

**Addendum to the Environmental
Impact Report (EIR)**

for the

Antelope Valley Solar Project (AVSP)

October 3, 2011

This Addendum to the Environmental Impact Report (EIR) for the Antelope Valley Solar Project (AVSP) has been prepared by Los Angeles County to provide additional information regarding the analysis of the effects of the proposed project on groundwater and water supplies. The AVSP is a proposed 650 megawatts photovoltaic (PV) solar electrical generating facility on 4,782 acres, with 462 megawatts on 3,544 acres in Kern County and 188 megawatts on 1,238 acres in Los Angeles County.

Kern County acted as lead agency under the California Environmental Quality Act (CEQA) in preparing the EIR for the Project, which included an accompanying water supply assessment titled Senate Bill 610 Water Supply Assessment for Antelope Valley Solar Project Kern and Los Angeles Counties, California dated May 2011, prepared by Aspen Environmental Group. Kern County certified the EIR, approved the water supply assessment, and issued a Conditional Use Permit for the Kern County portion of AVSP on August 2, 2011.

The Applicant, Renewable Resources Group, has requested a Conditional Use Permit from Los Angeles County for the portion of the ASVP that is located within Los Angeles County. As such, Los Angeles County is a Responsible Agency under CEQA.

A responsible agency's role under CEQA is more limited than that of a lead agency, and the responsible agency generally must rely on the information provided in the lead agency's EIR. Section 15096(a) of the CEQA Guidelines provides that a "responsible agency complies with CEQA by considering the EIR or negative declaration prepared by the lead agency and by reaching its own conclusions on whether and how to approve the project involved." Pursuant to CEQA Guidelines section 15096(e), a responsible agency must take any issue that it has regarding the adequacy of the EIR to court within 30 days after the lead agency files its notice of determination, or "be deemed to have waived any objection to the adequacy of the EIR or negative declaration." A responsible agency may prepare a subsequent or supplemental EIR only if the triggering events specified in CEQA Guidelines sections 15162 or 15163 have occurred. Further, CEQA Guidelines section 15096(g) states that when "considering alternatives and mitigation measures, a responsible agency is more limited than a lead agency. A responsible agency has responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of the project which it decides to carry out, finance, or approve."

Los Angeles County does not take issue with the adequacy of the ASVP EIR. Further, none of the events triggering preparation of a subsequent or supplemental EIR have occurred. However, some of the technical information in the Final EIR and accompanying water supply assessment merit further discussion. Accordingly, the County has determined that an addendum is the appropriate vehicle to augment the information in the ASVP EIR prior to Los Angeles County's consideration of whether or how to approve the portion of the ASVP that is located within Los Angeles County.

CEQA Guidelines section 15164 allows the preparation of an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in CEQA Guidelines section 15162 (Subsequent EIRs) calling for preparation of a subsequent EIR have occurred. An agency can use an addendum to the previous EIR if it would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects. In accordance with State CEQA Guidelines section 15164, regarding minor modifications to a previously approved EIR, this Addendum to the ASVP EIR incorporates, by reference, discussions from the certified ASVP EIR and accompanying water supply assessment.

Antelope Valley Solar Project Water Supply Assessment

The water supply assessment for the proposed ASVP contains technical information regarding the Antelope Valley Groundwater Basin (Basin). Los Angeles County disagrees with some of the technical information in the WSA, as explained below. Los Angeles County agrees, however, with the overall conclusion of the WSA that projected water supplies available during normal, single dry, and multiple dry years over the next 20 years will meet the projected water demand of the proposed ASVP, in addition to existing and planned uses of the identified water supplies. The ASVP would not increase pumping from the Basin, and the ASVP would not change the timing or location of such pumping. Accordingly, the disagreements regarding the accuracy of the technical information provided by the WSA, described below, do not necessitate preparation of a supplemental or subsequent EIR.

Basin Characteristics

In section 3.1, on page two, the ASVP water supply assessment describes the characteristics of the Antelope Valley Groundwater Basin. The WSA states the Basin is divided into 12 subunits, provides flow direction for some of the subunits, and includes statements regarding hydrologic divisions between subunits:

The Antelope Valley Groundwater Basin is divided by the U.S. Geological Survey (USGS) into 12 subunits based on differential groundflow patterns, recharge characteristics, and geographic location, as well as by controlling geologic structures; the proposed project site overlies the Neenach and Willow Springs Subunits. Within the Neenach Subunit, groundwater flow is mainly eastward into the “principal” and “deep” aquifers of the Lancaster subunit. Depth to water ranges from 150 to 350 feet. Within the Willow Springs Subunit, groundwater flows southeast and ultimately enters the Lancaster subunit. This subunit receives recharge from intermittent surface flows from the surrounding Tehachapi Mountain area. Depth to water ranges from 100 to 300 feet. The Neenach and Willow Springs Subunits are hydrologically separated by the Willow Springs fault, which is understood to be an effective barrier to groundwater movement (USGS, 2003). Due to the hydrologic divide between these subunits, rates of groundwater production and characteristics of groundwater quality may vary across the project site. Runoff in Big Rock and Little Rock Creeks from the San Gabriel Mountains and in Cottonwood Creek from the Tehachapi Mountains flows toward a closed basin at Rosamond Lake (DWR, 2004). Rogers Lake is a closed basin in the northern part of Antelope Valley that collects ephemeral runoff from surrounding hills (DWR, 2004).

Los Angeles County disagrees with the statements regarding hydrologic divisions between subunits. As reported in the WSA, the legal process to adjudicate and manage the Basin has been underway since the late 1990s. In November 2008, Superior Court Judge Komar determined the evidence demonstrated there is sufficient hydrologic connection between the disputed portions of the Basin such that the court must include all of the disputed areas within the adjudication area. *Antelope Valley Groundwater Cases*, Judicial Council Coordination Proceeding No. 4408, Los Angeles County Superior Court Case No. BC 325 201, Order After Phase Two Trial on Hydrologic Nature of Antelope Valley (Nov. 6, 2008). More recently, Judge Komar recognized that it ultimately may be necessary to provide for some level of separate management within different parts of the aquifer; however, Judge Komar established a safe yield for the Basin based on the court’s earlier ruling regarding

hydrologic connectivity. *Antelope Valley Groundwater Cases*, Judicial Council Coordination Proceeding No. 4408, Los Angeles County Superior Court Case No. BC 325 201, Statement of Decision Phase Three Trial (July 13, 2011). Any safe yield analysis must be conducted in a manner that recognizes and acknowledges the Basin is a single basin.

The conclusions in the WSA do not depend upon hydrologic connectivity among different parts of the Basin, or any lack thereof. Accordingly, this disagreement regarding the background, technical information in the WSA does not necessitate revision to the WSA's conclusion that total projected water supplies available during normal, single dry, and multiple dry years over the next 20 years will meet the projected water demand of the proposed project, in addition to existing and planned uses of the identified water supplies.

Recharge and Storage Capacity

On page two, the WSA describes natural recharge to the Basin from perennial runoff. The WSA states that a current groundwater budget for the Basin is not available:

A current groundwater budget for the Antelope Valley Groundwater Basin is not available, due to lack of comprehensive quantitative data regarding inflows and outflows (discussed further under "Safe Yield," below).

Los Angeles County disagrees with the statement that a groundwater budget and supporting data are not available. In July, 2010, six experts retained by eight of the parties to the Antelope Valley Groundwater Cases prepared a report to summarize their collective, integrated efforts to describe the geology, occurrence of groundwater, and overall conditions in the Valley as related to historical and current land uses, water-requirements, surface and groundwater supplies, including natural and supplemental sources of groundwater recharge, resultant groundwater basin yield, extent of groundwater use, and resultant groundwater basin conditions. The report also summarizes the treatment, utilization and disposal of recycled water in the Valley. Robert Beeby, Timothy Durbin, William Leever, Peter Leffler, Joseph C. Scalmanini, and Mark Wildermuth, Summary Expert Report Phase 3—Basin Yield and Overdraft, Antelope Valley Area of Adjudication (July, 2010) (2010 Summary Expert Report).

The 2010 Summary Expert Report contains extensive data regarding the Basin and presents several analyses that independently reached the same native recharge calculations. The 2010 Summary Expert Report includes a groundwater budget and supporting data. Further, in ruling on the total safe yield of the Basin in the Phase Three trial, Judge Komar relied on evidence from the 2010 Summary Expert Report. Los Angeles County has determined this report should be included in the record of proceedings.

The conclusions in the WSA do not depend upon the absence of a groundwater budget and supporting data. Accordingly, this disagreement regarding the background, technical information in the WSA does not necessitate revision to the WSA's conclusion that total projected water supplies available during normal, single dry, and multiple dry years over the next 20 years will meet the projected water demand of the proposed project, in addition to existing and planned uses of the identified water supplies.

Historic Groundwater Trends/ Water Budget and Safe Yield

On pages three and four, the WSA describes historic pumping activities, groundwater level trends and a simulated flow budget from the USGS Groundwater Flow Model based on

1949 to 1953 average conditions and 1991 to 1995 average conditions. In several locations, the WSA indicates that the Basin is recovering from overdraft conditions:

Table 1 shows that between the 1950s and 1990s, Antelope Valley Groundwater Basin recovered substantially (approximately 95 percent) from overdraft conditions that resulted from heavy agricultural pumping in the 1950s. Since 1995, an increased usage of imported surface water sources and decreasing deep well usage has resulted in the water table rising by an average of two to three feet per year, per records compiled by the Rosamond Community Services District (RCSD) (Kennedy-Jenks, 2005). Based on current and available information, it is reasonable to conclude that the Antelope Valley Groundwater Basin is currently in a state of overdraft, but is recovering from historically more substantial overdraft.

The USGS flow model forecasts groundwater level trends between 1995 and 2025, and demonstrates that if groundwater pumping trends remained the same as they were in 1995, by 2025 groundwater levels would rise in the western portion of the basin, including within the Neenach Subunit, where the proposed project site is located (USGS, 2003). The USGS also modeled a scenario where between 1995 and 2025, public supply pumping increased 3.3 percent annually and agricultural pumping increased 75 percent, resulting in groundwater drawdown throughout the basin (USGS, 2003). This second scenario is not considered representative of current conditions, due to data mentioned above (Kennedy-Jenks, 2005) which indicates an overall rising of the groundwater table.

Los Angeles County disagrees with the statements on pages three and four of the WSA that indicate the Basin is recovering from overdraft conditions. The overdraft conditions that exist in the Basin have disrupted natural groundwater flow, and this has resulted in levels rising in certain areas. These rising levels do not indicate that the Basin is in recovery.

The conclusions in the WSA do not depend upon the status of Basin recovery, or lack thereof. Accordingly, this disagreement regarding the background, technical information in the WSA does not necessitate revision to the WSA's conclusion that total projected water supplies available during normal, single dry, and multiple dry years over the next 20 years will meet the projected water demand of the proposed project, in addition to existing and planned uses of the identified water supplies.

Water Rights and Adjudication

In section 3.2, on page five, the WSA explains that the Basin is currently non-adjudicated, although the legal process to manage this Basin under adjudication has been underway since the late-1990s. The WSA characterizes the court's ruling establishing a safe yield for the Basin as follows:

In May 2011, Superior Court Judge Jack Komar issued an official decision that the Antelope Valley Groundwater Basin is in a state of overdraft and that the safe yield of this basin is 110,000 afy (SEMCHUCK, 2011).

The WSA cites a newspaper article, rather than the court's decision. The decision, along with all of the electronically filed documents in the Antelope Valley Groundwater Cases can be found at: <http://www.sceffiling.org/cases/docket/docket.jsp?caseId=19>. The decision should be referenced as: *Antelope Valley Groundwater Cases*, Judicial Council Coordination Proceeding No. 4408, Los Angeles County Superior Court Case No. BC 325 201, Statement of Decision Phase Three Trial (July 13, 2011).

Page five of the WSA also summarizes information in the newspaper article that questioned the basis for the court's safe yield determination:

This safe yield is substantially higher than those described above in Section 3.1; however, as reported by the *Antelope Valley Press*, it is unclear whether the identified safe yield of 110,000 afy accounts for imported water that is used to recharge the basin in addition to natural recharge from infiltration of precipitation and snowmelt (SEMCHUCK, 2011). The consideration of imported water quantities in calculating a water budget for the basin would substantially influence safe yield determination. Judge Komar's decision on safe yield of the Antelope Valley Groundwater Basin is one step towards official adjudication of the basin. Future phases of the legal process will require that experts define specific geological characteristics throughout the Antelope Valley, in order to determine how much water each well owner/operator will be permitted to withdraw from the basin on an annual basis (SEMCHUCK, 2011). Due to varying subsurface conditions throughout the Antelope Valley, the appropriate annual pumping allotment for each well owner/operator must be determined based on site-specific considerations.

The evidence presented to the court included evidence that the total safe yield of 110,000 acre feet per year is comprised of the native safe yield of 82,000 acre feet per year and the supplemental yield from imported water return flows of 28,000 acre feet per year. An allocation of pumping rights will be based on the legal doctrines of reasonable and beneficial use of correlative overlying, and appropriative, and prescriptive rights. Los Angeles County disagrees that current site-specific considerations would determine correlative rights; however, the County acknowledges that such considerations will play a part in the management of the Basin.

The conclusions in the WSA do not depend upon the potential effect of site-specific considerations in determining future pumping rights. Accordingly, this disagreement regarding the background, technical information in the WSA does not necessitate revision to the WSA's conclusion that total projected water supplies available during normal, single dry, and multiple dry years over the next 20 years will meet the projected water demand of the proposed project, in addition to existing and planned uses of the identified water supplies.

Water Supply Assessment Conclusions

On page 10, the WSA estimates that during the 36-month (3-year) construction period for the proposed Project, a total of 400 acre-feet of water would be required, or approximately 133.33 acre feet per year. Following completion of construction, ASVP would require 30 to 40 acre feet per year for operations and maintenance activities, including twice per year panel cleaning which require 15 to 20 acre-feet each.

On page 11, the WSA states that the proposed project site has previously been irrigated for agricultural use. Between 2005 and 2009, annual total irrigation water consumption on the Project site ranged from 12,639 acre feet to 19,085 acre feet, with an average use of 15,862 acre feet per year. The water use resulting from the ASVP would be less than historic water use on the project site.

On page 19, the WSA explains that a water supply shortfall would exist absent consideration of other sources available to water purveyors, such as use of future groundwater banking programs, future conservation efforts, and use of recycled water. Taking these additional water supplies sources into consideration, the WSA demonstrates sufficient water supply would be available for the ASVP water demands as well as non-Project water demands:

The water supply management projects and programs described above in Table 9 are anticipated to provide up to 287,391 – 299,290 acre-feet per year of water supply reliability, increasing to 352,171 – 364,070 by 2025, with the development of the North Los Angeles/Kern County Regional Recycled Water Project. Tables 6 through 8 indicate that projected water supply availability shortfall ranges between 67,200 acre-feet during the first year of multi-dry year projections, and 293,800 acre-feet during year 2035 of single-dry year projections, without consideration to the reliability of other sources available to water purveyors, such as their use of future groundwater banking programs, future conservation efforts, and use of recycled water (AVEK, 2008).

The additional projected water supplies indicated above in Table 9 demonstrate that water supply management programs within the Antelope Valley Region and the proposed project area would ensure adequate water supply to compensate for projected shortfalls under average-year, dry-year, and multiple-dry-year conditions over a future projection of 20 years. Sufficient water supply would therefore be available for the proposed project water demands as well as non-project water demands.

On page 20, the WSA lists the following conclusions regarding water supply availability for the ASPV and non-project water demands:

Based on the water supply management strategies described above, water supply availability in the Antelope Valley Region is sufficient to meet requirements of the proposed project under average-year, single-dry year, and multiple-dry year conditions over a 20-year future projection. Conclusions regarding water supply availability are summarized below.

- Past and existing irrigation on the project site would be discontinued and water supply requirements of the proposed project are minimal compared to previous irrigation water requirements on the site (see Table 2 and associated discussion).
- The proposed project would be a compatible land use with the Antelope Valley Water Bank, and may supplement banking efficiency by reducing evaporation from the settling basins.

- Ongoing and anticipated water supply management strategies will ensure adequate supply availability for the proposed project as well as other existing and anticipated water needs in the Antelope Valley region.
- The Antelope Valley Groundwater Basin is recovering from historical overdraft conditions, and groundwater levels in the portion of the basin where the proposed project site is located have been steadily increasing in recent years.
- Implementation of the proposed project would include Best Management Practices (BMPs) and mitigation measures to minimize and/or avoid potential impacts to water resources.
- Alternative water supply sources are available in the Antelope Valley region to meet the water supply requirements of the proposed project, should local groundwater resources be unusable or become unusable.

Los Angeles County agrees with the conclusions in the WSA and ASVP EIR that the projected groundwater use by the ASVP would not significantly impact the environment, as long as irrigation on the project site is discontinued as proposed by the applicant.

The County notes that the ASVP EIR and WSA do not evaluate potential impacts and groundwater management issues that could arise if the applicant were to pump water on the property for non-project purposes or if the applicant were to transfer (pursuant to a stipulated judgment) any rights to pump groundwater on the property for use on another parcel of property. In the absence of a stipulated judgment, the County concludes the law does not allow the court to grant transferable rights to groundwater. Further, pumping for non-project purposes is not a consequence of the County's issuance of a Conditional Use Permit for the ASVP. Accordingly, such effects, if any, are beyond the scope of the ASVP EIR and WSA.

As explained above, Los Angeles County also disagrees with the statements in the WSA indicating that the Basin is recovering from overdraft conditions. The 2010 Summary Expert Report demonstrates that the Basin has been over-drafted by an average of approximately 40,000 acre feet per year in recent history.

The conclusions in the WSA do not depend upon the status of Basin recovery, or lack thereof. Accordingly, this disagreement does not necessitate revision to the WSA's conclusion that total projected water supplies available during normal, single dry, and multiple dry years over the next 20 years will meet the projected water demand of the proposed project, in addition to existing and planned uses of the identified water supplies.

Antelope Valley Solar Project Final EIR

On pages 7-6 through 7-9, the Final EIR for the ASVP summarizes the information in the WSA. The Final EIR indicates that Kern County reviewed both the WSA and the 2010 Summary Expert Report, and the Final EIR concludes that implementation of the proposed Project would "result in a net positive impact on local water supplies."

Los Angeles County agrees with this impact determination. However, as indicated above, the County does not agree that the Basin is recovering from overdraft conditions, as stated on page 7-7 of the Final EIR.

Conclusion

The information in this Addendum is intended to augment the analysis in the ASVP EIR and accompanying water supply assessment. The Addendum does not change the ASVP EIR's conclusion that the proposed ASVP will not result in a significant adverse effect to groundwater or water supplies.