TOPICAL RESPONSE 9: STATE WATER PROJECT SUPPLY RELIABILITY

Comments have been received on the Draft EIS/EIR regarding the reliability of the water supplies, including imported State Water Project (SWP) water supplies and deliveries to the Santa Clarita Valley. Some comments claim that the Draft EIS/EIR did not evaluate the adequacy of SWP water resources in light of other residential units already entitled in the Santa Clarita Valley, particularly with the known Bay-Delta constraints to SWP supplies. This response addresses all such comments.

Comments that raise issues regarding the uncertainty of Castaic Lake Water Agency's (CLWA) 41,000 acre-feet (af) of SWP supplies, and uncertainties associated with water-related litigation (*e.g.*, *Wanger* decisions), other regulatory actions (*e.g.*, federal biological opinions for smelt and salmon), and future potential impacts due to global climate change are addressed in **Topical Response 5: Water Litigation and Regulatory Action Update**; **Topical Response 6: CLWA's 41,000 AFY Water Transfer**; **Topical Response 8: Groundwater Supplies and Overdraft Claims**; and **Topical Response 13: Global Climate Change Update**.

This response is based on the information presented in the Draft EIS/EIR, **Section 4.3**, Water Resources, relevant portions of which are summarized below. It also is based on numerous reports and studies referenced in or appended to the Draft EIS/EIR (see **Section 4.3**, pages 4.3-6-4.3-10), including those shown in date order below:

(a) "Water Supply Contract Between the State of California Department of Water Resources and CLWA," 1963 (plus amendments, including the "Monterey Amendment," 1995, and Amendment No. 18, 1999, the transfer of 41,000 acre-feet of SWP supplies from Kern County Water Agency to CLWA). (See Draft EIS/EIR, **Appendix 4.3**, for a copy of this contract, and subsequent amendments thereto.)

(b) California Department of Water Resources (DWR), "The State Water Project Delivery Reliability Report 2002," May 2003. (DWR Reliability Report, May 2003).

(c) "Newhall Ranch Revised Additional Analysis, Volume VIII," SCH No. 1995011015, May 2003 (Newhall Ranch Revised Additional Analysis; **Appendix 4.3**, Draft EIS/EIR);

(d) "2005 Urban Water Management Plan" (UWMP; **Appendix 4.3**, Draft EIS/EIR);

(e) California Department of Water Resources, "The State Water Project Delivery Reliability Report 2005, Final," April 2006. (DWR Reliability Report, April 2006).

(f) Santa Clarita Valley Water Reports (2006, 2007 Water Reports; **Appendix 4.3**, Draft EIS/EIR); and

(g) California Department of Water Resources, "The State Water Project Delivery Reliability Report 2007," August 2008. (DWR Reliability Report, August 2008). (See Draft EIS/EIR, **Appendix 4.3**, for a copy of the 2007 Delivery Reliability Report.)

The response also is based on information from DWR's latest draft report entitled, "The State Water Project Delivery Reliability Report 2009," dated December 2009 (DWR 2009 Draft Reliability Report). DWR's 2009 Draft Reliability Report became available after the Draft EIS/EIR was circulated for public review in April 2009. (DWR released the 2009 Draft Reliability Report for public review and comment

on January 26, 2010.) DWR's 2009 Draft Reliability Report is available for public review at http://baydeltaoffice.water.ca.gov and is provided in **Appendix F4.3** of the Final EIS/EIR. The report is an update to DWR's 2007 Delivery Reliability Report, issued as final in 2008. In addition, for further responsive information, please see revised **Section 4.3** of the Final EIS/EIR.

Availability and Reliability of SWP Water Supply

The Draft EIS/EIR thoroughly described and assessed existing SWP conditions both statewide and in the Santa Clarita Valley, and focused on the known SWP facilities, operations, deliveries, and constraints. (See Draft EIS/EIR, **Subsection 4.3.4**, pp. 4.3-14-4.3-38.) For example, the Draft EIS/EIR identified and summarized existing SWP facilities, including water quality and operational constraints imposed by the State Water Resources Control Board (SWRCB), and other constraints acknowledged by DWR due to recent federal court litigation, citing the two *Wanger* decisions and the federal biological opinion for Delta smelt. The Draft EIS/EIR also summarized the current status of the *Wanger* litigation and the Delta smelt biological opinion. Specifically, the Draft EIS/EIR stated:

> "The SWP is a water supply, storage, and distribution system that includes 28 storage facilities, reservoirs, and lakes; 20 pumping plants; six pumping-generating plants and hydroelectric power plants; and about 660 miles of aqueducts and pipelines. [Footnote omitted.] Principal SWP facilities are shown on **Figure 4.3-3** [depicting principal SWP facilities].
>
> In the southern Sacramento-San Joaquin Delta (Delta), water is pumped into the 444-mile-long California Aqueduct at the Clifton Court Forebay by the Banks Pumping Plant (or by agreement with the U.S. Bureau of Reclamation, at the Central Valley Project's (CVP) Tracy Pumping Plant). SWP water exports for users south of the Banks and Tracy pumping plants are currently limited by a series of water quality and operational constraints, governed primarily by the SWRCB Water Right Decision 1641 (D-1641), as amended. D-1641 was adopted by the SWRCB in 1999; prior to that time, SWP water exports from the Delta were limited by the SWRCB's Water Right Decision 1485 (adopted in 1978), Order Water Right (WR) 95-6 (adopted in 1995), and Order WR 98-09 (adopted in 1998). In addition, DWR has acknowledged constraints on the SWP system due to recent federal court litigation (*Natural Resources Defense Council v. Kempthorne*, 506 F.Supp.2d 322 (E.D. Cal. 2007) (*Wanger* Decision - Delta smelt); and *Pacific Coast Federation of Fishermen's Associations, et al. v. Gutierrez, et al.*, No. 06-CV-00245-OWW-GSA (E.D. Cal. 2008) (*Wanger* Decision - Chinook salmon/steelhead). (Copies of these two decisions are available in **Appendix 4.3**.) DWR has stated that it will operate the SWP and its facilities in accordance with all statutory requirements, and, in the immediate short-term time frame, operate the SWP using the remedies imposed by the federal court in the *Wanger* Decision to provide protection for Delta smelt, a listed fish species. Further, DWR has stated that a new Biological Opinion for Delta smelt will replace the trial court's order regarding the operation of the SWP, and the new Biological Opinion would continue to provide the mitigation required to address the SWP's impact on the Delta smelt and other listed fish species. (The current status of the Delta smelt Biological Opinion and the associated litigation is provided below.)" (Draft EIS/EIR, pp. 4.3-19, 4.3-22.)

The Draft EIS/EIR also included a subsection assessing SWP operations, deliveries, and constraints. (Draft EIS/EIR, **Subsection 4.3.4.2.2**, pp. 4.3-22-4.3-29.) In determining SWP delivery capability under current and future conditions, the Draft EIS/EIR used DWR's computer modeling (CALSIM II) and information from DWR's 2007 Reliability Report, August 2008, which was appended to the Draft EIS/EIR (see Draft EIS/EIR, **Appendix 4.3**). DWR's report assessed the impact of various conditions on SWP supply reliability, and provided estimates of SWP delivery reliability, using existing SWP facilities operated under current regulatory and operational constraints, and with all SWP contractors requesting delivery of their full Table A Amounts in most years. According to the Draft EIS/EIR, DWR's report also described "three areas of uncertainty to SWP delivery reliability," as follows:

> "To determine the SWP delivery capability under current and future conditions, DWR uses a computer model (currently, CALSIM II) that simulates operations of the SWP and CVP. DWR's most recently published estimates of SWP delivery reliability are included in DWR's State Water Project Delivery Reliability Report 2007 (August 2008). [Footnote omitted.]
>
> As background, DWR has assessed the impact of various conditions on SWP supply reliability since 2003. (See DWR Reliability Report, May 2003.) The report assisted SWP contractors in assessing the reliability of the SWP component of their overall supplies. DWR subsequently issued its 2005 SWP Delivery Reliability Report (April 2006). This updated analysis estimated that the SWP, using existing facilities operated under current regulatory and operational constraints, and with all contractors requesting delivery of their full Table A Amounts in most years, could deliver 77 percent of total Table A Amounts on a long-term average basis. The 2005 UWMP's discussion of SWP supply reliability is based on the analysis contained in the DWR 2005 Delivery Reliability Report, April 2006.
>
> Since that time, DWR released the 2007 State Water Project Delivery Reliability Report (August 2008). This Report updates the 2005 Delivery Reliability Report, and describes *three areas of uncertainty to SWP delivery reliability: (a) the recent and significant decline in pelagic organisms in the Delta (open-water fish such as striped bass, Delta smelt, and longfin smelt); (b) climate change and sea level rise; and (c) the vulnerability and potential failure of Delta levees.* The inclusion of new areas of uncertainty distinguishes the 2007 Delivery Reliability Report from earlier reports by including estimates of the potential reductions to SWP delivery reliability due to the pelagic organism decline and future climate changes.
>
> As described in the 2007 Delivery Reliability Report (August 2008), *simulations to evaluate future (2027) SWP delivery reliability incorporate the current interim court-ordered operating rules related to Delta smelt and a range of possible climate change impacts to hydrology in the Central Valley.* The interim operating rules for Delta smelt are simulated at a more restricted level and a less restricted level for Delta exports to provide a range of estimated water deliveries. Therefore, for 2007, two studies were conducted. For 2027, ten simulations were used to reflect the four assumed scenarios for climate change and the two levels of operating rules.
>
> The 2007 Delivery Reliability Report (August 2008) includes the information presented in **Tables 4.3-4** and **4.3-5**, below, which provide average and dry period estimated

deliveries for current conditions (2007) and future conditions (2027), and compares those figures to those in the DWR 2005 Delivery Reliability Report." (Draft EIS/EIR, pp. 4.3-23-4.3-24, italics added.)

Using DWR's estimates of delivery capability under both current and future conditions, the Draft EIS/EIR provided the following two tables summarizing average and dry-year SWP Table A deliveries under current (2007) and future (2027) conditions:

Table 4.3-4
Average And Dry Period SWP Table A Deliveries From The Delta Under Current Conditions

	SWP Table A Delivery from the Delta (in percent of maximum Table A[1])					
Study of Current Conditions	**Long-Term Average[2]**	**Single Dry-Year (1977)**	**2-Year Drought (1976-1977)**	**4-Year Drought (1931-1934)**	**6-Year Drought (1987-1992)**	**6-Year Drought (1929-1934)**
2005 SWP Reliability Report, Study 2005	68%	4%	41%	32%	42%	37%
Update with 2007 Studies[3]	63%	6%	34%	35%	35%	34%

Notes:

[1] Maximum Table A Amount is 4,133 thousand acre-feet/year.

[2] 1922-1994 for 2005 Delivery Reliability Report; 1922-2003 for Update with 2007 studies.

[3] Values reflect averaging annual deliveries from the two scenarios of Old and Middle River flow targets described in Table 6-3 of the 2007 Delivery Reliability Report.

Source: DWR Delivery Reliability Report, 2007 (August 2008), Table 6-5.

Table 4.3-5
Average And Dry Period SWP Table A Deliveries From The Delta Under Future Conditions

	SWP Table A Delivery from the Delta (in percent of maximum Table A[1])					
Study of Future Conditions	**Long-term Average[2]**	**Single dry-year (1977)**	**2-year drought (1976-1977)**	**4-year drought (1931-1934)**	**6-year drought (1987-1992)**	**6-year drought (1929-1934)**
2005 SWP Reliability Report, Study 2025	77%	5%	40%	33%	42%	38%
Update with 2027 Studies[3]	66-69%	7%	26-27%	32-37%	33-35%	33-36%

Notes:

[1] Maximum Table A Amount is 4,133 thousand acre-feet/year.

[2] 1922-1994 for 2005 Delivery Reliability Report; 1922-2003 for Update with 2027 studies.

[3] Range in values reflects four modified scenarios of climate change: annual Table A deliveries were first interpolated between full 2050 level and no climate change scenarios, then averaged over the two scenarios of Old and Middle River flow targets.

Source: DWR Delivery Reliability Report, 2007 (August 2008), Table 6-14.

In assessing **Table 4.3-5** (above), the Draft EIS/EIR also compared the estimates for SWP Table A deliveries under future conditions in the 2007 Report to the estimates previously provided in DWR's 2005 Delivery Reliability Report, showing a projected decrease in reliability:

> "As shown, under the updated Future Conditions (2027), average SWP delivery amounts may decrease from 8 to 11 percent of maximum Table A Amounts as compared to earlier estimates in the 2005 Delivery Reliability Report. This decrease in reliability results in an estimated average delivery of 66 percent to 69 percent (versus 77 percent as identified in the 2005 Delivery Reliability Report).
>
> Applying the 66 percent figure (most conservative of the 66-69 percent range) to CLWA's Table A Amount of 95,200 af, results in approximately 62,800 af expected under average Future Conditions (2027) according to the 2007 Delivery Reliability Report (August 2008). This is compared to the 77 percent, or 73,300 af, included in the water supply planning in the 2005 UWMP in 2030 in an average year." (Draft EIS/EIR, pp. 4.3-23-4.3-25, italics added.)

Further, the Draft EIS/EIR provided a discussion of SWP constraints, including climate change, the *Wanger* decisions, and the Delta smelt biological opinion:

> "**Further Discussion of Constraints.** A topic of growing concern for water planners and managers is global climate change and the potential impacts it could have on California's future water supplies. DWR's California Water Plan Update 2005 contains the first-ever assessment of such potential impacts in a California Water Plan. Volume 1, Chapter 4 of the Water Plan, Preparing for an Uncertain Future, lists the potential impacts of global climate change, based on more than a decade of scientific studies on the subject. In addition, please refer to **Section 8.0**, Global Climate Change, of this EIS/EIR, and, specifically, the appendices to that section. The appendix contains the best available information on the subject of global climate change and its effects on California's water supplies.
>
> Changes in Sierra snowpack patterns (the source of the SWP's water supply in Lake Oroville), hydrologic patterns, sea level, rainfall intensity, and statewide water demands are all possible should global climate change prove to be increasing through time. Computer models (such as CALVIN) have been developed to show water planners what types of effect climate change could have on the water supply. DWR has committed to continue to update and refine these models based on on-going scientific data collection, and to incorporate this information into future California Water Plans, so that agencies like CLWA and the purveyors can plan accordingly.
>
> DWR's 2007 State Water Project Delivery Reliability Report (August 2008) also addresses global climate change and its effects on the state's water resources, particularly the SWP's ability to deliver water. For the SWP, climate change has the potential to simultaneously affect the availability of source water, the ability to convey water, and users' demands for water. These potential effects are described further in the 2007 Delivery Reliability Report (August 2008), pp. 29-36.

In addition, recent state and federal court litigation has had an impact upon the availability and reliability of imported SWP supplies. For example, in October 2006, plaintiff, Watershed Enforcers, a project of the California Sportfishing Protection Alliance, filed a lawsuit in Alameda County Superior Court alleging that DWR was not in compliance with the CESA [California Endangered Species Act] and did not have the required state incidental take permit to protect the Delta smelt as part of DWR's pumping operations at the Harvey O. Banks Pumping Plant located near the town of Tracy (*Watershed Enforcers, et al. v. California Department of Water Resources, et al.* Alameda County Superior Court No. RG06292124 [*Watershed* decision]). In April 2007, the court agreed with the plaintiff and ordered a shutdown of pumping from the Delta if appropriate permits could not be obtained in 60 days. In May 2007, DWR filed an appeal of the trial court's decision, which automatically stayed the decision pending the outcome of the appeal. At the same time, DWR entered into a Memorandum of Understanding with CDFG to jointly work with the appropriate federal agencies to develop a federal Biological Opinion that complies with CESA. During preparation of the new Biological Opinion, DWR committed itself to actions related to protecting the Delta smelt and other species through adaptive management provisions. Upon completion of this effort, DWR plans to submit a request to CDFG for a consistency determination under CESA that would allow for incidental take based on the new federal Biological Opinion.

The *Wanger* Decisions also have affected imported SWP supplies. The background of the *Wanger* Decisions and their implications are discussed further below.

2007 *Wanger* Decision. On February 16, 2005, the USFWS issued its Biological Opinion, determining that the operations and criteria for both the CVP [Central Valley Project] and SWP would not result in jeopardy to the Delta smelt. On May 20, 2005, the Natural Resources Defense Council (NRDC) and others filed a supplemental complaint in federal court against the Secretary of the Interior and the Director of USFWS, challenging the adequacy of the 2005 Biological Opinion. On June 9, 2006, plaintiffs filed their motion for summary judgment. On July 6, 2006, in light of new information, the U.S. Bureau of Reclamation (Bureau), operator of CVP, requested that USFWS reinitiate consultation on the operations plan and criteria for the CVP. Notwithstanding the request for reinitiation of consultation, the parties proceeded with briefing their cross-motions for summary judgment and, on May 25, 2007, the U.S. District Court for the Eastern District, the Honorable Oliver W. Wanger, presiding, found that the 2005 Biological Opinion was inadequate and that the no-jeopardy determination was arbitrary, capricious, and contrary to the law. [Footnote omitted.]

Thereafter, on August 31, 2007, Judge Wanger announced an initial ruling, which outlined an operational plan calling for reductions in water supplies to protect the Delta smelt. The Court specified that reduced operations would last until the fall of 2008, while federal agencies develop a revised Biological Opinion for Delta smelt that will ensure the SWP's and CVP's compliance with the requirements of the federal ESA. (The current status of the Delta smelt Biological Opinion and the associated litigation is provided below.)

On December 14, 2007, Judge Wanger issued a final court order, which curtails Delta pumping to protect the Delta smelt. The range of reduced operations is consistent with earlier estimates made by DWR following the Court's initial ruling in August 2007. Following Judge Wanger's final ruling, DWR performed additional modeling and analysis of the impacts of the *Wanger* Decision on Delta pumping. According to DWR, the final ruling will primarily affect export pumping between January and June 2008, when juvenile Delta smelt are at greatest risk of entrainment in pumps. Further, DWR has stated that the actual impact on SWP water supply will depend on a number of factors, including the locations where adult smelt spawn and off-spring hatch, levels of precipitation for the year, and water temperatures affecting how quickly the fish migrate. The Court's restrictions on SWP/CVP operations will last until the fall of 2008, while the revised Biological Opinion for Delta smelt is completed (see below). The revised Biological Opinion is expected to impose restrictions that may continue reduced pumping operations in the SWP/CVP until broader solutions are implemented for the Bay-Delta.

2008 *Wanger* Decision. U.S. District Court Judge Oliver Wanger also recently invalidated a 2004 biological opinion issued by the National Marine Fisheries Service (NMFS). The 2004 NMFS Biological Opinion determined that, pursuant to section 7 of the federal ESA, the operation of the Delta pumps would not jeopardize the continued existence of three listed Delta fish species protected under the federal ESA, namely, the winter-run Chinook salmon, the Central Valley spring-run Chinook salmon, and the Central Valley steelhead. Judge Wanger invalidated the biological opinion by relying on several of the factual findings made by NMFS in that opinion. Judge Wanger also faulted the biological opinion for, among other issues, failing to adequately analyze the impact of the operations plan on the critical habitat of the three species. [Footnote omitted.]

After Judge Wanger's ruling, the court held hearings in June and July 2008 on possible remedies; however, no further remedies were imposed beyond the curtailments already issued with respect to the Delta smelt in the prior 2007 *Wanger* Decision.

. . .

On December 15, 2008, USFWS issued the new Biological Opinion for Delta smelt. The Opinion continues restrictions on SWP and federal CVP operations that have been in place under Judge Wanger's order concerning Delta smelt. However, the Opinion also imposes new requirements for Delta outflows under certain conditions and requires increased reservoir releases in the fall of some years to reduce salinity. DWR has not yet issued a new "State Water Project Delivery Reliability Report," which is expected to address the ramifications of the new Biological Opinion, and its effects on SWP supplies and deliveries. DWR is expected to issue the 2009 State Water Project Delivery Reliability Report in 2010. In response to the Biological Opinion, on March 5, 2009, the State Water Contractors and others filed litigation challenging the new Delta smelt Biological Opinion under provisions of the federal Endangered Species Act. The litigation is still pending, and the outcome of the litigation cannot be predicted as of this writing." (Draft EIS/EIR, pp. 4.3-25-4.3-28.)

In addition, the Draft EIS/EIR evaluated the implications of both the state court litigation and the two federal *Wanger* decisions in terms of impacts on imported SWP/CVP water supplies throughout California. This evaluation also took into account the recent regulatory actions taken by the U.S. Fish and Wildlife Service (USFWS) and the California Fish and Game Commission, as well as associated litigation. Specifically, the Draft EIS/EIR stated:

> "The *Watershed* and the two *Wanger* Decisions, and the recent actions taken by USFWS and California Fish and Game Commission, as well as the associated litigation, have serious implications on imported SWP/CVP water supplies throughout California. These implications are outlined below based on the best available information.
>
> In terms of short-term water supply availability, there have been short-term effects related to issues presented in the *Watershed* and *Wanger* Decisions. For example, pumping operations were shut down for approximately nine days in June 2007 due to concerns over the declining number of Delta smelt. DWR then operated the pumps at limited levels for several weeks while waiting for the smelt to migrate to cooler waters. DWR then resumed normal operations in July 2007. There is also concern that the remedy adopted by the District Court could ultimately become part of the conditions in the new incidental take permit, which is currently subject to litigation. These concerns, if they materialize, could limit the percentage of SWP water that can be delivered to SWP Contractors, including CLWA. If such remedies are not ultimately part of the incidental take permit, the permit itself may contain conditions that would lower the percentage of SWP water made available for delivery to Southern California, including the Santa Clarita Valley." (Draft EIS/EIR, p. 4.3-28.)

The Draft EIS/EIR also evaluated the long-term implications of the litigation and the referenced regulatory actions on imported SWP/CVP water supplies in California, stating:

> "Over the long-term, water supply availability and reliability will continue to be assessed by DWR in DWR's biennial SWP delivery reliability reports. These reports take into account a myriad of factors in evaluating long-term water supply availability and reliability. These factors include multiple sources of water, a range of water demands, timing of water uses, hydrology, available facilities, regulatory restraints, including pumping constraints due to impacts on listed fish species, water conservation strategies, and future weather patterns. The *Watershed* and the two *Wanger* decisions highlight the regulatory restraints applicable to SWP supplies, which have impacted DWR deliveries of SWP supplies in the past, and could curtail such deliveries in the future." (Draft EIS/EIR, p. 4.3-29.)

In addition to the above, the Draft EIS/EIR included an additional subsection devoted to an assessment of the "litigation effects on availability of imported water." (Draft EIS/EIR, pp. 4.3-67-4.3-73.) Based on that analysis, the Draft EIS/EIR acknowledged the court cases challenging the sufficiency of imported water supplies in the Santa Clarita Valley, but, nonetheless, determined that substantial evidence existed in the Draft EIS/EIR and record to support the conclusion that "there is sufficient water to serve the proposed Project, the alternatives, as well as anticipated cumulative development in the Santa Clarita Valley." (Draft EIS/EIR, p. 4.43-73.)

From an impact perspective, the Draft EIS/EIR also identified significance criteria specific to water supply availability to serve the proposed Project and the alternatives. The significance criteria used in the Draft EIS/EIR stated that water supply impacts would be significant if implementation of the proposed Project or its alternatives would:

> "2. Have insufficient water supplies available to serve the project from existing entitlements and resources, or result in the need for new or expanded entitlements (Significance Criterion 2)." (Draft EIS/EIR p. 4.3-76.)

The Draft EIS/EIR then analyzed the direct, indirect, and secondary impacts on water supplies associated with the proposed Project and alternatives based on the significance criteria, including the water supply criterion quoted above. (Draft EIS/EIR, pp. 4.3-76-4.3-116.) After conducting the analysis, the Draft EIS/EIR found no secondary water resource impacts relative to any of the significance criteria. As to direct and indirect impacts, the Draft EIS/EIR concluded, as follows:

> "The direct and indirect water demands of the proposed Project and alternatives are summarized in this subsection. **Table 4.3-18**, above, summarizes the construction water demand of the proposed Project and alternatives, and the percentage that this demand represents of the applicant's total available existing agricultural water demand (7,038 afy). **Table 4.3-26** summarizes the water demand and supplies of the proposed Project (Alternative 2) and the alternatives (Alternatives 3-7). The water demands of the Specific Plan would be met primarily by the applicant's supplies (*e.g.*, agricultural water, Nickel water, Newhall Ranch WRP). The demands of VCC and Entrada are included the Santa Clarita Valley demands shown in the 2005 UWMP, which would be met by the imported and local supplies also indicated in the 2005 UWMP. **Table 4.3-27** summarizes the indirect operational water demands of the Specific Plan, plus VCC and Entrada, as well as the corresponding percentage reduction in demand. *Based on the information presented in this EIS/EIR, there would be no significant impacts on water supplies from the demands of the proposed Project (Alternative 2) and the alternatives (Alternatives 3-7), as water supplies meet or exceed the estimated water demands*." (Draft EIS/EIR, pp. 4.3-116, 4.3-118, italics added.)

Water Supplies to Meet Cumulative Project Demand

Comments have claimed that there is not enough water for existing residents, businesses, approved development not yet constructed, as well as the Newhall Ranch Specific Plan in the Santa Clarita Valley. However, as evidenced in the Draft EIS/EIR's analysis of water supplies and demand (see **Section 6.0**, Cumulative Impacts), there are sufficient water supplies to accommodate *all* cumulative development in the Santa Clarita Valley. The Draft EIS/EIR's cumulative water impacts analysis includes a determination of whether enough water would exist in the future to meet the needs of existing residents, the Specific Plan, as well as development approved but not yet constructed and development still in the proposal stages (including general plan amendment requests). (See Draft EIS/EIR, **Subsection 6.5.3.2**, Cumulative Water Resources Impacts.) As stated in the Draft EIS/EIR:

> "The analysis evaluates cumulative impacts utilizing the plan approach under the following two future water demand and supply scenarios:

Scenario 1. Existing development within the CLWA service area (see **Figure 4.3-1**, Castaic Lake Water Agency Service Area), plus near-term projections (*i.e.*, to be built in the next 10 years or less), plus the proposed Project (referred to as the SB 610 Water Demand and Supply Scenario).

Scenario 2. Build-out within the CLWA service area by 2030, plus active pending General Plan Amendment requests, plus the proposed Project (referred to as the Santa Clarita Valley 2030 Build-Out Scenario).

6.5.3.2.3 *SB 610 Water Demand and Supply Scenario*

The Newhall Ranch Specific Plan, VCC, and Entrada projects will require approximately 19,909 afy at build-out during average years and 21,890 afy during dry years. This demand is accounted for by the UWMP. The average year, dry year, and multiple dry-year water assessments are presented below.

As shown in **Tables 6.0-21** to **6.0-23**, purveyors have access to an amount of water that exceeds demand under all conditions. As discussed in **Section 4.3**, adequate water exists to serve the proposed Project, and the proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Therefore, the incremental effects of the proposed Project are not significant when viewed in connection with the effects of other past, present, and foreseeable future development projects. Cumulative water resources impacts are less than significant, and the proposed Project's incremental contribution to cumulative impacts is less than cumulatively considerable (Criteria 1 and 2).

6.5.3.2.4 *The Santa Clarita Valley 2030 Build-out Scenario.*

The Santa Clarita Valley 2030 Build-Out Scenario entails build-out of lands under the current land-use designations indicated in the County's Area Plan and the city of Santa Clarita's General Plan by the year 2030, plus the proposed Project, plus all known active pending General Plan amendment requests for additional urban development in the County unincorporated area and the city of Santa Clarita, including the VCC and Entrada sites. When combined, the 2030 build-out scenario demand is approximately 125,400 af with conservation in an average year. (2005 UWMP and 2003 Newhall Ranch Additional Analysis.)

Table 6.0-24 and **Table 6.0-25** summarize the cumulative water demand and supply for this 2030 build-out scenario. As shown, the project is not expected to create any significant cumulative water availability impacts in either average or dry years. In addition, under the build-out scenario, there are adequate water supplies for each project alternative, with no significant cumulative water supply impacts occurring in either average or dry years. The water supplies exceed demand under this build-out scenario in average and dry years in 2030 with Alternative 2. Alternatives 3 through 7 create less water demand than Alternative 2. Consequently, no cumulatively significant average and dry year impacts would be created with any of the alternatives studied." (Draft EIS/EIR, pp. 6.0-77-6.0-78.)

As summarized in the Draft EIS/EIR:

> "As depicted in **Table 6.0-25**, purveyors have access to an amount of water that exceeds demand under all conditions. As discussed in **Section 4.3**, adequate water exists to serve the proposed Project, and the proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Therefore, the incremental effects of the proposed Project are not significant when viewed in connection with the effects of other past, present, and foreseeable future development projects. Cumulative water resources impacts are less than significant, and the proposed Project's incremental contribution to cumulative impacts is less than cumulatively considerable (Criteria 1 and 2)." (Draft EIS/EIR, p. 6.0-79.)

Draft EIS/EIR's Estimate of Water Demand for the Newhall Ranch Specific Plan and Project Alternatives

Other comments have stated that the water demand for the Newhall Ranch Specific Plan and other uses in the Santa Clarita Valley is understated. However, no evidence supports these claims. The Draft EIS/EIR thoroughly addressed the water demand of the Specific Plan and the water demand of other users in the Santa Clarita Valley. Please refer to the Draft EIS/EIR, pages 4.3-82-4.3-84, for a description of the anticipated Specific Plan water demand. As summarized in the Draft EIS/EIR:

> "The methodology used to determine the Specific Plan's water demand is presented in the Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003), Section 2.5, Water Resources. The summary provided below of the Specific Plan water demand is taken from the Newhall Ranch Revised Additional Analysis. However, since approval of the Specific Plan in May 2003, the Specific Plan's anticipated water demands have been refined. (See Technical Memorandum, Water Demand Update for Newhall Ranch (September 24, 2008), prepared by GSI Water Solutions, Inc., which is found in **Appendix 4.3** of this EIS/EIR).
>
> The total revised water demand for the Specific Plan is estimated to be approximately 16,400 afy, which is down from the 17,680 afy originally forecasted (*i.e.*, an approximate seven percent reduction in demand). Of this total, potable demand is 8,135 afy and non-potable demand is 8,265 afy. Specific Plan demand also would increase by approximately 10 percent in years with lower than average local rainfall (a "dry year") to a total Specific Plan demand of 18,040 afy in that dry year." (Draft EIS/EIR, p. 4.3-83.)

In addition, the source for the cumulative water demand used in the Draft EIS/EIR is the 2007 Santa Clarita Valley Water Report and the 2005 UWMP, both of which are provided in Draft EIS/EIR, **Appendix 4.3**. The water demand and supply have been analyzed under two scenarios, both of which employ the use of water demand projections provided by CLWA and the Santa Clarita Valley water purveyors. As stated in the Draft EIS/EIR:

> "The following discussion focuses on the cumulative impacts to water availability for the Santa Clarita Valley. The analysis evaluates cumulative impacts utilizing the plan approach under the following two future water demand and supply scenarios:

> **Scenario 1.** *Existing development* within the CLWA service area (see **Figure 4.3-1**, Castaic Lake Water Agency Service Area), *plus near-term projections* (*i.e.*, to be built in the next 10 years or less), *plus the proposed Project* (referred to as the SB 610 Water Demand and Supply Scenario).
>
> **Scenario 2.** *Build-out within the CLWA service area by 2030, plus active pending General Plan Amendment requests, plus the proposed Project* (referred to as the Santa Clarita Valley 2030 Build-Out Scenario)." (Draft EIS/EIR, page 6.0-71, italics added.)

Because the comments provide no support for claims regarding underestimated water demands, no further response can be provided.

Comments also have claimed that the Draft EIS/EIR incorrectly uses the same water demand for Alternatives 2-7. In fact, the Draft EIS/EIR correctly reported the varying water demands for the proposed Project and each alternative. As shown in Draft EIS/EIR, **Table 4.3-26**, Summary Table of Water Demand and Supplies, page 4.3-117, the water demand for each alternative ranges from a high of 16,400 afy for Alternative 2 to a low of 9,465 afy for Alternative 7 (Alternative 1 does not generate water demand).

Article 21 Water

Other comments have claimed that the Draft EIS/EIR does not indicate that Article 21 water (which refers to the SWP contract provision defining this supply) will not be available in the future. However, the Draft EIS/EIR addressed Article 21 water by reference to the 2005 UWMP, which was appended to the Draft EIS/EIR (see **Appendix 4.3**). As stated in the 2005 UWMP, pages 3-5 and 3-6:

> "While the primary supply of water available from the SWP is allocated Table A supply, SWP supplies in addition to Table A water may periodically be available, including 'Article 21' water, Turnback Pool water, and DWR dry-year purchases. Article 21 water (which refers to the SWP contract provision defining this supply) is water that may be made available by DWR when excess flows are available in the Delta (i.e., when Delta outflow requirements have been met, SWP storage south of the Delta is full, and conveyance capacity is available beyond that being used for SWP operations and delivery of allocated and scheduled Table A supplies). Article 21 water is made available on an unscheduled and interruptible basis and is typically available only in average to wet years, generally only for a limited time in the late winter."

Article 21 water is not a source of supply relied upon by CLWA and the Santa Clarita Valley water purveyors as part of the water supply plan for the Santa Clarita Valley. (Draft EIS/EIR, **Table 4.3-6**, Summary of Current and Planned Water Supplies and Banking Program.) As indicated in the 2005 UWMP and above, Article 21 water is available only during average to wet years, and for limited times in the late winter. Constraints on the SWP (*e.g.*, drought conditions, ongoing Delta pumping limitations, *etc.*) may limit the availability of Article 21 water in future years.

2009 Draft State Water Project Delivery Reliability Report

Finally, since circulation of the Draft EIS/EIR in April 2009, DWR has updated the report it produces every two years as part of the Monterey Settlement Agreement provisions signed in 2003. The DWR 2009 Draft Reliability Report was released for public review and comment on January 26, 2010.[1]

Specifically, the report is an update to the 2007 Delivery Reliability Report, issued as final in August 2008. The report updates estimates of the current (2009) and future (2029) SWP delivery reliability and incorporates regulatory requirements for SWP and Central Valley Project (CVP) operations in accordance with a U.S. Fish and Wildlife Service biological opinion for the Delta smelt (December 2008) and a National Marine Fisheries Service biological opinion for salmon (June 2009). Estimates of future SWP delivery reliability also reflect potential impacts of climate change, sea level rise, and vulnerability of Delta levee failure due to floods and earthquakes. In summary, the report provides as follows:

> "The report shows that future SWP deliveries will be impacted by two significant factors. The first is significant restrictions on SWP and Central Valley Project (CVP) Delta pumping required by the biological opinions issued by the U.S. Fish and Wildlife Service (December 2008) and National Marine Fisheries Service (June 2009). The second is climate change, which is altering the hydrologic conditions in the State.
>
> This report represents the state of water affairs if no actions for improvement are taken. It shows continued erosion of SWP water delivery reliability under the current method of moving water through the Delta. The updated analysis shows that the primary component of the annual SWP deliveries (referred to as Table A deliveries) will be less under current and future conditions, when compared to the preceding report (*State Water Project Delivery Reliability Report 2007).*
>
> The report discusses areas of significant uncertainty to SWP delivery reliability:
>
> - restrictions on SWP and CVP operations due to State and federal biological opinions to protect endangered fish such as delta smelt and spring-run salmon;
> - climate change and sea level rise; and
> - the vulnerability of Delta levees to failure due to floods and earthquakes.
>
> As in previous reports, estimates of SWP deliveries are based upon operation simulations with DWR's CalSim II model using an extended record of runoff patterns. These patterns have been adjusted to reflect the levels of development in the source areas and, for future conditions, possible impact due to climate change and accompanying sea level rise. Potential deliveries under current conditions are estimated at the 2009 level and assume current methods of conveying water across the Delta and the current operational rules contained in the federal biological opinions. Potential deliveries under future conditions are estimated at the 2029 level and are also based on the assumptions that no changes will be made in either the way water is conveyed across the Delta or in the operational rules. The analysis of future conditions incorporates a climate change scenario from DWR's

[1] DWR's 2009 Draft Reliability Report is provided in **Appendix F4.3** of the Final EIS/EIR.

2009 report, *Using Future Climate Projections to Support Water Resources Decision Making in California*, which represents the median effects of the 12 scenarios contained in the report.

The 2009 draft report shows greater reductions in water deliveries on average when compared to the 2007 report. The 2007 report incorporates the interim operation rules established by Judge Wanger in the federal court in 2007. It shows very significant reductions in SWP deliveries when compared to the 2005 report, which assumes operation rules that were less restrictive. The 2007 report shows current SWP annual Table A deliveries averaging 63% (2595 taf) of the maximum contract amount of 4,133 thousand acre-feet (taf) per year. The 2009 report shows a corresponding value of 60% (2485 taf). The 2007 report projects an annual average of 66% to 69% (2725-2850 taf) for the future condition, whereas the updated report has 60%.

Although the averages of the updated estimates are less than were estimated in the 2007 report, the annual deliveries during drier conditions are projected to be somewhat higher than estimated in the 2007 report. This is due to the updated analysis incorporating the ability of SWP contractors to save water allocated in one year for delivery in the subsequent year and because water stored upstream cannot be delivered in some years due to export restrictions and is, therefore, available in drier times. . . .Under current conditions, annual SWP Table A deliveries from the Delta average 60% of the maximum annual amount of 4,133 taf per year. Over the 82-year simulation period, annual SWP Table A deliveries range from 7% to 81% of the maximum amount. Over multiple-year dry periods, average annual Table A deliveries vary from 34% to 36% of the maximum Table A amount, while average annual deliveries over multiple-year wet periods range from 67 to 71% of the maximum Table A amount. Under current conditions, annual SWP Article 21 deliveries, a secondary component of annual deliveries, average 85 taf and range from 2 taf to 850 taf over the 82-year simulation period.

Under future conditions, annual SWP Table A deliveries from the Delta also average 60% of the maximum Table A amount. Over the 82-year simulation period, annual SWP Table A deliveries range from 11% to 97% of the maximum amount. Over multiple-year dry periods, average annual Table A deliveries vary from 32% to 38% of the maximum Table A amount, while average annual deliveries over multiple-year wet periods range from 72 to 93% of the maximum Table A amount. Under future conditions, annual SWP Article 21 deliveries average 60 taf, ranging from 1 taf to 540 taf over the 82-year simulation period." (DWR 2009 Draft Reliability Report, Summary, pp. 1-2.)

The Draft EIS/EIR used DWR's published estimates of SWP delivery reliability from DWR's 2007 Reliability Report, August 2008. (Draft EIS/EIR, pp. 4.3-23-4.3-25.) The estimates were based on DWR's use of CALSIM II modeling to determine the SWP delivery capability under current conditions (2007) and future conditions (2027). (*Id.*) The Draft EIS/EIR also included a complete copy of the 2007 Reliability Report in **Appendix 4.3**. This data represented the best available information at the time the Draft EIS/EIR was released for public review in April 2009.

Since that time, DWR has issued its updated 2009 Draft Reliability Report. As stated above, DWR's updated report shows greater reductions in SWP water deliveries on average when compared to DWR's

2007 Reliability Report. For example, the 2007 report showed current SWP annual Table A deliveries averaging 63 percent of the maximum contract amount of SWP supplies, while the 2009 report shows a corresponding reduction of 60 percent under current average year conditions. The 2007 report projected an annual average of 66 to 69 percent for *future* average year conditions, whereas the updated report has reduced that percentage to 60 percent.

The Final EIS/EIR, **Section 4.3**, has been revised to reflect the latest DWR estimates in determining SWP delivery capability under current and future conditions, based on DWR's updated 2009 Draft Reliability Report. As reflected in the Final EIS/EIR, **Section 4.3**, even with DWR's latest estimates, which have been reduced to account for restrictions in operations due to federal biological opinions, climate change, sea level rise, and vulnerability of Delta levees, it has been determined that substantial evidence exists in the Final EIS/EIR and record to support the conclusion that sufficient SWP supplies remain available to serve the proposed Project and alternatives, as well as projected cumulative development in the Santa Clarita Valley. Please note that while the draft 2009 SWP Delivery Reliability Report (December 2009) represents reasonable scenarios, recent reductions in SWP supply narrow the gap between the available supply and demand in the future, thereby making the CLWA service area more susceptible to shortages in certain dry years. Accordingly, the reduction in SWP supply reinforces the need to continue diligent efforts to conserve potable water and increase the use of recycled water, both to meet the goals in the 2005 UWMP and to maximize utilization of potable water supplies. According to CLWA and the retail water purveyors, they will continue to work diligently with Los Angeles County and the City of Santa Clarita with water conservation ordinances and the enforcement mechanisms to aggressively implement water conservation in the CLWA service area. Despite the reduction in SWP reliability to 60 percent in average year conditions, a supply of water that exceeds future demand in the Santa Clarita Valley remains available to local purveyors, and impacts to water resources would remain less than significant. It also should be noted that SWP reliability reductions do not impact the applicant's ability to store its Nickel water (water under contract with the Nickel Family, LLC in Kern County) in the Semitropic bank program because this water is 100 percent reliable on a year-to-year basis, and not subject to the annual fluctuations that can occur in dry year conditions. (Draft EIS/EIR, **Subsection 4.3.6.2.2**, Indirect Impacts).