs, is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling**

(Vol. 7, Chapter 14, Section 14.2.3, under the heading Conservation Measures Suggested by Commenters).

SI_PacInst-21 This comment expressing the opinion that all agencies should sign the CUWCC's Memorandum of Understanding (MOU) and work to implement the CUWCC's BMPs is noted; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Conservation Measures Suggested by Commenters).

SI_PacInst-22 This comment recommending that the SFPUC and BAWSCA work together to implement regional conservation and recycling programs is noted. As described in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-51), the SFPUC, in cooperation with its wholesale customers and BAWSCA, undertook a study to assess the potential for additional conservation and recycled water projects, including potential regional projects, that were not already considered to be implemented locally by 2030 as part of the WSIP purchase estimates. The results of this study provided the basis for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative evaluated in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-59) as well as an element of the Modified WSIP Alternative (Vol. 4, Chapter 9, pp. 9-78 to 9-84). Under the Modified WSIP Alternative, the SFPUC and/or BAWSCA would pursue additional efforts to generate supplemental supply and/or demand offset equivalents in the range of 5 to 10 million gallons per day (mgd). Please also refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14).

SI_PacInst-23 BAWSCA performs many of the functions listed in this comment: encouraging implementation of water conservation measures, information sharing, program evaluations, and conservation data collection and reporting. Please refer to Appendix K of this Comments and Responses document (Vol. 8), which consists of a listing of the attachments provided by all commenters; it includes numerous examples and descriptions of wholesale customers' conservation and efficiency measures. Regarding economic incentives for demand reductions and conservation pricing for wholesale customers, refer to **Responses SI_PacInst-47 and SI_PacInst-62**.

SI_PacInst-24 This comment recommends that purchases from the SFPUC be capped at current levels and that financial incentives/disincentives be instituted to encourage conservation and discourage growth in demand. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Conservation Measures Suggested by Commenters).

SI_PacInst-25 This comment is a preamble to more specific comments and conclusions that follow in Comments SI_PacInst-26 through SI-PacInst-84. Please refer to **Responses SI_PacInst-26 through SI-PacInst-84**.

SI_PacInst-26 This comment provides an overview of the SFPUC system and WSIP planning that contains several minor factual errors as well as terminology that may be misleading if not clarified, as follows:

- The SFPUC now delivers water to 27 wholesale customers (not 28) (Draft PEIR, Vol. 1, Chapter 3, p. 3-5).
- The SFPUC's study of a regional supply option to offset the projected 35 mgd increase in purchases from the SFPUC system using only groundwater, recycled water, and conservation measures, entitled *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D), identified projects that could potentially offset 28.5 mgd (not 28 mgd) of the projected 35 mgd increase in purchases (Draft PEIR, Vol. 4, pp. 9-47 to 9-49).
- With respect to the terminology used in this comment, the projected increase of 38 mgd for wholesale customers referenced in this comment refers to the increase in *purchases* from the SFPUC system, not the projected increase in demand (with plumbing codes) for the wholesale customers determined by the end-use demand models. While the projected purchases may be characterized as demand *specifically on the SFPUC system*, use of the term "demand" in this context could be misleading. The projected increase in demand for the wholesales customers is 52 mgd (Draft PEIR, Vol. 4, Chapter 7, Table 7.3, p. 7-18). Implementation of conservation measures and the use of other water sources (recycled water, groundwater, and other surface water) accounts for the difference between the wholesale customers' projected increase in demand and their projected increase in purchases from the SFPUC system.

This comment correctly states that a series of comprehensive studies were prepared to determine the estimated increase in purchases from the SFPUC system of 35 mgd, and that the SFPUC expects to satisfy this increase in the estimated purchases by relying on increased diversions from the Tuolumne River and offsetting 10 mgd through conservation, water recycling, and groundwater supply within the retail service area. Note that the estimated 35 mgd increase in purchases from the SFPUC system already factors in expected conservation savings, water recycling, and use of other potable supplies for the wholesale service area, as noted above in this response, but not for the retail service area. Therefore, as indicated here and in the Draft PEIR, the 35 mgd purchase estimate would be offset by the 10 mgd of conservation, water recycling, and groundwater in the retail service area.

SI_PacInst-27 This comment, which states that the wholesale and retail demand studies may overestimate future demand and underestimate demand management and the use of recycled water, is a preamble to the more specific Comments SI_PacInst-28 through SI_PacInst-35, which repeat Comments SI_PacInst-03 through SI_PacInst-10. Refer to **Responses SI_PacInst-28 through SI_PacInst-35** for the appropriate response referrals. As the responses indicate, the commenter does

not, in fact, make the case that either demand is overestimated or that conservation and recycled water use is underestimated.

Note that in this and all other comments addressing the perceived shortfall in conservation potential presented in this submittal, the comment does not address the fact that the WSIP as proposed anticipates that even with the increases in water supplies, the system will experience water shortages and that rationing will be required during extended droughts, possibly because the report presented in this submittal was prepared prior to publication of the Draft PEIR. As described in the Draft PEIR (Vol. 1, Chapter 3, pp. 3-32 et seq.), the WSIP-proposed level of service is to limit rationing (required reductions in water use) during drought periods to a maximum of 20 percent systemwide. Put another way, during an extended sequence of dry years, the wholesale and retail customers might be required to reduce water use by up to 20 percent on a systemwide basis. These cutbacks would be in addition to reductions in potable water use achieved through existing and planned conservation and recycling. As indicated in the Draft PEIR (Vol. 4, Chapter 9, p. 9-28), “To the extent that water conservation is already being practiced and will increase in the future, the more difficult it will be to implement adequate cutbacks in water use in the future to achieve the rationing that may be required during a drought period. Demand hardening refers to the increasing difficulty and expense of achieving short-term water conservation levels during shortages as more long-term conservation measures are implemented and water-use efficiency maximized.” Refer to the Draft PEIR discussion related to the effects of droughts and rationing on customers (Vol. 4, Chapter 9, pp. 9-28 to 9-31).

- SI_PacInst-28 This comment repeats Comment SI_PacInst-03 and is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand).
- SI_PacInst-29 This comment repeats Comment SI_PacInst-04; refer to **Response SI_PacInst-04**.
- SI_PacInst-30 This comment repeats Comment SI_PacInst-05 and is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Outdoor Water Use).
- SI_PacInst-31 This comment repeats Comment SI_PacInst-06; refer to **Response SI_PacInst-06**.
- SI_PacInst-32 This comment, which repeats Comment SI_PacInst-07 and summarizes more detailed comments made in Comment SI_PacInst-79, is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Use of Total Jobs Projections for the Wholesale Customer Service Area).

- SI_PacInst-33 This comment, which repeats Comment SI_PacInst-08 and summarizes more detailed comments presented in Comments SI_PacInst-76 and SI_PacInst-77, is addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Employment Projections – Use of ABAG’s Projections 2002).
- SI_PacInst-34 This comment repeats Comment SI_PacInst-09; refer to **Response SI_PacInst-09**.
- SI_PacInst-35 This comment repeats Comment SI_PacInst-10, which in turn summarizes more detailed comments presented in Comments SI_PacInst-81 and SI_PacInst-82; refer to **Responses SI_PacInst-81 and SI_PacInst-82**.
- SI_PacInst-36 This comment stating the commenter’s conclusion that demand and conservation studies are inadequate and fail to realize efficiency levels achieved elsewhere summarizes the commenter’s conclusion of more specific Comments SI_PacInst-28 through SI_PacInst-35, which repeat Comments SI_PacInst-03 through SI_PacInst-10. Refer to **Responses SI_PacInst-28 through SI_PacInst-35** for the appropriate response referrals. Also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling) for a discussion of comparisons to other areas. As the responses demonstrate, the “achievements elsewhere” turn out not to be valid comparisons to the SFPUC service area, and these comparisons and other related comments do not in fact support the contention that the demand and conservation studies are flawed. The comment correctly states that it is critical that water demand forecasts be based on good data and appropriate assumptions. As the referenced responses indicate, the demand and conservation studies are based on appropriate assumptions and good data. The SFPUC’s water contracts with wholesale customers (see Draft PEIR, Vol. 1, Chapter 2, pp. 2-43 to 2-44) currently include provisions that wholesale customers employ best efforts to use all sources of water owned or controlled by them, including groundwater. The recommendation that the contracts be written to encourage conservation and efficiency improvements is noted.
- SI_PacInst-37 This comment correctly summarizes information on the SFPUC and its service area, except that the SFPUC now delivers water to 27 wholesale customers, not 28 (Draft PEIR, Vol. 1, Chapter 3, p. 3-5). Given this change, 25—not 26—of its customers are public entities, and two are private water utilities.
- SI_PacInst-38 This comment correctly summarizes information on BAWSCA and the coordination of the SFPUC and BAWSCA on a pre-rinse spray valve program, except that BAWSCA now represents 27—not 28—wholesale customers. According to Comment SI_PacInst-80 (Vol. 6, Chapter 12, Section 12.4),

pre-rinse spray valves is one of the “most promising technologies” for the nonresidential sector identified in a Pacific Institute report.

- SI_PacInst-39 This comment correctly states that the SFPUC and the wholesale customers depend on a variety of water sources to meet their water needs; however, to clarify, groundwater is currently the only other water source used by the SFPUC for the retail service area (although the CCSF currently uses a limited amount of recycled water (less than 1 mgd) for wastewater treatment plant process water and washdown operations; recycled water is also used in San Francisco for soil compaction and dust control during construction). That there is considerable variation in the supply mix used to meet demand for the wholesale customers is true, but certainly not “hidden,” as implied by this comment. Refer to Table 3.3 (Vol. 1, Chapter 3, p. 3-18) and Table 7.2 (Vol. 4, Chapter 7, p. 7-15) and the individual customer summaries (Vol. 4, Chapter 7, pp. 7-35 to 7-59); as stated in the Draft PEIR, “the water customers vary in size, their overall projected demand for 2030, the change the 2030 demand represents in absolute terms (i.e., in mgd) and as a percentage of 2001 demand, and the degree to which they depend on the SFPUC for their water supply” (Vol. 4, Chapter 7, p. 7-34). Regarding the sources of supply used to meet 2001–2002 demand, see *SFPUC Wholesale Customer Demand Technical Report* (URS, 2004a, p. 1-3, Table 1-2) and BAWSCA Annual Surveys.
- SI_PacInst-40 This comment correctly states that the SFPUC and the wholesale customers participate in a range of ongoing conservation programs; the information on signatories of the CUWCC MOU is updated as follows: the SFPUC and 14 of 27 wholesale customers are signatories of the CUWCC MOU (CUWCC, 2008), and 3 additional wholesale customers that are not signatories participate through the Santa Clara Valley Water District (SCVWD), which is a CUWCC signatory (BAWSCA, 2008, p. 75).
- SI_PacInst-41 This comment and the table to which it refers correctly show the CUWCC BMPs to which the SFPUC and wholesale customers have committed to implement (SFPUC, 2006a, p. 23). The comment correctly notes that BMPs 5 and 9, which target commercial, industrial, and institutional water uses, show the lowest participation, and that BMPs 4, 6, and 11 show the highest participation. However, several measures show higher participation than BMP 8; BMP 7, Public Information, with all but two agencies participating, is among the four BMPs with the highest participation.
- SI_PacInst-42 This comment, which states that although agencies may be implementing a BMP, they “may not meet the full coverage requirements of that BMP and thus may not be in compliance with the MOU,” may be based on a note in the table of “Conservation Best Management Practices Implemented by BAWSCA Members - FY 2004-05” in BAWSCA’s FY 2004-05 annual survey (the source cited for

Table 1 of Comment SI_PacInst-41). This comment is acknowledged. While the CUWCC does not monitor compliance with BMP requirements, agencies report annually on BMP implementation. The estimates of conservation savings submitted by the wholesale customers and assumed for WSIP planning were based on customer-specific evaluations of conservation potential in each wholesale customer service area.

- SI_PacInst-43 This comment, which expresses the commenter's opinion regarding the CUWCC BMPs, and the opinion that these BMPs are a minimum level of conservation that agencies should be implementing, is noted. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding conservation measures the SFPUC and its wholesale customers are implementing or have committed to implement under the WSIP.
- SI_PacInst-44 This comment correctly states that BAWSCA and the SCVWD are signatories to the CUWCC MOU and that the SCVWD implements the CUWCC BMPs among the jurisdictions it serves, including eight SFPUC wholesale customers. The information presented in the comment on BAWSCA conservation programs, citing BAWSCA's *2006 Water Conservation Programs Annual Report*, is noted. BAWSCA's *2007 Water Conservation Programs Annual Report* is included in Comment Letter L_BAWSCA1 (Vol. 6, Chapter 12, Section 12.3); see **Comment L_BAWSCA-114** for the 2007 report.
- SI_PacInst-45 This comment correctly states that the SFPUC implements conservation programs among its retail customers, implements all of the CUWCC BMPs in the retail service area, coordinates with BAWSCA on a pre-rinse spray valve program, and participates in a number of regional programs, including a regional water rebate program. These are described in more detail in the Sustainable Water Supply Briefing document (SFPUC, 2006a, pp. 6 to 7).
- SI_PacInst-46 This comment correctly states that conservation pricing is BMP 11 of the CUWCC's BMPs. As shown in Table 1 of this comment letter (referenced in Comment SI_PacInst-45 [Vol. 6, Chapter 12, Section 12.4]) and Tables 14.2-7 and 14.2-8 in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), all the wholesale customers and the SFPUC (for the retail customers) implement BMP 11. The comment correctly states that the SFPUC implements increasing block rates for most of its retail customers and for wastewater for its residential customers. Note that the water rates for the SFPUC's wholesale customers are set in contractual agreements with the wholesale customers. The rate for wholesale water service is set pursuant to the Master Sales Agreement between the CCSF and the SFPUC wholesale customers.

SI_PacInst-47 This comment states that increasing block rate pricing is effective in encouraging water conservation, citing a study in the Southwest that found that per-capita water use is typically lower in cities with dramatically increasing block rates, and recommends that the SFPUC and its wholesale customers evaluate and implement water and wastewater rate structures that encourage water conservation.

As discussed in **Response SI_PacInst-62**, below, water pricing, which has been used in conjunction with other measures during drought emergencies, is recognized as an important tool that water managers have employed to reduce discretionary use. However, as discussed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Effects of Future Price of Water on Projected Demand), studies have been unable to distinguish between the effects of conservation pricing and other conservation programs when more than conservation pricing is implemented. The limitations of a tiered rate structure for effecting substantial reductions during nonemergency (normal rainfall) periods are discussed below.

All of the wholesale customers and the SFPUC (for the retail customers) implement conservation pricing (CUWCC's BMP 11), as indicated in the previous comment (Vol. 6, Chapter 12, Section 12.4) and response, and 17 of 27 wholesale customers currently have increasing block rates (SFPUC, 2006a, pp. 99 to 100). However, these customers (and others) have found that it is not possible to generate significant water savings from such rates (Maddaus, 2008). The SFPUC's DSS technical consultant has considered the feasibility and potential water savings from conservation-oriented rate structures, particularly three or more tiered rate structures (as cited in this comment) as discussed below.

A three or more tiered tariff structure provides the opportunity to address the very high water users directly. The higher blocks (third and fourth tiers, or blocks) are usually set at the levels of water use related to certain percentages of the total accounts (e.g., the top 20 percent or the top 10 percent of all accounts), with a view toward discouraging discretionary usage at these levels. According to its proponents, this type of rate structure promotes economic efficiency by charging rates that more closely reflect the costs of meeting peak demand to those who cause the need for peak capacity and this approach discourages wasteful water practices and promotes conservation through the direct message of higher prices in the realm of discretionary water use (Maddaus, 2008).

The third and fourth tiers are generally set at 15 to 20 percent above the prior tier. Sometimes the top tier is set very high to discourage peak water use if peaking is a particular problem. The reason for the nominal rate difference is that, the larger the rates are in the higher (e.g., third and fourth) tiers, the lower the first-and/or

second-tier rates must be to maintain revenue neutrality. California law prohibits utilities from collecting revenues in significant excess of costs. (Note that the study cited in this comment addressed urban water use efficiency “across the southwest.”) Very large differences force the first tier rate to be so low that it becomes an affordability rate (i.e., a “lifeline” rate for low-income households) and the second block is, for all practical purposes, a single rate applied to 80 percent or more of total volume. Thus, for almost all customers (except for the relatively few that fall into the top blocks), this type of rate structure would offer no effective price-related conservation incentive (Maddaus, 2008).

Note also that this comment does not address rationing that would be imposed during drought periods and attendant demand hardening that could occur. Regarding the relationship between the implementation of long-term conservation measures and the imposition of short-term cutbacks in water use during drought periods, refer to **Response SI_PacInst-27**.

- SI_PacInst-48 This comment describing the demand studies conducted in the retail and wholesale service areas is acknowledged.
- SI_PacInst-49 This comment, which correctly summarizes the initial screening of conservation measures, is acknowledged.
- SI_PacInst-50 This comment describes steps taken in the retail service area to model conservation potential and summarizes the commenter’s more detailed comments on the evaluation of nonresidential conservation potential presented in Comments SI_PacInst-76 through SI_PacInst-79. Refer to **Response SI_PacInst-78** and to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the headings Employment Projections – Use of ABAG’s Projections 2002 and Use of Total Jobs Projections for the Wholesale Customer Service Area).
- SI_PacInst-51 The commenter’s statement regarding differing levels of commitment to conservation is noted. The description of the conservation potential studies presented in this comment is somewhat at variance with the process described in the conservation potential technical reports (URS, 2004b; Hannaford and Hydroconsult, 2004). Refer to the summary description of the screening process employed in the conservation potential studies presented in the Draft PEIR (Vol. 5, Appendix E.2, pp. E.2-11 to E.2-15). Also refer to Tables 14.2-6, 14.2-7, and 14.2-8 in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for a description of existing and planned conservation measures for the retail and wholesale customers.

Note that this comment does not address rationing that would be imposed during drought periods and attendant demand hardening that could occur. Regarding the relationship between the implementation of long-term conservation measures and the imposition of short-term cutbacks in water use during drought periods, refer to **Response SI_PacInst-27**.

- SI_PacInst-52 This comment states that both the DSS and Hannaford models³ assess the economics of the conservation measures and programs from the “utility perspective” and that community costs and benefits, although discussed secondarily, were not used to evaluate the measures.

This statement is incorrect. The *Wholesale Customer Water Conservation Potential Technical Report* (URS, 2004b, Table 3-3, p. 3-18) presents the “Utility-Customer” Benefit-Cost Ratio for conservation measures for an example customer, and Appendix D presents them by customer for each of the 32 measures. Each measure includes costs and benefits to the customer as defined in the report (p. 3-17): “Utility-Customer benefits and costs: utility customer benefits equal utility benefits plus retail customer energy benefits (cost to heat water). Utility-customer costs include the sum of utility and retail customer costs.” Wholesale customers were provided with this information when they selected measures for their alternative programs.

- SI_PacInst-53 This comment cites high-efficiency clothes washer promotion programs as an example of a measure that could be overlooked as a result of only considering the utility perspective.

As discussed in **Response SI_PacInst-52**, the community perspective was considered in the cost-benefit analyses. With respect to clothes washer promotion programs, this was evaluated (as measure 5) in the wholesale conservation report (URS, 2004b); utility and community benefit-cost ratios (as defined above) were published. In addition, clothes washer rebate programs are included as CUWCC BMP 6. As shown in Tables 14.2-7 and 14.2-8 in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), and in Table 1 of Comment SI_PacInst-45 (Vol. 6, Chapter 12, Section 12.4), the SFPUC (for the retail service area) and all of the wholesale customers have adopted this measure.

- SI_PacInst-54 This comment, which includes a figure showing historical and projected water demand for the wholesale and retail customer service areas, states that conservation and efficiency offset increases in water use due to population and employment growth in the retail customer service area but not in the wholesale customer service area. Regarding historical trends, refer to **Figure 14.2-2** in

³ Referring to the end-use demand and conservation potential models used in the wholesale customer service area and retail customer service area, respectively.

Section 14.2, Master Response on Demand Projections, Conservation, and Recycling (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand), which shows that on a per-capita basis, the wholesale and retail service areas had similar historical water demand trends. Regarding water demand, the comment correctly states that population and economic growth in the wholesale service area is expected to increase water demand. The growth in water demand will be offset to some extent by implementation of conservation measures, as indicated in the aforementioned discussion of per-capita demand.

SI_PacInst-55 This comment introduces the commenter's Table 3, which includes information on base-year demand, 2030 demand with plumbing codes, and 2030 demand with plumbing codes and conservation; this information essentially corresponds to the information presented in Tables 7.2 and 7.3 of the Draft PEIR (Vol. 4, Chapter 7, pp. 7-15 and 7-18). Minor differences are assumed to be due to rounding and some updated information in the Draft PEIR tables. Table 3 also includes information on the change in demand with conservation that is consistent with the information presented in the other columns. The text of this comment correctly summarizes information on projected increases in population and employment, changes in demand (in mgd and percent), and changes in demand after conservation savings are factored in.

The figures in Table 3 are consistent with information in the demand model and in Tables 7.2, 7.3, and 7.4 of the Draft PEIR (Vol. 4, Chapter 7, pp. 7-15, 7-18, and 7-20), except for rounding, some updated information reflected in the Draft PEIR tables, and the fact that, for those customers that submitted a range of conservation savings, the PEIR tables reflect the range rather than a single number.

SI_PacInst-56 This comment, which correctly states that there is variation in the changes in water demand among the wholesale and retail service area customers and that four wholesale customers account for nearly 80 percent of the increase in demand projected for 2030, and expresses the commenter's opinion that four wholesale customers are "responsible for a disproportionate amount of 2030 demand growth," is acknowledged.

SI_PacInst-57 This comment characterizes past per-capita demand and projected 2030 per-capita demand in the wholesale customer service area. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand).

SI_PacInst-58 This comment characterizes past gross per-capita demand and projected 2030 per-capita demand in the retail customer service area. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and**

Recycling (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand).

SI_PacInst-59 This comment characterizes trends over time in the retail and wholesale customer service areas (similar to Comments SI_PacInst-57 and SI_PacInst-58), stating that the comparison indicates that water-use efficiency improvements are not being implemented effectively for the wholesale customers and citing improvements that have been achieved in other water districts. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand) for a discussion of past per-capita demand trends and projected demand in the retail and wholesale customer service areas. Regarding the comparisons to other areas, refer to **Section 14.2** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling).

SI_PacInst-60 This comment correctly notes (in footnote 32) that water use trends for the retail and wholesale service areas are similar, but that retail area trends are less variable because the retail service area has less outdoor water use, which is sensitive to climate variations. While climate unquestionably affects outdoor water use, shorter term variations in weather (as opposed to climate) can cause variations in outdoor water use from year to year. This comment also states (in footnote 33) that for Tables 5 and 6 (cited in Comment SI_PacInst-68), “current” is defined as 2001 for the wholesale customers and as 2005 for the retail customers. While this comment is acknowledged, note that, as described in the Draft PEIR (Vol. 1, Chapter 3, p. 3-20), 2000 was used as the base year for the retail service area conservation and demand studies. The year 2001 was used as the base year for wholesale service area studies, consistent with the approach described in footnote 33.

SI_PacInst-61 This comment (in footnote 42) states that the commenter’s conclusion regarding the percentage savings that would result from the proposed change in plumbing requirements described in Comment SI_PacInst-74 (Vol. 6, Chapter 12, Section 12.4) is based on the assumption that all toilets currently have a flush volume of 1.6 gallons per flush and all urinals have a flush volume of 1.0 gallon per flush. For the purposes of calculating projected savings, this would be a conservative estimate, as this comment states, since the current average volume of gallons per flush for toilets and urinals is somewhat higher. The average flush volume in 2001 in the wholesale customer service area was determined by SFPUC studies to be 3.0 gallons per flush (Maddaus, 2008).

SI_PacInst-62 This comment focuses on issues related to the price of water and the consideration of price-driven efficiency improvements in the demand studies. Some price-related topics raised in this comment were also raised by other

commenters and are addressed, as noted in this response, in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). Regarding the level of conservation savings identified in the SFPUC service area and the alleged failure of conservation programs to adequately capture potential savings as compared to savings achieved in other assessments, refer to the discussion of comparisons to other areas in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling).

Price elasticity of water demand. The comment discusses the price elasticity of water demand and cites the results of a survey of price elasticities conducted by the Pacific Institute, which found that typical California price elasticity of water demand is about -0.20 for single-family homes, -0.10 for multifamily homes, and -0.25 for the nonresidential sector. Price elasticity of demand is an economic term that refers to the sensitivity of consumers to the price of a given product (i.e., how much demand rises or falls in response to the fall or rise in price). The price elasticity of water demand, or elasticity factor, is defined as the ratio of the percentage change in the quantity of water used to the percentage change in the price of water (DWR, 1998). In general, demand for a good is considered elastic if the percentage change in price results in an equivalent (or greater) percentage change in demand (the absolute value of the calculated elasticity factor is 1 or greater). Demand is inelastic (that is, the consumer is relatively insensitive to changes in price) if the percentage change in price results in a smaller percentage change in demand (the absolute value of the calculated elasticity factor is less than 1).

The elasticity factors cited in this comment (which have absolute values of 0.2, 0.1, and 0.25) indicate that water demand in the studies surveyed is relatively inelastic. A Department of Water Resources (DWR) survey of elasticity studies and an evaluation of the effects of water pricing and non-pricing demand reduction actions commissioned by the DWR for the 1998 *California Water Plan* similarly found that “residential water demand is usually inelastic, i.e., water users were relatively insensitive to price for the price ranges evaluated.” The DWR study covered single-family residential use in eight cities and water districts (four in the Bay Area and four in southern California) and identified an elasticity factor of -0.16. The urban water demand forecast used for the 1998 *California Water Plan* assumed single-family residential price elasticity factors of -0.1 for winter months and -0.2 for summer months.

Another example of the variation in elasticity of water demand that exists, cited by the SFPUC’s DSS technical consultant (Maddaus, 2008), is a recent (2007) pricing study in the Bay Area city of Sonoma, which derived much lower

elasticity factors: -0.028 for indoor use (December through February) and -0.061 for outdoor use (June through September). This study, which normalized water use to account for weather, compared water use and prices in 1999 and 2000 (similar use years) with 2005 and 2006 (similar use years). The indoor price increased 90 percent over that span and usage decreased by 2.5 percent in gallons per day per account; the outdoor water price increased 85.9 percent and usage decreased 5.3 percent. Changes in water price had statistically insignificant impacts on other account groups (City of Sonoma, 2007). During the time this study was being conducted, in addition to the effect of the plumbing codes on new homes and natural fixture replacements, the local water agency was implementing conservation programs that offered single-family residential customers ultra low-flush toilet rebates, home water audits, and free water-saving fixtures and devices (Pollard, 2007). Thus, this elasticity study showed that the price elasticity factors were low even when other conservation programs were being implemented and all savings were attributed to the price increases. Had the researchers been able to separate out the influence of price and the non-price conservation programs, the price elasticity may have been even lower (Maddaus, 2008).

A range of factors can affect the price elasticity of water demand, including climate, housing type, income, the percentage of the water user's budget represented by the water bill, the water rate structure, water conservation measures and education, and user preferences regarding water use. Because of these variables, the DWR discussion of elasticities cautions that "elasticity factors derived in one geographic area are not necessarily representative of another area" (DWR, 1998, p. 4A-3), a point the commenter also makes. Similarly, the SFPUC's DSS technical consultant has found that price elasticities are "rarely directly transportable from one utility to another" (Maddaus, 2008).

Effect of future price on demand. Regarding the statements that demand projections for the SFPUC retail and wholesale customers "do not include price-driven efficiency improvements" and that "[n]either the SFPUC retail nor wholesale customer demand analyses... consider price-driven efficiency," please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Effects of Future Price on Projected Demand).

Water pricing as a water agency tool. Even though studies have shown that water demand is relatively inelastic, water pricing is recognized as an important tool that allows water managers to reduce discretionary water use, as this comment indicates. In times of water shortage emergency, most water agencies have used water pricing as part of an overall strategy to reduce water use. In the 1976–1977 and 1986–1992 droughts, Bay Area water agencies used steeply inclining block rate pricing, public education campaigns, water restrictions, and ordinances,

some of which contained threats to shut off water to non-responsive customers, to reduce water use temporarily from about 20 to over 50 percent (Association of California Water Agencies, 1991). During such drought emergencies most of the reductions have come from drastically reduced discretionary use, which landscape irrigation is often considered to be. Such reductions have not come without impacts on water customers who have lost landscaping, on individuals and companies that depend on the landscaping and gardening industries for a livelihood, and on manufacturing companies that have had to cut back production and lay off workers due to water rationing programs (Barakat and Chamberlin, Inc., 1991).

Conservation pricing, CUWCC BMP 11, has been adopted by the SFPUC for the retail service area and by all the wholesale customers for ongoing, nonemergency conditions (refer to **Response SI_PacInst-46**). Regarding the potential for tiered pricing to affect substantial conservation savings, refer to **Response SI_PacInst-47**.

Regarding the statement that “per capita water use remains high, particularly for the wholesale customers,” the total gross per-capita average water use for the wholesale customers appears to be relatively low, not high, compared to per-capita demand in other parts of the state. Refer to the discussion of per-capita demand and to Tables 14.2-10 and 14.2-11 in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling).

Note also that this comment does not address rationing that would be imposed during drought periods and attendant demand hardening that could occur. Regarding the relationship between the implementation of long-term conservation measures and the imposition of short-term cutbacks in water use during drought periods, refer to **Response SI_PacInst-27**.

SI_PacInst-63 This comment addresses projected water use by residential and nonresidential sectors in the wholesale customer service area. First it should be noted that “demand” as used in this comment takes into account plumbing code savings and active conservation programs, in contrast to use of the term in the Draft PEIR.⁴ As shown in Table 7-3 of the Draft PEIR (Vol. 4, Chapter 7, p. 7-18), the total increase in demand in the wholesale service area from 2001, taking into account plumbing code savings, is 52 mgd. The comment does not indicate the source of Figures 3 and 4 (two bar charts) included with the comment, nor is the source

⁴ As used in the Draft PEIR discussion of demand projections and methodology (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-21; Vol. 4, Chapter 7, Section 7.2.2, pp. 7-14 to 7-18; and Vol. 5, Appendix E.3) demand includes plumbing code savings but not savings from active conservation unless otherwise noted; conservation savings are presented separately and included in the 2030 purchase estimates.

apparent. The SFPUC used the demand models to calculate the information shown in the bar charts; the results, shown below, differ slightly with those in the bar charts. (The differences may be due to rounding.)

SFPUC calculation of data shown in Figure 3 of the comment (wholesale customer demand change, 2001–2030, with plumbing codes and proposed conservation):

- Wholesale Nonresidential = 23.6 mgd
- Residential = 9.5 mgd
- Unaccounted-for Water = 3.8 mgd
- Total = 36.8 mgd

SFPUC calculation of data shown in Figure 4 of the comment (retail customer demand change, 2000–2030, with plumbing codes and proposed conservation):

- Retail Nonresidential = 2.9 mgd
- Residential = -6.5 mgd
- Unaccounted-for Water = -1.0 mgd
- Total = -4.6 mgd

Regarding the statement that the nonresidential sector accounts for about two-thirds of the increase, or 24.1 mgd, the SFPUC calculated a slightly different result, perhaps due to rounding: the increase from 2001 to 2030 was calculated to be 23.6 mgd (from 97.0 to 120.6 mgd), which is about 64 percent of the total demand increase for that same period for the wholesale customer service area.

Regarding the statement that over 40 percent of the increase in nonresidential demand is due to outdoor use, the SFPUC calculates that 39 percent of the increase is from outdoor use.

SI_PacInst-64 This comment correctly states that in the retail customer service area conservation and efficiency improvements reduce total demand (as they do in the wholesale service area).

The comment also states that nonresidential demand increases by 3.1 mgd, all of which is for indoor use, and that residential demand and unaccounted-for water decrease by 6.5 mgd and 1 mgd, respectively, so that total demand decreases by 4.7 mgd. Refer to **Response SI_PacInst-63**, above, regarding the figures the SFPUC calculated, based on the demand models, for the sectors referenced in this comment. As shown, the SFPUC calculations are slightly different from the figures stated in this comment. The statement that for the retail service area “[a]ll of the projected increase in non-residential demand is due to indoor use” is incorrect. Data on the split between indoor and outdoor water use were not available for retail service area nonresidential demand, and therefore were not included in the Sustainable Water Supply Briefing materials. The commenter

may have therefore assumed that there is no outdoor use, which may be the basis for this statement. However, assuming that the ratio of indoor/outdoor use for nonresidential demand in the retail service area in 2000 can be applied to 2030, the SFPUC calculates that nonresidential outdoor use would increase from 1.66 mgd in 2000 to 1.83 mgd in 2030. This change in nonresidential outdoor use, 0.17 mgd, is 5.9 percent of the total increase in nonresidential demand for the retail service area.

SI_PacInst-65 This comment, which includes a figure correctly showing residential per-capita water use in the wholesale and retail service areas and states in the comment text that data were not available to allow the commenter to distinguish single-family and multifamily water use and indoor and outdoor water use, is noted.

SI_PacInst-66 This comment characterizes water use data over the past 15 years, stating that residential per-capita water use has been constant, that indoor per-capita use has likely declined, and that indoor efficiency improvements have been offset over this period by increases in outdoor use.

The term “constant” may overstate the consistency of demand shown in Figure 5 of this comment. Because demand was not static, but instead shows variation for the years presented, “relatively” constant or stable may better characterize demand over the past 10 to 15 years, with the wholesales service area showing more variation than the retail service area. Figure 5 shows historical per-capita water use that is consistent with information provided in Sustainable Water Supply Briefing materials to the years 2001–2002 (SFPUC, 2006a) and (for the wholesale service area only) is consistent with information in the BAWSCA annual survey for the years 2002 to 2005. As noted in Comment SI_PacInst-65, the historical data on which this and related comments are based did not include a breakdown of water use for single- and multifamily residences, and the assumptions and conclusions drawn in the comment are therefore speculative. Data from the demand models for 2001 indicate a substantially higher percentage of single-family housing in the wholesale service area than is shown in the Table 4 of this comment: the model input data indicate that single-family housing made up approximately 93 percent of the residential housing in 2001, compared to 63 and 62 percent shown for 2000 and 2005, respectively, in this comment.

SI_PacInst-67 This comment, which correctly states that residential per-capita water demand is higher in the wholesale service area than in the retail service area, and that the higher percentage of multifamily housing units and fewer outdoor uses in the retail service area relative to wholesale service area tend to lower average residential per-capita water use, is acknowledged.

The comment also states that although differences in water use efficiency cannot be determined they will be discussed (in comments that follow). As noted in

Response SI_PacInst-66, the commenter's table showing percentages of single- and multifamily housing, to which this comment also refers, is not consistent with base-year data for the wholesale service area, which has a much higher proportion of single-family housing than the table shows. With respect to comparisons between retail and wholesale service areas, refer to

Response SI_PacInst-54 and Section 14.2, Master Response on Demand Projections, Conservation, and Recycling (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand). The last statement of this comment introduces the discussion to follow; refer to the responses that follow.

SI_PacInst-68 This comment refers to two tables that correctly show baseline and projected single-family and multifamily total, indoor, and outdoor per-capita water use for the SFPUC wholesale customers and retail service area. The comment correctly states that single-family residential outdoor water use in Hayward and the Purissima Hills Water District is projected to increase substantially. The comment also states that in areas where 2001 per-capita demand was 300 gallons per capita per day (gpcd), demand was largely due to high outdoor water use; and that savings from conservation between 2001 and 2030 are due to reductions in indoor water use.

The statement that savings from conservation between 2001 and 2030 are due to reductions in indoor use is a generalization, apparently based on average usage, which overlooks the 18 wholesale customers that show reductions in single-family residential per-capita outdoor water use between 2001 and 2030. The use of "only" to characterize the reduction in per-capita use suggests the commenter's opinion about the magnitude of the reductions, which is stated more explicitly in Comments SI_PacInst-71 and SI_PacInst-72. These comments are addressed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling).

SI_PacInst-69 This comment states that projected water demand reductions for multifamily residential customers are larger than for single-family customers, and that the savings are due to efficiency improvements in indoor use because outdoor use is projected to remain constant. More accurately stated, the savings are *mainly* due to efficiency improvements in indoor use. (Although the comment is correct that average water use for multifamily customers does not change [as shown in Table 6 of this comment], this generalization overlooks variations among the wholesale customers. For most customers, per-capita outdoor use does not change; however, for four customers—East Palo Alto, Hayward, Millbrae, and Stanford—it decreases, although these declines are offset by increases for one customer—Redwood City.)

- SI_PacInst-70 This comment states that demand reductions for single-family and multifamily residential use are more substantial in the retail service area than in the wholesale service area, and correctly states that a reduction of 10 gpcd, or 16 percent, is projected for total single-family use in the retail service area and a reduction of 11 gpcd, or 19 percent, is projected for total multifamily use in the retail service area. This statement characterizes the comparison of the retail service area with the average of the wholesale service area, although individual wholesale customers projected more or less than the average, and some show greater reductions than does the retail service area. Regarding comparisons between the retail customer and wholesale customer service areas, refer to **Response SI_PacInst-54 and Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand).
- SI_PacInst-71 This comment refers to several studies as evidence that the wholesale and retail customers can do more to reduce indoor and outdoor demand. Please refer to the discussion of comparisons to other areas in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling).
- SI_PacInst-72 This comment states that additional attention and effort must be focused on reducing outdoor water use and cites studies documenting improvements in outdoor water-use efficiency in the Southwest and southern California. Please refer to the discussion of comparisons to other areas in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling).
- SI_PacInst-73 This comment, which describes recently adopted legislation that may encourage additional improvements in indoor and outdoor water use efficiency is acknowledged. The landscape ordinances described in this comment had not been adopted when the wholesale conservation potential study was conducted in 2003–2004. Changes in available technology and/or legal requirements will inevitably arise and will inform future conservation efforts by the SFPUC, BAWSCA, and the wholesale customers.
- SI_PacInst-74 This comment describing provisions of an Assembly Bill 2496, which would have updated 1991 plumbing code standards for toilets and urinals had it not been vetoed, is noted.
- SI_PacInst-75 This comment repeats the point made in Comment SI_PacInst-06 and summarizes more detailed comments made in SI_PacInst-79; refer to **Response SI_PacInst-06 and Section 14.2, Master Response on Demand**

Projections, Conservation, and Recycling (Vol. 7, Chapter 14, Section 14.2.2, under the heading Use of Total Job Projections for the Wholesale Customer Service Area), which provides a response to Comment SI_PacInst-79. The statement that wholesale customers account for 90 percent of the projected growth in nonresidential demand is acknowledged.

- SI_PacInst-76 This comment states that the Association of Bay Area Governments (ABAG) has issued more recent demographic projections than were used to project nonresidential water demand and that the water demand projections based on *Projections 2002* may be overstated and need to be revised. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Employment Projections – Use of ABAG’s Projections 2002).
- SI_PacInst-77 This comment states that the 2030 employment levels assumed in the demand model are unlikely and should be adjusted using more realistic employment projections. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Employment Projections – Use of ABAG’s Projections 2002).
- SI_PacInst-78 This comment, which correctly summarizes steps taken in the DSS demand modeling process to establish base-year conditions and forecast future demand, is acknowledged.
- SI_PacInst-79 This comment states that the methodology used to forecast nonresidential demand in the wholesale customer service area contains errors that could lead to large inaccuracies in forecasted demand. Regarding the nonresidential growth rates assumed in the DSS demand models and variability among water users, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Use of Total Job Projections for the Wholesale Customer Service Area). Regarding the list of water use coefficients presented in Table 8 of this comment, note that with the exception of golf courses, the last six entries in the table (which have the highest water use values) are absent from the wholesale customer service area (Maddaus, 2008).
- SI_PacInst-80 This comment, which states that the conservation potential identified for the SFPUC wholesale and retail customers is weak and misses important efficiency opportunities, cites other conservation assessments that have found substantially higher conservation potential in the nonresidential sector. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling) for a discussion of comparisons to other areas. Regarding the relationship between the implementation of long-term conservation measures and the imposition of

short-term cutbacks in water use during drought periods, refer to **Response SI_PacInst-27**.

- SI_PacInst-81 This comment, which describes recycled water and its use to supplement potable water supplies and correctly summarizes information presented in the *Wholesale Customer Recycled Water Potential Technical Memorandum* (RMC, 2004), is acknowledged. Specific information on recycled water is presented in the Draft PEIR (Vol. 5, Appendix E.2) and **Section 4.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).
- SI_PacInst-82 This comment summarizes current recycled water use within the SFPUC retail service area and findings of the *City and County of San Francisco Recycled Water Use Master Plan Update*, including that 11 mgd of recycled water could be provided in the retail service area by feasible recycled water projects by 2030. It is correct that under the WSIP in 2030, 9 mgd of recycled water would be used in the wholesale customer service area and 4 mgd would be used in the retail service area to offset demand for potable supplies from the SFPUC regional system. As shown in Table 3.3 (Vol. 1, Chapter 3, p. 3-18) and Table 7.2 (Vol. 4, Chapter 7, p. 7-15) of the Draft PEIR, a range of 9–10 mgd of recycled water is projected for the wholesale service area. This comment includes a figure that indicates the currently projected breakdown of water supplies to meet 2030 supplies under the WSIP. This figure appears to be based on the breakdown of supplies shown in Figure 2 of the *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D, p. 1-4), adjusted to reflect an additional 2 mgd of groundwater, 4 mgd of conservation, and 4 mgd of recycled water (consistent with SFPUC plans to use groundwater, conservation, and recycled water to offset 10 mgd of demand in the retail service area). This comment is acknowledged.
- SI_PacInst-83 This comment states that implementation of recycled water projects involves challenges, but that use of recycled water is increasing, and that examples of recycled water use in southern Florida and a new community in southern California indicate that opportunities exist to increase water recycling in the SFPUC service area to reduce the need for new potable water supplies.

Factors affecting the feasibility of implementing recycled water projects in another state or a new southern California community may be fundamentally different from those in long-established communities, such as those within the SFPUC's service area. The proposed use of recycled water to offset potable demand in 2030 is reflected in 2030 purchase estimates. The *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D) investigated additional opportunities to implement programs that could potentially be implemented on a regional level. The findings of that report were used to develop the Aggressive Conservation/Water Recycling and Local

Groundwater Alternative evaluated in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-59) as well as an element of the Modified WSIP Alternative (Vol. 4, Chapter 9, pp. 9-78 to 9-84). Also refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14).

SI_PacInst-84 This comment correctly states that water purchases from the SFPUC regional water supply system are projected to increase by 35 mgd. To meet the projected increase, the preferred water supply option under the WSIP includes increased diversions from the Tuolumne River and 10 mgd of recycled water/groundwater/conservation projects in San Francisco; during dry years, the regional supply would be supplemented by water transfers from the Modesto and Turlock Irrigation Districts and/or other water agency, a conjunctive-use program in the Westside Groundwater Basin, and the restored capacities of Calaveras and Crystal Springs Reservoirs (Vol. 1, Chapter 3, pp. 3-33 to 3-39). Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

The second paragraph states that the commenter's foregoing analysis indicates that future demand may be significantly overestimated and demand management opportunities underestimated, and reiterates other statements made in the preceding SI_PacInst comments. With respect to the reiteration and summary of the commenter's previous comments, please refer to the previous responses.

SI_PacInst-85 This comment repeats Comment SI_PacInst-12; refer to **Response SI_PacInst-12**.

SI_PacInst-86 This comment repeats Comment SI_PacInst-13; refer to **Response SI_PacInst-13**.

SI_PacInst-87 This comment repeats Comment SI_PacInst-14; refer to **Response SI_PacInst-14**.

SI_PacInst-88 This comment repeats Comment SI_PacInst-15; refer to **Response SI_PacInst-15**.

SI_PacInst-89 This comment repeats Comment SI_PacInst-16; refer to **Response SI_PacInst-16**.

SI_PacInst-90 This comment repeats Comment SI_PacInst-17; refer to **Response SI_PacInst-17**.

SI_PacInst-91 This comment repeats Comment SI_PacInst-18; refer to **Response SI_PacInst-18**.

- SI_PacInst-92 This comment repeats Comment SI_PacInst-19; refer to **Response SI_PacInst-19.**
- SI_PacInst-93 This comment repeats Comment SI_PacInst-20; refer to **Response SI_PacInst-20.**
- SI_PacInst-94 This comment repeats Comment SI_PacInst-21; refer to **Response SI_PacInst-21.**
- SI_PacInst-95 This comment repeats Comment SI_PacInst-22; refer to **Response SI_PacInst-22.**
- SI_PacInst-96 This comment repeats Comment SI_PacInst-23; refer to **Response SI_PacInst-23.**
- SI_PacInst-97 This comment repeats Comment SI_PacInst-24; refer to **Response SI_PacInst-24.**

Pilarcitos Creek Advisory Committee, Tim Frahm, Chair, 9/28/2007

- SI_PilarCrk-01 This comment states the position held by the Pilarcitos Creek Advisory Committee that current SFPUC facilities and operations in the upper Pilarcitos Creek watershed have reduced opportunities to accomplish the goals of “restoration and balance” in the Pilarcitos Creek watershed. Comment noted.
- SI_PilarCrk-02 The purpose of the Draft PEIR is to describe the consequences of the proposed WSIP relative to the existing condition (CEQA Guidelines Section 15125[a]). CEQA does not require an EIR to evaluate whether the existing condition is satisfactory.
- The commenter correctly notes that the cross-basin transfer of water from Pilarcitos Creek to the San Mateo Creek watershed causes dewatering within a reach of Pilarcitos Creek immediately below Stone Dam most of the time. This situation occurs under existing conditions. The purpose of the analysis in the Draft PEIR was to determine whether the WSIP would alter the existing condition and, if so, whether the alteration would represent a significant adverse environmental impact.
- Under the WSIP, the SFPUC would serve a portion of Coastside County Water District’s increased water demand with water from Pilarcitos Creek, which would affect flow in the creek below Stone Dam, as discussed in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.5.1-19 to 5.5.1-22). However, Draft PEIR Mitigation Measure 5.5.3-2 (Vol. 4, Chapter 6, p. 6-26) would require the SFPUC to modify the operation of its Pilarcitos Creek facilities so that flow in Pilarcitos Creek with the WSIP would be very similar to flow under existing conditions. Therefore, with implementation of Measure 5.5.3-2, the SFPUC would supply Coastside County Water District’s increased water demand with water from Crystal Springs Reservoir, and there would no change from existing conditions with respect to flows in Pilarcitos Creek.
- SI_PilarCrk-03 As noted above, the purpose of the Draft PEIR is to describe the consequences of the WSIP relative to the existing condition. CEQA does not require an EIR to evaluate whether the existing condition is compliant with environmental laws and policies. See also **Response S_CDFG2-18**.
- SI_PilarCrk-04 Stone Dam and Pilarcitos Dam are existing structures that must comply with applicable regulations for dam safety. No modifications to either structure are proposed as part of the WSIP. For this reason, the Draft PEIR did not and does not need to include an analysis of dam failure. As indicated in the Draft PEIR (Vol. 1, Chapter 2, p. 2-35), Pilarcitos Dam and Reservoir are under the

jurisdiction of the California Department of Water Resources, Division of Safety of Dams (DSOD). A dam safety inspection is conducted regularly. Permanent piezometers are read once per month for groundwater levels and surveys of dam monuments are conducted twice per year. If the surveyor determines that maintenance is required, a maintenance work order is prepared. Maintenance work typically consists of clearing vegetation on the face of the dam and cleaning out the spillway. Unlike Pilarcitos Dam, Stone Dam is not an earthen dam and therefore is not under DSOD jurisdiction. However, Stone Dam is visually inspected many times per month (almost daily). Engineering inspections, which are conducted annually or more frequently as needed, include inspection of the pipeline and tunnel leaving the reservoir. The screens on Stone Dam are cleaned and the facility's meter is read on a weekly basis. Additional maintenance, such as cleaning the spillway, is performed as needed.

- SI_PilarCrk-05 As noted above, the purpose of the Draft PEIR is to describe the consequences of the WSIP relative to the existing condition. CEQA does not require an EIR to evaluate whether the existing condition is satisfactory. However, the SFPUC recognizes that the existing or baseline condition restricts upstream migration of native steelhead and limits the biological productivity of Pilarcitos Creek, particularly in the reach of the creek immediately below Stone Dam. As described in the Draft PEIR (Vol. 1, Chapter 2, p. 2-24), the SFPUC is currently conducting an experimental release of several cubic feet per second at Stone Dam to determine whether such a release would improve conditions for steelhead and other plant and animal species. See also **Response S_CDFG2-18**.
- SI_PilarCrk-06 The baseline condition for an EIR is the condition that existed at the time the Notice of Preparation for the EIR was published. The Notice of Preparation for the WSIP Draft PEIR was published in September 2005, and the baseline conditions represent SFPUC operations at that time. Experimental releases from Stone Dam were initiated in October 2006 and therefore are not included as part of the baseline condition.
- SI_PilarCrk-07 This comment is a closing statement summarizing the more detailed comments presented in Comments SI_PilarCrk-02 through SI_PilarCrk-06; refer to **Responses SI_PilarCrk-02** through **SI_PilarCrk-06** for the specific responses.

Restore Hetch Hetchy; Committee to Save Lake Merced, Jerry Cadagan, Board Member/Founder, 09/30/07

SI_RHH1-01 This comment summarizes the standards for determining the legal sufficiency of an EIR under CEQA. More detailed comments related to the specific issues in which the commenter believes the Draft PEIR is inadequate are presented in Comments SI_RHH1-02 through SI_RHH1-07; refer to **Responses SI_RHH1-02 through SI_RHH1-07** for the specific responses.

SI_RHH1-02 The commenter refers to Section 3.6.1 of the Draft PEIR (Vol. 1, Chapter 3, pp. 3-34 and 3-35), which states that under the WSIP during nondrought conditions, the SFPUC proposes to meet the increased 35 million gallons per day (mgd) in purchase requests through a combination of conservation, water recycling, and groundwater supply programs in San Francisco and increased diversions from the Tuolumne River. The commenter correctly notes that 10 mgd of this increase in purchase requests would be served through conservation, water recycling, and groundwater supply programs in San Francisco.

The comment is also correct in noting that the *Recycled Water Master Plan for the City and County of San Francisco* (RMC, 2006) identified a total annual average of 11.8 mgd in potentially feasible recycled water *demand*; however, the report does not describe 11.8 mgd of specific recycled water *projects* in sufficient detail for near-term implementation. Consistent with the CEQA Guidelines, the Draft PEIR summarizes the relevant information from this report (Vol. 1, Chapter 3, p. 3-22); the commenter is referred to the referenced report for a more detailed analysis of the potential for water recycling in San Francisco.

The report indicated that serving the identified recycled water demand requires consideration of user water quality needs and other implementation constraints, such as onsite retrofits, extent of the distribution system, acceptance by customers and regulatory agencies, and public perception. It identified a long-term alternative for distributing recycled water throughout San Francisco, but due to uncertainties associated with the SFPUC's Sewer System Master Plan (still under development), particularly with regard to facilities and users in the northeast and southeast portions of the city, the report identified the most feasible, short-term projects as Phase 1 projects. Under the WSIP, the SFPUC would develop about 4 mgd of recycled water projects (through implementation of facility improvement project SF-3), which were identified as Phase 1 uses in the Recycled Water Master Plan. The report indicates that the remaining portions of the SFPUC's preferred long-term alternative for recycled water may need to be adjusted in the future based on the outcomes of the Sewer System Master Plan and the maintenance and improvement of the Auxiliary Water Supply System

Bond Measure. Therefore, it would be speculative to assume any additional recycled water use in San Francisco as part of the WSIP until the SFPUC has identified, confirmed, and developed additional specific recycled water projects.

The information provided by the commenter regarding the status of San Francisco's water recycling record is acknowledged. The City and County of San Francisco currently uses a limited amount of recycled water (less than 1 mgd) for wastewater treatment plant process water and washdown operations; recycled water is also used in San Francisco for soil compaction and dust control during construction. Historically (from 1932 to 1981), San Francisco used recycled water for nonpotable uses; the McQueen Treatment Plant in Golden Gate Park supplied recycled water for irrigation and flow augmentation of the park's streams and lakes until the plant was shut down in 1981 (when it could not meet the current health standards), and groundwater generally replaced recycled water as the source for the park's irrigation water uses.

The comments regarding the adequacy of references used in the background report, *Recycled Water Master Plan for the City and County of San Francisco* (RMC, 2006), are noted.

SI_RHH1-03 The projected use of recycled water assumed under the WSIP for wholesale customers and the SFPUC (for the retail service area) is shown in Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18). (Note that the quantities shown reflect the amounts that would offset potable water supplies; additional recycled water projects that do not replace potable supplies, such as recycled water used for marsh or wetland restoration projects, are not shown in Table 3.3.) Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for more information on existing and planned recycled water projects, the recycled water studies undertaken as part of WSIP planning, and information in the Draft PEIR on this topic. Draft PEIR Table 9.11 (Vol. 4, Chapter 9, pp. 9-50 and 9-51) referenced by the commenter provides information about potential additional supplies from regional recycled water, groundwater, and conservation projects that were included as part of the Aggressive Conservation/Recycled Water and Local Groundwater Alternative, one of the WSIP alternatives evaluated in Draft PEIR Chapter 9. Also refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3) regarding the potential for additional recycling efforts by the SFPUC's wholesale customers included in this alternative beyond the amount assumed in the proposed program.

SI_RHH1-04 The alternatives analysis in the Draft PEIR includes a detailed evaluation of the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Vol. 4, Chapter 9, pp. 9-47 to 9-59). The water supply source for this alternative would include up to an additional 19 mgd of recycled water, groundwater, and

conservation in the wholesale service area in addition to the 10 mgd of recycled water, groundwater, and conservation in San Francisco included under the proposed program. The level of detail presented in the PEIR is consistent with CEQA requirements and provides sufficient information to enable the public and decision-makers to weigh the relative merits of the alternatives and the proposed program. Refer to **Response L_TUD1-05** for discussion of Raker Act, Section 9(h).

SI_RHH1-05 The commenter correctly notes that Chapter 10 of the Draft PEIR lists 20 significant and unavoidable impacts that could result from implementation of the WSIP. Eighteen of the impacts are associated with the program-level analysis of the facility improvement projects, which was based on worst-case assumptions derived from preliminary project information. Therefore, the significance determinations made in the Draft PEIR are conservative for these impacts, and the project-level and site-specific environmental review of these projects may be determine that these effects can be avoided or mitigated to a less-than-significant level.

The other two impacts identified in the Draft PEIR as significant and unavoidable are related to the proposed WSIP water supply and system operations (one in the Alameda Creek watershed and the other in the Peninsula watershed). The SFPUC is currently investigating potential methods to reduce the severity of these impacts; however, as of the publication of the Draft PEIR, it was uncertain whether proposed mitigation could reduce the impacts to a less-than-significant level, so a conservative determination was made that the impacts would be significant and unavoidable. These two significant, unavoidable impacts related to water supply and system operations will be reevaluated as part of the project-level CEQA review of the WSIP facility improvement projects, or specifically, the Calaveras Dam Replacement (SV-2) and Lower Crystal Springs Dam Improvements (PN-4) projects.

SI_RHH1-06 The opinion of the commenter regarding his desire for the SFPUC or the San Francisco Board of Supervisors to cooperate in the removal of O'Shaughnessey Dam is acknowledged. The Draft PEIR (Vol. 4, Chapter 9, pp. 9-127 and 9-128) describes why the removal of O'Shaughnessey Dam is not considered an alternative to the WSIP and why it is not evaluated in detail in the Draft PEIR. Also refer to **Response SI_RHH4-01**.

SI_RHH1-07 Please refer to **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14, Section 14.3.2) for detailed discussion related to this element of the proposed water supply option.

Restore Hetch Hetchy, Bob Hackamack, Tech/Engineering Chair, 09/05/07

SI_RHH2-01 The Draft PEIR (Vol. 1, Chapter 2) presents a description and overview of the existing regional water system to provide context for understanding the WSIP and its potential environmental effects. The description refers to the 1912 Freeman Report (p. 2-36) only with respect to its implication regarding San Francisco's water rights, and does not include unnecessary explanation of the history of the regional system.

The opinion of the commenter that the system was built for "maximum hydroelectric profit" is acknowledged. The calculations of firm yield provided by the commenter are also acknowledged, but, as discussed below, the statement about hydroelectric profit is not consistent with the SFPUC's Water First Policy, and the commenter's calculations are not consistent with its firm yield calculations and rationing estimates.

The Draft PEIR describes the system firm yield under existing conditions as well as the design drought that the SFPUC uses for regional water system planning (Vol. 1, Chapter 2, p. 2-25). The design drought is a planning and operation tool that the SFPUC has defined as a reasonable worst-case drought scenario based on historical hydrology; employing a conservative approach to regional water system planning, the SFPUC uses a design drought based on the hydrology of the six years of the worst historical drought (1987–1992) coupled with the 2.5 years of the 1976–1977 drought, for a combined total of an 8.5-year design drought sequence. The design drought represents a drought sequence that is more severe than any on record, but the SFPUC considers it prudent to use such a scenario for planning purposes. The SFPUC designed the WSIP to achieve the level of service objectives for drought-year rationing (Vol. 1, Chapter 3, Table 3.5, p. 3-26) such that the regional water system could accommodate customer deliveries under hydrologic conditions equivalent to the design drought with a maximum of 20 percent systemwide rationing. This table shows that the system firm yield is 219 million gallons per day (mgd) under existing conditions and would be 256 mgd under the WSIP.

During a hypothetical design drought sequence, the SFPUC anticipates utilizing its entire portfolio of resources, including the use of stored groundwater and water purchases during the second year of drought. During the remainder of the drought, the SFPUC would continue to use these resources in combination with staged delivery reductions, but would not impose rationing of greater than 20 percent systemwide. The SFPUC considers this planning approach as a prudent method by which to plan for uncertainty in future hydrologic events.

Based on modeling conducted for the Draft PEIR using 82 years of historical hydrology, the SFPUC determined that there would be drought-year shortages in approximately 24 out of 82 years under the WSIP, but that 10 percent systemwide rationing would only be required in 6 out of 82 years, and 20 percent systemwide rationing in 2 out of 82 years (Vol. 4, Chapter 9, Table 9.5, p. 9-13). The regional water system would not experience any years with shortages greater than 20 percent over the 82-year hydrologic record. Note that Figure 2.5 in the Draft PEIR (Vol. 1, Chapter 2, p. 2-19) refers to *existing* conditions, and the commenter is referred to Figure 3.4 (Vol. 1, Chapter 3, p. 3-37) for *future* conditions with implementation of the WSIP.

- SI_RHH2-02 Please refer to **Response SI_RHH2-01**.
- SI_RHH2-03 The commenter's suggestions regarding capping diversions from the Tuolumne River and employing water efficiency, recycled water, groundwater banking, water purchases, and desalination of brackish water are acknowledged. As described in the Draft PEIR (Vol. 1, Chapter 3, pp. 3-33 to 3-39), the proposed program would expand the SFPUC's existing water supply portfolio to include recycled water, conservation, and groundwater projects in San Francisco, water transfers, and groundwater conjunctive use. The desalination of brackish water and seawater is evaluated under alternatives to the proposed program (Vol. 4, Chapter 9).
- SI_RHH2-04 This comment, which supports the Aggressive Conservation/Water Recycling and Local Groundwater Alternative and alternatives that include groundwater banking and conjunctive use, desalination, and a lower Tuolumne River diversion, is acknowledged.
- SI_RHH2-05 The commenter's suggestion regarding capping diversions from the Tuolumne River is acknowledged. Please refer to **Section 13.4, Phased WSIP Variant**, for a discussion of SFPUC's current planning approach to use of Tuolumne River water. As noted by the commenter, the WSIP includes a facility improvement project, San Joaquin Pipeline System project (SJ-3), that would construct portions of a fourth San Joaquin Pipeline to improve the reliability of the system, but the proposed improvement would limit the hydraulic capacity of the San Joaquin Pipeline System to 314 mgd (Vol. 1, Chapter 3, Table 3.10, p. 3-49). This is a minor increase compared to the capacity of the existing three San Joaquin Pipelines of 290 to 300 mgd (Vol. 1, Chapter 2, Table 2.2, p. 2-6).
- SI_RHH2-06 The water supply objective presented at the scoping meeting remains the same as the one included in the Draft PEIR (Vol. 1, Chapter 3, Table 3.2, p. 3-9). This WSIP objective is to "improve use of new water sources and drought management, including use of groundwater, recycled water, conservation, and transfers." The WSIP would achieve this objective under the proposed program by expanding the SFPUC's existing water supply portfolio to include recycled

water, conservation, and groundwater projects in San Francisco, water transfers, and groundwater conjunctive use (Vol. 1, Chapter 3, pp. 3-33 to 3-39).

Refer to **Response L_TUD1-05** for discussion of Raker Act Section 9(h).

Restore Hetch Hetchy, Bob Hackamack, Tech/Engineering Chair, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 21–22]

- SI_RHH3-01 This comment, which expresses the opinion that the SFPUC regional water system was built for “maximum hydroelectric profit” and not according to John Freeman’s vision, is acknowledged. Please refer to **Response SI_RHH2-01** for response.
- SI_RHH3-02 This comment opposing any additional Tuolumne River diversions is acknowledged.
- SI_RHH3-03 The commenter states that the Raker Act requires San Francisco to utilize local water sources before increasing Tuolumne River diversions. Please refer to **Response L_TUD1-05** for a discussion of Raker Act Section 9(h).

Restore Hetch Hetchy; Committee to Save Lake Merced, Jerry Cadagan, Board Member/Founder, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 23–25]

SI_RHH4-01 The commenter's suggestion that the PEIR include a mitigation measure in which the SFPUC would agree to cooperate in the restoration of Hetch Hetchy Valley is acknowledged. CEQA Guidelines Section 15126.4 states that "an EIR shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy." An agreement to cooperate in the restoration of Hetch Hetchy Valley would not provide any physical measures that would address significant adverse impacts identified in the Draft PEIR. The concept of removing O'Shaughnessy Dam and restoring Hetch Hetchy Valley is not reasonably related to a reduction or elimination of the significant impacts of the WSIP, but such a concept suggests far greater changes than those necessary to address any impacts the WSIP would cause on the Tuolumne River and related resources. The concept of restoring Hetch Hetchy Valley—while at the same time providing equivalent water and power to the SFPUC in an alternative manner—would likely in itself result in numerous, significant environmental impacts associated with construction and operation of unknown new storage, conveyance, and treatment facilities at unknown locations, and it would likely require increased long-term energy requirements compared to the existing regional system.

SI_RHH4-02 The commenter requests clarification regarding the 10 mgd of water that would be provided by the WSIP through recycling, conservation, and groundwater extraction. The commenter requests that the PEIR address this issue relative to the 11.8 mgd of recycled water that the City and County of San Francisco's *Recycled Water Master Plan* indicates could be generated. Please refer to Section 3.6.1 of the Draft PEIR (Vol. 1, Chapter 3, pp. 3-34 and 3-35), which states that the WSIP would provide about 2 mgd through local groundwater development, 4 mgd through recycled water projects, and 4 mgd through additional water conservation measures.

Also, please refer to **Response SI_RHH1-02** regarding the 11.8 mgd of recycled water proposed in the *Recycled Water Master Plan* and the relationship of this plan to the WSIP and Draft PEIR.

Santa Clara County Creeks Coalition, Mondy Lariz, 09/28/07

- SI_SCCCC-01 This comment opposing any additional Tuolumne River diversions is acknowledged.
- SI_SCCCC-02 This comment, which states that the demand modeling in the Draft PEIR is flawed and inflates projected future needs, was submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- SI_SCCCC-03 This comment requests that additional studies of the Tuolumne River be conducted before the PEIR is finalized is acknowledged. Please refer to **Response SI_Caltrout-01** for response.
- SI_SCCCC-04 This comment expresses support for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (No Supplemental Tuolumne River Water) and the Year-round Desalination at Oceanside Alternative, and promotes additional conservation, efficiency, and recycling to prevent additional Tuolumne River diversions. Comment noted.

Coalition for San Francisco Neighborhoods, Joan Girardot, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, pp. 27–29]

SI_SFNeigh-01 The commenter states that the historical tables indicate that the average delivery from the regional system is about 240 million gallons per day (mgd) rather than 261 mgd for the 2001 baseline water demand, and that the increase to 300 mgd by 2030 is a much larger increase if the starting point is 240 mgd. The commenter requests that the historical table be included in the PEIR.

Consistent with the information provided by the commenter, the Draft PEIR (Vol. 1, Chapter 2, p. 2-37) states that, from fiscal year 1968 to 2004, annual deliveries to SFPUC customers averaged about 248 mgd. This amount represents an average of deliveries over 36 years, a period that resulted in increased population growth as well as changes in water use patterns in the Bay Area; this period includes two severe droughts, the 1976–1977 and 1987–1992 droughts, during which time deliveries were reduced due to supply shortages, and rationing was imposed. The information on historical deliveries is presented graphically in the Draft PEIR in Figure 7.3 (Vol. 4, Chapter 7, p. 7-17), which the San Francisco Planning Department has determined to be a sufficient level of detail for the PEIR.

Also consistent with the information provided by the commenter, the Draft PEIR (Vol. 1, Chapter 3, p. 3-17) states that in fiscal year 2000/2001 about 261 mgd was purchased from the SFPUC regional system. The 2000/2001 period was selected as the base year for the demand projections because it represented a typical year in terms of both rainfall and economic conditions (Vol. 1, Chapter 3, p. 3-20).

SI_SFNeigh-02 This comment corroborates information presented in the Draft PEIR that the projected increase in demand (as well as the increase in water purchases) will occur in the wholesale service area rather than San Francisco (the retail service area), as shown in Draft PEIR Table 7.3 (Vol. 4, Chapter 7, p. 7-18).

Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

The commenter's reference to average residential water use within San Francisco is consistent with historical per-capita consumption information

prepared by the SFPUC.¹ This information shows that 61 gallons per capita per day (gpcd) was the median total residential consumption in the retail service area for the years 1988/1989 to 2003/2004 (SFPUC, 2006, p. 128). The SFPUC also prepared historical per-capita information for the wholesale service area, which provides weighted average per-capita consumption for fiscal years 1985/1986 to 2001/2002. The median of the weighted average residential per-capita consumption over this period was 92 gpcd (SFPUC, 2006, p. 144). The commenter's assertion that 61.19 gpcd is 12 percent below what the Environmental Protection Agency recommends for indoor usage is noted. The comment also states that outdoor use in San Francisco is negligible. According to information prepared by the SFPUC (SFPUC, 2006, p. 106), external water use for single-family residences in the retail service area is projected to account for approximately 1 percent of consumption in 2030 (1.5 gallons per day per account [gpda] of a total of 132.8 gpda), and external water use for multifamily residences is expected to be negligible. This comment suggests that a table comparing the per-capita water use of the wholesale customers be included in the PEIR. Please refer to Table 5 and Table 6 in Comment SI_PacInst-68. Table 5 shows base-year 2001 ("current") and projected 2030 single-family residential per-capita consumption, and Table 6 shows 2001 and 2030 multifamily residential per-capita consumption. The SFPUC has verified the information in these tables, which appear to be based on information prepared by the SFPUC (SFPUC, 2006a, pp. 150 and 156). By virtue of being included in the Pacific Institute comment on the Draft PEIR, this information is included in the PEIR.

SI_SFNeigh-03 Historical information from the SFPUC confirms that 61 gpcd was the median total residential consumption for the years 1988/1989 to 2003/2004 (see **Response SI_SFNeigh-02**), and the SFPUC projects that residential per-capita consumption in 2030 will be 52 gpcd with implementation of plumbing codes, without additional conservation, and will be 50 gpcd with plumbing codes, with additional planned conservation (SFPUC, 2006, pp. 129 and 130). As shown in **Table 14.2-5 in Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), the projected estimated 2030 water savings from conservation and recycling would be shared among the wholesale and retail customers. The table indicates that wholesale customers would contribute about 47 to 50 mgd in water savings from conservation and recycling by 2030, while the retail customers would contribute about 11 to 20 mgd.

¹ The SFPUC prepared per-capita information in response to specific requests by participants at the September 2006 Sustainable Water Supply Briefing; for more information, refer to the introduction to the responses to comments submitted by the Pacific Institute (SI_PacInst).

Sierra Club, Tuolumne Group, Blaine Rogers, 09/24/07

SI_SierraC1-01 This comment discusses the uses of Tuolumne River water by natural systems and by rural and urban users, and promotes increased conservation, recycling, and efficiency to prevent the need for additional Tuolumne River diversions. Comment noted. This comment requests that additional studies of the Tuolumne River be conducted before the PEIR is finalized is acknowledged. Please refer to **Response SI_Caltrot-01** for response.

Sierra Club, Sandra Wilson, Chair, 09/06/07

[See Public Hearing Transcript, Modesto, pp. 27–29]

- SI_SierraC2-01 The commenter states concerns about salmon and wildlife habitat on the lower Tuolumne River below La Grange Dam, including the Tuolumne River Regional Park and the marsh habitat at the San Joaquin Wildlife Refuge for wintering Aleutian Canada geese. The commenter is correct that under the WSIP flows in the Tuolumne River would be reduced by an average of less than 10 percent during the winter months (Draft PEIR, Vol. 3, Chapter 5, p. 5.3.1-34), although reductions could be as much as 25 percent. Reductions would occur primarily in wet and above-normal rainfall years and would not affect releases in critically dry years when minimum releases are mandated. Under the WSIP, delayed spring releases and reductions in average peak flows and total flow would incrementally affect riparian communities and could also reduce stand diversity and incrementally reduce suitable conditions for the recruitment of some riparian species (Vol. 3, Chapter 5, p. 5.3.7-25). Because these impacts would take place incrementally in an already stressed system, they were determined to be potentially significant. Several mitigation measures were proposed to offset these impacts. Mitigation Measure 5.3.6-4a (Vol. 4, Chapter 6, p. 6-48) would avoid changes in flow by reducing demand for Don Pedro Reservoir water, thus offsetting the anticipated impacts due to increased diversions. If this measure is not feasible, Mitigation Measure 5.3.7-6 (Vol. 4, Chapter 6, p. 6-50) would provide for riparian habitat enhancement on the lower Tuolumne River.
- SI_SierraC2-02 This comment expresses concern for potential effects on the San Joaquin Wildlife Refuge as a result of reduced flows. Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8.3) for a relevant response to the effects of the WSIP on to the San Joaquin River and Delta.
- SI_SierraC2-03 Please see **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.

Sierra Club, Bill Young, Member, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 18–20]

- SI_SierraC3-01 This comment is an opening statement regarding the Sierra Club's detailed comments presented in Comments SI_SierraC3-02 through SI_SierraC3-04; refer to **Responses SI_SierraC3-02** through **SI_SierraC3-04** for the specific responses.
- SI_SierraC3-02 The commenter's opinion with respect to the need for decreasing reliance on the Tuolumne River and local creeks, such as Pilarcitos Creek, and the need for comprehensive watershed studies is acknowledged. The San Francisco Planning Department believes that comprehensive watershed studies, while desirable, are not needed to make an adequate analysis of the environmental impacts of the WSIP. Although comprehensive data on all of the SFPUC water supply watersheds may not be available at this time, sufficient information is available to evaluate the potential for the WSIP to result in significant effects on rivers and creeks and their related resources located downstream of the SFPUC reservoirs. As described in the Draft PEIR (Vol. 3, Chapter 5, Section 5.1.4), the approach to analyzing potential impacts on these resources is based first on the analysis of changes in stream flow and reservoir water levels that would occur under the WSIP compared to the existing condition. This analysis, combined with basic information on the watersheds and scientific understanding of the resources, was sufficient to make an adequate evaluation of the environmental impacts of the WSIP. Refer also to **Response SI_Caltrout-01** for further discussion.
- SI_SierraC3-03 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14), which provides detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP. Also refer to the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96).
- SI_SierraC3-04 The proposed program would expand the SFPUC's current water supply portfolio and includes groundwater projects, recycled water projects, additional conservation measures, water transfers, and conjunctive water use (see Draft PEIR Vol. 1, Chapter 3, pp. 3-33 to 3-39). The commenter is correct in noting that the proposed program would increase diversions from the Tuolumne River.
- This comment, which states that the Sierra Club believes there are more cost-effective and less environmentally harmful ways to secure and maintain a clean, reliable water supply, is acknowledged. The comment expressing support for increased water efficiency in urban and agricultural sectors, use of groundwater storage, and safe expansion of water reclamation and water

recycling is also noted. The commenter's suggestion that the SFPUC invest in the most efficient water resources, a more diverse mix of water supplies, and reduce consumption is noted as well.

Sierra Club, Richard Zimmerman, Member, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 20–23]

SI_SierraC4-01 This comment expressing support for seismic improvements to the regional water system is acknowledged.

SI_SierraC4-02 The comment that water conservation is the cheapest, easiest, and least destructive way to meet future demand was submitted by numerous commenters; for a discussion of this topic, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling. Numerous commenters also asserted that the Bay Area lags behind other areas in terms of reducing water consumption; for a response to this comment, refer to the discussion of wholesale customers' per-capita water use under Frequently Submitted Comments Addressing Conservation and Recycling in Section 14.2.3.

The opinion expressed in this comment that the SFPUC must provide strong leadership to make water conservation a fact in the Bay Area is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

SI_SierraC4-03 This comment correctly states that the SFPUC projects a 19 percent increase in water demand in the wholesale customer service area, as shown in Draft PEIR Table 7.3 (Vol. 4, Chapter 7, p. 7-18). With implementation of planned conservation measures, projected 2030 demand would be 308 to 311 million gallons per day (as shown in Table 7.2 in Vol. 4, Chapter 7, p. 7-15), representing a 14 percent increase over 2001 base-year demand. In addition to the 19 percent increase in population forecasted for the wholesale customer service area mentioned in this comment, employment is projected to increase by 31 percent (refer to Table 7.4 in Vol. 4, Chapter 7, p. 7-20). The comment correctly states that a decrease in demand is projected in the retail service area (as shown in Table 7.3).

Regarding the comment about projected outdoor water use, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) under the heading Outdoor Water Use.

Numerous comments were submitted regarding the level of conservation achieved in other areas; for a discussion of this topic, please refer to

Section 14.2, Master Response on Demand Projections, Conservation, and Recycling (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling. Also refer to **Response SI_PacInst-72** regarding comparisons to Las Vegas, Nevada and Austin, Texas.

Sierra Club, Gwynn MacKellen, Member, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 11–12]

SI_SierraC5-01 This comment expresses the Sierra Club's opposition to any additional Tuolumne River diversions and states that Sierra Club members and other members of the public submitted 800 comment cards expressing opposition to such diversions. See Comment Letter C_Form2 for a sample of the comment cards submitted by the Sierra Club at the September 20, 2007 public hearing in San Francisco on behalf of Sierra Club members and other members of the public. Please refer to **Response C_Form2-01** for the specific response.

Sierra Club, San Francisco Bay Chapter, John Rizzo, Executive Committee Member, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 25–27]

- SI_SierraC6-01 This comment opposes any additional Tuolumne River diversions and states that the Sierra Club would submit formal comments on the Draft PEIR in conjunction with other environmental groups. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. Refer to Comment Letter SI_TRT-CWA-SierraC for comments on the Draft PEIR submitted by the Tuolumne River Trust, Clean Water Action, and the Sierra Club; see **Responses SI_TRT-CWA-SierraC-01** through **SI_TRT-CWA-SierraC-199** for the specific responses.
- SI_SierraC6-02 This comment states that additional review is necessary “to bring the impacts of the growth number up to 2030 and also to review the impacts of the ABAG [projections] which only go to 2025.” Please refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling**, under the heading Employment Projections – Use of ABAG’s Projections 2002 (Vol. 7, Chapter 14, Section 14.2.2).
- SI_SierraC6-03 This comment states that there is a lack of adequate baseline data for the Tuolumne River to properly analyze the environmental consequences of additional diversions on river flows and fisheries. Please refer to **Response SI_Caltrout-01** for response.

Sierra Club-San Francisco Bay Chapter, John Rizzo, Executive Committee Member, 10/11/07

[See Public Hearing Transcript, San Francisco City Hall, October 11, 2007, pp. 42–44]

SI_SierraC7-01 This comment expresses support for seismic improvements to the regional water system and states that the comments that follow (SI_SierraC7-02 through SI_SierraC7-13) focus on impacts related to increased Tuolumne River diversions. Refer to **Responses SI_SierraC7-02** through **SI_SierraC7-13** for the specific responses.

Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

The designation of the Tuolumne River as a wild and scenic river is discussed in Draft PEIR Section 5.2 (Vol. 3, Chapter 5, p. 5.2-8).

SI_SierraC7-02 This comment states that the analysis of impacts on the Tuolumne River inside Yosemite National Park as a result of changes in releases from O'Shaughnessy Dam is inadequate. As described in the Draft PEIR (Vol. 1, Chapter 2, pp. 2-33 and 2-34), the Raker Act granted to the City and County of San Francisco rights-of-way and use of public lands in the affected areas to construct, operate, and maintain facilities for developing and using water and power; these public lands include lands within Yosemite National Park. The Draft PEIR analyzes the potential impacts on environmental resources within Yosemite National Park associated with changes in Hetch Hetchy Reservoir levels and changes in releases from O'Shaughnessy Dam (see Vol. 3, Section 5.3). The analysis includes impacts on stream flow, geomorphology, water quality, groundwater, fisheries, terrestrial biological resources, recreation, and visual resources. Refer also to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14) for additional information regarding the impact analysis for the upper Tuolumne River.

SI_SierraC7-03 The comment that “growth statements” rely on published studies that don't cover the time period up to 2030 and have not undergone environmental review apparently refers to the use of ABAG's *Projections 2002* in the water demand models, and repeats issues raised in Comment SI_SierraC6-02. Please refer to **Response SI_SierraC6-02**.

SI_SierraC7-04 This comment states that there is a lack of adequate baseline data for the Tuolumne River to properly analyze the environmental consequences of

additional diversions on river flows and fisheries. Please refer to **Response SI_Caltrout-01** for response.

- SI_SierraC7-05 As indicated in the Draft PEIR, the analysis determined that impacts of the WSIP on stream flow in the Tuolumne River would be less than significant (Vol. 3, Chapter 5, Impacts 5.3.1-1 [pp. 5.3.1-21 to 5.3.1-28] and 5.3.1-4 [pp. 5.3.1-30 to 5.3.1-38]), and no mitigation measures are required. In addition, the analysis determined that impacts of the WSIP on fishery resources would be less than significant in the Tuolumne River between Hetch Hetchy and Don Pedro Reservoirs (Vol. 3, Chapter 5, Impact 5.3.6-2, pp. 5.3.6-26 to 5.3.6-28), and no mitigation measures are required. However, the analysis determined that impacts of the WSIP on fishery resources would be potentially significant in the Tuolumne River below La Grange Dam (Vol. 3, Chapter 5, Impact 5.3.6-4, pp. 5.3.6-28 to 5.3.6-33), but implementation of Mitigation Measures 5.3.6-4a or 5.3.6-4b (Vol. 4, Chapter 6, pp. 6-48 to 6-49) would reduce this impact to a less-than-significant level. Please also refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14) for further discussion of mitigation for potential impacts on fisheries, and additional discussion of Measures 5.3.6-4a and 5.3.6-4b, including text revisions to Measure 5.3.6-4b that add further definition to the habitat enhancement effort.
- SI_SierraC7-06 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). **Section 14.11** of this document provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.
- SI_SierraC7-07 This comment asserting that demand projections are faulty has been submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- SI_SierraC7-08 Refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14).
- SI_SierraC7-09 The reference to the San Francisco Board of Supervisors resolution is acknowledged. It is assumed that the commenter is referring to Resolution No. 321-07 dated June 12, 2007, which urges environmental analysis of water supply alternatives that will not increase diversions of freshwater from the Tuolumne River as well as active implementation of conservation and recycled water programs. The PEIR is consistent with this resolution in that it evaluates two alternatives that would not increase diversions from the Tuolumne River: the Aggressive Conservation/Water Recycling and Local Groundwater

Alternative (see Vol. 4, Chapter 9, Section 9.2.4, pp. 9-47 to 9-59), No Supplemental Tuolumne River Water; and the Year-round Desalination at Oceanside Alternative (see Vol. 4, Chapter 9, Section 9.2.6, pp. 9-66 to 9-74). In addition, the WSIP includes 10 million gallons per day of recycled water, conservation, and groundwater projects as part of the proposed water supply option.

- SI_SierraC7-10 This comment references Comment Letter S_CDFG2, dated October 1, 2007. Please refer to **Responses S_CDFG2-05** and **S_CDFG2-06** for specific responses.
- SI_SierraC7-11 This comment references Comment Letter S_CDFG2, dated October 1, 2007. Please refer to **Response S_CDFG2-02** for response.
- SI_SierraC7-12 Please refer to **Response L_Tuol1-02** regarding the Tuolumne County Board of Supervisors' resolution formalizing the Board's opposition to the increased diversions from the Tuolumne River.
- SI_SierraC7-13 This comment, which recommends dropping the proposed increased diversions of Tuolumne River water from the WSIP, is acknowledged.

San Francisco Planning and Urban Research Association, Laura Tam, Sustainable Development Policy Director, 10/01/07

- SI_SPUR-01 This comment is an overview statement of the comments submitted by the San Francisco Planning and Urban Research Association (SPUR). The specific comments are presented in Comments SI_SPUR-02 through SI_SPUR-07; refer to **Responses SI_SPUR-02 through SI_SPUR-07** for the specific responses.
- SI_SPUR-02 This comment expressing SPUR's support of the seismic improvements to the regional water system is acknowledged. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.2) for a more detailed discussion of the overall need for the WSIP and of the potential consequences of not implementing the seismic facility improvements.
- SI_SPUR-03 This comment, which recommends more robust implementation of conservation and efficiency measures by the SFPUC's retail and wholesale customers, is acknowledged. Some of the information presented in the comment regarding projected changes in water demand, population, and employment requires clarification. As shown in Draft PEIR Table 7.4 and Table 7.10 (Vol. 4, Chapter 7, p. 7-20 and p. 7-33, respectively), population in the wholesale customer service area is expected to increase by 19 percent by 2030 (as the comment states) and employment is expected to increase by 31 percent (not 30 percent). As the comment states, water demand in the wholesale service area is projected to increase by 19 percent (refer to Draft PEIR Table 7.3 and Table 7.10, Vol. 4, Chapter 7, p. 7-18 and p. 7-33, respectively). Both population and employment growth were factored into the demand model; the suggestion that growth in demand is driven exclusively by increased employment does not appear to be based on information in the Draft PEIR, except insofar as more employment than population growth is expected. Regarding the employment projections assumed in the demand models, as well as expectations regarding per-capita demand, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).

The comment correctly notes that water savings are projected to result from active and passive conservation and from planned recycled water projects; expected savings from these components are shown Tables 14.2-5 and 14.2-9 of **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). The 2030 purchase estimates submitted by the SFPUC and its wholesale customers do not assume any water savings from desalination projects (refer to Draft PEIR Table 7.2, Vol. 4, Chapter 7, p. 7-18), although the Draft PEIR analyzes the use of desalination technologies as a supplemental water supply in the discussions for the

Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.6) and Variant 2 – Regional Desalination for Drought (Vol. 4, Chapter 9, Section 9.2.7).

Both population and employment in San Francisco are projected to increase, as this comment notes. As shown in Draft PEIR Table 7.10 (Vol. 4, Chapter 7, p. 7-33), population is projected to increase by 12 percent, employment is projected to increase by 25 percent, and water demand is projected to decrease very slightly (0.2 percent). The 11 percent decline referenced in this comment refers to the change in water “purchases” (that is, surface water supplies from the SFPUC regional system), as shown in Draft PEIR Table 7.3 (Vol. 4, Chapter 7, p. 7-18). The SFPUC retail demand will be met through regional water system supplies that include surface water, recycled water, and groundwater, as well as conservation.

The commenter’s opinion—that the “environmentally superior alternative” identified in the Draft PEIR represents a better approach, that the WSIP should exceed or meet the California Urban Water Conservation Council (CUWCC) Best Management Practices (BMPs) for water conservation, and that all agencies should continuously be improving their conservation practices—is acknowledged. Please refer to Tables 14.2-3 and 14.2-4 in **Section 14.2, Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) regarding the CUWCC BMPs and other conservation measures that are being implemented or planned by the SFPUC and its wholesale customers. Regarding the recommendation that the environmentally superior alternative be more fully described and evaluated, refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14).

- SI_SPUR-04 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 4.11 provides information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.
- SI_SPUR-05 SPUR’s request that climate change be examined, but not at the expense of the seismic improvements to the regional water system, is acknowledged. Please refer to Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96) and **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14). Section 14.11 provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.
- SI_SPUR-06 This comment expressing support for the Modified WSIP Alternative is acknowledged.

SI_SPUR-07 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues**, and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14) for relevant response related to the WSIP's impacts on Tuolumne River flows, including the effects of the proposed program on biological and fishery resources.

This comment stating the need for the regional water system to be as robust as possible for any future climate scenario is acknowledged. Refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.5) for a discussion of SFPUC actions to evaluate its water supply planning with respect to climate change effects.

State Water Contractors, Terry Erlewine, General Manager, 09/25/07

- SI_SWC-01 This comment addresses concerns that the Draft PEIR does not adequately address the potential indirect effects of the WSIP on the State Water Project (SWP) operated by the Department of Water Resources (DWR) or the indirect effects on Delta water quality and SWP supply. Please refer to **Section 14.8, Master Response on San Joaquin River and Delta Issues** (Vol. 7, Chapter 14, Section 14.8.3) for a review of the PEIR analysis of these issues and additional information about the potential effects on Central Valley Project (CVP) and SWP operations and related indirect environmental effects.
- SI_SWC-02 This comment supporting the environmentally superior alternative and encouraging additional environmental analysis due to the likely significant impacts associated with implementation of the WSIP is acknowledged. Please refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3) for additional information regarding updated model results for the proposed WSIP and Modified WSIP Alternative.
- SI_SWC-03 This comment recommends two options: (1) that the SFPUC adopt the Modified WSIP Alternative as the preferred alternative, or (2) that the SFPUC provide an updated analysis of the proposed WSIP that would include adjusting the timing of Don Pedro Reservoir refill in order to reduce the scale of monthly flow reductions in the Tuolumne River below La Grange Dam and to coincide with periods of excess conditions in the Delta. Please refer to **Section 14.8, Master Response on San Joaquin River and Delta Issues** (Vol. 7, Chapter 14, Section 14.8.3) for further discuss on WSIP effects on CVP and SWP operations. The PEIR determined that WSIP effects on the CVP and SWP operations would be less than significant and no mitigation is required. However, Mitigation Measure 5.3.6-4a (Avoidance of Flow Changes By Reducing Demand for Don Pedro Reservoir Water) proposed to address WSIP effects on fisheries and riparian habitat in the Lower Tuolumne River (which calls for the SFPUC to acquire conserved water for the proposed water transfer element of the WSIP), would also further reduce WSIP effects on the San Joaquin River and the Delta.

**Tuolumne County Farm Bureau,
Stan Kellogg, President, 09/05/07**

[See Public Hearing Transcript, Sonora, pp. 10–11]

SI_TCFB-01 This comment opposing any additional Tuolumne River diversions is acknowledged.

Tuolumne River Outfitters Association, Stephen Welch, President, 10/01/07

- SI_TROA-01 This comment, which opposes any changes to the SFPUC regional water system that could potentially degrade the quality of the Tuolumne River Outfitters Association's (TROA) trips, is acknowledged. The commenter notes that the proposed withdrawals from the Tuolumne River could be detrimental to TROA's business while also recognizing that the SFPUC and TROA have worked together successfully to develop an understanding of each entity's needs and constraints. The San Francisco Planning Department and the SFPUC recognize the importance of reliable and adequate river flows to the commercial outfitters. In the Draft PEIR, the San Francisco Planning Department concluded that the WSIP would have a less-than-significant impact on whitewater rafting (Vol. 3, Chapter 5, pp. 5.3.8-27 to 5.3.8-32). The SFPUC would continue to work cooperatively with the commercial outfitters, as it does currently, whether or not the WSIP is implemented.
- SI_TROA-02 The commenter notes that the Draft PEIR accurately describes the situation with respect to rafting flows and the working relationship between the SFPUC and the commercial rafting outfitters (Vol. 3, Chapter 5, pp. 5.3.8-9 and 5.3.8-10). The San Francisco Planning Department and the SFPUC acknowledge that the flows referred to as "minimum" and "adequate" are less than those preferred by the rafting outfitters and have noted the information provided by the commenter regarding TROA's opinion on optimal flow conditions.
- SI_TROA-03 The commenter, who represents expert opinion with respect to commercial rafting on the Tuolumne River, offers the following correction, which the San Francisco Planning Department accepts. In response to this comment, the following text from the Draft PEIR (Vol. 3, Chapter 5, p. 5.3.8-10, third full paragraph) is revised as follows:
- ~~A 900-cfs~~ A 1,100-cfs flow at Lumsden Campground is the minimum required for whitewater paddle boats and oar boats; ~~a 600-cfs 900-cfs~~ flow is the minimum required for kayaks ~~and oar boats~~, and ~~a 1,200-cfs~~ 1,500- to 2,000-cfs flow is considered optimal. The commercial outfitters prefer ~~a six-hour~~ an eight-hour release, but ~~a three-hour~~ a four-hour release allows them to launch one-, two- and three-day trips.
- SI_TROA-04 The commenter expresses hope that the current "minimum" flows and the potential for future "optimal" flows would not be jeopardized by the WSIP. As noted in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.3.8-27 to 5.3.8-32), the WSIP would have a less-than-significant impact on whitewater rafting. The potential for future optimal flows would be the same with or without the WSIP.

Tuolumne River Trust, Amy Meyer, Founding Member, 09/28/07

- SI_TRT1-01 This comment opposes any additional Tuolumne River diversions and promotes additional conservation and water recycling. Comment noted. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.
- SI_TRT1-02 This comment, which states that the SFPUC's pricing structure does not encourage enough conservation and recycling, is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Conservation Measures Suggested by Commenters for a discussion of conservation pricing.

Tuolumne River Trust, Cynthia King, Sierra Nevada Program Director, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 14–16]

- SI_TRT2-01 This comment states that there is a lack of adequate baseline data for the Tuolumne River to properly analyze the environmental consequences of additional diversions on river flows, fisheries, riparian habitat, and associated species. Please refer to **Response SI_Caltrout-01** for a response to this comment.
- SI_TRT2-02 This comment states that the demand projections are flawed because they use outdated employment projections and ignore the effect of price increases on future demand. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) for additional information.
- SI_TRT2-03 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 14.7.8 and 14.7.9) for an expanded discussion of Mitigation Measures 5.3.6-4a and 5.3.6-4b, including text revisions to Measure 5.3.6-4b that add further definition to the habitat enhancement effort.

Tuolumne River Trust, Galen Weston, Part-time Employee, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 25–29]

- SI_TRT3-01 Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) for relevant response related to the integration of the seismic improvements and water supply option to meet program objectives. Also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. This comment also refers to the San Francisco Board of Supervisor's Resolution No. 321-07, dated June 12, 2007, in which the Board urges the SFPUC to fully analyze water supply alternatives that would not result in increased Tuolumne River diversions. The Draft PEIR evaluated alternatives that do not propose additional diversions from the Tuolumne River, including the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.4) and the Aggressive Conservation/ Water Recycling and Local Groundwater Alternative (With No Supplemental Tuolumne River Water) (Vol. 4, Chapter 9, Section 9.2.6). Also refer to **Section 13.4, Phased WSIP Variant** (Vol. 7, Chapter 13) for new information related to a variation of the program, called the Phased WSIP Variant, in which the SFPUC would meet only the current Master Sales Agreement commitment of serving the SFPUC wholesale customers up to 184 million gallons per day (mgd) through 2018, at which time the SFPUC would reevaluate the wholesale customer supply delivery and future water supplies.
- SI_TRT3-02 Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) for pertinent responses related to future demand projections and to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers. The commenter expresses concern regarding the WSIP's compliance with the Raker Act of 1913. However, the City and County of San Francisco believes that the WSIP is consistent with the Raker Act, including Section 9(h), with respect to the export of additional water from the Tuolumne River watershed, since the additional diversions under the WSIP would be for municipal and domestic purposes. Please also refer to **Response L_TUD1-05** for additional information.
- SI_TRT3-03 This comment states that the baseline data used in the Draft PEIR to analyze impacts on the Tuolumne River related to proposed changes in water supply sources and regional water system operations is inadequate. Please refer to **Response SI_Caltrout-01** for a response to this comment.

- SI_TRT3-04 Mitigation Measure 5.3.6-4a, Avoidance of Flow Changes by Reducing Demand for Don Pedro Reservoir Water, is proposed to lessen the impacts of the WSIP on fishery and biological resources in the lower Tuolumne River below La Grange Dam (Vol. 4, Chapter 6, p. 6-48). The measure would involve actions that prevent the WSIP from causing water levels in Don Pedro Reservoir to be drawn down any farther than they are under the existing condition, which would require a reduction in water use by the Turlock Irrigation District, Modesto Irrigation District, or another water agency. Please refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3) for additional information regarding additional water conservation/recycling under the Modified WSIP Alternative.
- SI_TRT3-05 Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Sections 14.8.2 and 14.8.3) for discussion of the responsibilities of the U.S. Bureau of Reclamation and California Department of Water Resources regarding compliance with Delta water quality and flow objectives.
- SI_TRT3-06 The Draft PEIR evaluated the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (With No Supplemental Tuolumne River Water), which relies on conservation and recycling to meet future water demand needs (Vol. 4, Chapter 9, Section 9.2.6). The Draft PEIR also evaluated the Year-round Desalination at Oceanside Alternative, which includes a 25-mgd desalination plant in San Francisco to serve the full projected increase in customer purchase requests through 2030 without additional Tuolumne River diversions (Vol. 4, Chapter 9, Section 9.2.4). As summarized in Table 9.6 (Vol. 4, Chapter 9, pp. 9-14 to 9-16), the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (With No Supplemental Tuolumne River Water) would not be capable of meeting WSIP objectives related to water supply, and it is uncertain whether or not this alternative would meet all WSIP objectives related to seismic reliability, delivery reliability, and cost-effectiveness. The Year-round Desalination at Oceanside Alternative would only partially meet the WSIP objectives related to delivery reliability and cost-effectiveness, and it is uncertain whether or not this alternative would meet all WSIP objectives related to sustainability.

Tuolumne River Trust, Meg Gonzalez, Director of Community Outreach and Education, 09/06/07

[See Public Hearing Transcript, Modesto, p. 10]

SI_TRT4-01 The commenter states concern that efforts to restore the ecological integrity of the lower Tuolumne River would be undermined by the WSIP. Please refer to **Response SI_SierraC2-01**.

Tuolumne River Trust, Patrick Koepele, Central Valley Program Director, 09/06/07

[See Public Hearing Transcript, Modesto, pp. 18–21]

- SI_TRT5-01 This comment expresses concerns related to the effects of additional Tuolumne River diversions on restoration efforts aimed at protecting fall-run Chinook salmon and Central Valley steelhead below La Grange Dam. As described in the Draft PEIR, the San Francisco Planning Department determined that long-term WSIP-induced flow changes in the Tuolumne River below La Grange Dam could have a significant adverse effect on fishery resources along this reach of river (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32). The Draft PEIR acknowledged that the WSIP's small but incremental contribution to adverse effects on the lower river would make planned restoration of habitat and fishery resources more difficult. As a result, the impact of the WSIP on fishery resources in the lower Tuolumne River was determined to be potentially significant. Implementation of Mitigation Measure 5.3.6-4a, Avoidance of Flow Changes by Reducing Demand for Don Pedro Reservoir Water, or 5.3.6-4b, Fishery Habitat Enhancement, would reduce this impact to a less-than-significant level (Vol. 4, Chapter 6, pp. 6-48 and 6-49). Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 14.7.2, 14.7.8, and 14.7.9) for supplementary information on the presence of steelhead and Chinook salmon along this reach of the lower river, and additional discussion on Measures 5.3.6-4a and 5.3.6-4b, including text revisions to Measure 5.3.6-4b that add further definition to the habitat enhancement effort.
- SI_TRT5-02 The commenter notes that additional diversions of water from the Tuolumne River could harm steelhead that use the reach of the river below La Grange Dam. The focus of the Draft PEIR analysis was on Chinook salmon rather than steelhead, because conditions in this reach of river are generally considered to be unsuitable for steelhead under the existing condition. Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 14.7.2, 14.7.3, 14.7.8, and 14.7.9) for information on the presence of steelhead and Chinook salmon along this reach of the lower river, and for additional discussion on Mitigation Measures 5.3.6-4a and 5.3.6-4b, including text revisions to Measure 5.3.6-4b that add further definition to the habitat enhancement effort.
- SI_TRT5-03 The San Francisco Planning Department agrees with the commenter that the WSIP-caused flow reductions could have a potentially significant adverse effect on the riparian forest along the lower Tuolumne River (Vol. 3, Chapter 5, p. 5.3.7-25). Mitigation Measure 5.3.7-2, Controlled Releases to Recharge Groundwater in Streamside Meadows and Other Alluvial Deposits, would require

that the SFPUC manage releases from Hetch Hetchy Reservoir during the spring in order to recharge groundwater, which supports meadow and riparian habitat in the upper Tuolumne River. Implementation of Measure 5.3.6-4a, Avoidance of Flow Changes by Reducing Demand for Don Pedro Reservoir Water, or, if Measure 5.3.6-4a is not feasible, implementation of Measure 5.3.7-6, Lower Tuolumne River Riparian Enhancement, would address impacts on riparian habitat below La Grange Dam. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.4) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.8) for additional discussion of impacts on riparian habitat along the Tuolumne River, including text revisions to Measures 5.3.7-2 and 5.3.6-4a that further specify the mitigation requirements.

- SI_TRT5-04 The commenter indicates that the proposed mitigation for the impact on fishery resources in the lower Tuolumne River is inadequate. Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.9) for an expanded discussion of the impact analysis for the lower Tuolumne River, including revisions to Measures 5.3.6-4a and 5.3.6-4b that further define the mitigation requirements.
- SI_TRT5-05 This comment opposing additional Tuolumne River diversions and encouraging additional conservation efforts is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for pertinent response related to conservation programs and recycling projects proposed by the SFPUC in San Francisco and by the wholesale customers in their respective service areas.

Tuolumne River Trust, Eric Wesselman, Executive Director, 09/06/07

[See Public Hearing Transcript, Modesto, pp. 21–25]

- SI_TRT6-01 This comment stresses the need for seismic improvements to the regional water system but expresses concerns that the proposed WSIP water supply option and changes in system operations may delay the seismic improvements. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply options to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole. Also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- SI_TRT6-02 The statements made in this comment regarding demand projections have been submitted by numerous commenters. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) for additional information.
- SI_TRT6-03 This comment states that there is a lack of adequate baseline data for the Tuolumne River to properly analyze the environmental consequences of additional diversions. Please refer to **Response SI_Caltrout-01** for a response to this comment.
- SI_TRT6-04 The commenter accurately notes that the SFPUC currently pays the Turlock and Modesto Irrigation Districts to release fish flows at La Grange Dam on its behalf. Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.4) for a response to this comment.
- SI_TRT6-05 This comment asserts that the PEIR does not adequately analyze the WSIP's impacts on the Delta. Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Sections 14.8.2 and 14.8.3) for a discussion of the WSIP's effects on the San Joaquin River and Delta, and of the responsibilities of the U.S. Bureau of Reclamation and California Department of Water Resources regarding compliance with Delta water quality and flow objectives.

Tuolumne River Trust, Eric Wesselman, Executive Director, 09/18/07

[See Public Hearing Transcript, Fremont, pp. 12–17]

- SI_TRT7-01 This comment opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. Please refer to **Section 14.6, Master Response on Upper Tuolumne Issues** (Vol. 7, Chapter 14, Section 14.6.5) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River.
- SI_TRT7-02 This commenter’s support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River is acknowledged. As described in the Draft PEIR, the WSIP includes 22 to 34 million gallons per day (mgd) of projected water conservation and recycling savings in addition to 36 mgd of passive conservation savings due to the implementation of plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, please refer to the following sections of the Draft PEIR: Sections 9.2.2 through 9.2.4, and Sections 9.2.6 and 9.2.7. For additional information, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).
- SI_TRT7-03 This comment regarding the effect of price on demand was submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- SI_TRT7-04 It is assumed that this comment refers to the *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D). This study was used in the development of the Aggressive Conservation/Water Recycling and Local Groundwater Alternative analyzed in the Draft PEIR (Vol. 4, Chapter 9). In response to the commenter’s reference to “the reformulation of new demand projections,” please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Maximum Conservation and Water Recycling Potential).

- SI_TRT7-05 This comment regarding the employment projections used in the demand study was submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- SI_TRT7-06 This comment regarding per-capita demand increase was submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).
- SI_TRT7-07 This comment states that there is a lack of adequate baseline data for the Tuolumne River to properly analyze the environmental consequences of additional diversions. Please refer to **Response SI_Caltrout-01** for a response to this comment.
- SI_TRT7-08 CEQA defines a significant effect on the environment as a substantial, or potentially substantial, adverse change in the environment (Public Resources Code Section 21068). When determining whether a project may have a significant effect on the environment, CEQA calls for careful judgment on behalf of the lead agency based upon scientific and factual data to the extent possible. However, CEQA does not set quantifiable criteria because the significance of an activity may vary with the setting (CEQA Guidelines Section 15604). Appendix B of the Draft PEIR (SFPUC WSIP Initial Study Checklist) lists the significance criteria used to determine the significance of potential impacts. As stated in the Draft PEIR (Vol. 2, Chapter 4, p. 4.1-5), the impact significance criteria are based on San Francisco Planning Department, Major Environmental Analysis Division (MEA) standard guidance regarding the environmental effects to be considered significant. Note that the Draft PEIR includes additional significance criteria in cases where potential environmental issues associated with the WSIP are identified but are not clearly addressed by MEA's standard guidance.
- The Draft PEIR (Vol. 2, Chapter 4, pp. 4.1-5 to 4.1-7) identifies the significance determination categories (e.g., not applicable, less than significant, or potentially significant but mitigable) and describes the significance determination process. The impact analyses evaluate whether compliance with applicable regulations would reduce a potentially significant impact to a less-than-significant level. If so, compliance with the regulation is assumed, and the impact is considered to be less than significant. In addition, the impact analyses determine whether the WSIP projects would be subject to the policies set forth in the SFPUC Alameda or Peninsula Watershed Management Plans. The analyses also consider whether implementation of the SFPUC's Standard Construction Measures (described in Chapter 3, Section 3.11 of the Draft PEIR) could reduce impacts to a less-than-significant level. An impact is considered potentially significant in cases where there are no applicable regulations or SFPUC Standard Construction Measures,

or where such regulations and measures exist but by themselves would not reduce the impact to a less-than-significant level. If there are feasible measures available that would reduce a potentially significant impact to a less-than-significant level, then the impact is considered potentially significant but mitigable, and the PEIR identifies mitigation measure(s) to address the potentially significant impact.

SI_TRT7-09 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Sections 14.11.4 and 14.11.5) for a response related to the SFPUC's approach to addressing climate change in its water supply planning. Section 14.11 augments the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.

Tuolumne River Trust, Peter Drekmeier, Bay Area Program Director, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 12–16]

- SI_TRT8-01 This comment opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- SI_TRT8-02 These comments, which assert that demand is inflated, that demand projections do not account for increases in the price of water, and that per-capita consumption is expected to increase, have been submitted by many commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). The comment does not indicate the basis for the assertion that “we are shifting from manufacturing to service and information, which use considerably less water” or sufficiently specify information to allow for a specific response. However, the comment apparently refers to use in the demand model of employment projections that are not industry-specific. For additional information related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).
- SI_TRT8-03 Regarding the assertion that the full potential for water recycling and conservation has not been examined, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). The basis for the statement that the proposed WSIP includes only a 3 percent increase in water recycling is unclear. The recycled water potential studies distinguish between total recycled water projects and those that would replace potable supplies; only recycled water that would replace potable supplies is shown in Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18). According to the *SFPUC Wholesale Customer Recycled Water Potential Technical Memorandum* (RMC, 2004), existing (2004) recycled water projects replace 4.3 million gallons per day (mgd) of potable water supply. Therefore, the estimated 10.4 mgd of recycled water for the wholesale service area shown in Draft PEIR Table 3.3 represents a 243 percent increase in recycled water use. For the service area as a whole, the estimated 12.4 mgd of recycled water (assuming 2 mgd for the SFPUC retail service area, the average of the range shown in Table 3.3) represents a 288 percent increase in the use of recycled water that replaces potable supplies. It is the case, based on the projected 2030 recycled water use and 2030 demand shown in Table 3.3, that recycled water represents

about 3 percent of total 2030 demand, which may have been the commenter's point. This estimate is acknowledged.

Regarding the statement that 60 percent of 2030 water demand is for outdoor irrigation, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) for a discussion of water use for different sectors.

- SI_TRT8-04 This comment states that there is a lack of adequate baseline data for the Tuolumne River to properly analyze the environmental consequences of additional diversions on river flows, fisheries, riparian habitat, and associated species. Please refer to **Response SI_Caltrout-01** for a response to this comment.
- SI_TRT8-05 With respect to the use of monthly average and daily flows in the analysis of impacts on biological resources, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3).
- SI_TRT8-06 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.
- SI_TRT8-07 With respect to the dry-year transfer, please refer to **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14) for a discussion of feasibility and implementation issues and the requirement for subsequent project-level CEQA review of the transfer prior to ratification of such an agreement.
- Also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Tuolumne River Trust, Eric Wesselman, Executive Director, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, pp. 18–20]

- SI_TRT9-01 This comment opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. Please refer to the Draft PEIR (Vol. 3, Chapter 5, pp. 5.2-7 to 5.2-9) regarding the Tuolumne River’s designation as a wild and scenic river.
- SI_TRT9-02 The purpose of the Draft PEIR is not to “justify or define” the need for more water. Consistent with CEQA, the PEIR evaluates the environmental impacts of the proposed program as defined by the project sponsor (in this case, the SFPUC) and identifies and analyzes alternatives that would reduce or eliminate those impacts. Regarding the comment that the price elasticity of water demand was not considered in the demand analysis, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- SI_TRT9-03 It is assumed that this comment refers to the *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D). This study was used in the development of the Aggressive Conservation/Water Recycling and Local Groundwater Alternative analyzed in the Draft PEIR (Vol. 4, Chapter 9, Section 9.2.4). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Additional Conservation and Water Recycling Potential).
- SI_TRT9-04 This comment regarding the use of the Association of Bay Area Governments’ *Projections 2002* in the demand analyses was submitted by numerous commenters; refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- SI_TRT9-05 This comment regarding per-capita demand was submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- SI_TRT9-06 This comment, which stresses the need for seismic improvements to the regional water system while expressing concern that the proposed WSIP water supply option and changes in system operations could delay the seismic improvements,

is acknowledged. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply options to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.

Tuolumne River Trust, Peter Drekmeier, Bay Area Program Director, 10/11/07

[See Public Hearing Transcript #2, San Francisco City Hall, pp. 37–39]

- SI_TRT10-01 This comment expressing support for seismic improvements to the regional water system but opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- SI_TRT10-02 With respect to the dry-year transfer included as part of the proposed program, please refer to **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14). With respect to the agricultural conservation that would occur as part of a water transfer under the Modified WSIP Alternative, refer to Section 14.10, Master Response on Modified WSIP Alternative (Vol. 7, Chapter 14, Section 14.10). This section discusses feasibility and implementation issues as well as the requirement for subsequent project-level CEQA review of the transfer prior to ratification of such an agreement. With respect to the potential effects of the WSIP on the Tuolumne River between O'Shaughnessy Dam and La Grange Dam, the Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.9) included a project-level analysis of impacts on fisheries and terrestrial biological resources that would result from the proposed water supply option and changes in system operations. The results of the analysis indicated potentially significant adverse impacts on alluvial features that support meadow and riparian habitat (Impact 5.3.7-2, Vol. 5, Chapter 5, pp. 5.3.7-21 and 5.3.7-22) along this reach of the Tuolumne River. However, implementation of Mitigation Measure 5.3.7-2, Controlled Releases to Recharge Groundwater in Streamside Meadows and Other Alluvial Deposits (Vol. 4, Chapter 6, pp. 6-49 and 6-50) was prescribed to reduce these impacts to a less-than-significant level. Refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14) for further discussion of the analysis of the effects of the WSIP on the upper Tuolumne River, and additional discussion of Mitigation Measure 5.3.7-2, including text revisions to Measure 5.3.7-2 that further define the mitigation requirements.
- SI_TRT10-03 This comment states that there is a lack of adequate baseline data for the Tuolumne River to properly analyze the environmental consequences of additional diversions on river flows, fisheries, riparian habitat, and associated species. Please refer to **Response SI_Caltrout-01** for a response to this comment.

SI_TRT10-04 With respect to the dry-year transfer included as part of the proposed program, please refer to **Response SI_TRT10-02**, above. The commenter is correct that the California Department of Fish and Game has asked the Federal Energy Regulatory Commission to consider requiring greater releases of water from La Grange Dam to support anadromous fish. The commenter's opinion with respect to certification of the PEIR is noted.

Tuolumne River Trust, Clean Water Action, Sierra Club, Peter Drekmeier, Jennifer Clary, John Rizzo, 10/01/07

SI_TRT-CWA-SierraC-01 This comment consists of a summary of detailed comments contained in this comment letter. Responses to these comments are provided below in **Responses SI_TRT-CWA-SierraC-02 through SI_TRT-CWA-SierraC-199**. In addition, many of these comments are addressed in **Sections 14.5, 14.6, and 14.7, Master Responses on Water Resources Modeling, Upper Tuolumne River Issues, and Lower Tuolumne River Issues** (Vol. 7, Chapter 14), respectively.

SI_TRT-CWA-SierraC-02 The commenter correctly quotes the SFPUC's Water Enterprise Environmental Stewardship Policy. The Draft PEIR describes and evaluates the consistency of the WSIP with the Water Enterprise Environmental Stewardship Policy in two places: in Section 4.2 (Vol. 2, Chapter 4, p. 4.2-6 and pp. 4.2-15 and 4.2-16) with respect to the proposed facility improvement projects, and in Section 5.2 (Vol. 3, Chapter 5, pp. 5.2-24, 5.2-25, and 5.2-29) with respect to the proposed water supply and system operations. As described in these sections, the WSIP would be consistent with the underlying goals of the Water Enterprise Environmental Stewardship Policy, particularly with respect to the WSIP sustainability goal and the WSIP objective to manage natural resources and physical systems to protect watershed ecosystems (refer to Table 3.2, Vol. 1, Chapter 3, p. 3-9).

Impacts of the WSIP on downstream native fish and wildlife populations are analyzed in the Draft PEIR in Sections 5.3.6, 5.4.5, and 5.5.5 for the Tuolumne River system, Alameda Creek system, and Peninsula watershed, respectively. The following impacts on downstream fishery resources were found to be less than significant: along the Tuolumne River between Hetch Hetchy Reservoir and Don Pedro Reservoir (Impact 5.3.6-2); along the San Joaquin River (Impact 5.3.6-5); along Calaveras Creek below Calaveras Dam and along Alameda Creek below the confluence with Calaveras Creek (Impact 5.4.5-2); along San Antonio Creek below San Antonio Reservoir (Impact 5.4.5-5); along Alameda Creek below the confluence with San Antonio Creek (Impact 5.4.5-6); and along San Mateo Creek below Crystal Springs Reservoir (Impact 5.5.5-3). The following impacts on downstream fishery resources were found to be potentially significant but mitigable: along the Tuolumne River

below Don Pedro Reservoir (Impact 5.3.6-4); along Alameda Creek below the Alameda Creek Diversion Dam (Impact 5.4.5-3); and along Pilarcitos Creek below Pilarcitos Reservoir (Impact 5.5.5-5). Implementation of identified mitigation measures for downstream fishery resources would reduce the impacts associated with the WSIP to a less-than-significant level.

SI_TRT-CWA-SierraC-03 The Draft PEIR used available data to characterize the baseline or existing condition. The San Francisco Planning Department believes that the data are sufficient to make a reasonable assessment of environmental consequences associated with implementation of the WSIP. The CEQA Guidelines (Section 15151) note that an “evaluation of environmental effects of a proposed project need not be exhaustive.” For more information, please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol.7, Chapter 14, Section 14.4.4).

SI_TRT-CWA-SierraC-04 This comment expresses the opinion that biological baseline data are inadequate to assess the impacts of the WSIP. For information on this topic, please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol.7, Chapter 14, Section 14.4.4).

With respect to data on streamside meadows, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.3).

CEQA does not require that an EIR evaluate whether the existing condition is compliant with environmental laws and policies. The purpose of the Draft PEIR is to describe the consequences of the proposed WSIP relative to the existing condition (CEQA Guidelines Section 15125[a]).

With respect to the frequency and severity of impacts, refer to **Response SI_TRT-CWA-SierraC-44**.

SI_TRT-CWA-SierraC-05 This comment consists of a summary of comments on specific baseline data. Responses to detailed comments are provided in **Responses SI_TRT-CWA-SierraC-06 through SI_TRT-CWA-SierraC-29**.

SI_TRT-CWA-SierraC-06 Please refer to **Response SI_TRT-CWA-SierraC-84** regarding Fish and Game Code Section 5937. In addition, as stated in **Response SI_TRT-CWA-SierraC-04**, CEQA does not require that an EIR evaluate whether the existing condition is compliant with environmental laws and policies. The purpose of the Draft PEIR is to

describe the consequences of the proposed WSIP relative to the existing condition (CEQA Guidelines 15125[a]). As indicated in **Response SI_TRT-CWA-SierraC-03**, the San Francisco Planning Department believes that the data available from existing studies are sufficient to make a reasonable assessment of the environmental consequences of the WSIP for CEQA purposes. Also, please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol.7, Chapter 14, Section 14.4.4).

The commenter correctly notes that a draft report prepared by the U.S. Fish and Wildlife Service (USFWS) in 1992 recommended an increase in minimum releases from O'Shaughnessy Dam, based on an Instream Flow Incremental Methodology study. As described in the Draft PEIR (Vol. 3, Chapter 5, p. 5.7-7), the SFPUC provided comments on the draft study questioning the basis for some of the recommendations, but the matter was left unresolved. Beginning in 2005, the SFPUC began working with the USFWS to resolve issues regarding additional releases. Cooperative field studies are in progress, and the SFPUC and the USFWS expect to reach agreement on the releases in 2009. Please also refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2).

The supplemental releases referred to in the comment of 4,400 to 15,000 acre-feet per year (afy) were included in the analysis of cumulative impacts. As described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-28 to 5.7-32), the increase in minimum flows would benefit resident trout but could also have adverse effects on spawning trout and on the flora and fauna of streamside meadows. Release of the additional water from Hetch Hetchy Reservoir in most months would increase drawdown of the reservoir, which would reduce the total volume of water released in the spring and delay the release by a few days. The reduction in volume and delay in the release could have adverse impacts on spawning trout and on the flora and fauna of streamside meadows.

SI_TRT-CWA-SierraC-07 The Draft PEIR (Vol. 1, Chapter 2, pp. 2-35 to 2-37) provides a summary description of the City and County of San Francisco's (CCSF) water rights. These water rights are adequate for the proposed water supply option proposed under the WSIP; consequently, the CCSF will not seek new appropriative water rights.

The region identified by the National Marine Fisheries Service (NMFS) and California Department of Fish and Game (CDFG) in

the 2002 draft guidelines referred to by the commenter does not include watersheds affected by SFPUC facilities; further, the NMFS and CDFG explicitly state that the draft guidelines “are not developed for use in areas outside of the identified mid-coastal range” (NMFS and CDFG, 2002).

SI_TRT-CWA-SierraC-08 The commenter accurately notes that a flow/habitat assessment methodology was not used in the Draft PEIR analysis of the WSIP. A study that relates flow to trout habitat value will be part of the SFPUC’s and USFWS’s ongoing cooperative studies, as described in **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2).

With respect to compliance with existing environmental laws and policies, please refer to **Response SI_TRT-CWA-SierraC-04**.

SI_TRT-CWA-SierraC-09 Please refer to **Section 14.7, Master Response on the Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.2).

SI_TRT-CWA-SierraC-10 The commenter notes that the Modesto Irrigation District (MID) and Turlock Irrigation District (TID) routinely divert less water than allowed under their water rights. Although it would be theoretically possible for MID and TID to divert more water from the Tuolumne River than they have done historically, their current average diversion of about 867,000 afy is close to the practical maximum, taking account of available storage in Don Pedro Reservoir, flood control requirements, and requirements for minimum releases to the river. The assumed value for future diversions by TID and MID used in the Draft PEIR is consistent with the value that TID and MID provided to the Department of Water Resources for California Water Plan purposes. The SFPUC has no reason to believe that TID’s and MID’s diversions will increase in the future. For additional information on the assumed future diversions by MID and TID used in the Hetch Hetchy/Local Simulation Model (HH/LSM), refer to the discussion in **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6).

SI_TRT-CWA-SierraC-11 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.3).

SI_TRT-CWA-SierraC-12 The commenter notes that the lack of an established monitoring program to assess the status of steelhead (*O. mykiss*) in the Tuolumne River makes it impossible to evaluate impacts on this species due to the proposed flow changes. On the contrary, the San Francisco Planning Department believes that sufficient

information is available to reach a conclusion with respect to the potential impact of the WSIP on steelhead for the reasons noted below.

As described in the Draft PEIR, the San Francisco Planning Department determined that long-term WSIP-induced flow changes in the Tuolumne River below La Grange Dam could have a significant adverse effect on anadromous fish (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32). Although no significant populations of steelhead are known to exist in this reach of the river, individual steelhead could be adversely affected by WSIP-induced flow changes (for more information, please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.3).

The Draft PEIR lists the possible mechanisms for harm to anadromous fish (Vol. 3, Chapter 5, p. 5.3.6-29). Although the WSIP would have little or no effect on average monthly flow in the lower river in most summer, fall, and winter months in all hydrologic year types, it would reduce flows in many spring and early summer months. As indicated in the Draft PEIR, the largest percentage reductions in Tuolumne River stream flow downstream of La Grange Dam due to the WSIP would occur in June. Flow reductions in May and June would likely result in seasonally elevated water temperatures and a corresponding reduction in the linear extent of suitable habitat for Chinook salmon and steelhead/rainbow trout rearing. Juvenile Chinook salmon typically migrate downstream in May, but could be adversely affected by the reduction in suitable habitat. Steelhead/rainbow trout rear within the river system throughout the year and would be adversely affected by seasonally elevated water temperatures during summer months.

Although steelhead are not abundant in the Tuolumne River (refer to Vol. 7, Chapter 14, **Section 14.7, Master Response on Lower Tuolumne River Issues**, Section 14.7.3), these changes in stream flow and water temperature could reduce habitat quality and availability for summer rearing. The more abundant juvenile Chinook salmon could also be adversely affected by WSIP-induced changes in flow and water temperature. As a result, the impact of the WSIP on these fishery resources in the lower Tuolumne River was determined to be potentially significant. Implementation of Mitigation Measures 5.3.6-4a or 5.3.6-4b would reduce these impacts to a less-than-significant level (Vol. 4, Chapter 6, pp. 6-48 and 6-49).

Additionally, the commenter notes that it is possible that current water storage and diversion operations on the Tuolumne River have led to unacceptable conditions in the river for steelhead. Furthermore, the fact that steelhead were once abundant and now are rare emphasizes the need to re-operate the water system in a manner that increases steelhead populations.

The purpose of the Draft PEIR is to describe the consequences of the proposed WSIP relative to the existing condition. CEQA does not require that an EIR evaluate whether the existing condition is compliant with all environmental laws and policies. The Draft PEIR does include an assessment of the effects of the WSIP on fisheries in the context of all past, present, and expected future actions that have or will affect this resource (Vol. 3, Chapter 5, Section 5.7). In this section, it is acknowledged that past and present water management practices and other past and present human activities, such as gravel and gold mining, have substantially altered habitat for anadromous fish in the lower Tuolumne River. The already degraded condition of the anadromous fish population in this reach of the river contributed to the conclusion that WSIP-induced flow reductions would have a significant adverse effect in the absence of appropriate mitigation measures. Please also refer to **Response S_CDFG2-05**.

SI_TRT-CWA-SierraC-13 This comment on the need for monitoring is acknowledged. With respect to the ability to reach impact conclusions for CEQA purposes using available data and to devise appropriate mitigation measures to reduce impacts on fisheries in the lower Tuolumne River, please refer to **Responses SI_TRT-CWA_SierraC-03** and **SI_TRT-CWA-SierraC-12** and to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4).

SI_TRT-CWA-SierraC-14 The commenter accurately notes that there has been no recent comprehensive study of the upper Tuolumne River. As indicated in **Response SI_TRT-CWA-SierraC-03**, the San Francisco Planning Department believes that the data available from existing studies are sufficient to make a reasonable assessment of the environmental consequences of the WSIP for CEQA purposes. Also, please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4).

For discussion of data on streamside meadows, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.3).

Several studies are in progress that will improve knowledge of the upper Tuolumne River and its natural resources. The SFPUC began studies of river hydrology and geomorphology in 2006, and the early results of the studies were available to the authors of the Draft PEIR. The SFPUC has already begun cooperative studies with the USFWS that may lead to a revision of instream flow requirements below O'Shaughnessy Dam. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2). The National Park Service has conducted studies as part of the development of its *Tuolumne Wild and Scenic River Comprehensive Management Plan* and continues to conduct groundwater, rare species, and vegetation studies in the Poopenaut Valley.

Although the SFPUC expects to approve the WSIP in 2008, implementation will take many years. The results of many of the studies identified above will become available during implementation of all of the elements of the WSIP. The results of these studies, together with the results of the monitoring component of Mitigation Measure 5.3.7-2, would provide data for the adaptive management component of Measure 5.3.7-2.

The SFPUC cannot currently meet its level of service goals without an increase in water supplies, and its ability to meet the level of service goals will further deteriorate as water demand in the suburban customers' service areas increases. If the source of water is the Tuolumne River, as envisaged under the WSIP, some increase in diversions from the river are needed immediately, although the full 27 million gallons per day (mgd) would not be needed until 2030.

- SI_TRT-CWA-SierraC-15 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.3). The National Park Service is collecting data on rare species, vegetation, and groundwater in the Poopenaut Valley.
- SI_TRT-CWA-SierraC-16 Please refer to **Section 4.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.3) and **Response SI_TRT-CWA-SierraC-14**, above.
- SI_TRT-CWA-SierraC-17 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.4).
- SI_TRT-CWA-SierraC-18 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 14.6.3 and 14.6.4).

SI_TRT-CWA-SierraC-19 No mitigation measures are proposed to lessen impacts of the WSIP on visual and recreational resources in the Tuolumne River corridor because the impacts of the WSIP on these resources were determined to be less than significant (Vol. 3, Chapter 5, pp. 5.3.8-20 to 5.3.8-35).

A steep trail descends about 1,400 feet from the north side of Hetch Hetchy Road and provides access to the Poopenaut Valley. Access to the south bank of the Tuolumne River within the valley is provided by the trail, but the river must be forded to reach the north bank of the river. The WSIP would have no effect on access to the Poopenaut Valley.

SI_TRT-CWA-SierraC-20 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

SI_TRT-CWA-SierraC-21 The California Global Warming Solutions Act of 2006 (Assembly Bill No. 32), described in Draft PEIR Section 4.9, Air Quality (Vol. 2, Chapter 4, pp. 4.9-12 to 4.9-15), establishes a statewide greenhouse gas (GHG) emissions cap for 2020 that is equivalent to the 1990 emissions levels. Impacts associated with WSIP-related GHG emissions are analyzed in Impact 4.9-7 (Vol. 2, Chapter 4, pp. 4.9-42 to 4.9-47). Due to actions being actively taken by the CCSF and SFPUC to reduce GHG emissions, the PEIR analysis concludes that implementation of the WSIP would not conflict with the state's goal of reducing GHG emissions to 1990 levels by 2020. The CCSF and SFPUC actions to reduce GHG emissions are described in the Draft PEIR (Vol. 2, Chapter 4, pp. 4.9-17 to 4.9-19).

Refer to **Response SI_PacInst-03** regarding per-capita water use; this response describes why per-capita water demand in all sectors is projected to *decrease* between 2001 and 2030.

Since the proposed program was determined to have a less-than-significant impact related to GHG emissions, the alternatives analyzed in the Draft PEIR do not address GHG emissions, consistent with CEQA Guidelines Section 15126.6(a).

SI_TRT-CWA-SierraC-22 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

SI_TRT-CWA-SierraC-23 As the commenter accurately notes, the Draft PEIR concluded that the WSIP would have a less-than-significant impact on groundwater in the Tuolumne River corridor (Vol. 3, Chapter 5, pp. 5.3.5-4 and 5.3.5-5). The reasons for the conclusion are described below. The

only way that the WSIP could affect groundwater in the Tuolumne River corridor is if WSIP-induced changes in river flow altered groundwater recharge or discharge rates.

The Tuolumne River between Hetch Hetchy and Don Pedro Reservoirs flows in a deep canyon and is largely confined within a bedrock channel. Most of the alluvial deposits in the river corridor are limited in size, with the exception of the meadow in the Poopenaut Valley (Vol. 3, Chapter 5, pp. 5.3.2-1 and 5.3.2-2). There are no large groundwater bodies associated with this reach of the river, and no municipal water agencies, homeowners, or irrigators obtain their water supplies from groundwater in this portion of the Tuolumne River corridor. The rocks underlying the river are impermeable, so little or no water would be expected to percolate from the river into the ground. Groundwater probably enters the river from springs and seeps in the canyon walls.

WSIP-induced changes in flow in this reach of the river would manifest themselves as a reduction in the volume of water in the spring snowmelt period and a delay of a few days in the initial release of the snowmelt. This could result in a reduction in groundwater recharge in streamside alluvial deposits, particularly in the Poopenaut Valley, which could have a significant adverse impact on terrestrial biological resources (Vol. 3, Chapter 5, pp. 5.3.7-21 and 5.3.7-22). The significant impact on terrestrial biological resources would be reduced to a less-than-significant level by shaped releases of water from O'Shaughnessy Dam (see Mitigation Measure 5.3.7-2). WSIP-induced river flow changes would have no other effects on groundwater in the Tuolumne River corridor between Hetch Hetchy and Don Pedro Reservoirs.

The Tuolumne River between La Grange Dam and the San Joaquin River flows through alluvial deposits, as described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.3.2-3 and 5.3.2-4). For most of this reach, the river gains water from the groundwater because the groundwater table in the lands surrounding the river is at a higher elevation than the river. Because a pumping depression has developed in central Modesto, a five-mile reach of the river in Modesto loses water to the groundwater.

WSIP-induced changes in flow in the river between La Grange Dam and the San Joaquin River would manifest themselves as a reduction in the volume of water in the winter and spring and an altered pattern of releases in that period. During the winter and spring, flow in the

Tuolumne River below La Grange Dam would be less at times with the WSIP than under the existing condition. Because water levels in the river would be lower, the gradient between the elevation of the groundwater table in the surrounding lands and the river water surface elevation would increase slightly, and groundwater discharge to the river could increase slightly in most of the river reach. In the Modesto area, the loss of water from the river to the groundwater could decrease slightly as a result of the WSIP-induced reduction in flow.

The groundwater hydrology of the lands on both banks of the Tuolumne River between La Grange Dam and the San Joaquin River is quite complex. Groundwater occurs both in shallow, unconfined water bodies and in deep, confined aquifers. The deep aquifers, which are the primary source of groundwater for irrigation and municipal supply, are not directly connected to the Tuolumne River and are thus unaffected by the WSIP. The shallow groundwaters are connected to the Tuolumne River, but the river's influence on groundwater levels is small compared to the influence of precipitation and applied irrigation water. Some farmers and homeowners in the river corridor may use wells extending into shallow groundwater for irrigation or domestic water supplies. However, because groundwater flow is generally toward the river from the surrounding land rather than away from it, the Draft PEIR concludes that the WSIP would not have a significant affect on groundwater levels and agricultural and domestic wells.

SI_TRT-CWA-SierraC-24 The commenter expresses concern that the yield of the Westside Groundwater Basin is underestimated because of the lack of historical data and because the yield estimate did not consider the potential for using local stormwater to enhance local aquifer recharge.

As discussed in the Draft PEIR (Vol. 3, Chapter 5, p. 5.6-24), estimates of recharge to the North Westside Groundwater Basin are being refined as part of ongoing groundwater modeling efforts on behalf of the SFPUC, and this analysis indicates that recharge to the basin could range from about 4,850 afy to 6,950 afy (Luhdroff and Scalmanini, 2007). While accurately estimating recharge to the North Westside Groundwater Basin is difficult because of the lack of reliable historical data regarding groundwater use, the SFPUC started metering the use of water for irrigation at Golden Gate Park and the San Francisco Zoo, the major uses of the groundwater basin in 2005. This more accurate information will be used to develop a better

estimate of the safe yield of the groundwater basin, as required by Mitigation Measure 5.6-1 of the Draft PEIR (Vol. 4, Chapter 6, pp. 6-58 and 6-59). This measure requires that the basin's yield be determined on both a regular (average annual) and an intermittent (dry-year or emergency) basis, in accordance with Element 3 of the SFPUC's *Final Draft North Westside Groundwater Basin Management Plan* (SFPUC, 2005). A project-specific CEQA document will address the Westside Groundwater Project (part of the WSIP Regional Groundwater Projects, SF-2) in more detail.

The commenter also states that the groundwater yield estimate did not consider the potential for using local stormwater to enhance local aquifer recharge. In San Francisco, the SFPUC is examining options for recharging the Westside Groundwater Basin with stormwater, including restoration of Lake Merced water levels with stormwater. As discussed in the Draft PEIR (Table 3.10, Vol. 1, Chapter 3, p. 3-55), treated stormwater is one water supply under consideration for restoring Lake Merced water levels under the Local Groundwater Projects (SF-2). Under this project, treatment wetlands would be constructed to supply approximately 360 afy, or 0.32 mgd, of treated stormwater to Lake Merced. Because Lake Merced indirectly recharges the Westside Groundwater Basin, this project would result in a very small increase in the groundwater basin yield. However, the incremental increase in yield would be very small compared to the average annual increase in purchase requests of 35 mgd by 2030. Furthermore, the estimated range of recharge to the basin identified in the Draft PEIR (Vol. 3, Chapter 5, p. 5.6-24) includes recharge from Lake Merced.

In addition, the SFPUC evaluated recharge of the Westside Groundwater Basin with stormwater as part of the *Vista Grande Watershed Study* (RMC Water and Environment, 2006). This study demonstrated that construction of stormwater detention basins with a combined capacity of 54.4 million gallons would provide only approximately 694 afy (0.62 mgd) of recharge to the Westside Groundwater Basin. Aquifer recharge with stormwater would therefore require large amounts of land to achieve a substantial recharge benefit, and this land is not available in San Francisco and San Mateo County, which are mostly built out. The estimated cost would be \$22,000 to \$42,000 per acre-foot of water recharged. This is many times the cost of desalinated seawater, itself one of the more costly water sources potentially available to the SFPUC. Therefore, active recharge of the Westside Groundwater Basin with stormwater is not considered a feasible or cost-effective alternative to increase

the yield of the groundwater basin because of high cost and the large amount of land that would be needed to achieve a substantial aquifer recharge benefit.

- SI_TRT-CWA-SierraC-25 The commenter states that the Draft PEIR should confirm at the beginning of Section 5.6 that both the Local and Regional Groundwater Projects (SF-2) are subject to project-level CEQA review. Impacts of the proposed Local and Regional Groundwater Projects are addressed in Section 5.6 of the Draft PEIR (Vol. 3, Chapter 5). The analysis in this section demonstrates at a program level that identified impacts can be mitigated to a less-than-significant level. As stated in each impact analysis, the impacts and proposed mitigation would be subject to more detailed analysis as part of the project-level CEQA documentation for both projects, as determined by the San Francisco Planning Department.
- SI_TRT-CWA-SierraC-26 The commenter expresses confusion regarding Figures 5.6-3 and 5.6-4, and states that the figures should reflect total pumping volumes. Figures 5.6-3 and 5.6-4 in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.6-7 and 5.6-9, respectively) are included for different purposes. The purpose of Figure 5.6-3 is to illustrate total historical pumping from the Westside Groundwater Basin, including pumping for municipal water supply, cemetery irrigation, and golf course irrigation. As described in the Draft PEIR (Vol. 3, Chapter 5, p. 5.6-6), groundwater usage for municipal purposes is metered, while usage for irrigation of cemeteries and golf courses has not historically been metered. Therefore, it is impossible to include a continual record of groundwater usage for irrigation of golf courses and cemeteries in this figure, and only one dot representing historically high pumping rates is included. This figure illustrates historically high pumping rates compared to 2005 groundwater pumping rates once much of the pumping for golf course irrigation was replaced with recycled water and municipal groundwater pumping was reduced during the In-Lieu Recharge Demonstration Study. The purpose of Figure 5.6-4 is to provide more detail regarding municipal groundwater pumping during the In-Lieu Recharge Demonstration Study.
- SI_TRT-CWA-SierraC-27 The commenter asks why groundwater use at the Golden Gate Cemetery is not metered and what the plans are for measuring this groundwater use. Subsequent to preparation of the Draft PEIR, the SFPUC contacted the U.S. Department of Veterans Affairs and found that they no longer irrigate the Golden Gate Cemetery with groundwater. In response to this updated information, the text of the

Draft PEIR (Vol. 3, Chapter 5, p. 5.6-8, last paragraph) is revised as follows:

Other continued uses of irrigation pumping in the South Westside Groundwater Basin in 2005 were consistent with historical pumping rates and are estimated at up to 2.1 mgd (2,400 afy) of irrigation pumping for cemeteries in Colma, and 0.1 mgd (120 to 150 afy) of irrigation pumping for the California Golf Club⁸ in South San Francisco, and an undetermined amount of groundwater pumping for irrigation of the Golden Gate National Cemetery in San Bruno (Luhdorff and Scalmanini, 2006). The Golden Gate National Cemetery in San Bruno has historically used groundwater for irrigation, but the cemetery has not been irrigated using groundwater for over 20 years (Schem, 2007).

The following reference is added to the Draft PEIR (Vol. 3, Chapter 5, p. 5.6-33).

Schem, Clifford, U.S. Department of Veterans Affairs, National Cemetery Administration, personal communication with Greg Bartow, San Francisco Public Utilities Commission, September 7, 2007.

SI_TRT-CWA-SierraC-28 The commenter states that the available aquifer storage in the South Westside Groundwater Basin is greater than the capacity of Crystal Springs Reservoir, and that the Draft PEIR should evaluate the potential for proactive recharge of the groundwater basin with stormwater.

The Draft PEIR (Vol. 3, Chapter 5, p. 5.6-13) states that, based on the 2005 study by Luhdorff and Scalmanini, there is approximately 75,000 acre-feet of vacated aquifer storage in the South Westside Groundwater Basin in the Daly City, South San Francisco, and northern San Bruno areas. The proposed Regional Groundwater Projects (SF-2) are intended to take advantage of this vacated aquifer storage and to increase groundwater levels in the South Westside Groundwater Basin through in-lieu deliveries of potable water from the SFPUC regional system to the participating pumpers. While the vacated aquifer storage is greater than the historical capacity of the Crystal Springs Reservoir (69,300 acre-feet, Vol. 1, Chapter 2, Table 2.2, p. 2-6), the SFPUC studied recharge of the South Westside Groundwater Basin by stormwater, but found it to be infeasible.

The SFPUC investigated the potential for recharging the South Westside Groundwater Basin with stormwater in the *Vista Grande*

Watershed Study. The goal of the study was to identify potential solutions to flooding problems at the Vista Grande canal and in the Vista Grande drainage basin (RMC, 2006). This study evaluated the detention of stormwater to reduce both regional flooding as well as local flooding of the Vista Grande canal and tunnel.

As stated in **Response SI_TRT_CWA-SierraC-24**, the *Vista Grande Watershed Study* demonstrated that construction of stormwater detention basins with a combined capacity of 54.4 million gallons would provide only approximately 694 afy (0.62 mgd) of recharge to the Westside Groundwater Basin. Aquifer recharge with stormwater would therefore require huge amounts of land to achieve a substantial recharge benefit, and this land is not available in San Francisco and San Mateo County, which are largely built out. The estimated cost would be \$22,000 to \$42,000 per acre-foot of water recharged. Therefore, active recharge of the Westside Groundwater Basin with stormwater is not considered a feasible or cost-effective alternative to increase the yield of the groundwater basin because of the high cost to construct the basins and the large amount of land that would be needed to achieve a substantial aquifer recharge benefit.

SI_TRT-CWA-SierraC-29 The commenter states that a source water assessment should be part of the Draft PEIR, along with potential actions to address contamination of a water supply well. As stated in the Draft PEIR (Vol. 3, Chapter 5, p. 5.6-31), the SFPUC would develop a drinking water source assessment for each well constructed under the Local and Regional Groundwater Projects (SF-2). At a minimum, the assessment would include a delineation of the area around the well(s) through which contaminants might move and reach the well(s), referred to as the groundwater protection zone; an inventory of possible contaminating activities that could lead to a release of microbiological or chemical contaminants within the delineated area; and a determination of the potentially contaminating activities to which the well(s) are most vulnerable. Until production well locations are selected and a drinking water source assessment performed, the potential for contamination of a drinking water well cannot be fully evaluated. Therefore, impacts related to potential contamination of each well are conservatively considered potentially significant for the Local and Regional Groundwater Projects (SF-2) at the program level, but would be reduced to a less-than-significant level with implementation of Mitigation Measure 5.6-5, Drinking Water Source Assessments for Groundwater Wells (Vol. 4, Chapter 6, p. 6-59). This measure would require development and

implementation of a source water protection program for wells that are considered vulnerable to contamination. The drinking water source assessment would be conducted as part of the project-level analysis and would identify actions to address potential contamination.

SI_TRT-CWA-SierraC-30 The model used in the analysis for the Draft PEIR (the HH/LSM) is a state-of-the-art water system model comparable with those used by other California state and local water agencies for planning purposes. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6).

The second part of this comment consists of a summary of comments on modeling and data analysis. Responses to these detailed comments are provided in **Responses SI_TRT-CWA-SierraC-31** through **SI_TRT-CWA-SierraC-54**.

SI_TRT-CWA-SierraC-31 This comment restates the comments submitted by the Pacific Institute (Comments SI_PacInst-03, SI_PacInst-04, SI_PacInst-05, SI_PacInst-07, SI_PacInst-08) and numerous other commenters; please refer to responses to the Pacific Institute letter and **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

SI_TRT-CWA-SierraC-32 Regarding the assertion that the demand projections used to develop the WSIP are inflated, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

Regarding the comparison between percent difference in jobs and population between growth rates used to develop the demand projections and general plans, the commenter may be mistakenly referencing the comparison between Association of Bay Area Governments (ABAG) 2002 and 2005 projections. Table 7.8 in the Draft PEIR (Vol. 4, Chapter 7, p. 7-28) presents comparisons between water customer-selected population projections for 2030 and general plan population projections on a customer-by-customer basis; Table 7.9 (p. 7-30) presents the same information for employment projections. The percentages vary among the wholesale customers; as noted in the table, most wholesale customers service areas are not contiguous with city limits (or with the city and its planning area); therefore, the population projections from the jurisdictions' general plans and ABAG should be considered as general comparisons only.

The CCSF disagrees with the assertion that “it is speculative to make conclusions about consistency” between projections used to estimate future water demand and those contained in general plans. The Draft PEIR provides these comparisons because general plans present the level of growth adopted by the land use planning agencies in the areas receiving SFPUC water and, when considered in context with other local planning efforts (e.g., growth ordinances and amendments adopted subsequent to general plan approval), characterize potential buildout within these jurisdictions. The Draft PEIR identifies important issues salient to comparisons between the projections, noting the differences between planning-year horizons (Vol. 4, Chapter 7, pp. 7-7 et seq.), differences between service area boundaries and city boundaries (see preceding paragraph), and the age of some of the general plans and infrequency of general plan updates (p. 7-8). Partly because of these issues, the PEIR also compares the water-customer-selected population projections with those of the ABAG *Projections* series, since (a) ABAG is the official regional planning agency of the San Francisco Bay region; (b) the projections have a longer planning horizon than all of the general plans; and (c) the projections are updated (within information provided by Bay Area cities and counties) every two years.

Contrary to the comment, the PEIR does not assume nor speculate that “the local jurisdictions would plan for a continuing rate of growth beyond their [the general plans’] horizon years”; refer to note (a) in Tables 7.8 and 7.9 (Vol. 4, Chapter 7, pp. 7-28 and 7-30).

The comment also states that the general plan EIRs do not adequately cover the growth allowed by the increased water supply. As stated in the Draft PEIR (Vol. 4, Chapter 7, p. 7-70), “Given that the WSIP projections extend beyond the projections of many adopted general plans, especially in terms of expected employment growth, this analysis also considers the potential impacts of growth that could occur beyond the projections indicated in local general plans and related land use plans.” The referenced analysis of growth beyond the previously evaluated growth (e.g., growth evaluated in general plan EIRs) is presented on Draft PEIR pp. 7-70 and 7-71.

Lastly, the comment correctly states that ABAG projections are not subject to environmental review; Bay Area cities and counties (not ABAG) are responsible for evaluating and approving future development. The CCSF believes that the Draft PEIR approach to evaluating growth, which is based not only on comparisons with ABAG projections but also on review of 180 general plans, general

plan revisions, general plan amendments, specific plans, precise plans, updated land use and housing elements, and related CEQA documents (see Vol. 4, Chapter 7, pp. 7-78 to 7-91), is appropriate and consistent with CEQA requirements for a growth-inducement analysis.

SI_TRT-CWA-SierraC-33 This comment, which states that the Draft PEIR looks at the indirect effects of growth on air quality, traffic, and water quality but not on the other factors mandated by CEQA, is incorrect. Refer to Draft PEIR Section 7.4.1 (Vol. 4, Chapter 7, pp. 7-60 to 7-78). Table 7.11 (pp. 7-65 and 7-66) summarizes the significant impacts of planned growth, including impacts in the areas listed in this comment, and Table E.5.1 (Vol. 5, Appendix E.5, pp. E.5-3 to E.5-18) presents a more detailed summary of impacts and the measures that were identified to mitigate them in the EIRs prepared for the general plans of jurisdictions in the service area. In addition to these impacts on service area jurisdictions, the Draft PEIR identifies effects related to traffic, air quality, and hydrology/water quality as the key *regional* impacts of growth (i.e., in addition to these impacts within individual jurisdictions), which may be the basis for the comment's mischaracterization of the impact analysis.

SI_TRT-CWA-SierraC-34 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

SI_TRT-CWA-SierraC-35 This comment regarding the Draft PEIR review of the project-level impacts on growth requires clarification. In addition to reviewing those general plan EIRs that could be obtained and summarizing the impacts and mitigation measures contained therein (Vol. 4, Chapter 7, pp. 7-60 to 7-69, and Vol. 5, Appendix E.5), the Draft PEIR preparers also reviewed a selection of EIRs for major projects currently being undertaken in the SFPUC service area (Vol. 4, Chapter 7, p. 7-71, and Vol. 5, Appendix E.6), to which this comment refers. The purpose of this project-level review was to assess whether, at least for the selection of EIRs reviewed, the mitigation measures identified in general plan EIRs were being implemented at the project level, and the Draft PEIR states the limited nature of the review (p. 7-71 and Appendix E.6).

The Draft PEIR review of general plan documents and related CEQA documents (Vol. 4, Chapter 7, pp. 7-78 to 7-91) indicated that the majority of growth the WSIP would support is consistent with the growth anticipated in the adopted general plans within the service area. To the extent that the WSIP would support a level of growth

beyond that reflected in the adopted general plans, there could be additional or more severe impacts than those identified in the general plan EIRs. These impacts are discussed on pp. 7-69 to 7-71 of the Draft PEIR.

SI_TRT-CWA-SierraC-36 As described in Draft PEIR program description (Vol. 1, Chapter 3, pp. 3-28 to 3-30), the existing system could not meet average daily demand if any one of the five critical facilities were shut down for maintenance. SFPUC studies indicate that adequate redundancy for these critical facilities, including the Irvington Tunnel, is necessary to meet day-to-day customer water supply needs and allow sufficient operational flexibility to meet water delivery reliability goals. Without adequate redundancy of critical facilities, the SFPUC has limited operational flexibility in the event of an emergency or a system failure, as well as constraints on conducting adequate system inspection and maintenance. Consequently, the WSIP proposes to provide redundancy of some critical facilities in order to meet system reliability goals. The redundancy of individual facilities does not necessarily result in an overall increase in system capacity because of constraints in other parts of the system; therefore, the projected levels of water demand and related assumptions used in the Draft PEIR to estimate demand (Vol. 4, Chapter 7, pp. 7-9 to 7-18) provide the appropriate basis to assess expectations of future growth that would be served, in part, by the proposed program. Note also that the capacity of the existing Irvington Tunnel is not a constraint to growth, and the SFPUC is not proposing to use the second (new) tunnel and existing tunnel simultaneously.

SI_TRT-CWA-SierraC-37 This comment correctly states a requirement of the Master Water Sales Agreement that wholesale customers employ their best efforts to use all sources of water owned or controlled by them (Draft PEIR, Vol. 1, Chapter 2, p. 2-44 and Vol. 4, Chapter 7, p. 7-13).

The assertion that the analysis of the Aggressive Conservation/ Water Recycling and Local Groundwater Alternative was based on the additional conservation and recycling potential identified in the SFPUC's *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D), as this comment suggests, is correct. The analysis of this and other alternatives presented in the Draft PEIR (Vol. 4, Chapter 9) evaluated the comparative merits of the alternatives and included sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed program, consistent with CEQA Guidelines Section 15126.6.

The statement that gross per-capita demand is projected to increase is incorrect; refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Per-Capita Demand).

Regarding the wholesale customers' planned conservation measures, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). The statement referring to "foreseeable changes" apparently refers to legislation mentioned in Comment SI_PacInst-72; refer to **Response SI_PacInst-72**.

The statement that 60 percent of the planned increase in demand is projected to arise from outdoor water use does not appear to be based on Pacific Institute comments submitted on the Draft PEIR, but may be based on information provided at the Sustainable Water Supply Briefing; refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Outdoor Water Use).

SI_TRT-CWA-SierraC-38 The commenter's opinion that the recycled water potential for the wholesale agencies falls below the recycling goals of the state and certain water agencies is acknowledged. Note that the 3 percent cited in this comment apparently refers to the 9 to 10 mgd of recycled water that has been identified as a component of the wholesale customers' 2030 water supply, shown in Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18). Note that this estimate of recycled water use is assumed in the customer's 2030 purchase estimates. The *SFPUC Wholesale Customer Recycled Water Potential Technical Memorandum* (RMC, 2004) identifies the *potential* for additional recycled water projects to be developed at some point in the future (refer to Draft PEIR Vol. 5, Appendix E.2, Table E.2.5, p. E.2-17).

SI_TRT-CWA-SierraC-39 As the comment correctly states, the additional potential for conservation measures and the use of recycled water and groundwater to offset demand on the SFPUC regional water system, as identified in the *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D), was not incorporated into the proposed WSIP, and the SFPUC has committed to implementing identified measures in the retail customer service area that would offset 10 mgd of demand on the regional system. However, the findings of this study were used to inform the Aggressive Conservation/Water Recycling and Local Groundwater Alternative analyzed in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47

to 9-59). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for more information on this alternative. The reference to “6 mgd of savings” in this comment apparently refers to the difference between the maximum conservation savings considered to be feasible and cost-effective (“Program C”) in the *SFPUC Wholesale Customer Water Conservation Technical Report* (URS, 2004b). Regarding the conservation measures to which the wholesale customers have committed, refer to Section 14.2.3 of the above-referenced master response.

SI_TRT-CWA-SierraC-40 This summary of the conservation potential studies conducted by the SFPUC in the retail customer and wholesale customer service areas requires clarification on several points. As the commenter states, the retail service area conservation potential study initially considered 48 conservation measures, of which 38 were selected for further consideration. Ultimately the SFPUC committed to implementing all 38 (Program C) as part of the WSIP (refer to Draft PEIR, Vol. 5, Appendix E.2, p. E.2-15); the wholesale customers’ conservation potential study initially considered 75 measures, of which 32 were selected for further consideration by the wholesale customers. The commenter’s estimate that an average of fewer than 10 measures was selected in the wholesale service area is noted. Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18) shows the projected conservation savings for each wholesale customer and for the retail service area, and Table E.2.4 (Vol. 5, Appendix E.2) shows the estimated conservation savings in relation to the three theoretical programs of measures (Programs A, B, and C) that were considered in the conservation potential assessments. Tables 14.2-7 and 14.2-8 in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14) show the measures being implemented or planned in the retail and wholesale customer service areas.

The commenter correctly states that the 32 measures selected for consideration by the wholesale customers were in general found to be cost-effective.¹ However, the incremental cost of adopting additional conservation measures is not as important as concerns about the feasibility of implementing additional measures in an agency’s decision not to adopt additional measures, as discussed in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2,

¹ Most of the 32 measures were cost-effective for most customers, although there were some exceptions; not all measures were cost-effective for all customers.

under the heading Effects of Future Price of Water on Projected Demand).

This comment also asserts that the wholesale customer conservation potential study failed to determine the total cost-effective conservation potential of the region. Since cost/benefit analyses of the programs of compiled measures (Programs A, B, and C) prepared for each customer found the programs to be cost-effective, the cumulative total conservation potential of Program C (shown in Table E.2.4, Vol. 5, Appendix E.2, p. E.2-14) could be considered a regional total for the individual wholesale customers. In addition, as part of the WSIP planning process, the SFPUC, in cooperation with its wholesale customers and the Bay Area Water Supply and Conservation Agency, undertook a study to assess the potential for additional conservation and recycled water projects, including projects that could be feasible if implemented regionally but that may have been found to be infeasible for individual customers. This study, *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D), provided the basis for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative analyzed in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-59).

- SI_TRT-CWA-SierraC-41 This comment seeks a response to two attachments regarding water pricing and the potential for water conservation and recycling: Attachments I and J. These attachments are shown as Comments SI_TRT-CWA-SierraC-196 through SI_TRT-CWA-SierraC-199 (refer to those responses).
- SI_TRT-CWA-SierraC-42 The Draft PEIR provides a detailed analysis of the stream flow, geomorphology, groundwater, and fishery issues referred to in this comment (Vol. 3, Chapter 5, Sections 5.3.1, 5.3.2, 5.3.5, and 5.3.6). The analysis of potential WSIP impacts on these environmental elements extends along the length of the Tuolumne River, from Hetch Hetchy Reservoir to the river's confluence with the San Joaquin River and then along the San Joaquin River to the Delta. For additional discussion of changes in flow and the rationale for considering flows under the WSIP to be within the range of existing flows, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 14.6.5 and 14.6.6).
- SI_TRT-CWA-SierraC-43 CEQA Section 21068 defines a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the

environment.” While CEQA requires that an EIR determine the significance of the environmental effects caused by a project, CEQA Guidelines Section 15064(b) states that “an ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting.” CEQA Guidelines Section 15064(d) provides further guidance, stating “in evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project.” In terms of establishing significance criteria, CEQA Guidelines Section 15064.7 states “a threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect.”

The CCSF has not formally adopted significance standards for analysis of environmental impacts, but as the CEQA lead agency for the CCSF, the San Francisco Planning Department generally applies the standards contained in Appendix G of the CEQA Guidelines, supplemented by additional topics specific to San Francisco.

In the Draft PEIR, the San Francisco Planning Department employs significance criteria appropriate to the range of the WSIP’s environmental effects, drawing from the significance standards contained in Appendix G of the CEQA Guidelines where applicable and augmenting them where needed to address topics that could be affected by the WSIP but are not addressed in Appendix G, such as stream flow or greenhouse gas emissions. The Draft PEIR evaluates impacts associated with the WSIP in accordance with the CEQA Guidelines described above, identifying the applicable significance criteria and using quantitative, qualitative, or performance levels where appropriate to determine impact significance. Often, the significance criteria are based on standards set pursuant to state or federal law, which may be numerical or non-numerical. Each section in the Draft EIR describing the WSIP’s impacts on a particular environmental element begins with a subsection entitled “Approach to Analysis” that describes how the numerical and non-numerical standards are used in the analysis of impacts.

As an example of a quantitative analysis, Impact 4.9-1 (Vol. 2, Chapter 4, pp. 4.9-21 to 4.9-27) provides a quantitative estimate of WSIP construction-related air pollutant emissions and compares them to quantitative significance criteria established by the air district to determine the impact significance. Impact 4.5-1 (Vol. 2,

Chapter 4, p. 4.5-21) is an example of a qualitative impact analysis in which the potential for erosion and sedimentation during construction is identified but not quantified, and the impact significance is based on the effectiveness of known erosion and sedimentation control measures. Impact 4.10-4 (Vol. 2, Chapter 4, p. 4.10-33) is an example of a performance-level analysis in which disturbance due to long-term noise increases is identified, and the impact significance is based on the ability to comply with local noise ordinances. For some impacts in the Draft PEIR, the assessment of impact significance requires analysis of both the severity and frequency of an impact relative to a quantitative threshold; an example of this is Impact 5.3.3-2 (Vol. 3, Chapter 5, p. 5.3.3-17), which analyzes effects on water quality along the Tuolumne River below La Grange Dam and determines impact significance by considering both the magnitude of changes in water temperature relative to water quality objectives and the frequency of changes exceeding the objectives.

With respect to the need to consider both the frequency and severity of an impact, refer to **Response SI_TRT-CWA-SierraC-44**. With respect to the comment on cumulative impacts, refer to **Response SI_TRT-CWA-SierraC-45**. Also, see **Response SI_CNPS-EB1-23** for additional discussion of this topic.

SI_TRT-CWA-SierraC-44 The San Francisco Planning Department considered both severity and frequency of an impact when determining whether it was significant. Many of the potential impacts of the WSIP would stem from WSIP-caused changes in river flow, as depicted in Figure 5.1-3 (Vol. 3, Chapter 5, p. 5.1-8). However, river flow in watersheds fed by surface runoff is an inherently variable phenomenon, and the frequency of occurrence of noticeable flow changes from the existing condition is an important descriptor in understanding the effects of the WSIP on river flow. In most cases where the terms “occasional” or “rare” are used, they follow a more precise descriptor such as “x months in the 82-year hydrologic record.”

The rationale behind the impact significance determinations can best be illustrated by examples. In very dry periods under the current condition, the pool of cool water in Hetch Hetchy Reservoir becomes depleted and warmer water is released to the Tuolumne River below O’Shaughnessy Dam. This is a rare occurrence—once or twice in the 82-year period of hydrologic record. The WSIP would make this situation slightly worse; it would still be rare (occurring once or twice in the 82-year hydrologic record) but it might persist for two or

three weeks rather than a few days or a week. The release of warm water from the reservoir would increase water temperatures in the river toward the upper end of the optimal range for rainbow trout. Because the event would be rare and the consequences of limited severity to the affected resource, the conclusion was reached that the WSIP would have a less-than-significant adverse impact on fisheries in the Tuolumne River below O'Shaughnessy Dam.

Another example is that the WSIP would delay the start of the release of water from La Grange Dam in the late winter and early spring in excess of the minimum required instream flow. In most cases the delay would be a matter of a few days. Infrequently, the delay could be several weeks, during which time flows in the river below the dam would remain at the minimum required instream flow and water temperatures would be higher than under the existing condition. As indicated in the Draft PEIR, Chinook salmon populations in the lower Tuolumne River are much below historical levels. Although WSIP-caused substantial reductions in flow and increases in water temperature would be rare, it was concluded that the impact of the changes could be severe, bearing in mind the fragility of the Chinook salmon population. The impact of the WSIP on fisheries in this reach of the river was accordingly determined to be potentially significant, and appropriate mitigation measures are proposed (Measures 5.3.6-4a and 5.3.6-4b).

SI_TRT-CWA-SierraC-45 The San Francisco Planning Department identified the criterion indicating whether an impact would be “substantially ... outside of the range of pre-project conditions” as appropriate to determine the significance of changes in stream flow associated with the WSIP, and applied this criterion on an impact-by-impact basis. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5), and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6), for a description of how the criterion was applied to determine that stream flow impacts on the Tuolumne River would be less than significant. However, this same criterion, when applied to the effect of WSIP on stream flow in Alameda Creek (Impact 5.4.1-2, Vol. 3, Chapter 5, p. 5.4.1-25), resulted in the conclusion that the impact would be significant and unavoidable.

The Draft PEIR discusses the possibility that impacts determined to be less than significant could combine with other less-than-significant impacts from a future project to create a significant

impact (Vol. 3, Chapter 5, Section 5.7, Cumulative Projects and Impacts Related to WSIP Water Supply and System Operations).

- SI_TRT-CWA-SierraC-46 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3) for a discussion of the model time interval. The conclusions with respect to impacts on fisheries and riparian habitat were determined after consideration of both monthly and daily flows.
- SI_TRT-CWA-SierraC-47 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.4) for a discussion of the use of averages within hydrologic year types.
- SI_TRT-CWA-SierraC-48 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Sections 14.5.3 and 14.5.4) for discussions of the model time interval and the use of averages within hydrologic year types. Also, refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.6) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.7) for discussions of the use of flow data in the analysis of impacts on geomorphology.
- SI_TRT-CWA-SierraC-49 As the commenter notes, stream ecology may respond to a finer timescale than monthly flows, and stream geomorphology may respond to peak flows that occur rarely. These concepts are reflected in the Draft PEIR impact analyses. For more information on the statistical analysis of flow data, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Sections 14.5.3 and 14.5.4). For more information on the use of peak flow data in the analysis of geomorphology, refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.6) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.7). Estimates of monthly and daily flows were used in evaluating the effects of the WSIP on stream ecology. Daily flow information was estimated as described in the Draft PEIR (Vol. 3, Chapter 5, Section 5.3.1) and then used in the analysis of fisheries and terrestrial biology (Vol. 3, Chapter 5, Sections 5.3.6 and 5.3.7).
- SI_TRT-CWA-SierraC-50 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3).

SI_TRT-CWA-SierraC-51 The commenter states that the Draft PEIR should set measurable criteria for the evaluation of groundwater impacts. The San Francisco Planning Department identified the following significance criteria for evaluating groundwater impacts in the Draft PEIR (Vol. 3, Chapter 5, p. 5.6-22). An impact is considered significant if it would:

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)
- Potentially result in onsite or offsite land subsidence that would cause substantial structural damage, increased flooding, or altered drainage patterns
- Violate any water quality standards or waste discharge requirements
- Otherwise substantially degrade water quality

As stated in the Draft PEIR (Vol. 3, Chapter 5, p. 5.6-22), criteria for evaluating the depletion of groundwater resources are based on whether groundwater pumping would reduce groundwater levels to a degree that adverse effects would occur, including saltwater intrusion, effects on surface water resources, or land subsidence. Criteria for evaluating groundwater quality are based on beneficial uses and water quality objectives established by the San Francisco Bay Regional Water Quality Control Board in the *Water Quality Control Plan for the San Francisco Bay Basin*, as authorized under the Porter-Cologne Water Quality Control Act and Clean Water Act. In addition, for groundwater to be used as a public water supply, it must meet groundwater quality evaluation criteria based on the California Drinking Water Standards, as established by the state and federal Safe Drinking Water Acts.

Support of beneficial uses, recommended as a criterion by the commenter, is addressed in evaluating impacts related to the depletion of groundwater resources, the violation of water quality standards, and other degradation of water quality.

The Draft PEIR analyzes the impacts of the proposed Local and Regional Groundwater Projects (WSIP facility improvement project

SF-2) (Vol. 3, Chapter 5, Section 5.6) and demonstrates at a program level that identified impacts can be mitigated to a less-than-significant level. As stated in each impact analysis, the impacts and proposed mitigation would be subject to more detailed, site-specific analysis as part of the project-level CEQA review for both projects.

For additional information on significance criteria and thresholds, please refer to **Response SI_TRT-CWA-SierraC-43**.

SI_TRT-CWA-SierraC-52 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.5).

SI_TRT-CWA-SierraC-53 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3). The conclusions with respect to environmental impacts were arrived at after consideration of monthly, daily, and peak flows.

SI_TRT-CWA-SierraC-54 The sentence referred to on Draft PEIR p. 9-89 (Vol. 4, Chapter 9) is accurate and consistent with information presented in Table 9.7 (Vol. 4, Chapter 9, p. 9-17). The four alternatives mentioned would avoid the *significant* impacts on fishery resources below La Grange Dam, but would not necessarily avoid all impacts on this reach of the river. The Aggressive Conservation/Water Recycling and Local Groundwater Alternative (with No Supplemental Tuolumne River Water) and the Year-round Desalination for Drought Alternative would essentially avoid all impacts on the Tuolumne River below La Grange Dam. The Modified WSIP Alternative would also avoid all impacts on the Tuolumne River below La Grange Dam, provided Mitigation Measure 5.3.6-4a is implemented. The No Purchase Request Increase Alternative would have impacts similar to (but much less severe than) those of the WSIP. Its impacts on the reach of the river below La Grange Dam were judged to be less than significant.

SI_TRT-CWA-SierraC-55 This comment consists of a summary of comments on assumptions used in the Draft PEIR. Responses to detailed comments are provided below in **Responses SI_TRT-CWA-SierraC-55** through **SI_TRT-CWA-SierraC-73**. With regard to assumptions used in the HH/LSM, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6).

SI_TRT-CWA-SierraC-56 The Draft PEIR (Vol. 1, Chapter 2, pp. 2-35 to 2-37) provides a summary description of the CCSF's water rights. These water rights are adequate for the water supply option proposed under the WSIP;

consequently, the CCSF will not seek new appropriative water rights. No further information is provided because the validity or otherwise of water rights is not a CEQA issue.

The Raker Act does not require San Francisco to develop and use local water sources before it can divert out of the Tuolumne River watershed. Rather, the Raker Act restricts San Francisco's use of Tuolumne River water in the Bay Area to municipal and domestic purposes only. The SFPUC will continue to maximize its use of local resources and develop those local resource projects and programs that are feasible, reasonable, and cost-effective, consistent with responsible stewardship of Tuolumne River resources. For further information on this issue, please refer to **Response L_TUD1-05**.

SI_TRT-CWA-SierraC-57 Please refer to **Response SI_TRT-CWA-SierraC-56**, above.

SI_TRT-CWA-SierraC-58 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.8).

The SFPUC does not know if TID and MID are willing to consider an arrangement like that described in Mitigation Measure 5.3.6-4a and elaborated upon in **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14). That is why the Draft PEIR acknowledges the uncertainty associated with the measure. For more information on the transfer, please refer to **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14, Section 14.3.3).

SI_TRT-CWA-SierraC-59 The commenter's opinion with respect to gravel augmentation under Mitigation Measure 5.3.6-4b as poorly matched for the identified impact is acknowledged. Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.9).

SI_TRT-CWA-SierraC-60 The commenter's opinion with respect to pond removal as part of Mitigation Measure 5.3.6-4b is acknowledged. Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.9).

SI_TRT-CWA-SierraC-61 The potential effects of the WSIP on steelhead are described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32). Please also refer to **Response SI_TRT-CWA-SierraC-12**, above.

SI_TRT-CWA-SierraC-62 The commenter's opinion with respect to Mitigation Measure 5.3.6-4b is acknowledged. Please refer to **Section 14.7, Master**

Response on Lower Tuolumne River Issues (Vol. 7, Chapter 14, Section 14.7.9). Various measures are being taken to improve habitat for salmonids in the lower Tuolumne River. It will take some time to determine the effectiveness of the measures. The types of measures included in Measure 5.3.6-4b were devised based on factors known to be adversely affecting salmonid habitat. As described in Section 14.7.9, Measure 5.3.6-4b has been clarified to include surveys and actions to meet performance standards.

- SI_TRT-CWA-SierraC-63 The analysis in the Draft PEIR compares conditions with the WSIP to those under the existing condition. The WSIP includes a transfer of water from TID and MID to the SFPUC that would enable the SFPUC to meet customer demand in dry years without greater than 20 percent systemwide rationing. The transfer was included in the Hetch Hetchy/Local Simulation Model (HH/LSM) and is reflected in the flow estimates provided in the Draft PEIR (Vol. 3, Chapter 5, Section 5.3.1). Furthermore, the transfer is reflected in the assessment of WSIP impacts on the Tuolumne River between Hetch Hetchy and Don Pedro Reservoirs and below La Grange Dam (Vol. 3, Chapter 5, Sections 5.3.2 through 5.3.9).
- SI_TRT-CWA-SierraC-64 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.4).
- SI_TRT-CWA-SierraC-65 Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Sections 4.8.2 and 4.8.3).
- SI_TRT-CWA-SierraC-66 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2).
- SI_TRT-CWA-SierraC-67 Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Sections 4.8.2 and 4.8.3).
- SI_TRT-CWA-SierraC-68 With regard to the assumptions made in the HH/LSM, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6).

The commenter correctly notes that an agreement has not yet been reached on a transfer of water from TID and MID to the SFPUC. Such agreements with TID and MID cannot be formalized until the PEIR is certified and the WSIP is approved and adopted by the SFPUC. Please refer to **Section 14.3, Master Response on**

Proposed Dry-Year Water Transfer (Vol. 7, Chapter 14, Section 14.3.2) for more information on the transfer.

The commenter correctly notes that the WSIP would reduce inflow to Don Pedro Reservoir compared to the existing condition. This would occur in all but very dry years because water demand is greater with the WSIP than under the existing condition, and much of the increased demand would be met through diversions from the Tuolumne River at Hetch Hetchy Reservoir. Consequently, the water that TID and MID would capture for their own diversion and use (an average of 867,000 afy) would represent a higher proportion of reservoir inflow with the WSIP than under the existing condition, as described in the Draft PEIR (Vol. 3, Chapter 5, Section 5.3.1).

SI_TRT-CWA-SierraC-69 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6) for information on expected future diversions by TID and MID. Expected future diversions are much less than TID's and MID's full water rights.

The conversion of agricultural lands to urban uses has occurred rapidly in the TID and MID service areas in the last 30 years and can be expected to continue once the effects of the sub-prime mortgage crisis passes. Increases in urban water use would be almost exactly offset by reductions in agricultural water use. Typical urban neighborhoods use about the same amount of water per acre each year as typical irrigated agricultural land.

SI_TRT-CWA-SierraC-70 With regard to the hydrologic assumptions used in the analysis, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6). With respect to the effects of climate change, refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

SI_TRT-CWA-SierraC-71 It is conventional practice in water supply system planning to estimate future demand by assuming a continuation of whatever water conservation and recycling practices are already in place or can reasonably be predicted. This practice produced the total water demand for the SFPUC service area of 417 mgd in 2030. Further consideration by the SFPUC's wholesale customers of additional feasible conservation programs and alternative local water supplies resulted in the 2030 purchase estimates for the regional water system of 300 mgd shown in Table 9.4 (Vol. 4, Chapter 9, p. 9-11). One of the proposed alternatives (the Aggressive Conservation/Water Recycling and Local Groundwater Alternative) includes more aggressive conservation measures and recycling practices. The water

saved or used twice as a result of these practices can be treated as a new source of water or as a reduction in demand; how this saved water is viewed makes little practical difference in the planning process or impact analysis under CEQA.

The SFPUC chose to treat the 10 mgd of proposed groundwater/recycled water/conservation projects in San Francisco (one component of the WSIP water supply option) as a reduction in water demand for the regional system. Consequently, 290 mgd would have to be delivered from the regional system's other water sources. Modeling of the system assumed that 290 mgd would be provided from the system's other sources, and that shortages and rationing in droughts would be estimated based on a demand of 290 mgd rather than a demand of 300 mgd. Because of this, and contrary to the comment, the estimated total demand of 300 mgd in 2030 does not skew the modeling of drought-year shortages.

SI_TRT-CWA-SierraC-72 This comment refers to the demand hardening discussion in the Draft PEIR, which is included in the analysis of the Aggressive Conservation/Water Recycling and Local Groundwater Alternative's ability to meet the program objectives (Vol. 4, Chapter 9, p. 9-54). As indicated on Table 9.6 (Vol. 4, Chapter 9, p. 9-15), this alternative would have a limited ability to meet the WSIP's level of service objectives for water supply. For the scenario in which no supplemental Tuolumne River water would be provided to customers, this alternative would neither meet the average annual 2030 purchase request of 300 mgd during nondrought years nor meet the 20 percent systemwide rationing limit during droughts; this means that shortages would occur in all years, and, as shown in Table 9.5 (Vol. 4, Chapter 9, p. 9-13), there would be 15 years out of the 82-year period of hydrologic record that shortages would reach 25 percent. For the scenario in which supplemental Tuolumne River water would be provided to serve the 2030 purchase request of 300 mgd during nondrought years, this alternative would meet the WSIP water supply level of service objective during nondrought years; during drought years (Table 9.5, p. 9-13), there would be 7 out of 82 years with 10 percent shortages and 8 out of 82 years with 20 percent shortages. However, under both scenarios, the demand hardening would occur as a result of the increased water-use efficiency, and customers would have limited options for accommodating water shortages during drought periods.

With regard to the comment asserting that 60 percent of the increased 2030 water demand is for outdoor use, refer to

Response SI_PacInst-63 as well as **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14) for a detailed discussion of assumptions used in determining water demand.

SI_TRT-CWA-SierraC-73 Conjunctive use typically means the coordinated use of groundwater and surface water sources to avoid shortages in years when surface waters are in short supply. Because no additional surface water is available under the “no additional diversions” alternative, conjunctive use in the Westside Groundwater Basin is not feasible.

It is not clear how the Aggressive Conservation/Water Recycling and Local Groundwater Alternative would affect water levels in the Westside Groundwater Basin. The use of recycled wastewater to satisfy some irrigation demand that is now met with well water could potentially raise groundwater levels. On the other hand, aggressive conservation measures that reduce the use of water outside homes could reduce recharge and lower groundwater levels. These issues will be examined in detail in the project-level CEQA document for the Westside Groundwater Project (part of the WSIP Regional Groundwater Projects, SF-2).

SI_TRT-CWA-SierraC-74 No federal permits or approvals are needed for the SFPUC to approve, adopt, or implement the overall WSIP as a program and policy; therefore, compliance with the National Environmental Policy Act is not needed. As described in the Draft PEIR (Vol. 1, Chapter 2, p. 2.-33), the Raker Act granted the CCSF the rights-of-way and use of public lands in the affected areas to construct, operate, and maintain reservoirs, dams, conduits, and other structures necessary or incidental to developing and using water and power. Consequently, there is no federal nexus requiring compliance with the National Environmental Policy Act. However, as described in the Draft PEIR (Vol. 1, Chapter 3, p. 3-86), some of the individual WSIP facility improvement project may require federal approvals, but those actions would be distinct from the approval of the WSIP as a whole.

SI_TRT-CWA-SierraC-75 This comment expresses an opinion that there was inadequate noticing of the Draft PEIR public hearing dates. Please refer to **Responses F_USDAFS-05** and **L_SFCPC1-01** (Vol. 7) and **Appendix J1** (Vol. 8) of this Comments and Responses document for detailed information on the public outreach efforts conducted by the San Francisco Planning Department’s Major Environmental Analysis Division and the SFPUC.

- SI_TRT-CWA-SierraC-76 Draft PEIR Section 5.1 (Vol. 3, Chapter 5) is entitled “Overview” and is intended to provide the reader with an overall understanding of the HH/LSM and its use in the Draft PEIR analysis of the WSIP. Table 5.1-1 (Vol. 3, Chapter 5, p. 5.1-12) lists key differences between the existing condition and the WSIP scenarios. The assumption with respect to the diversion of water by TID and MID was not included because it was the same in the two scenarios. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6) for more information on the basis for the TID and MID diversion assumption.
- SI_TRT-CWA-SierraC-77 The commenter questions the use of data from the 82-year period of record to model future hydrologic conditions in the Draft PEIR. The use of historical hydrologic data is conventional practice in water supply system modeling and has been for many years, although recently many water agencies have begun to examine the possibility that climate change could alter future hydrology. The climate change analysis in the Draft PEIR used a similar assumptions as those used in other recent EIRs on water projects (e.g. *DEIR on the Monterey Amendment to the State Water Project Contracts*, California Department of Water Resources, October 2007).
- Refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for more information on the effects of climate change on the SFPUC regional water system.
- SI_TRT-CWA-SierraC-78 The commenter notes that temporal availability of water is likely to change, and that the model underestimates hydrology impacts as well as the biological and geomorphological impacts that result from hydrologic changes. The current understanding of climate change science and how it applies to California’s water resources and the SFPUC regional system is discussed in detail in **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).
- SI_TRT-CWA-SierraC-79 The HH/LSM in the form used in the Draft PEIR did not accurately simulate water system operations in the Pilarcitos Creek watershed for two reasons. The model did not accurately represent limitations in the capacity of the conveyance system from Stone Dam to the Coastside County Water District (Coastside CWD) treatment plant, and it assumed that water would be pumped from Pilarcitos Reservoir to Pilarcitos Creek when the water level in Pilarcitos Reservoir fell below its outlet elevation. Because of these deficiencies, information from operational records rather than the HH/LSM was used to analyze potential WSIP effects on Pilarcitos

Creek. The San Francisco Planning Department believes that the operational data are sufficient to make a reasonable environmental assessment.

Since publication of the Draft PEIR, the model deficiencies have been corrected and the HH/LSM was used to estimate the effects of the WSIP on reservoir levels and stream flow in the Pilarcitos Creek watershed (see Vol. 7, Chapter 13, Section 13.3). The results of modeling, together with the results of biological field reconnaissance, enabled a more precise identification of the potential impacts of the WSIP in the Pilarcitos Creek watershed. No new impacts were identified that were not documented in the Draft PEIR, but several impacts identified as potentially significant in the Draft PEIR were reclassified as less than significant. The revised impacts are shown in **Chapter 16, Staff-Initiated Text Changes** (Vol. 7). The modeling results are included in Appendix O1 (Vol. 8).

The Draft PEIR indicated that the significant adverse effects of the WSIP in the Pilarcitos Creek watershed would be avoided with the implementation of Mitigation Measure 5.5.3-2. Under Measure 5.5.3-2, the SFPUC would modify operation of its Pilarcitos Creek facilities so that flow in Pilarcitos Creek with the WSIP would be very similar to flow under existing conditions. After publication of the Draft PEIR, the SFPUC concluded that implementation of Measure 5.5.3-2 would be technically challenging and less practical than other available measures. Replacement mitigation measures were developed and are described in **Chapter 16, Staff-Initiated Text Changes**. The replacement mitigation measures would reduce the impacts of the WSIP in the Pilarcitos Creek watershed to a less-than-significant level.

With the WSIP, the SFPUC had planned to serve a portion of Coastside CWD's increased water demand from Pilarcitos Creek. However, this would not be possible because of conveyance system capacity limits, and so almost all of Coastside's increased demand would be met from Crystal Springs Reservoir. This would slightly increase the amount of water diverted from the Tuolumne River under the Modified WSIP Alternative.

With respect to the accuracy of the model, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.5).

SI_TRT-CWA-SierraC-80 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.8).

- SI_TRT-CWA-SierraC-81 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.8).
- SI_TRT-CWA-SierraC-82 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3). Information on daily flows in the Tuolumne River and Alameda Creek are provided in the Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 and 5.4.1).
- SI_TRT-CWA-SierraC-83 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3). Information on daily flows in the Tuolumne River and Alameda Creek are provided in the Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 and 5.4.1).
- SI_TRT-CWA-SierraC-84 This comment refers to Table 5.2-1, Applicable Federal, State, and Local Statutes and Agreements, in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.2-3 to 5.2-5) and states that there is no mention of Fish and Game Code 5937, which requires: “The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam.”

In response to this comment, Draft PEIR Table 5.2-1 is revised to include the following text under the State Agencies heading (Vol. 3, Chapter 5, p. 5.2-4):

Statute or Agreement/Responsible Agency

California Fish and Game Code / Fish and Game Commission and CDFG

Summary Description

Provides a system for the restoration and preservation of California's fish and wildlife resources

Associated Statutes and Plans

California Endangered Species Act (CESA), California Environmental Quality Act (CEQA), Lake and Streambed Alterations

Applicability to WSIP Water Supply and System Operations Issues

CEQA review of the proposed water supply and system operations aspects of the WSIP is presented in Chapter 5, including the impacts of the WSIP on species listed under CESA, as discussed in Sections 5.3.7, 5.4.6, and 5.5.6.

In response to this comment, the Draft PEIR is revised to include the following text (Vol. 3, Chapter 5, p. 5.2-10) under the State Agencies heading:

California Fish and Game Commission

The California Fish and Game Commission (Commission) has the statutory authority to formulate guidance policies for the California Department of Fish and Game (CDFG). The Commission has over 200 powers and duties listed in the statutes of the Fish and Game Code. Principal among these are legislatively granted powers for the regulation of the sport take and possession of birds, mammals, fish, amphibians, and reptiles. The Commission oversees the establishment of wildlife areas and ecological reserves and regulates their use, and prescribes the terms and conditions under which permits or licenses may be issued by the CDFG. A primary responsibility of the Commission is to afford an opportunity for full public input and participation in the decision- and policy-making process of adopting regulations or taking other actions related to the well-being of California's fish and wildlife resources.

The Commission sets policy for the CDFG, while the CDFG is the lead state agency charged with implementing, safeguarding, and regulating the uses of fish and wildlife.

California Department of Fish and Game

The mission of the CDFG is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. The CDFG enforces multiple programs dedicated to the conservation and preservation of habitats and species in California, including the California Endangered Species Act (CESA), California Environmental Quality Act (CEQA), and California Fish and Game Code. Under CESA, the CDFG is responsible for consulting with state lead agencies to determine if their actions would affect a state-listed threatened or endangered species. Under CEQA, the CDFG is responsible for consulting with lead and responsible agencies and providing the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities. The CDFG is also responsible for enforcing the provisions of the California Fish and Game Code.

In response to this comment, the Draft PEIR is revised to include the following text (Vol. 3, Chapter 5, p. 5.2-11) under the State Statutes and Agreements heading:

California Fish and Game Code

The Fish and Game Code provides a system for the protection of California's fish and wildlife resources and includes:

provisions related to fish and wildlife protection and conservation; fish and game management; wetlands mitigation banking; endangered species; and operation of dams, conduits, and screens.

- SI_TRT-CWA-SierraC-85 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2). With respect to compliance with the Fish and Game Code, CEQA does not require that an EIR evaluate whether the existing condition is compliant with all environmental laws and policies. The adequacy of baseline data is addressed in **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol.7, Chapter 14, Section 14.4.4).
- SI_TRT-CWA-SierraC-86 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2).
- SI_TRT-CWA-SierraC-87 The Draft EIR states that the SFPUC and the U.S. Department of the Interior agreed to the minimum release schedule from O'Shaughnessy Dam shown in Table 5.3.1-2 (Vol. 3, Chapter 5, p. 5.3.1-13), and that the SFPUC has made and continues to make releases in accordance with the minimum schedule. Furthermore, the Draft PEIR notes that field studies undertaken between 1989 and 1992 of the river reach between O'Shaughnessy Dam and Early Intake confirmed successful reproduction, rearing, and maintenance of adult populations of rainbow and brown trout (Vol. 3, Chapter 5, p. 5.3.6-2). Contrary to the statement in this comment, the Draft PEIR does not venture an opinion on whether the releases and the trout populations they support are sufficient (see **Response S_CDFG2-02**). The Draft PEIR confines itself to assessing the effects of WSIP-induced flow changes on resident trout. For more information, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2).
- SI_TRT-CWA-SierraC-88 The information provided in Figures 5.3.1-8 and 5.3.1-9 and the accompanying narrative provide a comprehensive summary description of the effects of the WSIP on storage in Hetch Hetchy Reservoir (Vol. 3, Chapter 5, pp. 5.3.1-21 to 5.3.1-24). Figure 5.3.1-8 shows that average monthly storage in Hetch Hetchy Reservoir over the 82-year period of record would be less with the WSIP than under the existing condition by a small amount in every month. For example, in October average monthly storage under the existing condition would be about 270,000 acre-feet; with the WSIP it would be about 255,000 acre-feet. The highest storage in October under the existing condition and with the WSIP would be

325,000 acre-feet. The lowest storage in October under the existing condition would be about 90,000 acre-feet; with the WSIP it would be about 40,000 acre-feet.

Figure 5.3.1-8 does not provide information on the differences between storage in Hetch Hetchy Reservoir under the existing condition and with the WSIP in any month in the 82-year period of hydrologic record. This information is provided graphically in Figure 5.3.1-9 and in tabular form in Appendix H2-1 (Vol. 5, Tables 2.3-1, 2.3-2, and 2.3-3 on pp. 17, 18, and 19). Storage in Hetch Hetchy Reservoir under the existing condition and with the WSIP in any given month would be different depending on hydrologic circumstances and reservoir management practices. The differences between monthly storage with and without the WSIP would be greatest under conditions similar to those that occurred in 1976 and 1977. As noted in the Draft PEIR, water levels in Hetch Hetchy Reservoir during extreme droughts could be as much as 64 feet lower than under the existing condition (Vol. 3, Chapter 5, p. 5.3.1-24).

The description of the effects of the WSIP on storage in Hetch Hetchy Reservoir contained in the Draft PEIR is accurate (Vol. 3, Chapter 5, pp. 5.3.1-21 to 5.3.1-24). Storage and water levels in Hetch Hetchy Reservoir fluctuate within a wide range under the existing condition. Although water levels in the reservoir would often be lower with the WSIP than under the existing condition, most of the time they would remain in the same range as they do under the existing condition, and few if any environmental impacts would result. Occasionally, in extreme droughts, the water level with the WSIP would fall below levels experienced under the existing condition. During these conditions, the WSIP could have adverse impacts on water quality, as described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.3.3-14 to 5.3.3-16).

SI_TRT-CWA-SierraC-89 Under the existing condition, average monthly storage in Hetch Hetchy Reservoir ranges from a maximum of 360,400 acre-feet to a minimum of about 34,000 acre-feet. As shown in Appendix H2-1, monthly storage with the WSIP would fall below 34,000 acre-feet in only 2 months of the 984-month hydrologic record (Vol. 5, Appendix H2-1, Tables 2.3-1, 2.3-2, and 2.3-3 on pp. 17, 18, and 19). This is the basis for stating that the water levels in Hetch Hetchy Reservoir with the WSIP would remain within the range currently experienced most of the time.

SI_TRT-CWA-SierraC-90 Please refer to **Responses SI_TRT-CWA-SierraC-88** and **SI_TRT-CWA-SierraC-89**.

SI_TRT-CWA-SierraC-91 The commenter restates information contained in the Draft PEIR; namely, that the issue of the degree to which parties that divert water upstream of the Delta, including the SFPUC, are responsible for meeting Delta objectives remains unresolved (Vol. 3, Chapter 5, p. 5.3.1-18). The commenter's opinion—that the SFPUC should not consider providing additional water to its suburban customers until the SFPUC's role in meeting Delta objectives is clarified—is acknowledged. For more information, please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14).

SI_TRT-CWA-SierraC-92 It is possible that the Vernalis Adaptive Management Program (VAMP) may demonstrate the value of increased releases from reservoirs on the San Joaquin River and its tributaries during the spring to protect migratory fish. If increased releases from Don Pedro Reservoir are necessary in a VAMP-like program after 2011, or as a result of Don Pedro Project relicensing in 2016, the SFPUC's customers would be subject to more frequent and severe water shortages than currently planned with the WSIP; however, the analysis in the Draft PEIR is based on the currently known operations of Don Pedro Reservoir and it would be speculative to assume anything other than a continuation of the existing conditions.

The WSIP does not foreclose options for releasing more water in a VAMP-like program should such a release be determined to be necessary to protect migratory fish. The additional quantity of water that would be diverted from the Tuolumne River under the WSIP is small compared to the total amount of water currently diverted from the river for municipal and agricultural purposes. The additional diversion would have little effect on the ability of the SFPUC, TID, and MID to manage reservoir storage and provide a VAMP-like release.

SI_TRT-CWA-SierraC-93 “Pre-project” in this context means the condition without the WSIP.

CEQA does not require that an EIR evaluate whether the existing or pre-project condition is compliant with environmental laws and policies. The purpose of the Draft PEIR is to describe the environmental consequences of the proposed WSIP relative to the existing or pre-project condition (CEQA Guidelines

Section 15125[a]). Cumulative impacts are addressed in the Draft PEIR (Vol. 3, Chapter 5, Section 5.7).

SI_TRT-CWA-SierraC-94 The commenter's opinion with respect to Figure 5.3.1-9 is acknowledged. The figure provides a useful graphical overview of the effects of the WSIP on reservoir storage and releases to the Tuolumne River. The data used to construct the figure are available in Appendix H2-1 (Vol. 5, Appendix H2-1, Tables 2.3-1 through Table 2.3-6, pp. 17 to 23).

As the commenter notes, HH/LSM results indicates that storage in Hetch Hetchy Reservoir in the winters of 1987, 1988, and 1989 would be 10 to 25 percent lower with the WSIP compared to the existing condition. This change would be attributable to the WSIP, but the change would not translate directly into an environmental impact. The water levels with the WSIP would remain in the range experienced under the current condition, and no environmental resources would be adversely affected by WSIP-induced water level changes in these years.

SI_TRT-CWA-SierraC-95 The fourth full paragraph on p. 5.3.1-25 of the Draft PEIR (Vol. 3, Chapter 5, Section 5.3.1) is accurate and does not contradict information provided elsewhere in the PEIR. As stated in the third full paragraph on the same page, the model indicates that under the existing condition, the minimum required release would be made in 837 months of the 82-year hydrologic record. The WSIP would have no effect on flow in these months, and thus would have no effect on river flow 84.2 percent of the time.

As described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.3.1-24 to 5.3.1-28), the WSIP would primarily affect releases from Hetch Hetchy Reservoir, and flow in the Tuolumne River below O'Shaughnessy Dam in the spring snowmelt period, which typically occurs in late April, May, and early June. Because water demand with the WSIP would be greater than current demand, Hetch Hetchy Reservoir would be drawn down farther just before snowmelt with the WSIP than it is under the existing condition. A higher proportion of snowmelt runoff from the watershed would be needed every year to refill the reservoir with the WSIP than under the existing condition; consequently, a smaller volume of water would be released from the reservoir to the river compared to the existing condition. The reductions in flow are reflected in Table 5.3.1-4 as reductions in average monthly flows in the months of April, May, and June in all hydrologic year types. As stated in the fourth full

paragraph of p. 5.3.1-25, the effects of the WSIP are greatest in normal, below-normal, and dry years because a greater proportion of total snowmelt runoff would be needed in these year types to refill the reservoir. In wet years, total runoff would be much greater, and a smaller proportion of total runoff would be needed to refill the reservoir.

SI_TRT-CWA-SierraC-96 In very dry years, when the volume of inflow to Hetch Hetchy Reservoir is small, all the snowmelt runoff could be needed to refill the reservoir. Under these conditions, releases to the Tuolumne River below O'Shaughnessy Dam are limited to the minimum required. As indicated in the fourth paragraph on p. 5.3.1-27 of the Draft PEIR (Vol. 3, Chapter 5), under the existing condition, no releases in excess of the minimum required would occur in 15 years of the 82-year hydrologic record. With the WSIP, no releases in excess of the minimum required would occur in 18 years of the hydrologic record.

SI_TRT-CWA-SierraC-97 As indicated in **Response SI_TRT-CWA-SierraC-96** above, flows in the Tuolumne River below O'Shaughnessy Dam would be the same with the WSIP as under the existing condition in most months of most years, but the WSIP would reduce flow in the snowmelt period. As stated in the Draft PEIR (Vol. 3, Chapter 5, p. 5.3.1-27), the WSIP would reduce the total volume of water released from Hetch Hetchy Reservoir during the snowmelt period and delay the start of snowmelt releases. It would also likely reduce the length of the period during which flows in the river are in excess of the minimum required. The length of the period during which flows in the river are in excess of the minimum required would depend on both the volume of water available for release and the choices made by the operators of the reservoir. The operators could choose to release a modest volume for weeks or a large volume of water for a few days.

The WSIP would have a negligible effect on large, infrequent peak flows. For more information, refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5).

SI_TRT-CWA-SierraC-98 Table 5.3.1-5 of the Draft PEIR (Vol. 3, Chapter 5, p. 5.3.1-26) contains information on monthly flows averaged for individual months within five different hydrologic year types. It is accurately titled "Estimated Average Monthly Flows for the Tuolumne River Below O'Shaughnessy Dam under Various Conditions." It correctly

indicates that the greatest average reduction in monthly flow attributable to the WSIP would be 30 percent and would occur in May of dry years.

The information contained in the table is correct. It is recognized by the authors of the Draft PEIR that changes in average monthly flow within year types do not provide a complete picture of the consequences of the WSIP. This is why the fifth full paragraph on p. 5.3.1-25 notes that considerably greater percentage reductions in monthly flows would occur in some years. Estimated flows in the Tuolumne River below O'Shaughnessy Dam in each month in each year of the hydrologic record with and without the WSIP can be found in Appendix H2-1 (Vol. 5, pp. 21 to 23).

- SI_TRT-CWA-SierraC-99 For discussion of the use of flow data in the geomorphology analysis, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.6).
- SI_TRT-CWA-SierraC-100 The average monthly flows shown in Table 5.3.1-6 for the existing condition and the “future with WSIP” were all estimated using HH/LSM, the SFPUC’s water supply planning model. For the existing condition, the model simulates the regional water system as it existed in 2005 and calculates the reservoir storage levels and releases that would occur over the 82-year period of hydrologic record, assuming the 2005 water demand of 265 mgd. For the “future with WSIP” condition, the model simulates the regional water system as it would be in 2030 after the improvements that are part of the WSIP are completed. It then calculates the reservoir storage levels and releases that would occur over the 82-year period of hydrologic record assuming the 2030 water demand of 300 mgd.
- For a discussion of model accuracy, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.5).
- SI_TRT-CWA-SierraC-101 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Sections 14.5.3 and 14.5.5).
- SI_TRT-CWA-SierraC-102 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Sections 14.5.3 and 14.5.5).
- SI_TRT-CWA-SierraC-103 For discussion of whether the WSIP would cause flows in the Tuolumne River below O'Shaughnessy Dam to fall outside the existing range of flows, please refer to **Section 14.6, Master**

Response on Upper Tuolumne River Issues (Vol. 7, Chapter 14, Section 14.6.5).

- SI_TRT-CWA-SierraC-104 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 14.6.5) for a description of the basis for the conclusion that the WSIP would not cause flows in the Tuolumne River below O'Shaughnessy Dam to fall outside the existing range of flows.
- SI_TRT-CWA-SierraC-105 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) for a discussion of the WSIP's effects on the range of flows experienced in the Tuolumne River below O'Shaughnessy Dam. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3) for a discussion of the use of monthly and daily flow data in the Draft PEIR.
- SI_TRT-CWA-SierraC-106 Contrary to this comment, Hetch Hetchy Reservoir fills in 74 years of the 82-year hydrologic period, or about 90 percent of the years. Also, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5).
- SI_TRT-CWA-SierraC-107 The opinion expressed with respect to the significance of impacts is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3) for a discussion of the use of monthly and daily flow data in the Draft PEIR.
- SI_TRT-CWA-SierraC-108 A figure similar to Figure 5.3.1-8 for Lake Lloyd was not included in the Draft PEIR because storage in Lake Lloyd is the same under the existing condition and with the WSIP in almost all instances. Figure 2.4-1 in Appendix H2-1 is a plot of storage in Lake Lloyd with and without the WSIP over the 82-year period of hydrologic record. A green line shows storage with the WSIP; a red line shows storage under the existing condition. Most of the time, the green line overlays the red line, indicating that storage is the same under the two conditions. With the WSIP, Lake Lloyd would be drawn down farther in 1992, at the end of a long dry period, than it would under the existing condition. This is because Hetch Hetchy Reservoir would be drawn down farther with the WSIP than under the existing condition, reducing the amount of water that the SFPUC could release from that reservoir to meet TID's and MID's water-right entitlements. In this circumstance, the SFPUC would release water from Lake Lloyd to fulfill the entitlements.

Once in the 82-year hydrologic record, Lake Lloyd would be drawn down considerably farther with the WSIP than it would under the existing condition. It is not expected that this would result in adverse environmental effects.

SI_TRT-CWA-SierraC-109 The title of Draft PEIR Table 5.3.1-6 (Vol. 3, Chapter 5, p. 5.3.1-35) accurately describes its contents. It does not purport to contain extreme values of monthly flow differences between the existing and with-WSIP conditions. As the commenter notes, the extreme values are identified in the text.

SI_TRT-CWA-SierraC-110 For a discussion related to the use of average monthly flows and to averaging flow within water-year types, please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Sections 14.5.3 and 14.5.4). For a discussion of the use of flow data in determining the WSIP's impacts on geomorphology, refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 4.6.6) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 4.7.7). Monthly, daily, and peak flows were all used in the analysis of biological impacts.

SI_TRT-CWA-SierraC-111 Table 5.3.1-6 (Vol. 3, Chapter 5, p. 5.3.1-35) indicates that 13 of the 60 month by year type combinations indicate a reduction in flow of 5 percent or more. This represents 22 percent of the month by year type combinations rather than 33 percent, as stated by the commenter. The effects of the reductions in flow shown in Table 5.3.1-6 on geomorphology, water quality, fisheries, and terrestrial biological resources are described in the Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.2, 5.3.3, 5.3.6, and 5.3.7). The impact analyses do not rely exclusively on the WSIP-induced changes in average monthly flows shown in Table 5.3.1-6. As explained in the text of the sections, peak and daily flow were also considered in reaching conclusions with respect to the impacts of WSIP-induced flow changes on stream geomorphology and biological resources.

SI_TRT-CWA-SierraC-112 The statement in the Draft PEIR was not derived from model output. It was based on operating practices at Don Pedro Reservoir and experience with historical peak flows.

As described in the Draft PEIR, the WSIP would result in reductions in releases from La Grange Dam in winter and spring in certain years. This is because with the WSIP the SFPUC would divert more water from the Tuolumne River at Hetch Hetchy Reservoir. As a result,

inflow to and storage in Don Pedro Reservoir would be reduced and a greater proportion of winter and spring flows would be needed to refill the reservoir.

The conclusions in the Draft PEIR with respect to peak flows in the Tuolumne River below La Grange Dam were arrived at as follows. Don Pedro Reservoir is a large multi-purpose reservoir. Water is released from the reservoir and diverted into the Turlock and Modesto Canals at La Grange Dam, approximately two miles downstream of Don Pedro Reservoir. Flow in the Tuolumne River below La Grange Dam consists entirely of releases from the dam.

In many months of above-normal, below-normal, and dry years, and in all months of critically dry years, only the minimum required releases are made from La Grange Dam. Releases in excess of the minimum required are made when they are necessary to preserve the flood storage reservation in the reservoir, which is in effect from early September to early June, or when the reservoir is full or is expected to fill. Operators attempt to limit releases to 10,000 cubic feet per second (cfs) because flows greater than this can cause flooding in the Modesto area.

Extreme peak flows in the Tuolumne River below La Grange typically occur when rain falls on accumulated snow in the watershed above Don Pedro Reservoir. Runoff into the reservoir increases rapidly, and operators must make releases to maintain the flood storage reservation. Such an event occurred in January 1997, when the water level in Don Pedro Reservoir was at its maximum consistent with the flood storage reservation. Operators had to release water in an amount approximately equal to reservoir inflow to maintain the flood storage reservation. Daily flow in the Tuolumne River below La Grange Dam peaked at 58,000 cfs.

Figure 5.3.1-12 shows storage in Don Pedro Reservoir under the existing condition and with the WSIP for the 82-year period of hydrologic record (Vol. 3, Chapter 5, p. 5.3.1-33). As shown in the figure, in January 1997 storage in Don Pedro Reservoir with the WSIP would be the same as it was under the existing condition. Therefore, the release and peak flow with the WSIP would be virtually the same as it was under the existing condition.

SI_TRT-CWA-SierraC-113 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6).

SI_TRT-CWA-SierraC-114 With respect to whether flows in the Tuolumne River below La Grange Dam with the WSIP would remain within the current range, please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6).

The question of whether flows in a water body with the WSIP would remain within the current range was considered only to determine the significance of hydrological impacts. Separate and independent significance determinations were made with respect to environmental elements affected by WSIP-induced flow changes, such as biological resources and geomorphology. Because the effects of the WSIP on the hydrology of the Tuolumne River below La Grange Dam were determined to be less than significant does not mean that the effects of WSIP-induced flow changes on biological resources or geomorphology would also be less than significant. In fact, the impacts of the WSIP on both fisheries and terrestrial biological resources were determined to be potentially significant.

With respect to the analysis of current operating practices, CEQA does not require that an EIR evaluate whether the existing condition is environmentally desirable or compliant with existing laws and regulations.

SI_TRT-CWA-SierraC-115 With respect to whether flows in the Tuolumne River below La Grange Dam with the WSIP would remain within the current range, please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6). Because flows in the river with the WSIP would remain in the current range, the character of the river—that is, its channel cross-section, sinuosity, and appearance—would remain unaltered or would be altered very little. If a project altered the range of current flows by, for example, reducing peak flows to one-third of their pre-project value, then the character of the river would likely change; the cross-section would diminish and vegetation would encroach into the former stream channel.

SI_TRT-CWA-SierraC-116 The commenter opines that the use of the term “rare” is subjective and that it is not defined. In most instances in the Draft PEIR, where the terms “rare” or “infrequent” are used to describe an event, their use is followed by a reference to the number of times the event would be expected to occur in the 82-year period of hydrologic record. The sentence from the Draft PEIR quoted by the commenter (“Flow reductions of these magnitudes would be rare events

occurring four or five times in the period of hydrologic record”) provides an example.

The San Francisco Planning Department considered both the severity and frequency of an impact when determining its significance. Please also refer to **Response SI_TRT-CWA-SierraC-44**.

SI_TRT-CWA-SierraC-117 The flow reductions in the San Joaquin River referred to in the Draft PEIR occur in wet or above-normal years after a series of dry years (Vol. 3, Chapter 5, p. 5.3.1-38). A wet or above-normal spring enables operators to refill Don Pedro Reservoir after it has been drawn down in the dry years. Large flow reductions are unlikely to occur in successive years, but may persist for more than one month in the year that they occur.

The effects of the flow reductions on water quality are described in the Draft PEIR (Vol. 3, Chapter 5, Section 5.3.3).

SI_TRT-CWA-SierraC-118 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for a description of how the significance conclusion was reached. Although it was concluded that the effects of the WSIP on the hydrology of the Tuolumne River below La Grange Dam would be less than significant, the effects of WSIP-induced flow reductions on fisheries and terrestrial biology in this reach of the river were determined to be potentially significant (Vol. 3, Chapter 5, Sections 5.3.6 and 5.3.7).

SI_TRT-CWA-SierraC-119 For general aspects related to the approach to analysis and a discussion of the baseline condition, please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4).

The commenter’s opinion that the analysis of sediment transport and gravel bed conditions is qualitative and largely speculative is noted. The San Francisco Planning Department acknowledges that the analysis is qualitative but disagrees that it is largely speculative. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.6) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.7).

SI_TRT-CWA-SierraC-120 For a discussion of the baseline condition, please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14).

The commenter notes that bed armoring is a major factor driving the loss of salmonid spawning habitat in the Central Valley. In the upper Tuolumne River, bed armoring probably occurred in the first few decades after construction of Hetch Hetchy Reservoir, Lake Lloyd, and Lake Eleanor when the bedload supply to the river reaches below the dams was eliminated. The trout that populate the upper Tuolumne River are adapted to the current channel bed conditions and the lack of gravel supply from upstream. The WSIP would have little or no effect on bedload movement from the watersheds above the reservoirs to the upper Tuolumne River and thus would neither decrease nor increase channel bed armoring.

Bed armoring is probably only one of a number of factors limiting the availability of salmonid spawning habitat in the lower Tuolumne River. The loss of bedload from above La Grange Dam, channel reshaping as a result of past mining, and the discharge of fine sediment in runoff from agricultural and urban lands are also important factors in limiting the availability of suitable spawning gravel. The WSIP would have little or no effect on bedload movement from the watershed above La Grange Dam to the lower Tuolumne River and thus would neither decrease nor increase channel bed armoring or otherwise affect the availability of salmonid spawning habitat. The WSIP would affect the bankfull peak flows in the river below La Grange Dam that occur every one to three years and could reduce the rate of downstream movement of artificially placed or other gravel in the lower Tuolumne River (refer to Vol. 7, Chapter 14, **Section 14.7, Master Response on Lower Tuolumne River Issues**, Section 14.7.7).

SI_TRT-CWA-SierraC-121 The SFPUC's geomorphology studies, conducted by McBain and Trush, indicate that the similarities between the upper Tuolumne River and the Clavey River are sufficient for data from the latter to be useful in analyzing the former (McBain and Trush and RMC, 2007). The Clavey River and the reach of the Tuolumne River between Hetch Hetchy Reservoir and the confluence with the Clavey River are at about the same elevation, and both rivers flow in a bedrock channel.

SI_TRT-CWA-SierraC-122 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) for a discussion of

the WSIP's effects on the magnitude, frequency, and duration of river flows, and to Section 14.6.6 of that master response for a discussion of WSIP-induced flow changes on channel form and sediment.

SI_TRT-CWA-SierraC-123 The WSIP would have very little effect on sediment transport in the upper Tuolumne River because most downstream migrating sediment was interrupted when Hetch Hetchy Reservoir and Lakes Lloyd and Eleanor were built. The armoring of sediments below O'Shaughnessy Dam likely occurred many years ago and results primarily from the elimination of sediment transport from the watershed above Hetch Hetchy Reservoir. The reduction in frequency of moderate-sized to small floods that occur more than once in 10 years as a result of the WSIP would not be expected to have much effect on the armoring phenomenon.

The reduction in frequency of moderate-sized to small floods that remove sediment from interstitial spaces in spawning gravels could have some adverse effect on the quality of spawning and rearing habitat for resident trout. However, the SFPUC proposes Mitigation Measure 5.3.7-2 (Vol. 4, Chapter 6, pp. 6-49 and 6-50), which would involve shaping releases of water from Hetch Hetchy Reservoir to increase the frequency of groundwater recharge in the Poopenaut Valley. The same measure would also wash sediment from spawning gravel.

Also, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) for a discussion of the WSIP's effects on the magnitude, frequency, and duration of river flows, and to Section 14.6.6 of that master response for a discussion of WSIP-induced flow changes on channel form and sediment.

SI_TRT-CWA-SierraC-124 The authors of the Draft PEIR did not refer to the USFWS's 1992 draft Instream Flow Incremental Methodology report because the information in it is out-of-date. As the commenter notes, the report would enable an assessment of the changes that may have occurred in sediment conditions between 1992 and the present once the current SFPUC studies are completed.

SI_TRT-CWA-SierraC-125 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.7).

SI_TRT-CWA-SierraC-126 The WSIP would have little effect on the magnitude of large flood flows, such as the flood that occurred in 1997, which radically reshaped the channel. However, in this reach of the river, the primary channel-forming events are peak flows that occur every one to three years, which would be affected by the WSIP. Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.7) for more information.

For a discussion of the WSIP's effects on bedload armoring, please refer to **Response SI_TRT-CWA-SierraC-120**, above.

SI_TRT-CWA-SierraC-127 There are many reasons for the decline of the salmonid populations in the Tuolumne River, including past water system development, gravel and gold mining in the river channel, the clearing of the riparian forest, channel encroachment by agriculture and urban development, and ocean harvesting and conditions. Past water development created barriers to fish passage and sediment movement, depleted flow, and altered seasonal flow patterns. The cumulative effects of past and present activities on the lower Tuolumne River and its fishery resources are described in the Draft PEIR (Vol. 3, Chapter 5, Section 5.7). Compared to the effects of past actions, the WSIP would have only minor effects on sediment transport in the reach of the river below La Grange Dam.

The degraded condition of the river ecology below La Grange Dam as a result of these past activities is acknowledged in the Draft PEIR (Vol. 3, Chapter 5, Section 5.7). Although the WSIP-related adverse changes in the condition of this reach of the river are relatively minor, including somewhat reduced sediment transport, the San Francisco Planning Department concluded that WSIP-caused incremental impacts on fisheries and terrestrial biological resources would be significant. The conclusion was reached because biological resources in this reach of the river are in a stressed and vulnerable condition.

SI_TRT-CWA-SierraC-128 With respect to the information in Table 5.3.3-2 (Vol. 3, Chapter 5, p. 5.3.3-3), please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.5, under the heading Impacts on Water Quality).

The commenter accurately notes that the table does not include any critically dry years. None occurred between 1996 and 2004. Maximum water temperatures in critically dry years could be greater than the values shown in the table.

- SI_TRT-CWA-SierraC-129 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.5).
- SI_TRT-CWA-SierraC-130 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.5). For more information on recorded temperatures in the Tuolumne River below La Grange Dam, see *2005 Ten Year Summary Report*, FERC Project No. 2299-024, Turlock Irrigation District/Modesto Irrigation District, 2005. For a discussion of the potential effects of global warming, please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).
- SI_TRT-CWA-SierraC-131 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.7).
- SI_TRT-CWA-SierraC-132 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.7). For a discussion of the frequency and severity of impacts, refer to **Response SI_TRT-CWA-SierraC-44**.
- SI_TRT-CWA-SierraC-133 For a discussion of the potential effects of global warming, please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).
- SI_TRT-CWA-SierraC-134 The Draft PEIR states that the optimum temperatures for Chinook spawning are 8 to 16 degrees Celsius (°C) and optimum temperatures for juvenile rearing are 12 to 18 °C (Vol. 3, Chapter 5, p. 5.3.6-16). Optimum temperatures for steelhead in California are considered to be in the range of 10 to 15 °C, but water temperatures up to 20 °C are considered suitable for juvenile summer rearing.

The commenter uses the information in Figures 5.3.3-3 and 5.3.3-4 to estimate the length of the river below La Grange Dam that would be suitable for steelhead rearing with and without the WSIP under conditions prevailing in 1993 and 1999. There is no disagreement with the commenter's estimates. It is acknowledged in the Draft PEIR that the length of the river reach suitable for juvenile salmonids would be truncated at times as a result of WSIP-caused elevated water temperatures (Vol. 3, Chapter 5, p. 5.3.6-32).

The occasional substantial increases in water temperature in the Tuolumne River below La Grange Dam, together with other factors, contributed to the conclusion that the WSIP could have a significant

adverse effect on salmonids in this reach of the river (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32).

SI_TRT-CWA-SierraC-135 For a discussion of the potential effects of global warming, please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

SI_TRT-CWA-SierraC-136 As stated in the Draft PEIR, the WSIP would cause water temperatures in the reach of the river between La Grange Dam and the San Joaquin River to exceed the water quality objective of 5-degree-Fahrenheit increase in three or four months of the 82-year hydrologic record (Vol. 3, Chapter 5, p. 5.3.3-19). The San Francisco Planning Department concluded that the impacts of the WSIP on water quality would be less than significant because the exceedences would be rare and because they would not impair the river's ability to support its designated beneficial uses. However, as noted above, the occasional increases in water temperature in the Tuolumne River below La Grange Dam, together with other factors, contributed to the conclusion that the WSIP could have a significant adverse effect on salmonids (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32).

SI_TRT-CWA-SierraC-137 The WSIP would not cause exceedences of water quality objectives at Vernalis or in the Delta. Responsibility for compliance with the water quality objectives belongs to two of the junior water-rights holders, the California Department of Water Resources (DWR) and U.S. Bureau of Reclamation (USBR). During the infrequent periods when flow in the San Joaquin River would be substantially reduced under the WSIP, the DWR and USBR would reduce diversions from their facilities to meet flow and water quality objectives at Vernalis and in the Delta as necessary (Vol. 3, Chapter 5, p. 5.3.1-39). Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8).

For a discussion of how the frequency and severity of impacts were accounted for in the analysis, please refer to **Response SI_TRT-CWA-SierraC-44**, above.

SI_TRT-CWA-SierraC-138 Table 5.3.3-6 (Vol. 3, Chapter 5, p. 5.3.3-10) shows water quality objectives for the San Joaquin River basin. The water quality objective for dissolved oxygen in the San Joaquin River between Turner Cut and Stockton shown in the table is revised as follows:

6.0 mg/L (September 1 to November 30) and 5.0 mg/L (December 1 to August 30)

As shown in Table 5.3.4-4 (Vol. 3, Chapter 5, p. 5.3.4-7), the WSIP would rarely affect flow in the San Joaquin River by more than 100 cfs in September, October, and November (8 months out of 246 months). During those months, if the flow reductions attributable to the WSIP could cause exceedences of water quality or flow objectives for the San Joaquin River at Vernalis, the USBR would have to make releases from its facilities to ensure that the objectives were met. This would lessen any adverse effects of the WSIP on dissolved oxygen levels in the lower San Joaquin River. Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8.2) for additional discussion of the effects of the WSIP on the San Joaquin River and Delta, including potential effects on Central Valley Project and State Water Project operations.

SI_TRT-CWA-SierraC-139 With respect to dissolved oxygen concentrations in the lower San Joaquin River, please refer to **Response SI_TRT-CWA-SierraC-138**. The commenter accurately notes that exceedences of the dissolved oxygen objective in the Stockton area are already common. The causes for the condition are many and include municipal wastewater discharges, agricultural tailwater discharges, and depleted flow due to diversions for agricultural and municipal purposes. The San Francisco Planning Department concluded that the WSIP's contribution to low dissolved oxygen conditions near Stockton was small compared to the effects of the other factors, and that the impact of the WSIP would be less than significant.

SI_TRT-CWA-SierraC-140 The Draft PEIR text referred to by the commenter (Vol. 3, Chapter 5, p. 5.3.4-5, third paragraph) is accurate but could be clarified. The text in this paragraph is revised as follows:

As described in Section 5.3.1, under existing conditions in the majority of years classified as below-normal or drier, almost all of the winter and spring runoff from the watershed upstream of Don Pedro Reservoir on the Tuolumne River is captured in the reservoir. Only the minimum required releases to the Tuolumne River below La Grange Dam are made. The WSIP would have no effect on flow in the Tuolumne River below La Grange Dam or the San Joaquin River ~~under these conditions~~ in months when only the minimum flows are currently released. In years when the reservoir fills, usually wet or above-normal years, excess water is released in some months to the Tuolumne River. In the future with the WSIP, TID and MID would draw Don Pedro Reservoir down farther in most years than they would under the existing condition, and consequently a greater proportion of spring runoff would

be needed to refill the reservoir. As a result, the volume of excess water released to the Tuolumne River would be reduced in ~~some normal, above normal and wet years compared to the existing condition~~ all wet years, most above-normal years, and occasional below-normal and dry years.

SI_TRT-CWA-SierraC-141 For a discussion of how the frequency and severity of impacts were accounted for in the analysis, please refer to **Response SI_TRT-CWA-SierraC-44**, above.

The commenter combines long-term monthly flow data averaged over several years, and shown in Table 5.3.1-1 (Vol. 3, Chapter 5, p. 5.3.1-12), with modeled flow data from a single month referred to in the text and shown in Table 5.3.4-4 (Vol. 3, Chapter 5, p. 5.3.4-7). This approach produces misleading information.

Table 5.3.1-1 shows gaging data for the Tuolumne River below La Grange Dam, and as the commenter notes, average monthly flow in the river in February is 1,884 cfs. This is the measured flow in February averaged over a 30-year period. Table 5.3.1-6 (Vol. 3, Chapter 5, p. 5.3.1-35) shows average monthly flows for the Tuolumne River below La Grange for an 82-year period of hydrologic record estimated using the HH/LSM. The table shows that average monthly flow in the river in February over the 82-year period would be 1,723 cfs under the existing condition and 1,638 cfs with the WSIP, a reduction of about 5 percent.

As noted by several commenters, and concurred with by the authors of the Draft PEIR, average values alone do not provide a basis for reaching conclusions with respect to environmental impacts. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Sections 14.5.3 and 14.5.4) for more information on this topic.

Because average values alone do not provide a basis for assessing environmental impacts, the average monthly data within hydrologic year types that are shown in Table 5.3.1-6 are supplemented by data on average flows for each month in the 82-year hydrologic record in Table 5.3.4-4. As shown in Table 5.3.4-4, the WSIP would have no effect on flows in the Tuolumne River below La Grange in critically dry years and little effect in dry and below-normal years. In seven months in the 82-year hydrologic record, the WSIP would reduce flows in the Tuolumne River below La Grange Dam by more than 1,000 cfs. The San Francisco Planning Department concluded that these flow reductions represent a less-than-significant impact on

hydrology because they would not cause flows in the river to be outside the range experienced under the existing conditions. Even though WSIP-induced substantial reductions in flow would occur infrequently, it was concluded that the effects of the flow reductions on fisheries and terrestrial biology in this reach of the river would be potentially significant (Vol. 3, Chapter 5, Sections 5.3.6 and 5.3.7). The Draft PEIR includes mitigation measures designed to reduce the impacts of flow reductions on biological resources to a less-than-significant level (Measures 5.3.6-4a and 5.3.6-4b, Vol. 4, Chapter 6, pp. 6-48 and 6-49).

SI_TRT-CWA-SierraC-142 The commenter combines long-term monthly flow data averaged over several years (shown in Table 5.3.1-1) with flow data from a single month (shown in Table 5.3.4-4). This approach produces misleading information.

The commenter notes that the WSIP would reduce flows in the Tuolumne River below La Grange in the fall and winter under conditions that prevailed in 1964. This is one of 2 years in the 82-year hydrologic record when the WSIP would have an effect on flow in this reach of the river in a dry or critically dry year. The flow reduction probably results from the fact that, under the conditions prevailing in the fall and winter of 1964, Don Pedro Reservoir would be at its maximum water level consistent with the flood storage reservation. Any rainstorms over the watershed would cause reservoir operators to release water to the river. With the WSIP, the water level in the reservoir in the fall and winter of 1964 would be slightly lower than under the existing condition, and the reservoir operators would be able to capture some of the runoff from the rainstorms without encroaching on the flood storage reservation. Less water would be released to the river, but the minimum required flows in the river below La Grange Dam would have to be maintained.

SI_TRT-CWA-SierraC-143 The comment with respect to the readability and utility of Table 5.3.4-4 (Vol. 3, Chapter 5, p. 5.3.4-7) is acknowledged. The San Francisco Planning Department respectfully disagrees with the comment. The estimated changes in flow attributable to the WSIP for each month in the 82-year period are a necessary supplement to the average monthly flow data provided elsewhere in Chapter 5 of the Draft PEIR.

SI_TRT-CWA-SierraC-144 Please refer to **Response SI_TRT-CWA-SierraC-141**, above.

- SI_TRT-CWA-SierraC-145 As stated in the Draft PEIR, substantial WSIP-induced flow reductions in the San Joaquin River between its confluence with the Tuolumne River and its confluence with the Stanislaus River would occur four or five times in the 82-year period of hydrologic record (Vol. 3, Chapter 5, p. 5.3.1-38). As the commenter notes, the Tuolumne River provides a substantial fraction of the flow in the San Joaquin River. However, the WSIP-induced reductions in flow in the San Joaquin River would not have any effect on compliance with State Water Resources Control Board-imposed flow and water quality objectives at Vernalis or in the Delta. Responsibility for compliance with the objectives belongs to two of the junior water-rights holders, the DWR and USBR. During the infrequent periods when flow in the San Joaquin River would be substantially reduced by the WSIP, the DWR and USBR would reduce diversions from their facilities to meet flow and water quality objectives at Vernalis and in the Delta as necessary (Vol. 3, Chapter 5, p. 5.3.1-39). Also, please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14).
- SI_TRT-CWA-SierraC-146 For a brief description of the monitoring program referred to by the commenter, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2). The San Francisco Planning Department concluded that sufficient information is available to reach conclusions with respect to the impacts of the WSIP on fishery resources in the Tuolumne River below O'Shaughnessy Dam. Please refer to **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4).
- SI_TRT-CWA-SierraC-147 Please refer to **Response SI_TRT-CWA-SierraC-14**, above.
- SI_TRT-CWA-SierraC-148 Please refer to **Response SI_TRT-CWA-SierraC-14**, above, and to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2).
- SI_TRT-CWA-SierraC-149 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.2).
- SI_TRT-CWA-SierraC-150 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.3) and **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4).
- SI_TRT-CWA-SierraC-151 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.3).

SI_TRT-CWA-SierraC-152 The comment raises concern over the biological distinctions made between steelhead and rainbow trout in describing steelhead presence and abundance within the lower Tuolumne River. The comment references the polymorphic nature of the species within the context that any *O. mykiss* surveyed within this area could potentially adopt an anadromous life-history strategy and are therefore subject to protection under the Federal Endangered Species Act.

Section 5.3.6 (Vol. 3, Chapter 5) of the Draft PEIR discusses steelhead presence and abundance within the lower Tuolumne River. This section discusses rainbow trout/steelhead presence and abundance based on biological surveys conducted between 1982 and 2004 (p. 5.3.6-18). Impact 5.3.6-4 (p. 5.3.6-28 to 5.3.6-32) discusses potential impacts on anadromous salmonids within the lower Tuolumne River and provides specific discussion of the impacts on steelhead within the affected reach. Implementation of Mitigation Measures 5.3.6-4a and 5.3.6-4b (Vol. 4, Chapter 6, pp. 6-48 and 6-49) would reduce these potentially significant impacts to a less-than-significant level. The legal status of steelhead, including details regarding steelhead protection under the Federal Endangered Species Act, is described in the (Vol. 3, Chapter 5, p. 5.3.6-23, under the heading Regulatory Setting). Further discussion of steelhead presence and abundance in the lower Tuolumne River is provided in **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.3) and in **Response SI_TRT-CWA-SierraC-12**, above.

Studies by the Federal Energy Regulatory Commission (FERC, 1996) present findings indicating that, although there are steelhead in the lower Tuolumne River, no significant populations are present. Data presented in the Draft PEIR show water temperatures in the lower Tuolumne River to be in the 25 to 30 °C range for extended periods during the summer in many locations. Water temperature data presented in Draft PEIR Table 5.3.3-2 (Vol. 3, Chapter 5, p. 5.3.3-18 and 5.3.3-19) demonstrate that only the reach immediately downstream of La Grange Reservoir is characterized by water temperatures suitable for steelhead rearing. The increased temperatures in reaches farther downstream and in the San Joaquin River during spring and summer may preclude successful out-migration of juveniles. Trout surveys conducted between 1982 and 2004 (see Vol. 3, Chapter 5, p. 5.3.6-18) found that the geographic range of *O. mykiss* reflected this thermal regime, and that the species was found with greatest frequency above River Mile 45 and not below River Mile 38.

Impact 5.3.6-4 (Vol. 3, Chapter 5, pp 5.3.6-28 to 5.3.6-32) discusses steelhead along the Tuolumne River below La Grange Dam as a federally listed threatened species that inhabits this portion of the river in low abundance. As presented under Impact 5.3.6-4, the largest percentage reductions in Tuolumne River stream flow downstream of La Grange Dam under WSIP operations are expected to occur in June. These summer flow reductions would likely elevate water temperatures and reduce the linear extent of suitable rearing habitat for steelhead/rainbow trout, which are acknowledged as rearing within the river system throughout the year.

As stated on p. 5.3.6-32, the flow reductions coupled with the projected infrequent water temperature increases that could result under the WSIP would have an adverse impact on habitat conditions for juvenile steelhead/rainbow trout. The flow reductions would reduce available habitat in the entire reach of the river used by juvenile steelhead/rainbow trout below La Grange Dam. The elevated temperatures, although infrequent, would truncate the length of the river reach suitable for juvenile steelhead/rainbow trout. These adverse effects on flow and temperature in the river under the WSIP would not substantially alter or degrade fishery habitat or jeopardize the continuation of the fishery populations in the lower Tuolumne River in most years. However, the WSIP's effects on flow and temperature would infrequently contribute to potentially significant effects on fishery resources. The *Habitat Restoration Plan for the Lower Tuolumne River Corridor* (McBain and Trush, 2000) establishes goals for fishery habitat restoration, and the NMFS and others have identified goals for fishery enhancement on the lower river. The WSIP's small but incremental contribution to adverse effects on the lower river would make planned restoration of habitat and fishery resources more difficult. As a result, the impact of the WSIP on these fishery resources in the lower Tuolumne River would be potentially significant. Implementation of Mitigation Measure 5.3.6-4a, Avoidance of Flow Changes by Reducing Demand for Don Pedro Reservoir Water, would reduce this impact to a less-than-significant level. This measure involves some uncertainty because its implementation depends on the SFPUC reaching agreement with MID and TID and possibly other water agencies. If this measure proves to be infeasible, the SFPUC will implement Mitigation Measure 5.3.6-4b, Fishery Habitat Enhancement, to enhance fishery habitat in the lower Tuolumne River. Implementation of Measure 5.3.6-4a or 5.3.6-4b would reduce these adverse impacts on steelhead/rainbow trout to a less-than-significant level.

SI_TRT-CWA-SierraC-153 Please refer to **Response SI_TRT-CWA-SierraC-152**.

SI_TRT-CWA-SierraC-154 The commenter concurs with the text of the Draft PEIR stating that low flow and high water temperatures in this reach stress juvenile salmon and enhance predation by bass (Vol. 3, Chapter 5, p. 5.3.6-20). Further, the commenter notes that WSIP-induced flow reductions and increased water temperatures would increase the loss of salmonids to non-native predators. The authors of the Draft PEIR agree with the commenter; this is one of the reasons why it was determined that the WSIP would have a potentially significant adverse effect on salmonids in this reach of the river (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32). The proposed mitigation measures (Measures 5.3.6-4a and 5.3.6-4b) would reduce the impacts to a less-than-significant level.

SI_TRT-CWA-SierraC-155 The commenter's opinion regarding the desirability of increasing flows in the Tuolumne River below La Grange Dam to decrease suitable habitat for non-native predators is acknowledged. Please also refer to **Response SI_TRT-CWA-SierraC-154** and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.8).

SI_TRT-CWA-SierraC-156 Refer to **Response SI_TRT-CWA-SierraC-43** regarding how the San Francisco Planning Department identifies significance criteria.

The comment describing the goal of doubling anadromous fish populations above their baseline averages in the Anadromous Fish Restoration Program is acknowledged.

The Draft PEIR (Vol. 2, Chapter 4, p. 4.6-23 and 4.6-24) summarizes the Federal Endangered Species Act as it applies to the WSIP and describes how provisions under this act are incorporated into the PEIR impact analysis on biological resources. This section of the Draft PEIR includes a description of the situations in which the act permits the "taking" of federally listed species.

SI_TRT-CWA-SierraC-157 Please refer to **Response SI_TRT-CWA-SierraC-14**, above, and **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2).

SI_TRT-CWA-SierraC-158 Please refer to **n Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Sections 14.5.3 and 14.5.4). The flow reductions in the reach of the river below O'Shaughnessy Dam that would be attributable to the WSIP would

manifest themselves as a delay in the initial release of water in excess of the minimum required releases in the spring snowmelt period. It was determined that the delay in the release would not be expected to have a significant adverse effect on rainbow trout or other resident fish (Vol. 3, Chapter 5, p. 5.3.6-27).

SI_TRT-CWA-SierraC-159 With regard to water quality objectives, please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.7). With regard to climate change, please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

SI_TRT-CWA-SierraC-160 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.7).

SI_TRT-CWA-SierraC-161 The analysis of fishery impacts in the Tuolumne River below La Grange Dam focused on Chinook salmon because this species was once abundant in this reach of the river and has been the subject of considerable management efforts in the last decade. The analysis in the Draft PEIR considered steelhead, but acknowledged that surveys conducted between 1982 and 2004 suggested that large anadromous steelhead occur in the river very infrequently (Vol. 3, Chapter 5, p. 5.3.6-18).

The San Francisco Planning Department concluded that the occasional flow reductions and increases in water temperature attributable to the WSIP would have a significant adverse impact on anadromous fish in the Tuolumne River below La Grange Dam. Although the focus of the analysis was Chinook salmon, it was acknowledged that the changes would affect habitat for summer rearing of steelhead (Vol. 3, Chapter 5, p. 5.3.6-31).

The purpose of the Draft PEIR is to describe the environmental consequences of the proposed WSIP relative to the existing condition. CEQA does not require that an EIR evaluate whether the existing condition is satisfactory for steelhead and compliant with all environmental laws and policies. The Draft PEIR does include an assessment of the effects of the WSIP on fisheries in the context of all past, present, and expected future actions that have or will affect the resource (Vol. 3, Chapter 5, Section 5.7). In this section, it is acknowledged that past and present water management practices and other past and present human activities, such as gravel and gold mining, have substantially altered habitat for anadromous fish in the lower Tuolumne River. The degraded condition of anadromous fish in this reach of the river contributed to the conclusion that WSIP-

induced flow reductions would have a significant adverse impact in the absence of appropriate mitigation measures.

SI_TRT-CWA-SierraC-162 Please refer to **Response SI_TRT-CWA-SierraC-161**, above.

SI_TRT-CWA-SierraC-163 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6).

SI_TRT-CWA-SierraC-164 As indicated in **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.7), the WSIP would have little effect on large infrequent peak flows in the reach of the river below La Grange Dam, and therefore would have little or no effect on the movement of coarse sediments in this reach of the river. The WSIP would not affect the recruitment of coarse sediment in this reach of the river because La Grange and Don Pedro Dams prevent the downstream movement and recruitment of coarse sediment. For a discussion of the effects of the WSIP on the movement of fine sediment, please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.7).

SI_TRT-CWA-SierraC-165 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.2).

SI_TRT-CWA-SierraC-166 Please refer to **Response SI_TRT-CWA-SierraC-134**, above.

SI_TRT-CWA-SierraC-167 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3) for more information on the use of monthly and daily data in the environmental analysis. Refer to **Response SI_TRT-CWA-SierraC-44** for more information on the frequency and severity of impacts.

Most flow reductions below La Grange Dam attributable to the WSIP would manifest themselves as a delay in late winter or early spring releases. On some days in the winter or spring, flow in the Tuolumne River with the WSIP would be the minimum required. On those same days under the existing condition, flow in the river would be greater because the spring release would have begun.

The releases to the river under the existing condition in 2000 are shown in Figure 5.3.1-13 (Vol. 3, Chapter 5, p. 5.3.1-37). Reservoir operators in 2000 were releasing the minimum required, 300 cfs, in January and the early part of February. In mid-February, reservoir operators began to release water in excess of the minimum required, raising flow in the river to about 3,000 cfs over about one week.

With the WSIP, the release would have been delayed by a few days and thus flow in the river would have remained at 300 cfs for a few days longer. In those few days, flow with the WSIP would be 90 percent less than under the existing condition.

The temperature model was used to simulate two scenarios: one where the WSIP would cause a 90 percent reduction in flow in the lower Tuolumne River, and one where it would cause a 50 percent reduction in flow. The results are shown in Figures 5.3.3-3 and 5.3.3-4 (Vol. 3, Chapter 5, pp. 5.3.3-18 and 5.3.3-19). In most years, flow reductions of this magnitude would last only a few days.

The San Francisco Planning Department concluded that the flow reductions attributable to the WSIP, and the consequent increase in water temperatures, would not represent a significant adverse effect on water quality in the Tuolumne River below La Grange Dam. However, the increase in water temperatures, together with other factors, contributed to the conclusion that the WSIP could have a significant adverse effect on salmonids in this reach of the river (Vol. 3, Chapter 5, p. 5.3.6-28 to 5.3.6-32).

SI_TRT-CWA-SierraC-168 For a discussion of the potential effects of global warming, please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14). Refer to **Response SI_TRT-CWA-SierraC-44** for more information on the frequency and severity of impacts. The commenter's statement that even small changes in water temperature can have a dramatic effect on salmon survival is acknowledged

SI_TRT-CWA-SierraC-169 The commenter concurs with the statement in the Draft PEIR (Vol. 3, Chapter 5, p. 5.3.6-32) that the WSIP's incremental contribution to adverse effects on the reach of the river below La Grange Dam would make the planned restoration of habitat and fishery resources more difficult.

The sentence referred to by the commenter is awkwardly stated. The intent was to indicate that, although the WSIP would have a substantial adverse effect on salmonid habitat in some years, it would not jeopardize the existence of salmonid populations because there would always be a reach of the river immediately below La Grange Dam where conditions would be suitable for salmonids.

In response to this comment, the Draft PEIR is revised as follows (Vol. 3, Chapter 5, p. 5.3.6-32, fourth sentence in the first partial paragraph):

These adverse effects on flows and temperature in the river under the WSIP would not substantially alter or degrade ~~fishery habitat~~ salmonid habitat in most years or jeopardize the continuation of the ~~fishery~~ salmonid populations in the lower Tuolumne River ~~in most years~~.

SI_TRT-CWA-SierraC-170 With respect to Mitigation Measure 5.3.6-4a, please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.8). With respect to Mitigation Measure 5.3.6-4b, refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.9).

SI_TRT-CWA-SierraC-171 The commenter's agreement with the quoted text on Draft PEIR p. 5.3.6-36 (Vol. 3, Chapter 5) is acknowledged.

SI_TRT-CWA-SierraC-172 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.4) for a discussion of FERC-required minimum flows in the lower Tuolumne River. As the commenter notes, the minimum flows were developed to facilitate Chinook salmon recovery, and little or no consideration was given to steelhead because the available evidence suggested that steelhead either no longer exist in the river or exist in very small numbers. Refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.3) with respect to data on steelhead in the lower Tuolumne River.

The minimum required instream flows will be reviewed in the future when the Don Pedro Project's FERC relicensing process begins, or perhaps earlier. Based on the poor returns of Chinook salmon in recent years, the CDFG has requested that FERC require the operators of the Don Pedro Project to increase releases to the river for salmonids. The CDFG's request focuses on recovery of Chinook salmon rather than steelhead.

The sentence quoted by the commenter states that during dry periods the WSIP would have no effect on flow in the San Joaquin River. This is because in dry periods the minimum required release would be made from La Grange Dam with or without the WSIP.

SI_TRT-CWA-SierraC-173 For information on significance criteria, please refer to **Response SI_TRT-CWA-SierraC-43**. Refer to **Response SI_TRT-CWA-SierraC-44** for more information on the frequency and severity of impacts. Flow in the San Joaquin River does not depend solely on water from the Tuolumne River. As a result, the WSIP-caused changes in flow in the San Joaquin River are less pronounced than in

the lower Tuolumne River. Because of this, and because substantial WSIP-caused changes in flow in the San Joaquin River would be infrequent, the San Francisco Planning Department concluded that the impacts of the WSIP on fisheries in the San Joaquin River would be less than significant.

However, it should be noted that the preferred mitigation measure (Measure 5.3.6-4a) proposed to reduce the impacts of the WSIP on salmonid fisheries in the lower Tuolumne River would also reduce or eliminate the effects of the WSIP on fisheries in the San Joaquin River.

SI_TRT-CWA-SierraC-174 In response to this comment, Draft PEIR, Vol. 5, Appendix H1, p. H1-10, third full paragraph, seventh sentence is revised as follows:

Studies suggest that there is a 30 percent chance that the SFPUC system will experience a drought in the next 75 years equal to or more severe than the 1987–1992 drought (Beck, 1994).

In addition, Draft PEIR, Vol.5, Appendix H1, p. H1-39, the following text is added as the first reference:

Beck, R.W. *Design Drought Analysis*. Prepared for Modesto Irrigation District and Turlock Irrigation District, August 1994.

SI_TRT-CWA-SierraC-175 Refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3) for a description of how monthly flows produced by the HH/LSM were supplemented by daily flow estimates derived from operational records.

SI_TRT-CWA-SierraC-176 Lake Eleanor and Lake Lloyd are located on Cherry Creek and do not contribute inflow to Hetch Hetchy Reservoir.

SI_TRT-CWA-SierraC-177 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6).

SI_TRT-CWA-SierraC-178 The SFPUC has not reached agreement with TID and MID with respect to the dry-year water transfer. Please refer to **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14, Section 14.3.2) for more information. The commenter's observation with respect to the uncertainty associated with the transfer is acknowledged. The CCSF has worked with TID and MID for many years in analyzing water supply availability from the Tuolumne River, and the HH/LSM modeling indicates that there

could be water available for a dry-year transfer without a loss of water to TID and MID.

SI_TRT-CWA-SierraC-179 The commenter opines that the data contained in Draft PEIR Appendix H2-1 (Vol. 5, Table 2.1-1, p. 11) is difficult to review in the tabular format and that it should be displayed in a graphical form. Much of the data used in the impact analysis are displayed graphically, either in the appendix or in the body of the Draft PEIR. For example, the data shown in Table 2.2-1 are shown graphically in Figure 2.2-1. The data contained in Tables 2.3-1, 2.3-2, and 2.3-3 on storage in Hetch Hetchy Reservoir are plotted in Figures 2.3-1, 2.3-2, 2.3-3, and 2.3-4 in Appendix H2-1. Figure 2.3-1 is included in the main body of the PEIR as Figure 5.3.1-9 (Vol. 3, Chapter 5, p. 5.3.1-23).

SI_TRT-CWA-SierraC-180 The comment misstates the content of Table 2.3-3 (Vol. 5, Appendix H2-1, p. 19), which shows differences in Hetch Hetchy Reservoir storage with and without the WSIP. The data contained in Table 2.3-3 are plotted in Figure 2.3-3 (Vol. 5, Appendix H2-1, p. 20).

SI_TRT-CWA-SierraC-181 Please refer to **Response SI_TRT-CWA-SierraC-180**, above.

SI_TRT-CWA-SierraC-182 Please refer to **Response SI_TRT-CWA-SierraC-180**, above.

SI_TRT-CWA-SierraC-183 The comment misstates the content of Table 2.3-4 (Vol. 5, Appendix H2-1, p. 21), which shows releases from Hetch Hetchy Reservoir to the Tuolumne River with the WSIP. The data contained in Table 2.3-4 are plotted in Figure 2.3-1 (Vol. 5, Appendix H2-1, p. 16).

SI_TRT-CWA-SierraC-184 The comment misstates the content of Table 2.3-5 (Vol. 5, Appendix H2-1, p. 22), which shows releases from Hetch Hetchy Reservoir to the Tuolumne River under the existing condition. The data contained in Table 2.3-5 are plotted in Figure 2.3-1 (Vol. 5, Appendix H2-1, p. 16).

SI_TRT-CWA-SierraC-185 The comment misstates the content of Table 2.3-6 (Vol. 5, Appendix H2-1, p. 22), which shows differences in releases from Hetch Hetchy Reservoir to the Tuolumne River under the existing condition and with the WSIP. The data contained in Table 2.3-6 are not directly plotted, but can be seen by observing the differences between the with- and without-WSIP releases plotted in Figure 2.3-1 (Vol. 5, Appendix H2-1, p. 16).

- SI_TRT-CWA-SierraC-186 The data contained in Table 2.4-1 (Vol. 5, Appendix H2-1, p. 27) are not directly plotted, but can be seen by observing the differences between the with- and without-WSIP releases plotted in Figure 2.4-1 (Vol. 5, Appendix H2-1, p. 25).
- SI_TRT-CWA-SierraC-187 The comment misstates the content of Appendix H2-1 Tables 2.6-1 through 2.6-8. Tables 2.6-1 and 2.6-2 show storage in Don Pedro Reservoir with and without the WSIP, and Table 2.6-3 shows the differences in storage between the two scenarios. Table 2.6-4 shows differences in reservoir inflow between the two scenarios. Tables 2.6-5 and 2.6-6 show releases from Don Pedro Reservoir to the Tuolumne River with and without the WSIP, and Table 2.6-7 shows the differences in releases between the two scenarios. Table 2.6-8 shows the same information as Table 2.6-7, but the information is ranked in descending order of wetness, based on the San Joaquin River index. The data in Tables 2.6-1, 2.6-2, 2.6-5, and 2.6-6 are plotted in Figure 2.6-1 (Vol. 5, Appendix H2-1, p. 30). The data contained in Table 2.6-3, Table 2.6-7, and 2.6-8 are not directly plotted, but can be seen by observing the differences between the with- and without-WSIP storage and releases plotted in Figure 2.6-1.
- SI_TRT-CWA-SierraC-188 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 4.7.8) regarding Mitigation Measure 5.3.6-4a, as well as to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.6). Because of uncertainties regarding Measure 5.3.6-4a, an alternative mitigation measure, Measure 5.3.6-4b, is identified in the Draft PEIR (Vol. 4, Chapter 6, pp. 6-48 and 6-49).
- SI_TRT-CWA-SierraC-189 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.9). It is recognized that the current understanding of the factors influencing salmonid productivity in the Tuolumne River below La Grange Dam is incomplete. Mitigation Measure 5.3.6-4b has been clarified to include surveys and actions to meet performance standards (refer to Vol. 7, **Chapter 16, Staff-Initiated Text Changes**). The comment regarding the possibility that providing additional spawning habitat for salmonids could cause crowding of rearing habitat is acknowledged.
- SI_TRT-CWA-SierraC-190 Please refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.9). A part of Mitigation Measure 5.3.6-4 is based on the belief of some

fisheries experts that the gravel pits provide habitat for salmonid predators, and that elevated numbers of predators reduce salmon survival. The comment questioning the evidence that predators are a problem is acknowledged. Also refer to **Response SI_TRT-CWA-SierraC-189**. The commenter's opinion that Measure 5.3.6-4b would not provide benefits to terrestrial biological resources is acknowledged. As noted in the Draft PEIR (Vol. 4, Chapter 6, p. 6-50), if Measure 5.3.6-4a proves to be infeasible and Measure 5.3.6-4b is implemented, an additional mitigation measure (Measure 5.3.7-6) would be implemented to reduce the impacts of the WSIP on terrestrial biological resources in the Tuolumne River below La Grange Dam to a less-than-significant level.

SI_TRT-CWA-SierraC-191 It is acknowledged in the Draft PEIR that past and current actions have harmed salmon habitat in the Tuolumne River (Vol. 3, Chapter 5, Section 5.7).

Studies of rainbow trout and salmon habitat in the Tuolumne River are in progress. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2) for a description of studies the SFPUC is conducting, in consultation with the USFWS, in the Tuolumne River below O'Shaughnessy Dam. TID and MID are currently conducting studies of the lower Tuolumne River pursuant to their license to operate the Don Pedro Project granted by FERC in 1996. If the WSIP is implemented, the results of these studies, together with the results of monitoring that is a part of several mitigation measures, would provide information for the adaptive management program associated with the WSIP's mitigation measures.

SI_TRT-CWA-SierraC-192 Please refer to **Response SI_TRT-CWA-SierraC-191**, above.

SI_TRT-CWA-SierraC-193 Receipt of the information provided by the commenter is acknowledged. The table labeled "Table 1" is included in the Draft PEIR (Vol. 3, Chapter 5, p. 5.3.1-12). The Draft PEIR includes a table of additional releases for trout in the Tuolumne River below O'Shaughnessy Dam (Vol. 3, Chapter 5, p. 5.7-30), but it is not the same as the table labeled "rough draft" and provided by the commenter. The information provided does not raise any new issues that have not been addressed in the Draft PEIR.

SI_TRT-CWA-SierraC-194 Receipt of the information provided by the commenter on Chinook salmon production in the Tuolumne River is acknowledged. It is similar to but more detailed than information presented in the Draft

PEIR in Table 5.3.6-2 (Vol. 3, Chapter 5, p. 5.3.6-15). The information provided does not raise any new issues that have not been addressed in the Draft PEIR.

- SI_TRT-CWA-SierraC-195 Receipt of the information provided by the commenter on water demand is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14) and the responses to comments from the Pacific Institute (**SI_PacInst**).
- SI_TRT-CWA-SierraC-196 Receipt of the information provided by the commenter on water conservation is acknowledged. The comment (Attachment I), entitled Studies on Water Conservation, is a list of studies primarily on conservation in Seattle and southern California intended to support the assertion that the Bay Area is not doing enough in these areas. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling); **Responses SI_PacInst-59** and **SI_PacInst-71** regarding specific assertions based on Seattle studies; and **Reponses SI_PacInst-72** and **SI_PacInst-80** regarding studies on urban water conservation potential in southern California.
- SI_TRT-CWA-SierraC-197 Receipt of the information provided by the commenter on water demand and conservation is acknowledged. Regarding issues raised in the presentations refer to responses to the Pacific Institute letter (**SI_PacInst**).
- SI_TRT-CWA-SierraC-198 Receipt of the information provided by the commenter on water demand and conservation is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). In particular, refer to the discussion under the heading Effects of the Future Cost of Water on Projected Demand.
- SI_TRT-CWA-SierraC-199 Receipt of the information provided by the commenter on water pricing and demand is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). In particular, refer to the discussion under the heading Effects of the Future Cost of Water on Projected Demand.

15.5 Citizens

CITIZENS

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Mail	C_AllenT	Thomas Allen	15.5-2
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PH Sonora	C_BoutiD	Dolores Boutin	15.5-10
PH Sonora	C_BoutiF	Fred Boutin	15.5-10
Email	C_BramID1	Darryl Bramlette	15.5-10
Email	C_BramID2	Darryl Bramlette	15.5-12
PH Sonora	C_BramID3	Darryl Bramlette	15.5-13
PH Modesto	C_BramID4	Darryl Bramlette	15.5-14
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PH	C_Britt	Beverly Britts	15.5-16
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PH Fremont	C_Cant	John Cant	15.5-20
Mail	C_Caugh	Robert Caughlan	15.5-21
Mail	C_Chase	Birgit Chase	15.5-21
Email	C_Chiap	Lynn Chiapella	15.5-21
PH SF1	C_Chode	Bernie Chodeu	15.5-23
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PH Palo Alto	C_Dippe	Dan Dippery	15.5-35
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PH SF1	C_Kalma	Emeric Kalman	15.5-65
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Email	C_Tubma	Marianna Tubman	15.5-104
Email	C_Tucke	Kristen Tucker	15.5-106
Mail	C_Unreadable1	Unreadable commenter name	15.5-106
Mail	C_Unreadable2	Unreadable commenter name	15.5-107
Mail	C_Unreadable3	Unreadable commenter name	15.5-107
Mail	C_Unreadable4	Unreadable commenter name	15.5-107
Mail	C_Unreadable5	Unreadable commenter name	15.5-108
Email	C_Urdan	Matthew Urdan	15.5-108
Email	C_Vadop	Paul Vadopalas	15.5-108
Email	C_VermeJ	Jim Vermeys	15.5-108
Email	C_VermeK	Karen Vermeys	15.5-109
Mail	C_Voyik	Ashleigh Voyikes	15.5-109
Mail	C_Vrana	Leo Vrana	15.5-109
Email	C_Walke	Patricia Walker	15.5-110
Email	C_Walls	Pete Wallstrom	15.5-111
Email	C_Weiss	Richard Weiss	15.5-111
Mail	C_Westc	Bart Westcott	15.5-112
Email	C_Willi	Doris Williams	15.5-112
Email	C_Wingf	Polly P. Wingfield	15.5-113
Email	C_Wolf	Elizabeth Wolf	15.5-113
Mail	C_Zimme	Benita Zimmerman	15.5-113

Amy Adams, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 32–35]

- C_AdamsA-01 This comment expresses the opinion that the SFPUC should pursue a two-tiered approach that separates the seismic improvements from the proposed water supply option. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.
- C_AdamsA-02 This comment in support of conservation and efficiency is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Sambhu Agarwala, 09/20/07

- C_Agarw-01 This comment opposing additional Tuolumne River diversions and encouraging additional conservation and recycling efforts to conserve the projected increase in water demand through 2030 is acknowledged. The commenter incorrectly infers that SFPUC wholesale customers in the East Bay account for 60 percent of the proposed increase in diversions from the Tuolumne River. Alameda County Water District and the City of Hayward, the two SFPUC wholesale customers in the East Bay, together account for 35 percent of the purchase request increase (approximately 12.1 mgd of the projected 35 mgd increase in purchase requests) relative to 2001/2002 purchases. Refer to Draft PEIR Table 7.2 and Table 7.3 (Vol. 4, Chapter 7, pp. 7-15 and 7-18) regarding expected future demand and purchases and the change in demand and purchases from 2001. Please also refer to the discussion in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2, under the heading Outdoor Water Use), for more information on outdoor demand, and to Section 14.2 (Vol. 7, Chapter 14, Section 14.2.3) for more information regarding conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Casey Allen, 09/20/07

- C_AllenC-01 This comment opposing additional Tuolumne River diversions is acknowledged.
- C_AllenC-02 This comment expresses concern for impacts to wildlife and biodiversity that could result from the proposed increase in Tuolumne River diversions. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.6 and 5.3.7) included a project-level analysis of impacts on fisheries and terrestrial biological resources that would result from the proposed water supply option and changes in system operations. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels.
- C_AllenC-03 Regarding the commenter's concerns about impacts to local businesses, please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 4, Section 14.1.6) regarding CEQA requirements related to economic evaluations, and the environmental effects that some commenters perceive could cause economic impacts for Tuolumne County residents, businesses, and tourism.

Thomas Allen, 09/22/07

- C_AllenT-01 This comment expressing an opinion on the WSIP is acknowledged.

Rita Allison, 08/28/07

- C_Allis-01 This comment expressing opposition to additional diversions from the Tuolumne River and support for additional conservation is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for discussion of conservation programs and recycling projects proposed by the SFPUC and its wholesale customers. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Grudy Alter, 09/20/07

C_Alter-01 This comment opposing additional diversions from the Tuolumne River and in support of additional conservation and recycling is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information on the conservation programs and recycling projects being implemented or planned by the SFPUC and its wholesale customers. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6), for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River.

Eric Arons, 09/14/07

C_Arons-01 This comment opposing additional diversions from the Tuolumne River and urging the protection of river habitat and recreational boating is acknowledged. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels.

Christopher Bail, 09/28/07

C_Bail-01 This comment opposing additional Tuolumne River diversions is acknowledged. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels.

C_Bail-02 Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6), for clarification regarding current and estimated future municipal and

agricultural diversions from the Tuolumne River. Regarding the effects of global warming on the Tuolumne River, refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.5) for information on current studies and models that are being used to forecast the effects of climate change on the SFPUC's regional water system. This comment incorrectly implies that the purchase estimates prepared for the WSIP do not include increased conservation and recycling efforts to mitigate demand. For additional information on the methodologies used by SFPUC in collaboration with its wholesale customers and the Bay Area Water Supply and Conservation Agency (BAWSCA) to assess future water demand, and on the conservation programs and recycling projects proposed by the SFPUC and its wholesale customers, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

C_Bail-03 This comment opposing additional Tuolumne River diversions and recommending that the SFPUC consider the possibility of reducing diversions from the river is acknowledged.

John Barbey, 10/01/07

C_Barbe1-01 This comment states that the supply capacity of the Hetch Hetchy Water System is reaching its limitations. While the SFPUC is currently able to serve customer demands during certain hydrologic and operating conditions and has the "capacity" to continue to do so through 2030, the existing system is currently unable to meet WSIP level of service objectives for reliably serving customers needs over a range of operating conditions and these deficiencies will become more severe in the future. As shown in the Draft PEIR, Table 3.5 (Vol. 1, Chapter 3, p. 3-26), the WSIP would improve overall system reliability with respect to water quality, seismic response after a major earthquake, customer deliveries during system maintenance, and water supply during drought periods. All of these factors influence the understanding of "capacity limitations" for the regional system.

C_Barbe1-02 This comment expresses support for additional water storage in the form of dams and water impoundments, and for implementation of desalination projects to meet future water demand in the SFPUC service area. The WSIP includes implementation of two facility improvement projects that would increase water storage in existing Bay Area reservoirs: the Calaveras Dam Replacement (SV-2) and Lower Crystal Springs Dam Improvements (PN-4) projects.

The PEIR analyzes the use of desalination technologies as a supplemental water supply in the Regional Desalination for Drought Alternative – Variant 2 (Vol. 4, Chapter 9, Section 9.2.7) and the Year-round Desalination at

Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.6). As indicated in Table 9.6 (pp. 9-14 to 9-16), it is uncertain whether these two alternatives are capable of meeting all WSIP goals and objectives related to sustainability and the cost-effective use of funds, and these alternatives would only partially meet the WSIP objective of maintaining a gravity-driven system. Also, the Year-round Desalination at Oceanside Alternative would only partially meet WSIP objectives related to delivery reliability during planned maintenance.

C_Barbe1-03 The comment asserts that San Francisco water customers are conserving so that suburban customers can squander the “saved” water. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding conservation programs and water recycling projects being implemented or planned in the retail and wholesale customer service areas.

C_Barbe1-04 The Draft PEIR, (Vol. 1, Chapter 3, pp. 3-16 to 3-22) describes the demand projection methodology. As described, projections for both retail and wholesale customers were developed using end-use demand models that break down total water use by customer type to specific end uses, such as toilets, faucets and irrigation. To project future demand, account growth rates were developed for residential and nonresidential accounts using published population and employment projections, respectively. For a more detailed discussion of the demand forecasting methodology, refer to Draft PEIR Appendix E2 (Vol. 5). The comment implies that the demand projections were prepared as part of the Draft PEIR. The demand projections were prepared by the SFPUC and its technical consultants, along with the SFPUC’s wholesale customers, as a component of WSIP planning. For additional information on the methodologies used by the SFPUC in collaboration with its wholesale customers and BAWSCA to assess future water demand, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).

John Barbey, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 7-8]

C_Barbe2-01 This comment expresses an opinion that there was inadequate noticing of the Draft PEIR public hearing dates. Please see **Responses F_USDAFS-05** and **L_SFPC1-01**, and **Appendix J1** (Vol. 8) of this Comments and Responses document for detailed information on the public outreach efforts conducted by the San Francisco Planning Department’s Major Environmental Analysis Division and the SFPUC.

- C_Barbe2-02 This comment expressing an opinion that San Francisco's water supplies should be safeguarded and that additional conservation is not capable of meeting future water demand is acknowledged.

Cris Barsanti, 09/10/07

- C_Barsa-01 The commenter expresses the concern that WSIP-related changes in Tuolumne River flow due to additional Tuolumne River diversions and changes in water system operations would reduce opportunities for whitewater recreation.

The Draft PEIR (Vol. 3, Section 5.3.8) provides an extensive discussion of existing whitewater recreational resources in the Tuolumne River watershed and evaluates the potential magnitude of impacts on future whitewater recreation under the WSIP. The detailed analysis of the timing and magnitude of the WSIP-related changes in water releases within the upper Tuolumne River watershed (see Impact 5.3.8-2: Effects on river recreation due to changes in water system operations, pp. 5.3.8-27 through 5.3.8-34) conclude that the effects on whitewater recreation would be less than significant since shifts in water releases and associated reductions in flow along the upper Tuolumne River would generally be limited to high flow months (April through June) or the low recreation season (November to March) and thus, would not significantly impair whitewater recreation. In addition, during other peak visitor months of July and August, SFPUC releases for whitewater rafting would continue to be provided when operationally practical. Furthermore, flow reductions during these months are projected to only occur during drier than normal hydrologic years and be relatively limited (i.e. 3 percent or less reductions in average monthly flows) so as to be imperceptible to most recreationists.

- C_Barsa-02 This comment in support of additional conservation and recycling to serve future water demand and against additional diversions from the Tuolumne River is acknowledged. For descriptions of alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.4), and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (Vol. 4, Chapter 9, Section 9.2.6). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Cedric De La Beaujardiere and Susan Stansbury, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 36-38]

- C_Beauj-01 This comment expressing support of more conservation and recycling is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information on conservation programs and recycling projects being implemented or planned by the SFPUC and its wholesale customers.
- C_Beauj-02 This comment expressing support for the proposed seismic upgrades, opposition to additional diversions from the Tuolumne River, and support for future decreases in diversions from the river is acknowledged.

Bonnie Berg, 09/11/07

- C_Berg-01 This comment opposing additional Tuolumne River diversions is acknowledged. This commenter requests that water demand projections in the SFPUC service area be reevaluated and urges more conservation and recycling. The 2030 purchase estimates prepared for the WSIP include 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For additional information on the methodologies used by the SFPUC in collaboration with its wholesale customers and BAWSCA to assess future water demand, and on the conservation programs and recycling projects proposed by the SFPUC and its wholesale customers, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78).

Allan Berkowitz, 09/07/07

- C_Berko-01 This comment opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9), for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

- C_Berko-02 This comment questions the demand and conservation projections and suggests that the SFPUC determine the maximum potential for conservation and efficiency savings, and that additional demand be met through increased investment in conservation, efficiency, and recycling. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14) for additional information on the methodologies used by SFPUC in collaboration with its wholesale customers and the Bay Area Water Supply and Conservation Agency (BAWSCA) to assess future water demand, and on the conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.
- C_Berko-03 This comment expressing an opinion that the SFPUC should adopt a policy of reducing additional Tuolumne River diversions over time is acknowledged.
- C_Berko-04 This comment was submitted by multiple commenters; refer to **Response C_Breso-01**.

Gabie Berliner, 09/20/07

- C_Berli-01 This comment opposing additional Tuolumne River diversions is noted. Please refer to **Response L_Tuol1-09** regarding the potential effects of the WSIP on those reaches of the Tuolumne River designated as wild and scenic.

John Beviacqua, 09/19/07

- C_Bevia-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposing additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP include 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9), for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. For more information regarding impacts on Chinook salmon, refer to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.2).

Marty Bigos, 10/01/07

- C_Bigos-01 This comment opposing urban sprawl development in the Bay Area is acknowledged.
- C_Bigos-02 This comment expressing support for the CEQA alternatives that would not include additional Tuolumne River diversions and that would promote additional conservation, efficiency, and recycling to prevent the need for additional Tuolumne River diversions is acknowledged. For a discussion of the alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (see Draft PEIR Vol. 4, Chapter 9, Section 9.2.6, p. 9-66) and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (see Section 9.2.4, p. 9-47). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for a discussion of the conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Martin Blake, 09/05/07

- C_Blake-01 This comment opposing additional diversions from the Tuolumne River and supporting additional conservation is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), for additional information related to the conservation programs and recycling projects being implemented or planned by the SFPUC and its wholesale customers.

Sean Bourke, MD, 09/11/07

- C_Bourk-01 This comment opposing additional diversions from the Tuolumne River is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Dolores Boutin, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 11-13]

C_BoutiD-01 This comment opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9), for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Fred Boutin, 09/05/07

[See Public Hearing Transcript, Sonora, p. 17]

C_BoutiF-01 This comment expresses an opinion that the Water System Improvement Program (WSIP) is not an improvement program, but rather an expansion program, and should be renamed accordingly. This comment is acknowledged.

C_BoutiF-02 The request for studies evaluating the maximum potential for water conservation has been submitted by numerous commenters; please refer to the discussion in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), under the heading Frequently Submitted Comments Addressing Conservation and Recycling. Refer to Table 7.3 in the Draft PEIR (Vol. 4, Chapter 7, p. 7-18) regarding where the increase in water demand and increase in water purchases from the SFPUC regional system is projected to occur.

Darryl Bramlette, 09/06/07

C_BramlD1-01 The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14) for additional information related to the impact analysis for the Tuolumne River. (Regarding the use of desalination technologies to supplement water supplies, refer to **Response C_BramlD1-02.**)

C_BramlD1-02 This comment questions why the SFPUC has not considered using desalination technologies to achieve “all of the key elements” of the WSIP and then provides information on desalination. The Draft PEIR analyzed the use of desalination technologies as a supplemental water supply as part of the Regional Desalination for Drought Alternative – Variant 2 (Vol. 4, Chapter 9, Section 9.2.7) and the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.6). As indicated in Table 9.6 (pp. 9-14 to 9-16), it is uncertain whether these two alternatives are capable of meeting all WSIP goals and objectives related to sustainability and the cost-effective use of funds, and these alternatives would only partially meet the WSIP objective of maintaining a gravity-driven system. Also, the Year-round Desalination at Oceanside Alternative would only partially meet WSIP objectives related to delivery reliability during planned maintenance.

C_BramlD1-03 The commenter suggests several ways to control seawater intrusion. The suggested methods for control of seawater intrusion mentioned in this comment are acknowledged and recognized as feasible. Management of groundwater withdrawals and positioning of wells is incorporated into the project design for both the Local and Regional Groundwater Projects (SF-2) (Draft PEIR, Vol. 3, pp. 5.6-24 and 5.6-25). Other methods of control that are mentioned in the comment (recharge with basins or wells to maintain freshwater pressure, interception with a line of pumping wells, and placement of a subsurface groundwater barrier) involve remediation for seawater intrusion and would not be needed because the Local and Regional Groundwater Projects would be conducted in a manner to avoid seawater intrusion as discussed below.

The potential for seawater intrusion to the North and South Westside Groundwater Basins is evaluated in Impact 5.6-3 of the Draft PEIR (Vol. 3, pp. 5.6-28 and 5.6-29). Potential impacts related to seawater intrusion are considered potentially significant for the North Westside Groundwater Basin because the shallow aquifer is in direct connection with the ocean from approximately Lake Merced to the north. However, determination of the basin safe yield in accordance with Measure 5.6-1 (Vol. 4, Chapter 6, pp. 6-58 and 6-59) would reduce impacts related to basin overdraft and potential seawater intrusion to a less-than-significant level. This measure requires determination of the basin’s yield on both a regular (average annual) and an intermittent (dry-year or emergency) basis, in accordance with Element 3 of SFPUC’s *Final Draft North Westside Groundwater Basin Management Plan* (SFPUC, 2005), as well as implementation of groundwater level and quality monitoring in accordance with Element 1 of the Groundwater Management Plan. The monitoring data would be used to inform decisions regarding appropriate pumping patterns to avoid overdraft and the undesirable effects associated with overdraft.

In the South Westside Groundwater Basin potential impacts related to seawater intrusion are less than significant because faulting and folding of the Merced Formation along the western border with the Pacific Ocean and the presence of bedrock and bay mud along the eastern border with the bay block seawater intrusion, as discussed in the Draft PEIR (Vol. 3, p. 5.6-29). Furthermore, monitoring and modeling would also be conducted to assess the conjunctive-use program's performance and to identify and avoid potential problems (Draft PEIR, Vol. 3, p. 5.6-26). Based on monitoring data and modeling results, conjunctive-use management strategies would be adjusted and implemented as necessary to avoid adverse conditions.

- C_BramlD1-04 The commenter states that the environmental impacts of the increased delivery demands on the Tuolumne River were not addressed in the Draft PEIR. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14) for additional information related to the impact analysis for the Tuolumne River.

Darryl Bramlette, 09/27/07

- C_BramlD2-01 This comment characterizes oral comments presented at a public meeting on the Draft PEIR ("The number one problem: San Francisco needs more water!"; "The number two problem: the increasing diversion will do further harm to the Tuolumne River"). Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole. Please refer also to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- C_BramlD2-02 This comment expressing support for more conservation and recycling to meet water demand, and opposition to additional diversions from the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP include 22 to 34 mgd of projected water conservation and recycling savings, in

addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). This comment also expresses doubt that projected water demand for San Francisco and its wholesale customers can be met by Tuolumne River diversions, conservation, efficiency, and recycling. As discussed in the Draft PEIR (Vol. 4, Chapter 7, p. 7-9) and shown in Table 3.3 and Table 7.2 (Vol. 1, Chapter 3, p. 3-18 and Vol. 4, Chapter 7, p. 7-15, respectively), for about half the wholesale customers, the SFPUC is one of several sources of supply. For additional information on the methodologies used by SFPUC in collaboration with its wholesale customers and BAWSCA to assess future water demand, and on the conservation programs and recycling projects proposed by the SFPUC and its wholesale customers, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

- C_BramlD2-03 This comment expresses the opinion that the SFPUC should write an EIR on the development of alternative water supply sources. The Draft PEIR (Vol. 4, Chapter 9) evaluates various supplemental water supply alternatives involving more conservation and water recycling (see the Aggressive Conservation/Water Recycling and Local Groundwater Alternative, Sections 9.2.4 and 9.2.5); alternative locations for Tuolumne River diversion (see the Lower Tuolumne River Diversion Alternative, Section 9.2.5); desalination technologies (see the Regional Desalination for Drought [Variant 2], Section 9.2.7, and the Year-round Desalination at Oceanside Alternative, Section 9.2.6); and an alternative involving a modification of system operations (see Modified WSIP Alternative, Section 9.2.8).

Darryl Bramlette, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 29-30]

- C_BramlD3-01 This comment opposes additional Tuolumne River diversions and supports the use of desalination as a source of supplemental water supplies. Please refer to **Response C_BramlD1-02** for response.
- C_BramlD3-02 This comment supporting additional conservation among SFPUC customers to meet future water demands is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to the conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

C_BramlD3-03 This comment implies that the SFPUC illegally sells Tuolumne River water to other communities for profit. The Raker Act imposed many conditions and obligations on the City and County of San Francisco (CCSF), including the requirement that Tuolumne River water could be used in the Bay Area for municipal and domestic purposes, but not for agricultural irrigation. See **Response L_TUD1-05** regarding CCSF's water rights and the Raker Act.

Darryl Bramlette, 09/06/07

[See Public Hearing Transcript, Modesto, pp. 15-16]

C_BramlD4-01 See **Response C_BramlD1-02**.

Jobst Brandt, 09/24/07

C_Brand-01 This comment opposing additional Tuolumne River diversions but in support of seismic improvements to the regional water system is acknowledged. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) for a discussion related to the integration of the seismic improvements and water supply options to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.

Mark Bresolin, 10/11/07

C_Breso-01 This comment expresses opposition to additional Tuolumne River diversions and requests that additional studies be conducted before the PEIR is finalized. As described in the Draft PEIR (Vol. 3, Chapter 5, pp. 5.1-7 to 5.1-18), the basic approach to the analysis of impacts on water and related resources was to first evaluate the changes in the river flow and reservoir levels that would occur with the WSIP, then to estimate changes in water quality and temperature, and finally to combine this information to determine potential impacts on fisheries and other biological resources. The analysis used the existing 82-year historical hydrologic record, coupled with the Hetch Hetchy/Local Simulation Model (HH/LSM), to depict the overall regional water system operations and to project the extent of changes in flow that could occur in the future. These results were used for the PEIR water supply and system operations impact analysis.

As described in **Section 14.4, Master Response on PEIR Appropriate Level of Analysis** (Vol. 7, Chapter 14, Section 14.4.4), the CEQA Guidelines (Section 15151) impose a standard of adequacy that is "reasonably feasible" and sufficient to allow decision-makers to make a decision that takes account

of environmental consequences. Data gathering need not be “exhaustive.” The Draft PEIR analysis of the WSIP water supply and system operations with respect to fisheries and biological resources along the Tuolumne River was based on current knowledge of the composition and condition of the resources and in consideration of the potential interactive responses of plant and animal species to the hydrologic changes resulting from the WSIP as indicated by the model results. The analysis relied on ecological principles, scientific literature, existing data, and site visits. The Draft PEIR analysis was conservative in finding that an impact could be potentially significant if there was a possibility of impacts from the WSIP water supply and system operations.

The San Francisco Planning Department believes these data are sufficient to reasonably assess the general magnitude, frequency, and extent of the WSIP’s environmental consequences, and to identify appropriate mitigation measures to offset potentially significant impacts on the Tuolumne River watershed and related resources. The mitigation measures were developed to include performance standards based on ecological principles, with the understanding that data from ongoing and future studies could be useful in augmenting the baseline data and in refining the implementation of each measure. As described in Draft PEIR Measure 5.3.7-2 (Vol. 4, Chapter 6, pp. 6-49 and 6-50), **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.2), and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.2), several studies of the Tuolumne River are in progress by the SFPUC, National Park Service, USFWS, NMFS, CDFG, and other agencies. Data from these studies would be used to augment the existing data and allow for refinement of the implementation of the mitigation measure to meet the performance standards.

C_Breso-02

This comment incorrectly states that the preferred alternative ignores conservation, efficiency, and recycling. The statements in this comment were submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling. The commenter’s support for alternatives that protect the Tuolumne River from new diversions is acknowledged. For descriptions of alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.4), and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (Vol. 4, Chapter 9, Section 9.2.6).

Beverly Britts, 09/05/07

C_Britt-01 This comment advocating greater public awareness of the environmental impacts of additional Tuolumne River diversions and of the need for increased conservation, is acknowledged. Please refer to **Section 14.2, Master Response Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information regarding conservation programs and recycling projects being implemented and planned by the SFPUC and its wholesale customers. As shown in Tables 14.2-6, 14.2-7, and 14.2-8, public information programs are being implemented throughout the SFPUC service area.

Liz Brooking, 09/11/07

C_BrookL-01 This comment, which advocates educating the public as to the value of conservation and reductions in water consumption, expresses support for more conservation and recycling to meet water demand, and opposes additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP include 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). Please refer to **Section 14.2, Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information regarding conservation programs and recycling projects being implemented or planned by the SFPUC and its wholesale customers. As shown in Tables 14.2-6, 14.2-7, and 14.2-8 of Section 14.2, public information programs are being implemented throughout the SFPUC service area.

Louis Bryan, 10/01/07

C_Bryan-01 This comment expresses opposition to additional Tuolumne River diversions and requests that additional studies be conducted before the PEIR is finalized. Please see **Response C_Breso-01**.

Keith Buckingham, 09/20/07

C_Bucki-01 This comment states that growth projections seem to be excessive. This comment was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).

C_Bucki-02 This comment, advocating more water conservation, is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding conservation programs and recycling projects being implemented or planned in the SFPUC service area. Regarding comparisons to other areas refer to the discussion in Section 14.2.3 under the heading Frequently Submitted Comments Addressing Conservation and Recycling.

June Bug, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 33-37]

C_Bug-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Juan Byron, 09/19/07

C_Byron-01 This comment in support of tiered water rates as a conservation incentive is acknowledged. Please refer to **Responses SI_PacInst-46 and SI_PacInst-47** for relevant discussions of conservation pricing. Please refer also to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding conservation programs and recycling projects being implemented or planned by the SFPUC and its wholesale customers.

C_Byron-02 This comment stating that the 82-year hydrologic record, which is used as the baseline for hydrologic modeling in the Draft PEIR, lacks consideration of “earlier historical, geological, and anthropological evidence that pre-modern and modern societies thrived in the [SFPUC] service area for hundreds of years with almost no water storage or distribution” is acknowledged. The water supplies of historical societies in the SFPUC service area are not relevant to the CEQA review process. As this comment does not address the adequacy or accuracy of the Draft PEIR, no additional response is provided.

C_Byron-03 This comment expressing an opinion that the significance determinations “identified for the Tuolumne, Alameda, and Peninsula watersheds are unacceptable because water conservation is more economical for the consumer and the utility” is acknowledged. Refer to **Section 14.2 Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information on conservation programs and water recycling projects proposed by SFPUC and its wholesale customers. The commenter also expressed the opinion that “engineering best practices will allow seismic upgrade of the water distribution system without the above impacts because of

the vastly redundant nature of the nine major reservoirs and multiple parallel pipelines that characterize this system.” This comment does not accurately characterize the regional water system. The Draft PEIR provides a program-level evaluation of the potential environmental impacts of constructing and operating the 22 regional WSIP facility projects (Vol. 2, Chapter 4). The analysis, which is based on preliminary information about the projects and their general site locations, presents a reasonable worst-case scenario regarding the potential environmental impacts that could occur. Project-level CEQA review will be conducted for each facility project, as appropriate, and will confirm the degree of impact.

C_Byron-04

The commenter states that potential impacts to groundwater resources are unacceptable given that voluntary conservation measures would meet realistic water supply objectives for the WSIP. As described in Draft PEIR (Vol. 1, Chapter 3, Section 3.4.1), the SFPUC conducted several planning efforts and studies to address future water supply needs for the SFPUC service area, and these efforts concluded that use of groundwater resources would diversify the regional system’s water supply portfolio during both drought and nondrought periods. Under WSIP, the proposed Local and Regional Groundwater Projects (SF-2) would include measures as part of the project or as mitigation of potential impacts to ensure that adverse groundwater effects do not occur.

Potential impacts of the Local and Regional Groundwater projects on groundwater and surface water resources are addressed in Section 5.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.6-1 to 5.6-33). In the North Westside Groundwater Basin, potentially significant impacts related to potential basin overdraft and seawater intrusion would be reduced to less than significant with implementation of Measure 5.6-1 (Vol. 4, Chapter 6, pp. 6-58 and 6-59) requiring determination of the basin’s yield on both a regular (average annual) and an intermittent (dry-year or emergency) basis, in accordance with Element 3 of the Groundwater Management Plan, as well as with implementation of groundwater level and quality monitoring in accordance with Element 1 of the Groundwater Management Plan (Draft PEIR, Vol. 3, pp. 5.6-24 and 5.6-25). The monitoring data would be used to inform decisions regarding appropriate pumping patterns to avoid overdraft and the undesirable effects associated with overdraft.

Potentially significant impacts related to effects on water levels in Lake Merced and other surface water features would be reduced to less than significant with implementation of Measure 5.6-1 (Vol. 4, Chapter 6, pp. 6-58 and 6-59), and Measure 5.6-2 (p. 6-59). (See Draft PEIR, Vol. 3, pp. 5.6-27 and 5.6-28 for the impact analysis.) Measure 5.6-1 includes groundwater and surface water monitoring as specified in Elements 1 and 2 of the Groundwater Management Plan to monitor the effects of groundwater pumping on surface

water features. The monitoring data would be used to inform decisions regarding the alteration of pumping patterns to avoid undesirable effects on surface water features. Measure 5.6-2 includes development and implementation of a lake level management plan identifying strategies for altering pumping patterns or lake augmentation to maintain Lake Merced water levels within the desired long-term range, should monitoring conducted under Measure 5.6-1 indicate the potential for adverse effects on lake levels due to groundwater pumping. The SFPUC would coordinate the implementation of both measures.

Following CEQA environmental review, implementation of the Regional Groundwater Projects in the South Westside Groundwater Basin would be subject to approval of an operating agreement(s) between the SFPUC and the participating pumpers as described in Section 3.14, Required Actions and Approvals and on pp. 5.6-25 and 5.6-26 of the Draft PEIR. The proposed operating agreement(s) would outline allowable operating parameters for pumping during drought years to avoid adverse long-term conditions. In addition, an operating committee would be formed to develop annual operating maintenance plans as well as an annual operating schedule, and groundwater monitoring and modeling would be conducted to identify the potential for adverse conditions and inform decisions to modify the recharge or pumping strategy in response to changing conditions over time.

Potentially significant effects related to groundwater contamination from pumping would be less than significant with development of a drinking water source assessment in accordance with applicable regulations (Draft PEIR, Vol. 3, p. 5.6-31), and preparation of a drinking water source assessments for each well in accordance with Measure 5.6-5 (Vol. 4, Chapter 6, p. 6-59).

Prudent management of groundwater resources in the North and South Westside Groundwater Basins as described above and in the Draft PEIR (Vol. 3, Sections 5.6 and 5.7.5) would ensure that groundwater resources are not depleted, and that use of the groundwater would be consistent with beneficial uses identified by the RWQCB without leaving the SFPUC exposed to catastrophic risk. Furthermore, there would be a larger quantity of groundwater in the South Westside Groundwater Basin during nondrought years due to the in-lieu recharge resulting from deliveries of SFPUC system water and correspondingly reduced groundwater pumping (Draft PEIR, Vol. 3, p. 5.6-25). Subsequent to the PEIR, project-level environmental review will be conducted on the local and regional groundwater projects.

The opinion of the commenter regarding the Wetlands Water District is noted.

C_Byron-05

This comment expressing an opinion that an alternative similar to the Modified WSIP combined with the “no purchase request increase” alternative should be implemented is acknowledged. Please refer to Sections 9.3 (Vol. 4, Chapter 9,

pp. 9-84 through 9-96) and Table 9-7 (Vol. 4, Chapter 9, pp. 9-17 through 9-21) for a comparison of impacts among the evaluated alternatives. The PEIR provides the environmental analysis of the proposed program as well as detailed analysis of a wide range of alternatives. Thus, consistent with CEQA, the PEIR, if certified, will enable the SFPUC to make an informed decision regarding program approval on a wide range of alternatives that may include a combination of the alternatives analyzed in the PEIR.

- C_Byron-06 This comment states that the use of groundwater to augment supplies would exacerbate groundwater overdraft problems. See **Response C_Byron-04**.
- C_Byron-07 This comment opposing the Year-round Desalination at Oceanside Alternative is acknowledged.
- C_Byron-08 This comment expressing support for further evaluation of the Regional Desalination for Drought Alternative – Variant 2 acknowledged.
- C_Byron-09 This comment essentially restates Comment C_Byron-01; please refer to **Response C_Byron-01**.
- C_Byron-10 This comment expressing support for restoration of Hetch Hetchy Valley is acknowledged. This concept was considered during the preliminary screening phase but because it did not meet any of the basic program goals or objectives, the concept was eliminated from further consideration. Please refer to the O'Shaughnessy Dam removal alternative concept in Section 9.5 (Vol. 4, Chapter 9, pp. 9-127 to 9-128) for further discussion.
- C_Byron-11 This comment is a closing statement expressing opinions regarding the history of water development in the Bay Area and water resource management in general. As the comment contains no specific comment on the adequacy or accuracy of the PEIR, no response is provided.

John Cant, 09/18/07

[See Public Hearing Transcript, Fremont, pp. 8-10]

- C_Cant-01 This comment addressing levels of conservation and recycling in the SFPUC service area was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3); regarding comparisons to other areas, refer to the discussion under the heading Frequently Submitted Comments Addressing Conservation and Recycling. As noted in the Draft PEIR (Vol. 4, Chapter 7, p. 7-35), the Alameda County Water District (ACWD) (which provides water to Fremont) currently purchases about

25 percent of its supply, and in 2030 would purchase approximately 23 percent of its supply, from the SFPUC after conservation has been implemented.

C_Cant-02 The commenter states concerns that the acreage of mitigation proposed by the Habitat Reserve Program (HRP) is insufficient to compensate for impacts from the WSIP. The HRP is intended to provide a “reserve” of mitigation values that can be applied to mitigation needs for each WSIP project as needed. Since mitigation requirements for each WSIP project will be determined as part of the project-level studies, all mitigation values developed under the HRP may or may not be sufficient to compensate for each project. If the HRP mitigation values are not sufficient or are not of the kind required for in-kind mitigation, additional mitigation will be developed as needed as part of project-level studies. All mitigation values developed by the HRP, the impacts of which would be analyzed in a project-level EIR, would be available for WSIP projects and would not be applied to other SFPUC mitigation needs unless they were deemed excess.

C_Cant-03 This comment restates issues raised in Comments C_Cant-01 and C_Cant-02 and advocates the SFPUC “pushing “our more recalcitrant neighbors” into doing more conservation. Refer to **Responses C_Cant-01 and C_Cant-02**, and to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Robert Caughlan, 09/24/07

C_Caugh-01 This comment regarding population and family planning is acknowledged. As this comment does not address the adequacy or accuracy of the Draft PEIR, no response is provided.

Birgit Chase, 09/20/07

C_Chase-01 This comment opposing additional diversions from the Tuolumne River and supporting additional conservation is acknowledged. Refer to the discussion in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding water conservation and recycling projects proposed by SFPUC in San Francisco and its wholesale customers in their respective service areas.

Lynn Chiapella, 09/30/07

C_Chiap-01 The percentage of diversions from the Tuolumne River attributed to the SFPUC presented in this comment is inaccurate. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14,

Section 14.6.5) and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6), for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River. The Draft PEIR (Vol. 1, Chapter 2, pp. 2-35 to 2-37) provides a summary description of the CCSF's water rights. Please refer to **Response L_TUD1-05** for additional discussion of CCSF's water rights and the Raker Act.

This comment also incorrectly implies that a profit motive is driving the WSIP. The WSIP would improve the reliability of the existing regional water system that provides water to people in San Francisco, San Mateo, Santa Clara, Alameda, and Tuolumne Counties. The program is not driven by profit but is needed due to public health and safety and water reliability reasons. Refer also to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.2) for information regarding the purpose of the program. For additional information related to future conservation measures being implemented or planned by the SFPUC and its wholesale customers refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

C_Chiap-02 This comment in support of tiered water rates as a conservation incentive is acknowledged. Please refer to **Responses SI_PacInst-46 and SI_PacInst-47** for further discussion of conservation pricing. Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information regarding conservation programs being implemented or planned by the SFPUC and its wholesale customers.

C_Chiap-03 This comment criticizes excessive outdoor water use and supports additional conservation and recycling. Please refer **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14) for information on outdoor water use within the SFPUC service area, existing and proposed recycled water programs, and alternatives involving higher levels of conservation and recycling than the preferred WSIP. Please refer also to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Bernie Chodeu, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 29-30]

C_Chode-01 For a discussion of the effects of climate change on the SFPUC regional water system and related SFPUC actions, please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Sections 14.11.4 and 14.11.5). Also see the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 of this document provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.

Ann Clark, Katherine Howard, 09/20/07

C_Clark1-01 This comment summarizes the more detailed comments presented in Comments C_Clark1-02 through C_Clark1-16; refer to **Responses C_Clark1-02 through C_Clark1-16** for the specific responses.

C_Clark1-02 The PEIR describes general funding of the WSIP for informational purposes (Vol. 1, Chapter 3, p. 3-10), and as provided under CEQA, the PEIR addresses the environmental consequences, not the specific funding and financing, of the proposed program. However, it should be noted that following certification of the PEIR, if the SFPUC adopts the WSIP (or an alternative to it that is covered in the PEIR), the SFPUC would also be required to adopt a Mitigation Monitoring and Reporting Program that will commit the SFPUC to implement mitigation measures identified in the PEIR as appropriate to the program adopted. The commenters concerns regarding cost and funding of the WSIP and associated mitigation measures are acknowledged.

C_Clark1-03 This comment requests that both a detailed cost analysis and the specific contract conditions for wholesale customers be included with the final PEIR. CEQA does not require inclusion of detailed costs and funding as part of the environmental document, and therefore this information is not provided in the PEIR.

The comment also states that the 2009 contract between the SFPUC and its wholesale customers will have an environmental impact on the WSIP and that environmental analysis of the 2009 contract needs to be included in the final PEIR. As described in the Draft PEIR (Vol. 1, Chapter 2, pp. 2-43 and 2-44), the SFPUC and each of its wholesale customers currently have agreements specifying the terms and conditions for purchasing water from the regional system. The individual agreements include terms set forth in the 1984 Master

Water Sales Agreement, which includes a supply assurance. Even though the current master contract expires in June 2009, the contract specifies that the supply assurance remains effective following termination of the Master Water Sales Agreement. The WSIP was developed to address anticipated customer demand on the regional system through 2030. To the extent that the individual agreements and/or the Master Water Sales Agreement may affect water supply (through 2030) and related environmental resources, the PEIR addresses those environmental issues (see Vol. 3, Chapter 5). Prior to approving a water sales agreement, the SFPUC will adopt CEQA findings documenting that the contract is consistent with the scope of the analysis contained in the PEIR.

The commenter also states that the PEIR need to include specific 2009 contract conditions for rates and charges for water use, including wholesale and retail incentives for water conservation requirements. As discussed above, CEQA does not require inclusion of detailed costs and funding as part of the environmental document, and therefore this information is not provided in the PEIR. For information regarding wholesale and retail conservation efforts and requirements, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

- C_Clark1-04 This comment requests additional analysis of impacts to the Tuolumne River brought about by the cumulative effects of drought cycles, climate change, and global warming. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Sections 14.11.4 and 14.11.5) for a discussion of the effects of climate change on the SFPUC regional water system and related SFPUC actions.
- C_Clark1-05 This comment questions the feasibility of the dry-year transfers from the Modesto Irrigation District (MID) and Turlock Irrigation District (TID). The analysis of the proposed program in the Draft PEIR incorporates the dry-year transfer as one component of the program and assumes a worst-case scenario that water would be from water stored in Don Pedro Reservoir. See **Section 14.3, Master Response on Proposed Dry-Year Water Transfer** (Vol. 7, Chapter 14) for a description of the assumptions used in the Draft PEIR to evaluate the dry-year water transfer and a discussion of the feasibility of the proposed transfer.
- C_Clark1-06 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.5) for response.
- C_Clark1-07 Regarding the effects of climate change on the SFPUC regional water system and related SFPUC actions, refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Sections 14.11.4 and 14.11.5). The description of actions taken by the East Bay Municipal Utility District is noted. Regarding demand management strategies being implemented or proposed for

implementation by SFPUC retail and wholesale customers (e.g., existing and proposed levels of conservation, conservation best management practices adopted by the SFPUC and wholesale customers), refer to **Section 14.2, Master Response on Demand Management, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

C_Clark1-08 This comment requests additional research and analysis to address the effects of climate change, global warming, and drought cycles and to protect the Tuolumne River from significant environmental impacts. Please see **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.5) for information regarding SFPUC's current efforts to evaluate their water supply planning with respect to climate change. This comment also requests that the PEIR focus on conservation, recycling, and re-use alternatives. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information on the conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.

C_Clark1-09 This comment, which states that there are "major discrepancies in the assumptions, research models, and recommendations" applied to the wholesale customers and the retail customers that result in "diametrically opposed policies for water use and active conservation," reflects some basic misconceptions about the methodology used by the SFPUC in consultation with its wholesale customers to evaluate 2030 water demand and conservation potential.

The Draft PEIR (Vol. 1, Chapter 3, p. 3-16 to 3-17 and Vol. 5, Appendix E.2) describes the methodology used to forecast demand and evaluate conservation and recycled water potential. As described therein, similar, although not identical, approaches were taken to model demand in the retail customer and wholesale customer service areas. To evaluate demand in each wholesale customer service area, the SFPUC employed an end-use model (the Decision Support System, or DSS, model) that breaks down existing water use by customer type into detailed water end uses, and then uses population and employment projections to develop residential and nonresidential account growth rates, to project future water demand by end use. Demand projections for the SFPUC retail customer service area were developed using a similar end-use model, although nonresidential demand was evaluated using composite employee water use rates with Association of Bay Area Governments (ABAG) industry-specific employment projections (rather than using employment forecasts to develop nonresidential account growth rates). Regarding the reasons this approach was not taken in the wholesale customer service area, refer to the discussion in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14,

Section 14.2.2), under the heading Use of Total Jobs Projections for the Wholesale Customer Service Area.

As part of the modeling effort the SFPUC also used the end-use models to evaluate conservation potential in the wholesale and retail service areas. As with the demand modeling, wholesale customer conservation potential modeling was conducted in close consultation with the wholesale customers. Three suites of theoretically feasible and cost-effective conservation programs (Programs A, B, and C) were identified for each wholesale customer and for the retail customer service area. The SFPUC also conducted studies to evaluate the potential for recycled water projects to offset demand for potable water in the retail and wholesale service areas. Based on the information generated by these studies and modeling efforts, the wholesale customers and the SFPUC (for the retail service area) submitted their best estimates of 2030 water purchases from the SFPUC. Each customer's estimates of conservation savings and the use of recycled water, groundwater, and other supply sources as well as its 2030 purchase estimate is shown in Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18).

As part of the WSIP planning process, the SFPUC in cooperation with its wholesale customers and BAWSCA also undertook a study to assess the potential for additional conservation and recycled water projects, including potential regional projects that were not identified in the previous studies or already considered to be implemented locally by 2030. This study, *Investigation of Regional Water Supply Option No. 4 Technical Memorandum* (SFPUC, 2007, Appendix D), provided the basis for the Aggressive Conservation/Water Recycling and Local Groundwater Alternative analyzed in the Draft PEIR (Vol. 4, Chapter 9, pp. 9-47 to 9-59). The SFPUC subsequently incorporated into the WSIP the San Francisco local projects categorized in the Regional Water Supply Option No. 4 study as likely to be implemented.

Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18) summarizes the water supply assumptions used in developing the 2030 demand projections. The table indicates that in the retail service area projected conservation savings range from 0 to 4 mgd, projected use of groundwater ranges from 3 to 5 mgd, and projected use of recycled water ranges from 0 to 4 mgd, for a total of 3 to 13 mgd that could offset demand. In the wholesale service area, the table indicates projected conservation savings range from 13 to 15 mgd, projected use of groundwater ranges from 39 to 42 mgd, and projected use of recycled water ranges from 9 to 10 mgd, for a total of an estimated 61 to 67 mgd of groundwater, recycled water, and conservation savings that would offset wholesale customer demand for water from the SFPUC regional system. An additional 53 mgd would be provided by other surface water sources in the wholesale service area.

Tables 14.2-6, 14.2-7, and 14.2-8, in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) describe existing and planned conservation measures, including measures incorporating incentives and disincentives for water uses for wholesale and retail customers. As shown in these tables, many of the conservation measures that the SFPUC plans to implement in the retail service area also are planned for the wholesale customer service areas.

Policies related to conservation inevitably will change over time; for example, programs that may not have been considered feasible for an individual wholesale customer to implement may prove more economical and feasible – and therefore will be pursued – on a regional basis. Also, technological developments likely will create new demand management strategies over the project performance period (to year 2030). Nothing in the WSIP precludes that process from occurring.

The statement in the comment that wholesale conservation goals are left to suggested methods and parameters in respective urban water management plans apparently refers to text in the Draft PEIR evaluation of WSIP alternatives (Vol. 4, Chapter 9, pp. 9-23 to 9-96). As described therein, the evaluation of alternatives includes a discussion of the actions by the SFPUC as well as possible wholesale customer actions that each alternative would entail. The alternatives analysis reasonably points out differences in supply assumptions and wholesale customer actions that the alternatives would entail and the sources of supply, conservation, and related wholesale customer activities that are reflected in current urban water management plans. As discussed above, extensive background studies in the wholesale and retail service areas – not urban water management plans – provided the basis for the estimates of conservation and use of recycled water assumed for the WSIP proposed by the SFPUC. However, it is assumed that the WSIP planning studies informed the urban water management plans, which for most customers were finalized in 2005, after the 2004 WSIP planning studies.

The statement in the comment that the wholesale model “does not penalize additional water usage” requires clarification. The model does not make policy. As described above, conservation potential was evaluated in the modeling undertaken as part of WSIP planning. However, it was up to each wholesale customer to determine which measures were feasible and cost effective to implement in its service area. Some wholesale customers have adopted water pricing strategies, during normal years and/or during dry years, that penalize individual customer accounts for higher rates of consumption. Refer to **Responses SI_PacInst-46 and SI_PacInst-47** (Vol. 7, Chapter 15, Section 15.4) for more information on tiered pricing.

The statement in the comment that “additional mandatory conservation will not be required for wholesalers” requires clarification. The wholesale customers have committed to implementing conservation and recycling at levels shown in Table 3.3 (Draft PEIR Vol. 1, Chapter 3, p.3-18). The Draft PEIR evaluates two alternatives that would involve higher levels of conservation and recycling by wholesale customers: the Aggressive Conservation/Water Recycling and Local Groundwater Alternative, and the Modified WSIP Alternative. Approval of either alternative would require higher levels of conservation and/or recycling by the wholesale customers; BAWSCA (which represents the wholesale customers) has expressed opposition to the Aggressive Conservation/Water Recycling and Local Groundwater Alternative and support for the Modified WSIP Alternative (refer to various comments in the submittal L_BAWSCA1). Regarding the authority of the SFPUC to condition future water purchase agreements on demand management measures, refer to the discussion in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), under the heading Frequently Submitted Comments Addressing Conservation and Recycling.

The statements in the comment that the Draft PEIR recommends that additional water be diverted from the Tuolumne River also require clarification. The WSIP PEIR (Draft PEIR Chapter 3) characterizes the WSIP as proposed by SFPUC and analyses the environmental impacts of the proposed program (Vol. 2, Chapter 4, Vol. 3, Chapter 5, and Vol. 4, Chapters 6 and 7); in the alternatives analysis (Vol. 4, Chapter 9, p. 9-96), the Draft PEIR identifies as the environmentally superior alternative the Modified WSIP Alternative. The California Environmental Quality Act (CEQA) requires that agencies consider the environmental consequences of projects as part of their decision-making process; the WSIP PEIR provides that information for the WSIP and alternatives to the WSIP. Individuals with approval authority¹ over the WSIP and the PEIR will consider information in the PEIR, including input received during the public review process, in deciding whether to approve the preferred WSIP or an alternative to it.

C_Clark1-10 Regarding comparisons with water use patterns in other jurisdictions and existing and planned conservation, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling.

¹ The San Francisco Planning Commission, SFPUC, and San Francisco Board of Supervisors; see Draft PEIR pp. 3-86 and 3-87 (Vol. 1, Chapter 3) for a complete list.

- C_Clark1-11 Regarding comparisons with water use patterns in other jurisdictions and existing and planned conservation, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling. Regarding the commenter's request for a regional analysis of specific projects in the wholesale customer service areas that affect water use, Chapter 7 of the PEIR contains an extensive analysis of growth associated with implementation of the WSIP, and the environmental impacts associated with that growth. See Tables 14.2-6, 14.2-7, and 14.2-8 regarding conservation programs proposed as part of the WSIP or otherwise planned by wholesale customers
- C_Clark1-12 This comment states that additional research be conducted to evaluate the combined long-term effects of additional diversions from the Tuolumne River and climate change on the health and welfare of the river, endangered species and habitats, and Delta ecosystems. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4) for response.
- C_Clark1-13 This comment requests that mitigation measures in the Draft PEIR be revised when the additional research and analysis requested by the commenter in Comments C_Clark1-08, -11, and -12 is completed. The Final PEIR includes staff-initiated text revisions to the Draft PEIR, including modifications and refinement of some of the mitigation measures in the Draft PEIR. These revisions are explained and documented in Chapter 16 of this Comment and Responses document, including any appropriate revisions to mitigation measures.
- The Draft PEIR provides a program-level evaluation of the potential environmental impacts of constructing and operating the 22 regional WSIP facility projects (Vol. 2, Chapter 4). The analysis, which is based on preliminary information about the projects and their general site locations, presents a reasonable worst-case scenario regarding the potential environmental impacts that could occur and provides programmatic mitigation measures for all potentially significant impacts. Project-level CEQA review will be conducted for each facility project, as appropriate, and will confirm the degree of impact and the applicability of the mitigation measures presented in the WSIP PEIR. As necessary, these mitigation measures will be re-evaluated to be confirmed, refined or replaced with an equivalent measure to better address the project-specific impacts.
- The Draft PEIR provides a project-level evaluation of the potential environmental impacts of the proposed changes in water supply sources and regional water system operations organized by watershed in the Draft PEIR

(Vol. 3, Chapter 5) and identifies mitigations for significant and potentially significant impacts. As discussed in **Response C_Breso-01**, above, the San Francisco Planning Department believes the data used to analyze project-level impacts on water and related resources are sufficient to reasonably assess the general magnitude, frequency, and extent of the WSIP's environmental consequences, and to identify appropriate mitigation measures to offset potentially significant impacts on the Tuolumne River, Alameda Creek, and Peninsula watersheds and related resources. The mitigation measures were developed to include performance standards based on ecological principles, with the understanding that data from ongoing and future studies could be useful in augmenting the baseline data and in refining the implementation of each measure.

- C_Clark1-14 This comment opposing Tuolumne River diversions and in support of “equitable conservation requirements” is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for discussion on conservation program and recycling projects proposed by SFPUC and its wholesale customers.
- C_Clark1-15 This comment supporting the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (No Supplemental Tuolumne River Supply) is acknowledged.
- C_Clark1-16 This comment expresses an opinion regarding the responsibility of San Francisco in environmental leadership. The WSIP includes a program goal to enhance sustainability in all system activities (see Vol. 1, Chapter 3, Table 3.2, p. 3-9). The system performance objectives include: manage natural resources and physical systems to protect watershed ecosystems; meet, at a minimum, all current and anticipated legal requirements for protection of fish and other wildlife habitat; and manage natural resources and physical systems to protect public health and safety. Furthermore, as described on p. 3-82, the SFPUC has committed to specific greenhouse gas reduction actions as part of the WSIP. As described in the Draft PEIR (Vol. 1, Chapter 3, Section 3.6.1), the proposed program also includes implementation of local groundwater projects in the North Westside Groundwater Basin, recycled water projects on the west side of San Francisco, and additional conservation programs within the San Francisco retail service area. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information regarding conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

Ann Clark, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 31-33]

C_Clark2-01 See **Response C_Clark1-02**.

C_Clark2-02 This comment states that the 2009 water contracts with the wholesale agencies are directly connected to the WSIP and that environmental review of the contract is needed. Please refer to **Response C_Clark1-03**, above.

The commenter further states that any promises to do more conservation with agricultural users should be expressly stated in the contractual terms. Conservation by agricultural users is not included in the proposed program, although it was identified as a mitigation measure for the potential impacts on the lower Tuolumne River and also as a component of the Modified WSIP Alternative. Please refer to **Sections 14.7 and 14.10, Master Responses on Lower Tuolumne River Issues and Modified WSIP Alternative**, respectively, for further discussion.

C_Clark2-03 This comment states that the Draft PEIR does not adequately address the combined effects of climate change, global warming, and drought. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Sections 14.11.4 and 14.11.5) for a discussion of the effects of climate change on the SFPUC's system operations and water yield, and related SFPUC actions.

Gary Clossman, 09/18/07

C_Closs-01 This comment expressing support for more conservation and recycling to meet water demand and opposing additional diversions from the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP include 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Caroline Coleman, no date

- C_Colem1-01 This comment opposing additional Tuolumne River diversions, expressing concern regarding the reliability of Tuolumne River water supplies, and in support of conservation and recycling to serve future water demand, is acknowledged. However, this comment does not address the content or adequacy of the Draft PEIR; therefore, no response is needed.

Caroline Coleman, 09/21/07

- C_Colem2-01 This comment opposes additional Tuolumne River diversions and requests that additional studies be conducted to evaluate the WSIP-related effects on fish and wildlife in the Tuolumne River watershed. Please refer to **Response C_Breso-01**.

With respect to conservation and recycling efforts, the 2030 purchase estimates prepared for the WSIP include 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Robert Collin, 09/27/07

- C_Colli-01 This comment opposing additional Tuolumne River diversions is acknowledged.
- C_Colli-02 Please see **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 of this document provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.
- C_Colli-03 Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions. Regarding potential

impacts on downstream waterbodies from increased diversions from the Tuolumne River, refer to **Section 14.8, Master Response on Delta and San Joaquin Issues** (Vol. 7, Chapter 14, Section 14.8.2). As stated in that section, impacts on the Delta attributable to the WSIP were determined to be less than significant; therefore, any impacts on resources downstream of the Delta, such as those associated with San Francisco Bay, would be less than significant. This comment expressing support of more conservation and recycling to meet water demand and against additional diversions from the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information, please refer to the discussion in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Leland & Shirley Dahlin, 09/08/07

C_Dahli-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Mary Davey, 09/09/07

C_Davey-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of

alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections of the Draft PEIR (Sections 9.2.2 through 9.2.4 and Sections 9.2.6 and 9.2.7). For additional information, refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for discussion of conservation programs and recycling projects proposed by the SFPUC and its wholesale customers. Please also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Joel Davidson, 10/01/07

C_David-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Joseph Day, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 44-45]

C_DayJ-01 This comment, opposing additional Tuolumne River diversions and water transfers from TID/MID as supplemental dry-year supplies, is acknowledged. For pertinent response regarding the proposed dry-year water transfers, refer to **Section 14.3, Master Response on Dry Year Water Transfer** (Vol. 7, Chapter 14).

C_DayJ-02 This comment expresses support for the use of desalination technologies for supplemental water supplies. Please refer to **Response C_BramlD1-02**.

Lisa Day, 09/20/07

- C_DayL-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). Regarding the Draft PEIR's consideration of the Tuolumne River's status as a federally designated Wild and Scenic River and potential impacts relevant to that designation, please refer to **Response L_Tuol1-09**.

Dan Dippery, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 17-18]

- C_Dippe-01 This comment, which refers to the report *Investigation of Regional Water Supply Option No. 4 Technical Memorandum*, was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3); refer to the discussion under the heading Frequently Submitted Comments Addressing Conservation and Recycling.
- C_Dippe-02 This comment requesting a study on the maximum technical potential for conservation and efficiency savings has also been submitted by numerous commenters and is also responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3); refer to the discussion under the heading Frequently Submitted Comments Addressing Conservation and Recycling.

Denise Dougherty, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, p. 38]

- C_Dough-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne

River, is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Diane Dulmage, 09/18/07

C_Dulma-01 The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.6 and 5.3.7) included a project-level analysis of impacts on fisheries and terrestrial biological resources that would result from the proposed water supply option and changes in system operations. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14) for additional information related to the impact analysis for the Tuolumne River. A discussion on the occurrence of Chinook salmon in the Tuolumne River watershed is presented in Section 14.7.2.

C_Dulma-02 This comment expresses concern regarding the effects of additional Tuolumne River diversions on the salinity of the San Francisco Bay-Delta Estuary. Please see Draft PEIR, Section 5.3.3 (Vol. 3, Chapter 5, pp. 5.3.3-19 and 5.3.3-20), which explains why the effect of the WSIP would be too small to substantially affect salinity in the Delta, and refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8.2) for additional discussion.

C_Dulma-03 This comment expressing support for more conservation and recycling is acknowledged. For a discussion of the alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (see Draft PEIR Vol. 4, Chapter 9, Section 9.2.6, p. 9-66) and Aggressive Conservation/ Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (see Section 9.2.4, p. 9-47). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for discussion of conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers. The statement regarding the findings of a Pacific Institute study is acknowledged. For specific responses to the Pacific Institute submittal on the Draft PEIR refer to **Responses SI_PacInst-01 through SI_PacInst-97** (Vol. 7, Chapter 15, Section 15.4).

- C_Dulma-04 This comment supports desalination of brackish water as an alternative source of water supply. Please refer to **Response C_BramlD1-02**.
- C_Dulma-05 This comment is a closing statement that summarizes Comments C_Dulma-01 through C_Dulma-04; refer to **Responses C_Dulma-01** through **C_Dulma-04**, above.

Fred Duperrault, 09/25/07

- C_Duper-01 This comment expressing support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). Please also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Jeb Eddy, 09/30/07

- C_Eddy1-01 The Draft PEIR (Vol. 1, Chapter 3, pp. 3-17 to 3-21 and Vol. 5, Appendix E.2) summarizes the steps involved in establishing base year water usage and projecting future demands. Projections were not based solely on population growth, as the comment suggests, but also considered future employment, customer-specific information on usage; levels of conservation, recycling and use other water sources that would offset demand for water from the SFPUC regional system, and other factors. As described in Draft PEIR Appendix E.2 (p. E.2-6) the selected sources used for population and employment provided forecasts in five- or ten-year increments (as opposed to a linear projection to the horizon year as suggested by this comment). ABAG, for example, provides projections in five-year increments. To develop yearly projections to 2030 for each source, the population and employment increase for each five- or ten-year increment was divided evenly and applied yearly throughout the five- or ten-year period (depending on the increment used in the particular projection) to form a linear yearly projection *between increments*. For additional discussion

of the methodology used by SFPUC in collaboration with its wholesale customers and BAWSCA to project future demand, refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).

C_Eddy1-02 This comment supporting seismic improvements to the regional water system is acknowledged.

C_Eddy1-03 Refer to **Response C_Eddy1-01**. This comment expressing support of more conservation and recycling to meet water demand and against additional diversions from the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Note also that the water demand models used in the wholesale and retail service areas are not based on per-capita consumption, as this comment suggests, but rather are end-use models. Refer to Draft PEIR Appendix E.2 (Vol. 5) for a detailed description of demand methodology. Refer also to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Jeb Eddy, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 40-43]

C_Eddy2-01 This comment advocating the use of markets/pricing to decrease demand is acknowledged. Please refer to **Response SI_PacInst-62** and also to **Section 14.2, Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) for information pertinent to this comment.

C_Eddy2-02 This comment questions the demand forecasting and suggests that market influences could create different kinds of water supply for different kinds of users and needs, thus changing market structures (and, therefore, demand). The comment appears to suggest that separate markets for recycled water or conserved water may decrease future demand for Tuolumne River water. While market structures may change in the future, as new technologies become available, it would be speculative for the PEIR to evaluate water demand based upon markets that have not been established. The implication in this comment that the demand projections are based on per-capita estimates is incorrect. Demand projection methodology is described in Draft PEIR Chapter 3 (Vol. 1,

pp. 3-16 to 3-22) and in more detail in AppendixE.2 (Vol. 5). As the Draft PEIR discussion indicates, the models used to develop water demand are end-use models and not based on per-capita consumption. The demand projections include savings from “passive conservation” resulting from plumbing codes, and the 2030 purchase estimates reflect savings from active conservation programs and recycling projects, as well as the use of other water sources. Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) for additional information pertinent to this comment.

Elanie Elbizri, 09/24/07

- C_Elbiz-01 The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14), and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14), for additional information related to the impact analysis for the Tuolumne River. As this comment does not specify the particular issue(s) in which the commenter believes the analysis presented in the Draft PEIR is inadequate, no specific response is provided.
- C_Elbiz-02 This comment, which cites reductions in demand growth achieved in other areas, was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling.
- C_Elbiz-03 This comment supporting the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (No Supplemental Tuolumne River Water) and the Year-round Desalination at Oceanside Alternative is acknowledged.
- C_Elbiz-04 This comment, requesting additional studies on the Tuolumne River, was submitted by numerous commenters; see **Response C_Breso-01** for response.

Claire Elliott, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 27-29]

- C_EllioC-01 This comment expresses the opinion that the SFPUC should pursue a two-tiered approach that separates the seismic improvements from the proposed water supply option. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply options to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.
- C_EllioC-02 The commenter's opinion on the diversion from the Tuolumne River is acknowledged. The commenter also asserts that the PEIR does not adequately evaluate the impacts on salt marshes of increased wastewater discharges into the San Francisco Bay receiving waters throughout the Bay Area. Changes in wastewater discharges into receiving waters in the SFPUC service area would be an indirect effect associated with implementation of the WSIP. Insofar as the WSIP would result in changes in municipal and domestic water use patterns, there would also be associated changes in wastewater discharge patterns for municipal and industrial uses, with much of the changes attributed to population growth. The Draft PEIR addresses the indirect effects of growth in Chapter 7 (Vol. 4, pp. 7-60 to 7-78); as this chapter indicates, these indirect effects, including impacts on wastewater treatment facilities and wastewater treatment capacities, were identified as significant but mitigable in the environmental impact reports for the general and specific plans in the service area. In the cases where the WSIP would result in increased use of recycled water, the associated effects on wastewater discharges would be or have been addressed in the project-level environmental documents for the recycled water projects.
- C_EllioC-03 This comment encouraging additional water recycling is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information on current and planned recycling projects in the SFPUC retail and wholesale customer service areas.

Patricia Elliott, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 31-33]

- C_EllioP-01 This comment expresses concern regarding the effects of additional Tuolumne River diversions on the towns of Groveland and Big Oak Flat. Please refer to

Section 14.1, Master Response on WSIP Purpose and Need (Vol. 7, Chapter 14, Section 14.1.6) regarding the scope of the PEIR with respect to economic evaluations.

Dave Ellison, 09/18/07

[See Public Hearing Transcript, Fremont, pp. 11-12]

C_Ellis-01 This comment advocating more conservation and public education regarding water efficiency is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for discussion of conservation measures being implemented and planned by the SFPUC and SFPUC wholesale customers. As shown in Tables 14.2-6, 14.2-7, and 14.2-8 of Section 14.2, public information programs are being implemented throughout the SFPUC service area.

Benjamin L. Farnum, 10/01/07

C_Farnu-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information on conservation programs and recycling projects being implemented or planned by the SFPUC and its wholesale customers, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Jan Fenwick, 09/30/07

C_Fenwi-01 This comment refutes statements made by the Tuolumne River Trust and does not address the content or adequacy of the Draft PEIR; no response is needed.

David Fielding, 10/01/07

C_Field-01 This comment, which expresses support for more conservation to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information on conservation programs and recycling projects being implemented or planned by the SFPUC and its wholesale customers, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

John and Janet Fiore, 10/01/07

C_Fiore-01 This comment, expressing the commenter's opinion on water sales by the CCSF, does not address the content or adequacy about the Draft PEIR; no response is necessary.

M. Flanigan, 09/20/07

C_Flani-01 This comment, which expresses opposition to additional diversions from the Tuolumne River and support for more conservation and recycling to meet additional water demand is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22), which offset a portion of the projected demand. For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information on the conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customer, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

E. Fleming-Hasegaue, 09/20/07

C_Flemi-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Kirsten Flynn, 09/27/07

C_Flynn-01 This comment opposing additional Tuolumne River diversions is acknowledged.

C_Flynn-02 This comment expressing support for more conservation and recycling is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Peter Fox, 09/25/07

C_Fox-01 This comment provides a personal perspective on the Tuolumne River and does not address the content or adequacy of the Draft PEIR. No response is provided.

Jimmy Gado, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 33-34]

C_Gado-01 This comment expresses concern regarding the use of monthly average values of river flow to evaluate the WSIP's impacts on recreational uses along the Tuolumne River. The Draft PEIR (Vol. 3, Section 5.3.8) provides an extensive discussion of existing whitewater recreational resources in the Tuolumne River watershed and evaluates the potential magnitude of impacts on future whitewater recreation under the WSIP. The detailed analysis of the timing and magnitude of the WSIP-related changes in water releases within the upper Tuolumne River watershed as related to whitewater rafting was based on review of daily flow and operations information, in addition to monthly average river flow (see Impact 5.3.8-2: Effects on river recreation due to changes in water system operations, pp. 5.3.8-27 through 5.3.8-34).

C_Gado-02 This comment, which expresses opposition to additional diversions from the Tuolumne River and support for additional conservation and recycling programs, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling

savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.

Caroline Garbarino, 09/22/07

- C_Garba-01 This comment, which states that flawed demand modeling inflates future demand and that other metropolitan areas have reduced demand despite growth, was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2).
- C_Garba-02 This comment, requesting that SFPUC conduct additional studies on the Tuolumne River, was submitted by numerous commenters; see **Response C_Breso-01** for response.
- C_Garba-03 This comment states that the Draft PEIR does not take into consideration the impact of climate change on precipitation in the Tuolumne River watershed. Please refer to **Section, 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4).

Ruben Garcia, 09/20/07

- C_Garci-01 This comment opposing additional diversions from the Tuolumne River is acknowledged. The Draft PEIR includes multiple alternatives to the WSIP that would reduce diversions from the Tuolumne River; refer to the following sections in Chapter 9 (Vol. 4): Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for discussion of conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.

Robert Gelman, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 43-44]

C_Gelma-01 This comment questions the volume of water to be diverted from the Tuolumne River. Please refer to the Draft PEIR Chapter 3 (pp. 3-16 to 3-22) for information regarding development of demand projections and purchase estimates. Demand projections are described in more detail in Draft PEIR Appendix E.2 (Vol. 4). For additional information, refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). Please also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

C_Gelma-02 Please see **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 of this document provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.

Marylyn Genovese, 09/29/07

C_Genov-01 This comment states that the impact analysis presented in the Draft PEIR did not adequately address the environmental impacts to the Tuolumne River. Please refer to **Response C_Breso-01** for response.

The commenter also requests that the SFPUC re-evaluate the projections for future water demand and conservation potential. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14) for a discussion of the methodology used by SFPUC in collaboration with its wholesale customers and BAWSCA to project future demand, and for additional information related to conservation programs and recycling projects proposed by the SFPUC and its wholesale customers.

C_Genov-02 This comment, which supports reducing reliance on the Tuolumne River due to the uncertainty of climate change effects, implementation of more conservation and recycling to meet water demand, and alternatives that protect the Tuolumne River from additional diversions, is acknowledged. Regarding the effects of climate change on the Tuolumne River, refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4).

The commenter's support for conservation and recycling and opposition to additional diversions from the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Ernest Goitein, 10/14/07

- C_Goite-01 This comment states that there will be impacts on the Tuolumne River. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14) for additional information related to the impact analysis for the Tuolumne River.
- C_Goite-02 This comment expressing opposition to additional diversions from the Tuolumne River and support for more water conservation, including pricing incentives, and water recycling, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.

Shawna Gokener, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, p. 33]

C_Goken-01 This comment expresses a general concern about water supply management and does not address the content or adequacy of the Draft PEIR; no response is needed.

Kathleen Goldfein, 09/25/07

C_Goldf-01 This comment in support for alternatives that reduce diversions from the Tuolumne River is acknowledged. The second part of this comment presents observations on personal conservation practices and demand hardening. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding the specific conservation measures currently being implemented and those to which the SFPUC and SFPUC wholesale customers have committed under the WSIP.

C_Goldf-02 Please refer to **Response C_Breso-01**.

Rebecca Goodman, 09/26/07

C_Goodm-01 This comment summarizes more specific issues discussed in Comment C_Goodm-02; refer to **Response C_Goodm-02**.

C_Goodm-02 This comment encourages consideration of biological resources along the Tuolumne River, and encourages additional conservation and recycling in lieu of additional diversions. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14), and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14), for additional information related to the impact analysis for the Tuolumne River.

For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the

Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer also to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information related to conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.

Ben Graves, 09/27/07

- C_Grave-01 This comment has been submitted by numerous commenters; please refer to **Response C_Breso-01**.
- C_Grave-02 This comment expressing support for more conservation and recycling to meet water demand and for alternatives that protect the Tuolumne River from additional diversions is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

David Greene, 09/11/07

- C_GreenD-01 This comment, expressing support for more conservation and recycling rather than additional diversions from the Tuolumne River to meet additional demand and requesting that the SFPUC re-evaluate its studies, is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14) regarding the studies conducted to project water demand and conservation and recycled water potential and for information on the conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.
- C_GreenD-02 This comment stating that SFPUC adopt a policy of reducing diversions from the Tuolumne River is noted.

- C_GreenD-03 This comment requests that the Draft PEIR take into account the impact of climate change on precipitation in the Tuolumne River watershed. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4).
- C_GreenD-04 This comment expressing support for more conservation and recycling is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for discussion of conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Katherine Greene, 09/21/07

- C_GreenK-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Doris Grinn, 09/20/07

[See Public Hearing Transcript, Sonora, pp. 38-40]

- C_GrinnD-01 This comment does not address the accuracy or adequacy of the Draft PEIR; no response is provided.

Jim Grinnell, 09/20/07

[See Public Hearing Transcript, Sonora, pp. 40-41]

- C_GrinnJ-01 This comment, which expresses support for more conservation and less development in the Bay Area if needed to protect resources, is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for

pertinent response on the conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Andrew Gross, 09/20/07

C_Gross-01 See **Response C_Agarw-01**.

Bob Hackamack, 10/01/07

- C_Hacka1-01 This comment expressing an opinion that SFPUC adopt a policy of reducing diversions from the Tuolumne River is noted. This comment also requests that the impact discussion presented in the Draft PEIR be expanded to include a discussion of San Francisco's water rights on the Tuolumne River. A brief discussion of existing water rights and entitlements is included in the Draft PEIR, Section 2.5.1 (Vol. 1, Chapter 2, pp. 2-35 to 2-37) for informational purposes. Issues related to the validity or otherwise of CCSF's water rights is not a CEQA issue and therefore not addressed in the PEIR.
- C_Hacka1-02 This comment requests additional discussion regarding three items: (1) the impact of export reduction from the Tuolumne River on the operation under the Raker Act; (2) the impact of the Lower Tuolumne River Diversion Alternative on San Francisco's water rights; and (3) the impact of the Lower Tuolumne Diversion Alternative on the operation of the Raker Act. See **Response L_TUD1-05** regarding CCSF's water rights and the Raker Act.
- C_Hacka1-03 This comment requests additional discussion regarding the impact of the Lower Tuolumne Diversion Alternative on the operation of the four agreements among San Francisco, Tuolumne Irrigation District (TID), and Modesto Irrigation District (MID). The descriptions of the CEQA alternatives presented in the Draft PEIR are conceptual, and the evaluation of the alternatives is based on the available information and reasonable assumptions about how each alternative would be implemented. Uncertainties regarding the feasibility of each alternative are discussed in the Draft PEIR and were taken into consideration during the screening process. As discussed in the Draft PEIR (Vol. 4, Chapter 9, pp 9-62), the Lower Tuolumne River Diversion Alternative would pose a number of institutional challenges including agreements with TID/MID for making the necessary releases from Don Pedro Reservoir, and approval by the State Water Resources Control Board (SWRCB) for a change in the point of diversion and possibly additional appropriation license to recover the water. See also **Response L_TUD1-05**.
- C_Hacka1-04 The Draft PEIR analyzed impacts on water and off-water recreational uses in the lower Tuolumne River (see Vol. 3, Section 5.3.8), including boating,

fishing, swimming, camping, day-use, and picnicking at the principal public park and river access sites in Stanislaus County (La Grange Regional Park, Turlock Lake State Recreation Area, Fox Grove Regional Park, and Tuolumne River Regional Park). Impacts on reservoir recreation due to changes in water system operations were found to be less than significant (Impact 5.3.8-1, pp. 5.3.8-23 through 5.3.8-27). Impacts on river recreation due to changes in water system operations were also found to be less than significant (Impact 5.3.8.2, pp. 5.3.8-27 through 5.3.8-34).

- C_Hacka1-05 This comment states that “improving and enlarging of the Lower Cherry Aqueduct may not be provided for in Raker Act documents and a full EIR is requested.” The relevant past and future SFPUC projects presented in the cumulative impact analysis are summarized solely for the purpose of evaluating the WSIP’s contribution to cumulative impacts and are not proposed as part of the WSIP. Improving and enlarging Lower Cherry Aqueduct is a component of the Hetch Hetchy Repair and Rehabilitation Program (see Vol. 3, Chapter 5, pp. 5.7-6 and 5.7-7). Project-level CEQA review will be conducted as appropriate to provide additional information and analyses. However, as stated above, issues related to the validity or otherwise of CCSF’s water rights is not a CEQA issue.

Bob Hackamack, 10/15/07

- C_Hacka2-01 This comment requests the SFPUC to discuss plans for compliance with Section 9(h) of the Raker Act. See **Response L_TUD1-05**.

Diana Hall, 10/15/07

- C_Hall-01 This comment opposing additional Tuolumne River diversions and supporting a program emphasizing conservation and recycling is noted. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.
- C_Hall-02 This comment stating that water efficiency measures and implementation of diverse water supplies would help reduce the impacts associated with climate change is noted. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for response.

Kimberly Hamilton-Lam, 09/20/07

C_Hamil-01 This comment opposes additional Tuolumne River diversions and promotes water conservation as the key to satisfying future water demand and protecting the river. The following comments in this submittal were submitted by numerous commenters:

“ . . outdoor water use drives 60% of the anticipated increase in demand”

“Water conservation is cheap, relatively easy and much less destructive to the environment.”

“The Bay Area lags behind other metropolitan areas when it comes to water conservation.”

Please see **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14). Refer to the discussion in Section 14.2.2, under the heading Outdoor Water Use, regarding estimates of outdoor water demand, and to the discussion in Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling, regarding comparisons to other areas. Refer also to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Carol Hankermeyer, 09/25/07

C_Hanke-01 This comment opposing additional diversions from the Tuolumne River is acknowledged. Please refer to **Response L_Tuol1-09** regarding the potential effects of the WSIP on those reaches of the Tuolumne River designated as wild and scenic. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River.

C_Hanke-02 This comment stating that 60 percent of the proposed increase in Tuolumne River diversions is due to outdoor water use and that the Bay Area falls behind other California metropolitan areas in conservation is acknowledged. These comments were submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14); refer to Section 14.2.2, under the heading

Outdoor Water Use, regarding estimates of outdoor water demand, and to the discussion in Section 14.2.3, under the heading Frequently Submitted Comments Addressing Conservation and Recycling, regarding comparisons to other areas and the need for conservation and efficiency to meet increases in outdoor water demand.

C_Hanke-03 This comment expresses concern regarding impacts to the San Francisco Bay-Delta's estuarine ecosystem as a result of additional Tuolumne River diversions. Please refer to **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8.2).

C_Hanke-04 This comment opposing additional Tuolumne River diversions is acknowledged.

Tomer Hasson, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 15-18]

C_Hasso-01 This comment supporting seismic improvements to the regional water system is acknowledged.

C_Hasso-02 This comment opposing additional Tuolumne River diversions and encouraging increased conservation and water efficiency is acknowledged. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5), and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River. Please refer to the discussion in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) under the heading Outdoor Water Use, regarding estimates of outdoor water demand. The characterization of the methodology used to project water demand is incorrect; see Section 14.2.2. Regarding the comparison to other metropolitan areas, see Section 14.2.3 under the heading Frequently Submitted Comments Addressing Conservation and Recycling.

C_Hasso-03 This comment, regarding demand modeling, per-capita demand, the SFPUC's studies on conservation and recycling, and comparisons to other areas, was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

- C_Hasso-04 This comment requests that the Draft PEIR address the concept of global warming. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

Alex Helldoevker, 08/15/07

- C_Helld-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, especially for outdoor use, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For additional information, including information on projected outdoor use as well as conservation programs and recycling projects in the SFPUC service area, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Leah Henry, 09/20/07

- C_Henry-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Kristin Herron, 09/25/07

- C_HerroK-01 This comment, which expresses the commenter's opinion that the environmental impacts of increased water diversions outweigh the need for lawns and sprawl in the East Bay, support for more conservation and recycling to meet water demand, is acknowledged. The California Environmental Quality Act (CEQA) requires a public agency with approval authority over a project to balance a project's benefits (economic, legal, social, technological, or other) against any unavoidable environmental risks (the "costs" implied in this comment) when determining whether to approve the project.² When an agency approves a project that will result in the occurrence of significant effects that are not avoided or substantially lessened through adopted mitigation measures, the agency must state in writing the specific reasons to support its action. Alternatively, the agency can adopt measures to mitigate significant

² CEQA Guidelines Sections 15043 and 15093.

environmental effects or adopt an alternative to the project that lessens the project's effects.

As stated in Draft PEIR (Vol. 1, Chapter 1, p. 1-1 and p. 1-9), the San Francisco Planning Department prepared the Draft PEIR to provide the public and responsible and trustee agencies with information about the potentially significant environmental effects of the proposed program, to identify possible ways to minimize the potentially significant effects, and to describe and evaluate feasible alternatives to the proposed program. Upon certification of the PEIR, the SFPUC may proceed to take action on program approval.

Regarding conservation and recycling in the SFPUC service area, the 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

The statement that 60 percent of proposed increase in diversions would go to the East Bay is incorrect; please refer to **Response C_Agarw-01**, above.

Christopher Hest, 10/16/07

C_Hest-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Sidney Higgins, 09/20/07

C_Higgi-01 This comment does not address the content or adequacy of the Draft PEIR; no response is needed.

Jeff Hoel, 10/01/07

C_Hoel-01 The purpose and objectives of the WSIP are described in the Draft PEIR (Vol. 1, Chapter 3, pp. 3-5 to 3-10), and the components of the WSIP addressed in the Draft PEIR are described in Sections 3.6 to 3.8 (pp. 3-33 to

3-73). The use of chlorine and chloramines for disinfection of the SFPUC's water supply is part of the ongoing system operations and maintenance and not directly related to implementation of the WSIP. The SFPUC acknowledges that both chlorine and chloramine are considered for planning, operational flexibility, and emergency purposes. As part of ongoing system operations, discharges containing residual disinfectants—chlorine or chloramines—are dechlorinated to address environmental concerns per RWQCB requirements. Chloramine is used to ensure compliance with the federal drinking water regulations (Stage 1 and 2 Disinfectants and Disinfection Byproducts Rule, as discussed in Draft PEIR, Vol. 1, Chapter 2, 2-32). Therefore, consistent with the WSIP water quality objectives; use of chloramine cannot be discontinued for the duration of the WSIP construction projects.

Both chlorine and chloramines are toxic to aquatic species, and would need to be removed from any discharges to surface waters. Because the chlorine or chloramine would be removed from the water prior to discharge, the impacts of discharge of water containing either disinfectant would be the same as described in the Draft PEIR (Vol. 2, Chapter 4, pp. 4.5-35 to 4.5-49; and Vol. 3, Chapter 5, p. 5.5.3-3). Dechlorination removes the toxic chlorine from both waters containing free chlorine and those containing chloramines. The SFPUC does not propose to switch to free chlorine during construction as it would jeopardize the reliability of complying with public health and water quality regulations.

C_Hoel-02

The commenter asks why there would be increased need for chloramination or chlorination supplies in a drought year. There would be no increase in *total systemwide* volume of chloramination or chlorination supplies in a drought year based on the fact that overall system deliveries would be the same or less than a typical year. However, under the WSIP, during drought years the first stage of response would be to implement the supplemental dry-year water supplies, namely the conjunctive-use program within the Westside Groundwater Basin and the TID and MID water transfer (Vol. 1, Chapter 3, pp. 3-42 and 3-43). If supplemental dry-year water supplies are needed from the conjunctive-use program in the Westside Groundwater Basin, chlorination or chloramination of supplies may be required for groundwater sources used during drought years depending on water quality and water demand conditions. This would result in a *localized* increase in chlorination or chloramination supplies to disinfect this water source to meet public health requirements. Groundwater pumped from the Westside Groundwater Basin under the Local and Regional Groundwater Projects (SF-2) will require disinfection prior to being used in the regional water supply system. As discussed in the Draft PEIR (Vol. 1, p. 3-71), this would require approximately 14 new well stations (one for each groundwater production well). Since disinfection would be accomplished with either chlorination or chloramination, the operational change described in

Table 3-12 reflects the materials needed for disinfection of the groundwater during a drought year when groundwater resources would be used.

C_Hoel-03

The comment regarding the State Water Resources Control Board's statement on chloramines is acknowledged.

Construction-related pollutants are listed in the Draft PEIR in Table 4.5-3 (Vol. 2, Chapter 4, p. 4.5-22). The Draft PEIR states "Through compliance with existing regulations and established project procedures as well as implementation of mitigation measures specified in this section, these impacts would be less than significant" (Vol. 2, Chapter 4, p. 4.5-21). With regard to "potential" impacts, impacts are a function of time of year, receiving water volume and water quality, as well as discharge volume and water quality. For construction projects, the SFPUC obtains construction permits and implements Storm Water Pollution Prevention Plans (SWPPP) as required by regulations to minimize erosion and turbid water runoff. In addition, the SFPUC follows sanitary work practices and emergency response plans for these projects. Disinfectants in discharged water are dechlorinated per RWQCB requirements.

The Draft PEIR further states "The San Francisco Bay Basin Plan standard for residual chlorine is 0.0 milligrams per liter and the Central Valley Region General Order for Dewatering and Other Low Threat Discharges to Surface Waters standard for residual chlorine is 0.02 milligrams per liter; thus, dechlorination of any discharges would be required in order to remove all residual chlorine prior to discharge to surface waters, and to assure compliance with RWQCB requirements" (Vol. 2, Chapter 4, p. 4.5-42).

With regards to impacts of environmental effects of chloraminated water, see **Response C_Hoel-01**.

Both chlorine and chloramine dissipate in the water over time. The rate of dissipation depends on many factors such as pH, temperature, disinfectant concentration, dilution, exposure to sunlight etc. Chloramine takes longer to dissipate, but it is not a persistent disinfectant. Discharges containing residual disinfectants chlorine or chloramine are dechlorinated to address environmental concerns per RWQCB requirements. Dechlorination removes the toxic chlorine from both waters containing free chlorine and those containing chloramines. Residual disinfectant chloramine is dechlorinated per RWQCB requirements.

The comment expressing an opinion on the Draft PEIR concerning the efficacy of treatment of chlorine and chloramines is acknowledged. Free chlorine (sodium hypochlorite) is used at the treatment plant to address pathogens (e.g., giardia, viruses). Prior to leaving the treatment plant free chlorine levels are increased and ammonia added to form chloramines. The use of chloramines serves the dual

purpose of persistent residual disinfection in the distribution system and reduces the formation of disinfection byproducts. This process meets the Department of Public Health total coliform rule and disinfection byproduct rule.

<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/default.aspx>

The comment stating that “chloramine are more persistent than chlorine” is acknowledged.

The U.S. Environmental Protection Agency provides a comprehensive treatment of chlorine, chloramines, and ammonia in the documents listed below. Toxicity impacts on aquatic organisms for chlorine and chloramines are similar. There is widely available literature on these subjects as well. Presentation of organism-specific effects are discussed to some extent in the following documents, but are not exhaustive.

U.S. Environmental Protection Agency. 1996. Quality Criteria for Water. Office of Water, Regulations and Standards Agency. Washington, DC, EPA 440/5-86-001. May 1.

<http://www.epa.gov/waterscience/criteria/goldbook.pdf>

U.S. Environmental Protection Agency. 1985. *Ambient Water Quality Criteria for Chlorine - 1984*. Office of Water, Regulations and Standards Criteria and Standards Divisions, Washington, D.C. EPA-440/5-84-030. January.

<http://www.epa.gov/waterscience/criteria/library/ambientwqc/chlorine1984.pdf>

U.S. Environmental Protection Agency. 1999. Alternative Disinfectants and Oxidants Guidance Manual. Office of Water. EPA-440/5-84-030. April.

http://www.epa.gov/safewater/mdbp/alternative_disinfectants_guidance.pdf

U.S. Environmental Protection Agency. 1999. *1999 Update of Ambient Water Quality Criteria for Ammonia*. Office of Water, Office of Science and Technology, Washington, D.C. EPA-822-R-99-014. December.

<http://www.epa.gov/waterscience/standards/ammonia/99update.pdf>

Humans are not considered aquatic organisms, and use of chlorine, ammonia, and chloramines as disinfection agents is consistent with U.S. EPA drinking water regulations designed for protection of public health.

The comment is acknowledged that the San Francisco Bay Basin Plan standard for residual chlorine is 0.0 milligrams per liter (Vol. 2, Chapter 4, p. 4.5-42; Vol. 3, Chapter 5, p. 5.5.3-3), and that the Draft PEIR identifies four limits, all less than 0.02 mg/L, but not equal to zero. The Central Valley Region General Order for Dewatering and Other Low Threat Discharges to Surface Water standards for residual chlorine is 0.02 mg/l (Vol. 2, Chapter 4, p. 4.5-42). The

Draft PEIR states that “dechlorination of any discharges would be required in order to remove all residual chlorine prior to discharge to surface waters, and to assure compliance with RWQCB requirements” (Vol. 2, Chapter 4, p. 4.5-42). Note that many instruments cannot accurately measure residual chlorine below 0.02 mg/L thus this value was used in the report.

Before SFPUC discharges system water into Crystal Springs Reservoir, the treated water is dechlorinated per RWQCB requirements and ammonia is removed to limit the potential for eutrophication in the reservoir and for operational reasons.

C_Hoel-04 The commenter indicates concern regarding the amount of ammonia removed from system water prior to discharge to Crystal Springs Reservoir. The removal of ammonia is based on flow rate (and thus mass). The Pulgas Dechloramination Facility was designed to remove 90 percent of ammonia for all flows between 10 million gallons per day and 100 million gallons per day.

Ammonia in chloramine that is not removed when water is discharged to Crystal Springs Reservoir, will convert to nitrate via nitrification, as described in the Draft PEIR (Vol. 3, Chapter 5, p. 5.5.3-4) and will not have to be removed prior to treatment.

The Draft PEIR, Section 5.5.3, has been revised to correct the spelling of “phosphorus.” Please see Chapter 16 of this Comments and Responses document.

C_Hoel-05 Reference material cited in the Draft PEIR is available for review by contacting the San Francisco Planning Department at 1650 Mission Street, Suite 400, San Francisco, CA 94103.

The comment on pipe material and the effects of chloramines on pipe materials is acknowledged. The American Water Works Association (<http://www.awwa.org/>) (AWWA) has published guidelines for chemical compatibility of different materials commonly used in drinking water facilities with chloramine at residual disinfectant concentrations (<4 mg/L). These guidelines are being used during final design for all materials selection decisions. Where new pipe welded steel pipe with cement mortar lining will be employed. Other pipeline materials may be considered on a case by case basis, but consistent with AWWA guidelines.

Jeff Hoffman, 09/20/07

C_Hoffm-01 This comment opposing additional Tuolumne River diversions is acknowledged. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology,

water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River. Refer also to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

- C_Hoffm-02 The opinion of the commenter regarding the San Francisco ballot initiative authorizing the WSIP is acknowledged.
- C_Hoffm-03 This comment states that the actions of the SFPUC outside of San Francisco are in direct opposition to the will of San Francisco residents. Extensive public comments were received on the Draft PEIR; these comments, representing a wide range of opinions, are included in Vol. 1 of this Comments and Responses document. A programmatic analysis of the environmental impacts of the facility improvement projects located outside of San Francisco is included in the Draft PEIR (Vol. 2, Chapter 4).

Pei-Lin Hsiung, 10/12/07

- C_Hsiun-01 The Draft PEIR analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, and recreation and visual quality of the Tuolumne River corridor in Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8. Several potentially significant adverse impacts of the WSIP on the Tuolumne River and its resources were identified and mitigation measures developed to reduce the impacts to a less-than-significant level. As this comment does not specify the particular issue(s) in which the commenter believes the analysis presented in the Draft PEIR is inadequate, no specific response is provided. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

- C_Hsiun-02 These comments were submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Noah Hughes, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 41-43]

- C_Hughe1-01 This comment states that the use of monthly average values of river flow are inappropriate for analysis of environmental elements that may be affected by hourly, weekly, or daily flows. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.3).
- C_Hughe1-02 The opinion of the commenter expressing the Board of Supervisors' position on the preferred alternative is acknowledged.
- C_Hughe1-03 This comment expressing the commenter's understanding of fiscal management of the regional system in the 1990s is acknowledged. This comment does not address the accuracy or adequacy of the Draft PEIR; no response is provided.

Noah Hughes, 09/06/07

[See Public Hearing Transcript, Modesto, pp. 16-18]

- C_Hughe2-01 This comment opposing additional Tuolumne River diversions is acknowledged. Regarding environmental sustainability, see **Response C_Clark1-16**.
- C_Hughe2-02 This comment states that the use of monthly average values of river flow are inappropriate because it conceals extreme values and understates impacts. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Sections 14.5.3 and 14.5.4).

Kile Ikemoto, 08/15/07

- C_Ikemo-01 This comment opposing additional Tuolumne River diversions and in support of conservation and recycling is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding conservation to address outdoor water demand in the SFPUC service area and for information related to other

conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Marian Isaac, 09/28/07

C_Issac-01 This comment, which expresses support for more conservation, recycling, and desalination to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following. For additional information related to conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). Regarding the use of desalination technologies as a supplemental water supply, refer to **Response C_BramlD1-02**.

Richard Izmirian, 10/01/07

C_Izmir-01 This comment requests for clarification as to why SFPUC is exempt from Section 5937 of the State Fish and Game Code, NOAA requirements, and the Federal Endangered Species Act (FESA). The Draft PEIR describes all of the relevant state and federal regulatory requirements that are applicable to the SFPUC regional water system (see Vol. 1, Chapter 2, Section 2.4, pp. 2-31 thru 2-35). As this comment does not relate to the adequacy of the Draft PEIR, no additional response is provided.

C_Izmir-02 This comment requests that the analysis be revised to include SFPUC's responsibility to release adequate flows downstream of its dams. The Draft PEIR (Vol. 1, Chapter 2, pp. 2-39 to 2-43) describes the SFPUC's obligations for instream flow releases.

Mitchell Johnson, 09/13/07

C_JohnsM-01 This comment, which expresses opposition to additional diversions from the Tuolumne River and support for more conservation to meet water demand, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1,

Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for a discussion of conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.

Sieglinde Johnson, 09/20/07

C_JohnSie-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.4), and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (Vol. 4, Chapter 9, Section 9.2.6). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.

Silvia Johnson, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 35-36]

C_JohnsSil-01 This comment does not address the content or the adequacy of the Draft PEIR; no response is needed.

Lindsay and Ken Joye, 09/11/07

C_Joye-01 This comment, requesting that SFPUC consider the conservation programs of other progressive water agencies, and consider incentive programs and landscape standards, is acknowledged. The reference to the efforts by other

water agencies is similar to comments submitted by numerous commenters which are responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling. Please also refer to Tables 14.2-6, 14.2-7, 14.2-8 regarding the conservation programs, including programs to reduce outdoor water use, being implemented or proposed by the SFPUC and its wholesale customers. Regarding the statement that a comprehensive watershed study should be completed, please refer to **Response C_Breso-01**.

Mike Kahn, 09/17/07

C_Kahn-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River or any other water source, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.4), and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (Vol. 4, Chapter 9, Section 9.2.6). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.

Gwynn Kaliner-MacKellen, 09/20/07

C_Kalin-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for

additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers. Regarding graywater systems, refer to the discussion in Section 14.2.3 under the heading Conservation Measures Suggested by Commenters. Regarding the effects of climate change on the Tuolumne River, refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4).

Emeric Kalman, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 33-35]

C_Kalma-01 This comment expresses an opinion that there was inadequate noticing of the Draft PEIR public hearing dates. Please see **Responses F_USDAFS-05** and **L_SFCPC1-01**, and **Appendix J1** (Vol. 8) of this Comments and Responses document for detailed information on the public outreach efforts conducted by the San Francisco Planning Department's Major Environmental Analysis Division.

Suzanne Keebra, 10/01/07

C_Keebr-01 The comment expresses support for retrofitting the Hetch Hetchy system, and (with Comment C_Keebr-02) asserts that the SFPUC should separate the seismic improvements from the proposed water supply option. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.

C_Keebr-02 This comment expressing support of more conservation and recycling to meet water demand and against additional diversions from the Tuolumne River is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for discussion of conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Regarding graywater systems, refer to the discussion in Section 14.2.3 under the heading Conservation Measures Suggested by Commenters.

Michael Kelleher, 10/01/07

- C_Kelle-01 This comment expresses an opinion about the value of natural resources and requests that CCSF “give careful consideration to the recommendations you get from all sides and make a decision that will benefit California in perpetuity.” This comment is acknowledged.

Michelle Kim, 09/20/07

- C_Kim-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- The comment also requests that the economic consequences of the proposed program be evaluated. Refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.6) regarding the scope of the PEIR with respect to economic evaluations.

Carl King, 10/01/07

- C_KingC-01 This comment expressing support of more conservation and recycling to meet water demand and opposing additional diversions from the Tuolumne River is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for a discussion of conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. The comment also states that the plan to increase diversions does not adequately

consider the recreational benefits of the wild and scenic Tuolumne River. Please refer to **Response C_Barsa-01** for a discussion of potential impacts on future whitewater recreation under the WSIP. Please refer also to **Response L_Tuol1-09** regarding the potential effects of the WSIP on those reaches of the Tuolumne River designated as wild and scenic.

David King, 10/01/07

C_KingD-01 This comment opposing urban sprawl is acknowledged.

Kenneth King, 10/15/07

C_KingK-01 This comment opposing additional Tuolumne River diversions and expressing support for sustainable alternatives is acknowledged. For descriptions of alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.4), and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (Vol. 4, Chapter 9, Section 9.2.6). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

John Kramer, 09/05/07

C_Krame1-01 This comment questions how the WSIP would address counties of origin water rights. Please refer to **Response L_Tuol1-04**.

C_Krame1-02 Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.

John Kramer, 10/11/07

C_Krame2-01 The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the

Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.6) for pertinent response regarding the scope of the PEIR with respect to economic evaluations.

C_Krame2-02 See **Response C_Krame1-02**.

Aldora Lee, 09/25/07

- C_Lee-01 This comment stressing the importance of seismic improvements to the regional water system is acknowledged.
- C_Lee-02 This comment opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- C_Lee-03 This comment states that demand analyses do not sufficiently take into consideration conservation and recycling. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). Please refer also to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) regarding the methodology used by the SFPUC in collaboration with its wholesale customers and BAWSCA to project demand and to Section 14.2.3 (Vol. 7, Chapter 14, Section 14.2) for additional information related to conservation programs and recycling projects being implemented or proposed by SFPUC and its wholesale customers.
- C_Lee-04 Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 of this document provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.

Ben Leet, 08/16/07

C_Leet-01 This comment expressing support for conservation is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Linda Lewin, 09/20/07

C_Lewin-01 See **Response C_HerroK-01**.

C_Lewin-02 This comment expressing support for more conservation and recycling to meet water demand and against additional diversions from the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Sidney Liebes, 09/19/07

[See Public Hearing Transcript, Palo Alto, p. 23]

C_Liebe-01 This comment endorses the remarks of Peter Drekmeier (Bay Area Program Director at the Tuolumne River Trust) regarding the WSIP. This comment is acknowledged. Regarding environmental sustainability, refer to **Response C_Clark1-16**.

Kingman Lim, 09/11/07

C_Lim-01 This comment, which expresses support for more conservation to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition

to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.4), and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (Vol. 4, Chapter 9, Section 9.2.6). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Carissa Look, 09/20/07

C_Look-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers; regarding comparisons to the achievements in other areas in reducing demand, refer to the discussion under Frequently Submitted Comments Addressing Conservation and Recycling.

Regarding the location of the SFPUC service area, refer to Draft PEIR Figure 3.2 (Vol. 1, Chapter 3, p. 3-6); as shown, the service area includes portions of the South Bay and San Francisco Peninsula in addition to portions of the East Bay and San Francisco. Regarding specific projections of future demand and purchases from the SFPUC regional system, refer to Table 3.3 or Table 7.2 (Vol. 1, Chapter 3, p. 3-18 and Vol.4, Chapter 7, p. 7-15, respectively). Table 3.4 and Table 7.3 (Vol. 1, Chapter 3, p. 3-19 and Vol. 4, Chapter 7, p. 7-18, respectively) include information on projected increases in demand and purchases from the 2001 base year used in the demand projections.

Judith LoVuolo-Bhushan, 09/24/07

C_LoVuo-01 This comment expressing concern about increased diversions and support for more conservation to meet water demand, and suggesting that the SFPUC work with Acterra on a conservation plan, is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Janet Lowry, 10/01/07

C_Lowry-01 This comment, which expresses support for more conservation and recycling to meet water demand and for alternatives that protect the Tuolumne River from additional diversions, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Sheri Lubin, 09/19/07

C_Lubin-01 The commenter's support for conservation, conservation outreach, recycling, and replacement of lawns with low/no-water-use landscaping is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding the specific conservation measures currently being implemented and those to which the SFPUC and its wholesale customers have committed under the WSIP.

Erik Lundberg, 09/19/07

C_Lundb-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Tyana Maddock, 09/18/07

C_Maddo-01 This comment opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Ramses Madou, 09/19/07

[See Public Hearing Transcript, Palo Alto, p. 17]

C_Madou-01 This comment opposing additional Tuolumne River diversions, urging additional conservation to reduce future water demand, and expressing concern for biological resources in the Tuolumne River watershed, is acknowledged. Impacts of the proposed diversions on biological and fisheries resources of the Tuolumne River corridor were analyzed in the Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.6 and 5.3.7). As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Nick Magol, 09/20/07

C_Magol-01 This comment opposing additional Tuolumne River diversions and expressing support for additional water conservation is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Mary Jane Marcus, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 10-12]

C_Marcu-01 This comment, which advocates more conservation through public awareness, education, and involvement in determining conservation potential, and expresses opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Elliot Margolies, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 35-36]

C_Margo-01 This comment encouraging additional water conservation and recycling is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for pertinent response related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

James Marshall, 09/09/07

C_Marsh-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Michael Martin, 09/26/07

C_MartiM-01 This comment expresses concerns related to the effects of additional Tuolumne River diversions on spring-run Chinook salmon, fall-run Chinook salmon, and Central Valley steelhead below La Grange Dam. As described in the Draft PEIR, the San Francisco Planning Department determined that long-term WSIP-induced flow changes in the Tuolumne River below La Grange Dam could have a significant adverse effect on anadromous fish, including steelhead and fall-run Chinook salmon, along this reach of river (Vol. 3, Chapter 5, pp. 5.3.6-28 to 5.3.6-32). No spring-run Chinook salmon currently exist in the Tuolumne River. Spring-run Chinook typically spawn in the upper reaches of watersheds, which have been inaccessible to migratory fish in the Tuolumne River for more than 100 years.

The Draft PEIR determined that WSIP effects on flow and temperature would infrequently contribute to potentially significant effects on these fishery resources. As a result, the impact of the WSIP on these fishery resources in the lower Tuolumne River was determined to be potentially significant. Implementation of Mitigation Measures 5.3.6-4a (Avoidance of Flow Changes By Reducing Demand for Don Pedro Reservoir Water), or 5.3.6-4b (Fishery Habitat Enhancement) would reduce these impacts to a less-than-significant level (Vol. 4, Chapter 6, pp. 6-48 and 6-49). Please see **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Sections 14.7.2 and 14.7.3) for supplementary information on the presence of steelhead and Chinook salmon along this reach of the lower river, and

additional discussion on Mitigation Measures 5.3.6-4a and 5.3.6-4b, including text revisions to Measure 5.3.6-4b that add further definition to the habitat enhancement effort.

- C_MartiM-02 This comment correctly states that the majority of the future demand resides outside of San Francisco, as shown in Draft PEIR Table 3.3 (Vol.1, Chapter 3, p. 3-18). The comments on outdoor use and demand projections were submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). Regarding the statement in support of conservation and recycling to meet future increases in demand, the 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78).
- C_MartiM-03 This comment expresses concern regarding the effects of additional Tuolumne River diversions on property values, tourism, and recreation resources in the upper Tuolumne River watershed. For a discussion of CEQA requirements with respect to economic effects on Tuolumne County residents, businesses, and tourism prior, please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.6).
- C_MartiM-04 This comment expresses concern regarding the potential effects of climate change and how it will affect water supply. More specifically, the commenter requests that the PEIR include an analysis of the effects of drought and water shortage and provide a discussion regarding how the SFPUC would meet demand during those critical times. Refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4) for information regarding effects of climate change on the Tuolumne River watershed and associated effects on SFPUC's system operations and water yield. Please also refer to Section 14.11.5 under the heading SFPUC's Actions to Address Climate Change for information regarding SFPUC's current efforts to evaluate their water supply planning with respect to climate change.
- This comment also states that reduced flows in the San Joaquin River basin has resulted in low recruitment of anadromous salmonid populations. See **Section 14.8, Master Response on Delta and San Joaquin River Issues** (Vol. 7, Chapter 14, Section 14.8.2) for a discussion of WSIP effects on the San Joaquin River and Delta.

- C_MartiM-05 This comment expressing support for alternatives that would avoid increases in diversions from the Tuolumne River is acknowledged. These alternatives include the Year-round Desalination at Oceanside Alternative (see Draft PEIR Vol. 4, Chapter 9, Section 9.2.6, p. 9-66) and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (see Section 9.2.4, p. 9-47). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.
- C_MartiM-06 This comment states that the Draft PEIR lacks sufficient description of the potential impacts of the WSIP on the Lower Tuolumne River, particularly with respect to anadromous fish populations. See **Response C_MartiM-01**. This comment also states that the WSIP fails to address consistency with on-going State and Federal resource agency activities, studies, and actions that may be compromised by additional Tuolumne River Diversions. Refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River. With respect to the commenter's request for additional studies, please refer to **Response C_Breso-01**.

Sofia Martinez, 08/15/07

- C_MartiS-01 This comment, which expresses support for using recycled water for outdoor water use and opposition to additional diversions from the Tuolumne River, is acknowledged. The proposed WSIP includes recycled water projects in the SFPUC service area totaling 9 to 14 mgd by 2030 (Vol. 1, Chapter 3, pp. 3-18 and 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers; regarding conservation and recycling to meet outdoor water demand refer to the discussion under the heading Frequently Submitted Comments on Conservation and Recycling.

Len Materman, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 44-45]

- C_Mater-01 This comment states that the Draft PEIR inadequately and inconsistently addresses the topic of climate change and global warming. Please see **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96). Section 14.11 of this document provides more detailed and up-to-date information on climate change as it relates to the SFPUC regional water supply and the proposed WSIP.
- C_Mater-02 The commenter states that although impacts to special-status species were discussed, ecosystems were not adequately addressed. In both Chapter 4 (Vol. 2, Chapter 4, Section 4.6) and in Chapter 5 (Vol. 3, Chapter 5, Sections 5.3.7, 5.4.6 and 5.5.6), impacts on both special-status species and sensitive natural communities are analyzed.

Jonathan McClelland, 09/26/07

- C_McCle-01 This comment, which expresses support for more conservation to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Tables 14.2-6, 14.2-7, and 14.2-8 in Section 14.2 show the specific conservation measures currently being implemented and those to which the SFPUC and SFPUC wholesale customers have committed under the WSIP.

Karl McCollom, 11/07/07

- C_McCol-01 Please refer to **Response C_Breso-01**.

C_McCol-02 This comment expressing support for more conservation and recycling to meet water demand and for alternatives that protect the Tuolumne River from additional diversions is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). Alternatives that would reduce diversions from the Tuolumne River are described in the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Mike McConnell, 09/07/07

C_McCon-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Keith & Luella McFarland, 09/13/07

C_McFar-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Julie McKee, 09/29/07

C_McKee-01 This comment, which expresses support for more conservation to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect

22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Robert Means, 09/18/07

C_Means1-01 This comment states that water needs are best addressed through conservation. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Robert Means, 09/18/07

[See Public Hearing Transcript, Fremont, pp. 20-22]

C_Means2-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78).

Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5), and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7., Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River.

Regarding the assertion that demand projections are faulty, and for a discussion of current and planned conservation and recycling in the SFPUC service area, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14).

C_Means2-02 The methodology used to develop demand projections is described in Draft PEIR Chapter 3 and in more detail in Appendix E.2 (Vol. 5). Refer also to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). This part of Section 14.2 also addresses the commenter's assertion regarding per capita demand, which was submitted by many commenters. Regarding the commenter's support for more conservation and efficiency to meet future demand, the 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). Alternatives to the WSIP that would reduce diversions from the Tuolumne River, are described in the following sections of Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Christina and Chet Melnarik, 09/18/07

C_Melna-01 This comment expressing the commenter's opinion that the environmental impacts of water diversions from the Tuolumne River outweigh the benefit and that Bay Area water districts should be leaders in conservation and recycling is acknowledged. The California Environmental Quality Act (CEQA) requires a public agency with approval authority over a project to balance a project's benefits (economic, legal, social, technological, or other) against any unavoidable environmental risks (the "costs" implied in this comment) when determining whether to approve the project.³ When an agency approves a project that will result in the occurrence of significant effects that are not avoided or substantially lessened through adopted mitigation measures, the

³ CEQA Guidelines Sections 15043 and 15093.

agency must state in writing the specific reasons to support its action. Alternatively, the agency can adopt measures to mitigate significant environmental effects or adopt an alternative to the project that lessens the project's effects.

As stated in Draft PEIR (Vol. 1, Chapter 1, p. 1-1 and p. 1-9), the San Francisco Planning Department prepared the Draft PEIR to provide the public and responsible and trustee agencies with information about the potentially significant environmental effects of the proposed program, to identify possible ways to minimize the potentially significant effects, and to describe and evaluate feasible alternatives to the proposed program. Upon certification of the PEIR, the SFPUC may proceed to take action on program approval.

Regarding conservation and recycling in the SFPUC service area, the 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Regarding the use of graywater, refer to the discussion in Section 14.2.3 under the heading Conservation Measures Suggested by Commenters.

Bill Mensing, 09/06/07

C_Mensi-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Karen Menuz, 09/09/07

C_Menuz-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following

sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Steven Merlo, 09/20/07

C_Merlo-01 This comment opposing additional Tuolumne River diversions and supporting more efficiency is acknowledged. For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Ivo Mijac, 10/01/07

C_Mijac-01 This comment supporting adoption of landscaping policies, more conservation and recycling to meet water demand, and opposition to additional diversions from the Tuolumne River, is acknowledged. Refer to **Tables 14.2.2, 14.2.3, and 14.2.4 of Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding the specific conservation measures currently being implemented and those to which SFPUC and its wholesale customers have committed under the WSIP. As shown, measures include landscape audits and, in the wholesale customer service area, xeriscape education.

With respect to conservation and recycling, the 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale

customers. Regarding the commenter's request for additional studies to adequately identify and address impacts on the Tuolumne River, please refer to **Response C_Breso-01**. Regarding the effects of climate change on the river, please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4).

Eric Millette, 10/01/07

C_Mille-01 This comment, which expresses support for more conservation to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Naomi Mindelzun, 09/20/07

C_MindeN-01 This comment, which expresses support for more conservation and efficiency measures to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). For information on the demand projections prepared for the WSIP and additional information on conservation and recycling, please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14). Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Robert E. Mindelzun, 09/23/07

C_MindeR-01 This comment, which expresses support for more conservation and efficiency measures to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Peter Neal, 09/21/07

C_Neal-01 This comment stresses the need for seismic improvements to the regional water system but opposes additional Tuolumne River diversions. The commenter also states that the Draft PEIR does not adequately address the impacts of additional Tuolumne River diversions and recommends that the SFPUC use a two-tiered approach that separates the seismic improvements from the proposed water supply option.

The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.

Erna Nore, 09/26/07

C_Nore-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

William Noren, 10/10/07

C_Noren1-01 This comment expresses opposition to additional Tuolumne River diversions and requests that additional studies be conducted before the PEIR is finalized. Please see **Response C_Breso-01**.

C_Noren1-02 This comment expressing support for alternatives that would avoid increases in diversions from the Tuolumne River is acknowledged. These alternatives include the Year-round Desalination at Oceanside Alternative (see Draft PEIR Vol. 4, Chapter 9, Section 9.2.6, p. 9-66) and the Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (see Section 9.2.4, p. 9-47).

C_Noren1-03 This comment, which expresses support for more conservation and recycling as a means to meet water demand while minimizing impacts on the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling

projects being implemented or proposed by the SFPUC and its wholesale customers.

- C_Noren1-04 This comment, which expresses the commenter's opinion that agribusiness wastes more water than cities do, but that use and disposal of water by residences and businesses in cities requires more energy, and that water use must be addressed on both fronts, is acknowledged. Refer also to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information on the specific conservation measures currently being implemented and those to which the SFPUC and its wholesale customers have committed under the WSIP. Regarding water use by the agricultural sector, the commenter may be interested to note that a component of the Modified WSIP Alternative involves the yearly transfer of *conserved* agricultural water from the Modesto and Turlock irrigation districts to the SFPUC (Vol. 4, Chapter 9, p 9-79).
- C_Noren1-05 This comment expressing support for implementation of water saving technology and reducing water waste by agribusiness is noted. Regarding conservation under the WSIP, please refer to **Response C_Noren1-03**.

William Noren, 09/18/07

[See Public Hearing Transcript, Fremont, pp. 22-24]

- C_Noren2-01 This comment expressing an opinion regarding sustainable resource management is acknowledged; as it does not address the adequacy or accuracy of the PEIR, no response is provided.

Margaret Okuzumi, 10/12/07

- C_Okuzu-01 The comment states that a comprehensive study of baseline conditions must be conducted in order to properly analyze the impacts of the project on the upper Tuolumne River. Please refer to **Response C_Breso-01**. Please also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- C_Okuzu-02 This comment opposes additional Tuolumne River diversions. The Draft PEIR includes a detailed analysis of the potential impacts of the proposed WSIP water supply and system operations on the Tuolumne River (Vol. 3, Chapter 5, Section 5.3). Section 5.3 addresses environmental resources that could be affected by the proposed water supply option and system operations: surface

water hydrology, geomorphology, water quality, groundwater, fisheries and aquatic resources, riparian resources, recreational and visual resources, Delta water supplies, and energy. As indicated in Section 5.3.6 (beginning on p. 5.3.6-25), impacts to fishery resources in Hetch Hetchy Reservoir and Don Pedro Reservoir, and along the Tuolumne River between Hetch Hetchy Reservoir and Don Pedro Reservoir would be less than significant. Impacts to fishery resources along the Tuolumne River below La Grange Dam would be potentially significant, but would be reduced to less-than-significant levels with implementation of either Measure 5.3.6-4a (Vol. 4, Chapter 6, p. 6-48), or (if Measure 5.3.6a proves to be infeasible) Measure 5.3.6b (pp. 6-48 and 6-49). As indicated in Section 5.3.3 (beginning on p. 5.3-13), the effects of the WSIP on water quality along the San Joaquin River and the Sacramento-San Joaquin Delta would be less than significant. Further, as discussed in Section 5.3.8 (p. 5.3.8-23), the effects of the WSIP on recreational uses along the Tuolumne River would also be less than significant. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

C_Okuzu-03

This comment, which expresses the commenter's opinion that the environmentally superior alternative is one that requires more conservation and recycling, rather than additional diversions from the Tuolumne River, and that the PEIR should reach this conclusion, is acknowledged. Alternatives that would reduce diversions from the Tuolumne River are described in the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). The Draft PEIR (Vol. 4, Chapter 9, p. 9-95 to 9-96) identified the Modified WSIP Alternative, which includes more conservation, water recycling and local groundwater projects than does the WSIP, as the environmentally superior alternative. Refer to pp. 9-95 to 9-96 for more information on the basis for identifying the Modified WSIP Alternative as the environmentally superior alternative. Please also refer to **Section 14.10, Master Response on Modified WSIP Alternative** (Vol. 7, Chapter 14, Section 14.10.3) for additional information.

The statement that the employment projections used to develop future demand estimates are inflated was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). For information regarding the conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers please also refer to **Section 14.2** (Vol. 7, Chapter 14, Section 14.2.3).

Jenna Olsen, 09/20/07

[See Public Hearing Transcript, San Francisco City Hall, September 20, 2007, pp. 23-25]

C_Olsen-01 This comment expresses an opinion that San Francisco should strive to be a leading city in sustainable water management and encourages increased water efficiency and conservation. Please refer to **Response C_Clark1-16**.

Kay O'Neill, 09/19/07

C_ONeil-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), for information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

The commenter's opinion that agricultural and industrial water use needs to be reviewed and not subsidized is acknowledged. The proposed WSIP would involve neither agricultural subsidy nor use of water for agriculture. Regarding the implication that industrial water use is subsidized, note that the SFPUC and all but one of the wholesale customers implement California Urban Water Conservation Council Best Management Practice No. 4, Metering with Commodity Pricing, as shown in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). For additional discussion of projected nonresidential water use refer to Section 14.2.2).

Ellie Owen, 09/05/07

[See Public Hearing Transcript, Sonoma, p. 31]

C_Owen-01 This comment questions how the yield of water is calculated from a glacier and requests additional information regarding the coupled effect of drought and

global warming. Please see **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14) for additional discussion of climate change to augment the discussion presented in Section 5.7.6 of the Draft PEIR (Vol. 3, Chapter 5, pp. 5.7-92 to 5.7-96).

Anne Pagliarulo, 09/20/07

C_Pagli-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Doug Parkes, 09/29/07

C_Parke-01 This comment recommends that the SFPUC pursue a two-tiered approach that separates the seismic improvements from the proposed changes in water supply sources. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole. (Note that the correct name of the proposed program is the Water System Improvement Program [WSIP], and not the Water Improvement Program ([WIP].)

C_Parke-02 This comment that the demand forecasts pay little attention to conservation or changes in the price of water requires clarification and is essentially incorrect. The estimated water *purchases* from the SFPUC (that is, the demand on the SFPUC regional system) consider conservation and the future price of water; refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). This comment correctly states that 4 percent of demand is expected to be met by conservation; this level refers to savings from active conservation programs to which the SFPUC and wholesale customers have committed. Draft PEIR

Table 3.3 (Vol. 1, p. 3-18) and Table 7.2 (Vol. 4, p. 7-15) show the estimated level of water conservation assumed in the purchase estimates submitted by each water customer. The average of the estimated range of conservation (13-19 mgd) represent about 4 percent of the total 2030 demand (417 mgd) for the service area. Note that an additional 36 mgd is expected to result from implementation of plumbing code requirements (or “passive conservation”). As part of the planning effort for the proposed program, the SFPUC, in conjunction with its wholesale customers and BAWSCA, conducted extensive studies—including technical studies on conservation and recycled water use potential. These studies are described in the Draft PEIR (Vol. 1, Chapter 3, pp. 3.16 to 3-22, and Vol. 5, Appendix E.2) and in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Background.

Regarding the statements in this comment about per-capita and outdoor water use; please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7. Chapter 14, Section 14.2.2), under the headings Per-Capita Demand and Outdoor Water Use, respectively.

C_Parke-03 This comment expressing support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7. Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers. Regarding the specific conservation measures currently being implemented and those to which the SFPUC and its wholesale customers have committed under the WSIP, refer to Section 14.2.

C_Parke-04 This comment, requesting that additional studies on the Tuolumne River, was submitted by numerous commenters; see **Response C_Breso-01** for response.

Kathy Perl, 09/20/07

C_Perl-01 This comment expressing support for more conservation, recycling, and desalination to meet water demand and opposition to additional diversions from

the Tuolumne River is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

The Draft PEIR analyzes the use of desalination technologies as a supplemental water supply in the discussions for the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.6) and Variant 2 – Regional Desalination for Drought (Vol. 4, Chapter 9, Section 9.2.7). As indicated in Table 9-6 (pp. 9-14 thru 9-16), it is uncertain whether these two alternatives are capable of meeting all WSIP goals and objectives related to sustainability and the cost-effective use of funds, and these alternatives would only partially meet the WSIP objective of maintaining a gravity-driven system. Also, the Year-round Desalination at Oceanside Alternative would only partially meet WSIP objectives related to delivery reliability during planned maintenance. The commenter's opinion that the planet is endangered by overpopulation is acknowledged.

Ron Pickup, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 37-38]

C_Picku-01 This comment, which expresses support for more conservation and recycling to develop a more sustainable water supply, as many other cities have accomplished, and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

The statement that the “county of origin ... has already provided you 20 million gallons per day [mgd] from our river” is incorrect. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River.

J. Poulton, 09/26/07

C_Poult-01 This comment incorrectly states that the proposed WSIP does not include conservation, and expresses support for alternatives that reduce Tuolumne River diversions. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). Alternatives to the WSIP that would reduce diversions from the Tuolumne River are described in the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Regarding the Draft PEIR consideration of impacts on the river or people living near it, the Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Assuming this comment also refers to potential economic impacts, please refer **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 4, Section 14.1.6) regarding CEQA requirements related to economic evaluations, and the environmental effects that some commenters perceive could cause economic impacts for Tuolumne County residents, businesses, and tourism.

Paul Raffaeli, 10/01/07

C_Raffa-01 This comment opposing additional Tuolumne River diversions is acknowledged.

- C_Raffa-02 This comment opposes additional Tuolumne River diversions and refers to the specific comments presented in Comments C_Raffa-03 through C_Raffa-12; refer to **Responses C_Raffa-03 through C_Raffa-12** for the specific responses.
- C_Raffa-03 The background information related to the Tuolumne River watershed corroborates information presented in the Draft PEIR (Vol. 3, Chapter 5, Sections 5.2 and 5.3). The range of current SFPUC diversions from the Tuolumne River presented in this comment is inaccurate. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River. Please also refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- Regarding the statement that outdoor water use is driving 60 percent of the anticipated increase in water demand, refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2), under the heading Outdoor Water Use.
- C_Raffa-04 The comment that the Draft PEIR used flawed modeling to determine the anticipated increase in water demand, thus inflating future needs was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). The statement that the anticipated increase in demand projected by the SFPUC is “large and out of step” compared to other metropolitan areas also was submitted by numerous commenters and is responded to in **Section 14.2** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling.
- C_Raffa-05 This comment states that there is a lack of adequate baseline data for the Tuolumne River to properly analyze the environmental consequences of additional diversions. Please refer to **Response C_Breso-01** for response.
- C_Raffa-06 This comment states that the Draft PEIR does not take into consideration the impact of climate change on precipitation in the Tuolumne River watershed. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4) for information regarding current studies and models that are being used to forecast the effects of climate change on the SFPUC’s regional water system.

- C_Raffa-07 These comments were submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).
- C_Raffa-08 This comment encourages the SFPUC to reduce its reliance on the Tuolumne River to protect the ecosystems and functions of the river and to prepare for uncertainties regarding climate change. Refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.5) for information regarding the effects of climate change on Tuolumne River water supplies.
- C_Raffa-09 This comment states that “by pursuing a plan to divert additional water from the Tuolumne River, the SFPUC risks delaying their capital improvement program” among other things. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.
- C_Raffa-10 This comment, stating that the SFPUC should re-evaluate their projections in light of flaws and inaccuracies, was submitted by numerous commenters. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2) for response.
- C_Raffa-11 These comments were submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers and the study requested in this comment.
- C_Raffa-12 This comment suggesting that the SFPUC adopt a policy of reducing diversions from the Tuolumne River is acknowledged.
- C_Raffa-13 This comment requests that a comprehensive watershed study be completed in order to adequately assess the environmental impacts of the WSIP. Refer to **Response C_Breso-01**, above.

David Raube, 10/01/07

- C_Raube-01 This comment, which expresses support for more conservation, recycling, and desalination to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation

and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. The Draft PEIR analyzes the use of desalination technologies as a supplemental water supply in the discussions for the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.6) and Variant 2 – Regional Desalination for Drought (Vol. 4, Chapter 9, Section 9.2.7). As indicated in Table 9-6 (pp. 9-14 thru 9-16), it is uncertain whether these two alternatives are capable of meeting all WSIP goals and objectives related to sustainability and the cost-effective use of funds, and these alternatives would only partially meet the WSIP objective of maintaining a gravity-driven system. Also, the Year-round Desalination at Oceanside Alternative would only partially meet WSIP objectives related to delivery reliability during planned maintenance.

Mark Reedy, 09/19/07

C_Reedy-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Regarding environmental sustainability, refer to **Response C_Clark1-16**.

Stefani Reichle, 09/05/07

- C_Reich-01 This comment, which suggests that the Bay Area lags behind other metropolitan areas in terms of conservation and could instead be a leader in this area was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling.

Matthew Richardson, 09/06/07

- C_Richa-01 This comment opposing additional Tuolumne River diversions is acknowledged.
- C_Richa-02 This comment recommending additional public awareness programs to promote conservation is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) regarding the specific conservation measures currently being implemented and those to which SFPUC and its wholesale customers have committed under the WSIP.
- C_Richa-03 This comment encouraging additional water conservation and recycling is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information on the recycled water potential studies that were conducted and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.
- C_Richa-04 This comment opposing the construction of new dams is acknowledged. The proposed program does not include the construction of new dams. The WSIP proposes implementation of two facility improvement projects that would retrofit two existing dams at Bay Area water supply reservoirs in order to meet seismic standards, protect public safety, and restore full, historical water storage capacity: the Calaveras Dam Replacement (SV-2) and Lower Crystal Springs Dam Improvements (PN-4) projects.
- C_Richa-05 This comment expressing support for desalination technologies is acknowledged. Please refer to **Response C_BramlD1-02**.

Leah Rogers, 09/19/07

[See Public Hearing Transcript, Palo Alto, pp. 39-40]

C_Roger-01 This comment expresses an opinion about water consumption by industrial and agricultural uses. As this comment does not address the adequacy or accuracy of the PEIR, no response is needed.

Jim Ross, 10/03/07

C_Ross-01 See **Response C_Raffa-03**.

C_Ross-02 These comments have been submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

C_Ross-03 See **Response C_Breso-01**.

C_Ross-04 See **Response C_Raffa-06**.

C_Ross-05 These comments have been submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

C_Ross-06 See **Response C_Raffa-08**.

C_Ross-07 See **Response C_Raffa-09**.

C_Ross-08 The concerns reflected in this comment regarding demand projections and the level of proposed conservation were submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14).

C_Ross-09 These comments were submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

C_Ross-10 See **Response C_Raffa-12**.

C_Ross-11 See **Response C_Raffa-13**.

Trish Rowe, 10/11/07

- C_Rowe-01 This comment expressing an opinion regarding water usage and management is acknowledged. This comment also endorses a statement made by California Department of Fish and Game (CDFG) that is presented in Comment C_Rowe-02; refer to **Response C_Rowe-02** below.
- C_Rowe-02 This comment is an excerpt from the comment letter submitted by CDFG on the Draft PEIR dated October 1, 2007. The full text of this letter can be found in Comment Letter S_CDFG2. This excerpt is contained within Comment S_CDFG2-05; refer to **Response S_CDFG2-05** for the specific response.

Ron Schmidt, 09/11/07

- C_SchmiR-01 This comment opposing additional Tuolumne River diversions is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Judy Schriebman, 09/25/07

- C_Schri-01 This comment questioning the methodology used to project future water demand was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). Refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.
- C_Schri-02 This comment opposing additional Tuolumne River diversions and supporting conservation and recycling is acknowledged. For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Regarding the Draft PEIR's consideration of the Tuolumne River's status as a

federally designated Wild and Scenic River and potential impacts relevant to that designation, please refer to **Response L_Tuol1-09**.

Urs Schuler, 09/17/07

C_Schul-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Kelly Shea, 09/20/07

C_Shea-01 This comment which expresses concern about the environmental effects of the WSIP, opposition to additional diversions from the Tuolumne, and support for more conservation and recycling to meet water demand, and suggests that the Bay Area emulate conservation efforts in Seattle and Los Angeles, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

John Simpkin, 09/14/07

C_Simpk-01 This comment expressing opposition to additional Tuolumne River diversions is acknowledged.

Ann Sloan, 09/06/07

C_Sloan-01 This comment expressing opposition to additional Tuolumne River diversions is acknowledged.

Evan Winslow Smith, 09/26/07

C_SmithE-01 This comment expressing support for seismic improvements to the regional water system but urging additional recycling and conservation is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for information on conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Paul Smith, 09/30/07

C_SmithP-01 This comment expressing an opinion regarding agricultural water use is acknowledged.

Cindy Spring, 09/25/07

C_Sprin-01 The commenter's opinion expressing concern regarding environmental impacts to the Tuolumne River and the associated habitat for fish and wildlife is acknowledged. Please refer to **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14) and **Section 14.7, Master Response on Lower Tuolumne Issues** (Vol. 7, Chapter 14) for additional discussion on WSIP-induced flow changes and their effects on public trust values.

C_Sprin-02 This comment on water conservation is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

Peter Steinhart, 09/26/07

- C_Stein-01 This comment criticizes evaluation of seismic improvements and the proposed water supply option as part of the same program. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.
- C_Stein-02 These comments were submitted by numerous commenters and are responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14).
- C_Stein-03 This comment states that the discussion of potential impacts of global warming on the Tuolumne's future flows is inadequate and that the discussion shrugs off impacts as being similar under both the existing conditions and with the proposed program. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4) for information on current studies and models that are being used to forecast the effects of climate change on the SFPUC's regional water system.
- C_Stein-04 This comment requests for additional studies on the upper Tuolumne River and states that climate change coupled with increased diversions from the Tuolumne could result in significant impacts on the health of the Sacramento Delta and San Francisco Bay. Please refer to **Response C_Breso-01** for response related to the need for additional studies to analyze impacts. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4) for a qualitative assessment of effects of the WSIP with consideration of climate change.

Jon Sturtevant, 09/05/07

[See Public Hearing Transcript, Sonora, pp. 36-37]

- C_Sturt-01 This comment opposing additional Tuolumne River diversions and encouraging additional conservation and recycling efforts to serve future water demand is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2

through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers and discussion regarding comparisons to other areas, which were submitted by numerous commenters.

Marc Sugars, 09/26/07

- C_Sugar-01 This comment has been submitted by numerous commenters. Please refer to **Response C_Breso-01**.
- C_Sugar-02 This comment, which expresses support for more conservation to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers and discussion regarding comparisons to other areas, which were submitted by numerous commenters. Regarding the effects of global warming on the Tuolumne River, refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4).

Karen Sundback, 10/01/07

- C_Sundb-01 This comment regarding Governor Schwarzenegger's support for the peripheral canal and questioning how water rights along the Tuolumne River would be affected if the peripheral canal were implemented is noted. This comment does not address the accuracy or adequacy of the Draft PEIR; no response is provided.

Barbara Symons, 09/20/07

C_Symon-01 This comment recommending that the SFPUC use a two-tiered approach that separates the seismic improvements from the proposed water supply option is acknowledged. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need** (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole. Refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Jean Taylor, 09/06/07

[See Public Hearing Transcript, Modesto, pp. 26-27]

C_TayloJ-01 This comment opposing additional Tuolumne River diversions and expressing concern for the current condition of the Tuolumne River is acknowledged. Because this comment does not address the accuracy or adequacy of the Draft PEIR, no response is needed.

Scott Taylor, 10/01/07

C_TayloS-01 This comment opposing additional Tuolumne River diversions and supporting conservation and recycling is acknowledged. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

M. Teves, 09/19/07

C_Teves-01 This comment supporting conservation is acknowledged. The suggestion that conservation is not included in WSIP planning is incorrect. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in

Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information on the conservation and recycled water potential studies that were conducted and the conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Betsy Thagard, 09/25/07

C_Thaga-01 This comment expressing an opinion that the SFPUC should adopt a policy to reduce diversions from the Tuolumne River is acknowledged.

C_Thaga-02 These comments were submitted by numerous commenters. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). The commenter's suggestion to reduce withdrawals from the Tuolumne River over time is acknowledged.

Julia Thollaug, 09/11/07

C_Tholl-01 This comment opposing additional Tuolumne River diversions and expressing concern for the Tuolumne River is acknowledged. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Dennis Thomas, 05/02/07

C_Thoma-01 Regarding the Draft PEIR's consideration of the Tuolumne River's status as a federally designated Wild and Scenic River and potential impacts relevant to that designation, please refer to **Response L_Tuol1-09**. The comments in support of meeting additional water demands through conservation and recycling and drawing comparisons to other areas were submitted by numerous commenters and are addressed in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3).

Tibor Toth, 09/04/07

C_Toht-01 Regarding potential impacts to the Delta from increased diversions from the Tuolumne River, refer to **Section 14.8, Master Response on Delta and**

San Joaquin Issues (Vol. 7, Chapter 14, Section 14.8.2). As stated in that section, impacts on the Delta attributable to the WSIP were determined to be less than significant.

- C_Toht-02 This comment opposing additional Tuolumne River diversions and supporting desalination technologies is acknowledged. Please refer to **Response C_BramlD1-02**.

Marianna Tubman, 09/26/07

- C_Tubma-01 This comment stating that the future demand estimates used in the WSIP PEIR are based on inflated projections was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). This comment also states that the WSIP does not do enough to protect the Tuolumne River and other watersheds. The Draft PEIR includes a programmatic evaluation of the environmental impacts of the proposed facility improvement projects by topical area (Vol. 2, Chapter 4). A project-level evaluation of the potential environmental impacts of the proposed additional Tuolumne River diversions and changes in regional water system operations are organized by watershed in the Draft PEIR (Vol. 3, Chapter 5). Several potentially significant impacts were identified and mitigation measures developed to reduce the impacts to a less-than-significant level.
- C_Tubma-02 This comment, which expresses support for more conservation to meet water demand, opposition to additional diversions from the Tuolumne River, and the opinion that fish and plant life need the water more than people, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Regarding the effects of climate change on the Tuolumne River, refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4). Regarding the effects of the WSIP on fish and plant life, the Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater,

terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels.

- C_Tubma-03 This comment, expressing the commenter's belief that population in the area will not increase significantly due to housing prices is acknowledged. The methodology used to project future demand, which involved selection of a published population projection source, is described in Draft PEIR Chapter 3 (Vol. 1, pp. 3-16 to 3-21) and described in more detail in Appendix E.2 (Vol. 5). As described in Draft PEIR Chapter 7 (Vol. 4, p. 7-34), growth in many of the jurisdictions served by the SFPUC is expected to be accommodated by infill development, redevelopment, and increasing densities, as this comment suggests. There are some exceptions to this; some new housing in several areas⁴ is expected to be on comparatively large lots with more landscaping and higher water use (refer to Vol.5, Appendix E.2, pp E.2-7 to E.2-9).
- C_Tubma-04 This comment, which urges promotion of aggressive conservation measures and watershed protection, is acknowledged. The Draft PEIR (Vol. 4, Chapter 9) evaluates various supplemental water supply alternatives involving more conservation and water recycling (see the Aggressive Conservation/Water Recycling and Local Groundwater Alternative, Sections 9.2.4 and 9.2.5). Please also refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Kristen Tucker, 09/11/07

- C_Tucke-01 This comment opposing additional Tuolumne River diversions and supporting conservation and recycling is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR:

⁴ For example, the demand model was adjusted for Estero Municipal Improvement District, Hayward, and Milpitas to include new account categories for new residences on larger lots with higher water use levels than current residences, and model adjustments were made for Purissima Hills Water District and Santa Clara to reflect observed higher water use rates for newer single family residences. (Refer also to Comment L_Milpitas-13 and **Response L_Milpitas-13** regarding the city's commitment to smart growth and the Draft PEIR information on model adjustments.)

Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Unreadable commenter name, 09/20/07

C_Unreadable1-01 The comment regarding the need for more conservation to meet water demand and conservation achievements in other urban areas was submitted by numerous commenters; please refer to **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.3). Regarding the location of the SFPUC service area, refer to Draft PEIR Figure 3.2 (Vol. 1, Chapter 3, p. 3-6); as shown, the service area includes portions of the South Bay and San Francisco Peninsula in addition to portions of the East Bay and San Francisco. Regarding specific projections of future demand and purchases from the SFPUC regional system, refer to Table 3.3 or Table 7.2 (Vol. 1, Chapter 3, p. 3-18 and Vol.4, Chapter 7, p. 7-15, respectively). Table 7.3 (Vol. 4, Chapter 7, p. 7-18) includes information on projected increases in demand and purchases from the 2001 base year used in the demand projections. Regarding the effects of climate change on the Tuolumne River, refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14).

Unreadable commenter name, 08/15/07

C_Unreadable2-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Unreadable commenter name, 09/20/07

C_Unreadable3-01 This comment, which expresses support for conservation and opposition to additional diversions from the Tuolumne River, especially for outdoor use, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to

9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for more information regarding conservation to address outdoor water demand and conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Unreadable commenter name, 08/15/07

C_Unreadable4-01 This comment expressing opposition to additional diversions from the Tuolumne River and support for conservation and recycling to meet demand is acknowledged. The statement that the increased diversion under the WSIP would be used only to water lawns is incorrect. Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14) regarding the percentage of additional demand that would be for outdoor use, as well as information on conservation and recycling measure being implemented or planned in the SFPUC service area. Please refer to **Section 14.5, Master Response on Water Resources Modeling** (Vol. 7, Chapter 14, Section 14.5.9) for an explanation of the relationship between the average annual increase in purchase requests and the average annual increase in Tuolumne River diversions.

Unreadable commenter name, 08/15/07

C_Unreadable5-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Matthew Urdan, 09/27/07

C_Urdan-01 This comment has been submitted by numerous commenters. Please refer to **Response C_Breso-01**.

C_Urdan-02 This comment expressing support for more conservation and recycling to meet water demand and for alternatives that protect the Tuolumne River from additional diversions is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, Section 3.4.4, pp. 3-16 to 3-22). For descriptions of alternatives that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand**

Projections, Conservation, and Recycling (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Paul Vadopalas, 10/01/07

C_Vadop-01 This comment opposing additional Tuolumne River diversions and supporting desalination technologies is acknowledged. Please refer to **Response C_BramlD1-02**.

Jim Vermeys, 09/30/07

C_VermeJ-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. Regarding the request to “take a better look” at environmental impacts, please refer to **Response C_Breso-01**.

Karen Vermeys, 09/24/07

C_VermeK-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Ashleigh Voyikes, 08/15/07

C_Voyik-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Leo Vrana, 09/20/07

- C_Vrana-01 This comment expressing support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers and discussion regarding comparisons to other areas, which were submitted by numerous commenters.
- C_Vrana-02 This comment requesting that CCSF take the proper steps to make the Bay Area a leader in water conservation is noted; please refer to **Response C_Vrana-01**.

Patricia Walker, 10/13/07

- C_Walke-01 This comment expresses concern that the proposed water supply option may delay implementation of seismic improvements to the regional water system. Please refer to **Section 14.1, Master Response on WSIP Purpose and Need**, (Vol. 7, Chapter 14, Section 14.1.5) regarding the integration of the seismic improvements and water supply option to meet program objectives, and for a discussion of the advantages of using a program EIR to evaluate the proposed program as a whole.
- C_Walke-02 The first part of the comment stating that the SFPUC should take the lead in reducing water demand by implementing more stringent water conservation measures is acknowledged. Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information on conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers. The second part of the comment states that the Draft PEIR fails to address the environmental impacts associated with the increased diversion of water from the Tuolumne River, including the projected reduction in flows due to reduced snowpack. The Draft PEIR (Vol. 3, Chapter 5,

Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.4) for information regarding current studies and models that are being used to forecast the effects of climate change on the SFPUC's regional water system.

- C_Walke-03 This first part of this comment was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling, of this Comments and Responses Document** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling. The second part of this comment, which states that the PEIR does not address the potential to increase water supplies by water recycling, is incorrect. As shown in Draft PEIR Table 3.3 (Vol. 1, Chapter 3, p. 3-18), the 2030 purchase estimates prepared for the WSIP reflect 9-14 mgd in recycled water supply.

Pete Wallstrom, 09/27/07

- C_Walls-01 This comment opposing additional Tuolumne River diversions is acknowledged.
- C_Walls-02 This comment expresses support for the CEQA alternatives that would not include additional Tuolumne River diversions and that would promote additional conservation, efficiency, and recycling to prevent the need for additional Tuolumne River diversions. For a discussion of the alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.4), and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (Vol. 4, Chapter 9, Section 9.2.6). Refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information regarding conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Richard Weiss, 09/26/07

- C_Weiss-01 This comment asserts that the Draft PEIR fails to adequately address environmental impacts to the Tuolumne River and urges SFPUC to conduct additional studies of the Tuolumne River before finishing environmental review of the WSIP. See **Response C_Breso-01**.
- C_Weiss-02 This comment expressing support for the CEQA alternatives that would not include additional Tuolumne River diversions and that would promote additional conservation, efficiency, and recycling to prevent the need for additional Tuolumne River diversions is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For a discussion of the alternatives evaluated in the Draft PEIR that do not include additional diversions from the Tuolumne River, refer to the descriptions of the Year-round Desalination at Oceanside Alternative (Vol. 4, Chapter 9, Section 9.2.6, p. 9-66) and Aggressive Conservation/Water Recycling and Local Groundwater Alternative (Without Tuolumne River Supplement) (see Section 9.2.4, p. 9-47). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Bart Westcott, 09/12/07

- C_Westc-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Doris Williams, 09/25/07

- C_Willi-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposition to additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to

9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects proposed by SFPUC and its wholesale customers.

- C_Willi-02 The statement that the demand modeling was flawed was submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation and Recycling** (Vol. 7, Chapter 14, Section 14.2.2). Please also refer to the discussion of comparisons to other areas in Section 14.2 (Vol. 7, Chapter 14, Section 14.2.3), under the heading Frequently Submitted Comments Addressing Conservation and Recycling.
- C_Willi-03 This comment has been submitted by numerous commenters; please refer to **Response C_Breso-01**.
- C_Willi-04 This comment states that the Draft PEIR does not take into consideration the impact of climate change on precipitation in the Tuolumne River Watershed and recommends decreasing reliance on the Tuolumne River. Please refer to **Section 14.11, Master Response on Climate Change** (Vol. 7, Chapter 14, Section 14.11.5) for information regarding current studies and models that are being used to forecast the effects of climate change on the SFPUC's regional water system.
- C_Willi-05 This comment has been submitted by numerous commenters and is responded to in **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) under the heading Frequently Submitted Comments Addressing Conservation and Recycling.

Polly P. Wingfield, 09/11/07

- C_Wingf-01 This comment opposing additional Tuolumne River diversions is acknowledged.

Elizabeth Wolf, 09/24/07

- C_Wolf-01 This comment requests that more research be done before the PEIR is finalized. As this comment does not specify the particular issue(s) in which the commenter believes the analysis presented in the Draft PEIR is inadequate, no specific response is provided.

Benita Zimmerman, 09/28/07

C_Zimme-01 This comment, which expresses support for more conservation and recycling to meet water demand, opposition to additional diversions from the Tuolumne River, and support for a sustainable water plan, is acknowledged. The 2030 purchase estimates prepared for the WSIP reflect 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Vol. 1, Chapter 3, pp. 3-16 to 3-22). For descriptions of alternatives to the WSIP that would reduce diversions from the Tuolumne River, refer to the following sections in Chapter 9 (Vol. 4) of the Draft PEIR: Sections 9.2.2 through 9.2.4 (pp. 9-23 to 9-59), and Sections 9.2.6 and 9.2.7 (pp. 9-66 to 9-78). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3) for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

This comment also expresses concern that any more water diversions would threaten the entire ecosystem in the Bay Area. The Draft PEIR (Vol. 3, Chapter 5, Sections 5.3.1 through 5.3.8) analyzed the effects of the WSIP on the hydrology, geomorphology, water quality, groundwater, terrestrial biology, fisheries, recreation, and visual quality of the Tuolumne River corridor. As described, implementation of the WSIP would result in several potentially significant adverse impacts on the Tuolumne River and its resources; the Draft PEIR identified mitigation measures to reduce these impacts to less-than-significant levels. Please see **Section 14.6, Master Response on Upper Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.6.5) and to **Section 14.7, Master Response on Lower Tuolumne River Issues** (Vol. 7, Chapter 14, Section 14.7.6) for clarification regarding current and estimated future municipal and agricultural diversions from the Tuolumne River.

15.6 Form Letters

FORM LETTERS

CITIZENS WHO SUBMITTED FORM LETTER COMMENTS ON THE DRAFT PEIR

Form 1

Keren Abra	Mark Jones	Kevin Rayhill
Tom Adams	Cassandra Kyle	Dorothy Reinhardt
Karen Boudreaux	Gary Laufman	Janine Richman
Katie Bramlett	Joseph and Vicki/John	Mija Riedel
Eric Brooks	Leidner/Radogno	Hedi Saraf
Susan Burgenbauch	Victoria Lewis	Patrick Schmitz
Leslie Chew	Kirk Lumpkin	Kent Schneeveis
Nick Colin	Michele Luncy	Tara Schubert
John Cordes	Laurie McCann	Peter, Bonnie, Benard Seidman
Colette Crutcher	Mary L. McDonnell	Kate Stepan
Michael/Tom Duncan/Richard	Sara Meghrouni	Maury and Susan Stern
Don Ehrlich	Gale Melton	Olav Strawe
Don Eichelberger	Mariella Mey	Megan Sullivan
Ruben Garcia	Mark Mills-Thysen	Allen Todd
Peter Gass	Elan Minvielle	Terry A. Trumbull
Julian Giardinelli	Denis Mosgofian	Catherine Vowles
Richard and Valerie Girling	Kevin Neeson	Tes Welborn
Sami Goski	Chad Nichols	J. Wong
Barry Hermanson	Lauren Nickell	Ebbe Roe Yovino-Smith
Carole Herron	Erica Pederson	
Lia Hillman	Ed Pike	

Form 2

Alice Abbott	Laura Atkins	Nikki Bengal
Bashir Abdullah	Sarikka Attoe	Lawrence Bernard
Trip Adler	Sylvia Augustiniok	Nellie Bertucci
Monika Aeschbacher	N. Ausschnitt	Max Betkouski
Joshua Agan	Vai Aven	James Biggs
Bunardi Aiechlanski	Phyllis Ayer	Jon Birnbaum
Robert Alna	Richard Babb	Sandra Bishop
Trudy Alter	J. Bacani	Gillian Blair
Lydia Alva	Samuel Bagdorf	Alex Blanchad
Bylgia Amadour	Shaun Bailey	Dian Blomquist
Susan Amden	Marilyn Bair	Phil Bloomfield
Anna Andersen	John Baker	Ron Boeck
Sara Anderson	Yvonne Baker	Jordan Bogash
B.J. Anderson	William Baker	Raymond Bohn
Kyle Anderson	Marilyn Bancel	Mitchell Bonner
Theresa Andrews	Teresa Baom	Sherry Boschert
Max Andrews	Linda Barnett	Sherry Boschert
Mitchell Aourls	Randall Barry	Alex Boyd
Gary Apter	Dirk Bartels	John Boyes
Lisa Arena	Gail Bartlett	Ava Breembaum
Joe Aristo	Jason Baum	William Breen
Marilyn Arnest	Nikki Beach	Kristina Brennan
David Artis	Bruce Beal	Janet Brewer
Elizabeth Ashcroft	Devena Beal	Simone Brille
Lani Asher	Blanche Bebb	Carlos Brito
Nicola Atkins	Jessica Bell	Ralph Brott

CITIZENS WHO SUBMITTED FORM LETTER COMMENTS ON THE DRAFT PEIR (Continued)

Form 2 (cont.)

Bruce Brown	Dan Coleman	David Egert
Maureen Brown	Caroline Coleman	Lynne Eggeri
Geoffrey Brown	Christopher Concolino	Charlie Scott Elaine Michaud
Tom Browne	John Conley	Gretchen Elliott
Mary Browne	Jean Conner	Scott Ellis
Kent & Jennifer Brownlow	J. Maureen Cook	Jessica Ellis
Jordan Brownwood	Gibbons Cooney	Ernest Ely
William Bryant	Alison Corson	John Emami
William Bryant	James Corwin	Jeri Engstrand
Lynne Buchholz	Scott Corwin	Aviva Enoch
Flavia Buda	Jesse Costello-Good	Julie Enright
Michael Buel	Curtis & Debi Cournale	Jack Ermen
Brad Buethe	John Cowan	John Erskine
Ann Burke	Carolyn Crampton	John & Leigh Escobedo
Jean Burkhead	Mr. & Mrs. William Crowe	J. Esfacio
Adam Burnett	Elizabeth Curda	Jonathen Essillies
Jacklyn Button	John Curran	Chris Esparcia
Davis C	Tonette Cyprien	Douglas Estes
Paul Cahill	Chris Czerkies	Mark Evans
Benjamin Caldwell	Maria Dais	Debra & Brad Evans
Susan Calender	Peter Dalton	Maxamillienne Ewalt
Robert Campbell	Micheal Daly	David Fairley
Matt Campbell	Tina Dang	Deborah Farkas
Isaac Campbell	Denise D'Anne	Carol Farley
Amy Canalino	Clayton Dart	Geoff Farrell
Robert Cangelosi	Michelle Davidson	Alice Farrelly
Alma Canindin	Sierra Davidson	Michael Fay
Elizabeth Carbajal	Ludmilla Davis	Marla Feher
Marion Cardinal	George Davis	Gavin Feiger
Arthur Carey	Claude Davis	Mike Fernandez
Caitlin Carini	Ian Dedrick	Ron Ferrato
Rebecca Carino	Carole Deeb	Kristina Fialova
Hugnette Carleton	Matthew Denckla	David & Audrey Fielding
Lance Carnes	Martin Denefeld	June Finis
Kathleen Casey	Sherley Denney	Raul Fion
Gloria Catricala	Gertrude Denney	Eve Fisher
Leslie Cele	Ernest Dernburg	E. Fleming
Andria Cercio	Ray & Helen Desai	Paul Flores
Arthur Cerf	Peter Desmond	Stephen Follansbee
Lauren Cha	Madeline Dessat	Susan Ford
Lyzanan Chaires	Deirdre Devine	Muriel Forlerer
Chan	Maria Dichov	Michael Fornalski
Kelly Chang	Matt Dietz	Chiara Fox
Anne Chang	Mark Dillan	Elizabeth Franczak
Loretta Chardin	Jacqueline Dion	Ellen Frank
Elvina Charley	Sofia DiPadova	Martina Frank
Pearl Chen	Ralph DiPadova	Deborah Frankel
Eric Chesmar	Okori Dixon	Mark Freeman
May Chin	Fumiko Docker	Elena Freiwald
Karen Christenson	Claudia Doerr	Yee-chung Fu
Jonah Christian	Janelle Dong	Genevieve Fujimoto
Winston Christian	E. Donnelly	Ryan Gamlin
Pelletier Christiane	Justin Dorsey	Andrea Gara
Kerry Chung	Robert Dower	Albert Garcia
Jesse Church	Annie Du	Tamayer Garcia
Mike Burbank Cindy Roberts	Maria Ducey	Kevin Garden
Scott Clark	Larey Dunn	Michele Garside
Jackson Clawson	S. J. Dunne	Claudia Gaytan
Judy Clayton	Mary Dunning	Anne-Marie Gearhart
Laurence Clement	Natalia Dusov	Arlene Getz
Nancy Coe	Betty Cornell Eberhardt	Sean Gibson
Steven Cohen	Harvey Eckmann	Rose Gillen
Kimberly Cohen	Tom Eckstrom	Judy Ginsburg
K. Colburn	Scott Edwards	Justin Glosvenor

CITIZENS WHO SUBMITTED FORM LETTER COMMENTS ON THE DRAFT PEIR (Continued)

Form 2 (cont.)

Randall Goetsl	Maggie Hill	Barbara Jue
Kristina Goldberg	Mary Hill	Marlena Jury
Jim Goldstein	Frederick Hirth	Lisa Kadyk
David Gonzalez	Frederick Hirth	Eve Kamakea
Chris Goodfellow	Nan Ho	Elizabeth Kaplan
Deborah Goodson	Phillip Hoehn	Jane Kastner
Jazmin Gorge	Mr. & Mrs. William Hogan	Paula Katz
Kevin Gottesman	Bettie Holaday	Fran Kearney
Erica Gould	Edward Holden	James Keeffe
Robbie Gould	Donald Holley	Audra Kefe
L. Gourley	Jan & Maurice Holloway	Larry Kelleher
Don Graham	Thelma Holmer	Erwin Kelly
T.J. Grasshoff	Aruna Hoover	Joan Kelly
David Gray	Cornelia Hoppe	Kerri Kelting-Leslie
Debra Green	Inge Horton	Wilbert Kemp
Pamela Green	Carmen Horton	Nancy Kenyon
D. Green	Julia Horvath	Sabrina Kesler
Lyn Grigonis	Leonard Horwitz	Sanjay Kewlani
Bill Grindell	Mark Hotsenpiller	David Keyes
L. Grithner	Deborah Howard-Page	Daniel Kim
Paul Groose	Edward Howden	Jana King
M.Bruce Grosjean	Julianne Howe	James Kinsinger
Lee Grygo	Keith Howell	John Kliment
Daniel Guaraldi	Ying Hsiao	Joseph Knight
Maijala Guerr	Vicky Huang	Eni Knight
Judith Guerriero	Sarah Hudson	Barbara Kockerols-Alvarez
George Guie	Ellen Hughes	Carolyn Koester
Pearl Gunsell	Joan & Jack Hughes	Blanche Korfmacher
Morgan Gwynn	Sarah Hummingbird	Ana Kreo
Ursula Haas	Karyn Hunt	Brooke Krohn
Lucile Hackett	David Hunter	Godelieve Kuppens
Jessica Hahn	Lisa Hunter	Amy Kyle
Robert Hall	Carolyn Hutchinson	Alex Labanda
Thomas Hall	Lois Hyatt	Matt Lafferty
Samuel Hall	Jennifer Hym	Tomi Lahdesneki
Brittany Hall	Mara Iaconi	Heather Laing-Obstbaum
Dean Halpern	Sacha Ielmorini	Theresa Lamb
F. Hammer	Eva Ihle	Theresa Lamb
Nedzada Handukic	Monica Incerti	Barbara Lane
Jim Hannah	Al Indicato	Patricia Langdell
Kristin Hansen	Hretna Ingadottir	Nechama Langer
Aimee Harcos	Ernesto Inuro	Lanoir
Gabriel Harlow	Rosa Iversen	Steven Lanum
Craig Harmer	Zach Ives	Melissa Laulle
Lisa Harms	Gwendolyn Jacobsen	Curt Lawson
Tom Harold	John Jameson	Gary Lea
Richard Harrigan	Denise Jameson	Alice Leach
Richard Harrigan	Roy Jarl	Elizabeth Leaf
Jill Harris	Patty Jaundzems	Joan Leaf
Tina Harris	Yari Jead	Joan & Elizabeth Leaf
Janet Harrison	Gerald Griffin Jean Clements	Kelly Leber
R. Hayden	Sara Jobin	Gloria Lee
Elizabeth Haylock	Diana Scott Joel Schechter	Preely Lehartowicz
Loie Hayward	Barbara Johnson	Troy Leone
Craig Hecker	Beverly Johnson	Salvatore Lesata
Michelle Hecnt	Wiebke Johnson	David Lesseps
Tim Heiman	Linda Jolie	Linda Lewin
Bob Henderson	Lori Jones	Deborah Lewis
Corey Hennessy	Jerone Jones	Erin Li
Ann Henry	Robin Jones	Alan Li
Karen Herman	Myra Jones-Taylor	Eric Liaw
Gustavo Hernandez	S. Jordan	Harry Lieberman
Donald Heyneman	Richard Jorgensen	Lori Liederman
John Hicks	Derek Jostad	Clifford Liehe

CITIZENS WHO SUBMITTED FORM LETTER COMMENTS ON THE DRAFT PEIR (Continued)

Form 2 (cont.)

Ho Lin	Joseph Meant	Vera Obermeyer
Irving Lind	Guadalupe Mecron	Melody O'Donnell
Sara Lind	Dorothy Medlin	Claudine Offer
Inavk Linenthal	Sue Mehrings	O'Finnegan
Lawrence Lipkind	Karen Menuz	Austin Okane
Kelly Liu	Carmen Meraza	Megan O'Leary
Alyss Lochen	John Merchant	Andrea O'Leary
Brice Lockord	Michael Merk	Pamela Olson
Esther Lomeli	Fred Merrick	Maureen O'Neal
Jean Long	Barbara Messmore	Eing Ong
Jacques Longval	Brad Meyers	Gene O'Ovidio
Gary Lopez	Chad Michel	Trudy Opitz
James Lovette-Black	Chad Michel	John O'Reilly
Patrishia Lowder	Nica Michoch	Nicole Osborn
Molley & Rich Lowry	Florence Miller	Chris Oshaben
Marshall Luck	Christine Mills	Duke Otoshi
Nancy Ludcke	David Milne	Carolyn Ozarchuk
Patricia Luddington	Kala Milosevich	Paula Page
Oscar Luna	David & Nancy Milton	M. Pains
Torborg Lundell	Buffy Mitchell	Jean Palmeter
T.J. Lupis	Miryum Mochkin	Sophia Papageorgiou
Kim Lynn	Julian Montellanos	Holly Pataki-Bettin
Barbara Lyon	Montez	Ruth Patschkowski
Xiue Ma	E. Mooney	Jay Patton
Regina Macias	Jubilith Moore	Jon Gatto Paul Colfer
Gwynn MacKellen	Alberto Moran	Eli Payton
Mary Mackin	Joe Moriarty	Sebastian Peck
Miles Madison	Colin Morris	John Pendleton
Paul Malhin	Richard Morris	Anita Pereira
Karen Malm	John Morris	Tina Perez
Maria Mansi	Richard Morris	Adele Perez
Ron Mantingh	Dennis Mosgofian	Marco Antonio Perez
Bruce Marcucci	Karen Mount	Jack Perkins
Barbara Margolis	Klaus Muehlmann	Dana Perrigan
Eli Marias	Gloria Mundt	Jeffrey Perrone
Maria Markoff	Geraldine Murphy	Chris Petaja
Ziliana Martinez	Joanna Murphy	Stefanie Peter
Marcello Martinez	Elizabeth Murrens	Faith Petric
Joseph Martinez	Chloe Lewis Myles Conley	Beth Pewther
Eric Wells Maryanne Razzo	Robert Myska	Andrea Pfaff
Caryn Mason	Louise Nakamura	Greta Phillips
David Massen	Katrina & Peter Nardini	Tim Phillips
Elisabeth Matkin-Sullins	Julia Nash	Susannah Phillips
Mary Matrux	Bill Nasser	Nora Phillips
Erna Matula	Jonas Nattoom	Maryte Piazza
Kelly Maughan	Lawrence Nelson	Marianna Pieck
Seth Mausner	Suzanne Nelson	Patricia Pierce
Lawrence Maxwell	Vanessa Nelson	Ed Pike
Alan McAllister	Fiya Nelson	Alex Pineda
Scarlett McCahill	Troy Nergaard	Nancy Piotrowski
Michelle McCarron	Denny Ng	John Piva
K. McClune	El Ng	Wendy Poinson
Alexandra McCormack	Lan Ngo	Benito Polo
Tracey McCormick	Marilyn Nichols	P.D. Poole
Brian McCracken	Noreen Nieden	Luke Powell
Norine McCulley	Stephanie Niemann	Laurle Prescott
Mary McDonnell	Caitlin No Name Entered	Mariah Price
Allison McDonough	Willard Norley	Louis Prisco
R. McEachern	David Nuegowski	Lisa Prochello
Doyle McGolden	Zilma Nuns	Megan Pruiett
K. McKenna	Jessica Nusbaum	T. Przybeck
John McKenna	Eric Nyman	Judith Pynn
Bill McLaughlin	William O Arge	Brad Quarstrom
Judith McManigal	Patricia O' Neill	Carlos Quintanilla

CITIZENS WHO SUBMITTED FORM LETTER COMMENTS ON THE DRAFT PEIR (Continued)

Form 2 (cont.)

Gina Quintinilla	Pamela Scrutton	Benilda Taft-Kiewek
JC Rafferty	Kinney Shah	Blodwen Tarter
Lynn Ragghianti	Louis Bennett Shauna Sadowski	Alicia Tavlen
Gaylin Raisler	Cynthia Shaw	Ian Tawes
Lord Ramsey	Daniel & Helen Sheehan	Anna Taylor
Sanjay Ranchod	Kenneth Sherey	LeeAnn Taylor
Stephen Randall	Brian Sherry	Jennifer Templin
Rebecca Rankin	Tina Shih	Rose Terrell
Martin Ratcliff	Mary Lynn Shimek	Rakia Thabet
Charles Rathbone	Suzanne Shinkle	Valentine Thaler
Patricia Reid	Esther Shon	Carol Thenot
Dale Reihart	Steve Shovelind	Kat They
D.J. Reilly	Brad Shutzberg	Nanci Thibs
M. Reynolds	Dano & Elizabeth Silva	Callie Thomas
Judy Reynolds	Kenneth Silveria	Andrea Hacher Thompson
Jeanne Rice	Robert Simac	James Thompson
Gary Richmond	Case Simmons	Benjamin Thompson
Samantha Rieter	Adam Simonoff	Richard Thompson
Lillyane Rietmann	Michael Simpson	Pete Thompson
Jose Rios	Marcia Sitaske	Charles Thornburgh
Olga Rios	Dorothy Skylok	Thea Miller Thornton Smith
Michael Ritter	Suellen Sleamaker	Joelle Tirindelli
Micca Rivera	Ray Sloan	Nelson Tobar
Deborah Robbins	Susan Smith	Zac Tobias
Rachel Galsoul Robert Halsy	Kris Smith	Alex Tokar
Lois Roberts	G. Austin Smith	Adrienne Toomey
Robin Roberts	J. Smith	Flora Torres
Betty Roi	Emily Smith	Andrew Tosiello
David Romaro	Aura Smithers	Mary Tovar
Eddy Rose	Regina Sneed	Kavita Trivedi
Eunice Rosenberg	Chris Sommerfield	Arthur James Ulam
Isadore Rosenthal	L.E. Sorenson	Karen Ulring
Mitzi Ross	Carol Soto	Pat Umhinger
Janet Rossi	Geraldine Souzis	Dan Unger
Antonio Rossi	Kathryn Spence	Harrison Unreadable
Bruce Rueppel	Michelle Spicher	Lilly Urbach
Olivia Ruiz	Jim Sprague	George Ushanoff
Kris Spangler Ruth Schlesinger	Laura Sriclesky	Elise Vaccarest
Patricia Rutherford	Sridaran Srivatsan	Geraldine Vahey
Michael Ryan	Fred Stabell	Sylvia Valdez
Frank Ryan	L. Stansfield	Paget Valentzas
M. Ryan	Loriel Starr	Barbara Valverde
Carina Ryan Wechsler	Kim Steele	Edward Van Eqri
Rob Ryanski	Steenbogen	M. Van Gils
Mitchell Sacks	Christina Stephens	Paul Van Houten
Jason Salfi	Heather Sterner	Laurens Vaneveld
Kadie Salfi	Leta Sternes	Sally Vangundy
Canyon Sam	Marilyn Stettler	Stephanie Vasilev
Oscar Samarran	Jesse Stevens	Susan Vaughan
Manuel Sanchez	Claudia Stillwell	Candace Vee
Xenia Sanders	Joel Streicker	David Velasquez
Luis Santiago	Adam Strom	Randol Venderford
Melissa Sarenae	Kina Sullivan	Matthew Vespa
Lauren & Matt Satlak	Ben Sun	Joe Viallcrino
Giancarlo Scalise	Sara Sunderek	John Victorino
Joel & Laine Schipper	Karin Surber	Villarroel
Susan Schneider	David McIlhenny	Martine Vincent
Michele Schoal	Susan Burkhardt	Jane Vincent Corlett
David Schott	Katherine Swan	Claire Visconti
David Schott	Walter Swan	Eleanor Visser
Brigitte Schulz	Walter Swan	Charles Wagner
Edward Schuster	Joshua Switzky	Johanna Wald
David Scortpimo	Edda Sydow	Pamela Wallach
Jeanie Scott	Paula Symonds	Charles Ward

CITIZENS WHO SUBMITTED FORM LETTER COMMENTS ON THE DRAFT PEIR (Continued)

Form 2 (cont.)

Paul Washington	Roger Williams	Eric Zivian
Bruce Watts	Cynthia Wilsey	Marya Zlatnik
Lyn Watts	Heather Wilson	Mike Zucksworth
Robert Watts	William Wilson	Lonn
Catherine Wayland	Elizabeth Wilson	Unreadable Name #1
Marilyn Webb	Recha Winkelman	Unreadable Name #2
John Webster	Grace Wi-Santiago	Unreadable Name #3
Stefani Wedl	Carl Wolf	Unreadable Name #4
Catherine Wehrmeister	Jonathan Wolfe	Unreadable Name #5
Abby Weidner	Carol Wong	Unreadable Name #6
Linda Weiner	F. Wong	Unreadable Name #7
Tes Welborn	Donald Woods	Unreadable Name #8
Ann Wellington	Danny Wright	Unreadable Name #9
Doug Wentworth	Huang Xinhng	Unreadable Name #10
Andrea Werplman	Karyn Yandar	Unreadable Name #11
Debbie West	Henry Yang	Unreadable Name #12
N. West	Alice Yavorsky	Unreadable Name #13
Ruth Wetherford	Larry Yavorsky	Unreadable Name #14
Jeanne Wetzel Chinn	Leslie Yip	Unreadable Name #15
Patty Wheeler	Jeff Younker	Unreadable Name #16
Kathleen White	Chris Yu	Unreadable Name #17
Mani White	Diane Zacher	Unreadable Name #18
Douglas White	Noe Zamoro Flores	Unreadable Name #19
Monroe Whitley	Turek Zarzycki	
David Willey	Julian Zepeda	

15.6 Form Letters

Form Letter 1

- C_FORM1-01 This comment states that the Draft PEIR inadequately addresses all of the environmental impacts that would result from increased Tuolumne River diversions and requests additional studies before finalization of the PEIR. Please refer to **Response C_Breso-01** for response.
- C_FORM1-02 This comment, which expresses support for more conservation and recycling to meet water demand and opposing additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP include 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

Form Letter 2

- C_FORM2-01 This comment, which expresses support for more conservation and recycling to meet water demand and opposing additional diversions from the Tuolumne River, is acknowledged. The 2030 purchase estimates prepared for the WSIP include 22 to 34 mgd of projected water conservation and recycling savings, in addition to 36 mgd of passive conservation savings due to plumbing codes (Draft PEIR, Vol. 1, Chapter 3, pp. 3-16 to 3-22). Please refer to **Section 14.2, Master Response on Demand Projections, Conservation, and Recycling** (Vol. 7, Chapter 14, Section 14.2.3), for additional information related to conservation programs and recycling projects being implemented or proposed by the SFPUC and its wholesale customers.

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15.7 References

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No references.

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