Appendix I.2

Water Supply Assessment
Water Supply Assessment

For

Jawbone Wind Energy, LLC and North Sky River Wind Energy Projects
Kern County, California

Draft

Prepared For:

Jawbone Wind Energy, LLC

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April 19, 2011
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Executive Summary

This Water Supply Assessment (WSA) has been prepared to assess the potential to use groundwater to meet the water demands for the Jawbone Wind Energy and North Sky River Wind Energy projects (Project). The proposed Project is to construct and maintain up to 150 wind turbine generators, which would have the potential to generate approximately 325.5 megawatts of electricity.

The groundwater resource assessed in this WSA is the Kelso Landers Groundwater Basin, or as designated by the State of California - Department of Water Resources, “Groundwater Basin 6-69” (Basin 6-69) located in Kern County. Basin 6-69 lacked historical data and little was known about the hydrogeology of the basin. Due to this lack of information, a hydrogeologic exploratory drilling and aquifer testing program was initiated to obtain basin specific hydrogeologic data to help establish the viability of Basin 6-69 to provide the Project water demands.

The exploratory drilling program identified an alluvial aquifer that extends to a depth of approximately 53 feet below ground surface at the location of the test well for the Project. Measurements of the static water level indicated that Basin 6-69 has approximately 40 feet of saturated alluvial aquifer thickness at this location. Based upon these measurements and projections of this aquifer thickness throughout Basin 6-69, it is reasonable to estimate that this alluvial aquifer would have between 42,000 acre-feet and 85,000 acre-feet of groundwater in storage. The estimated project water demand for the first year during the construction phase of the Project is 270 acre-feet (170 gpm). The ongoing estimated Project water demand is 4.5 acre-feet/year (2.8 gpm).

The aquifer testing program indicated that the alluvial aquifer system would be able to meet the Project water demands of approximately 170 gpm for the first year and 2.8 gpm for subsequent years. The alluvial aquifer exhibited significant recharge capability. At the end of a 218 gpm 22.3 hour pumping cycle, the test well recovered in excessive of 90 percent within 60 minutes. In addition, water level transducers installed prior to the aquifer testing program were able to observe a precipitation/groundwater-recharge event that indicated that this basin receives recharge at an estimated rate of 1,680 acre-feet/inch of precipitation. This basin receives between 4 and 19 inches of rainfall per year. In a drought year with only 4-inches of precipitation, the basin would receive approximately 6,720 acre-feet of recharge, or approximately 24 times the Project water demands during the construction period of the project. Currently there is not any groundwater pumping from the alluvial aquifer within Basin 6-69.


**Introduction**

**Project Description**
The proposed Jawbone Wind Energy and North Sky River projects (Project) includes for the construction of up to 150 wind turbine generators in eastern Kern County. The Project would generate approximately 325.5 megawatts of electricity and would permit the construction of their ancillary facilities and supporting infrastructure. Temporary concrete batch plants are proposed to be used to provide concrete and materials for turbine, substation, and building foundations. The lifetime of the project is anticipated to be more than 20 years; however, upgrading and replacing equipment could extend the operating life indefinitely dependent on future demand for the electricity generated by the project.

The Project is located approximately 12 miles northeast of the City of Tehachapi and approximately 11 miles north of the intersection of Highway 58 and the Randsburg Cutoff Road in the Tehachapi Wind Resource Area (TWRA) of eastern Kern County. The proposed Project water supply is groundwater from the Kelso Landers Groundwater Basin, identified by the California Department of Water Resources as Basin 6-69 (Basin 6-69) in Bulletin 118. Basin 6-69 is located within the South Lahontan Hydrologic Region, approximately 16 miles south of State Highway 178 along South Kelso Valley Road, as shown in Figure 1.

**Water Demands**
Water demands for the Project are separated into two phases: construction/restoration and ongoing operations and maintenance. The construction and restoration phase of the Project is estimated to require up to 88,000,000 gallons of water over a 12 month time period (270 acre-feet for one year). Construction is anticipated to take 260 days over a 12 month period. Water demands for the operation phase of the Project are estimated to be 4,000 gallons per day for 20 years (4.5 acre-feet per year).

**Water Supply Assessment**

**Kern County Requirements**
As part of Kern County’s CEQA process for this Project, a Water Supply Assessment (WSA) was requested to determine the viability of developing a local groundwater supply to meet the Project water demands. Kern County requested that the WSA follow the guidelines defined in SB 610 as closely as possible, with the realization that historical data was not available for the selected groundwater basin. Typically, WSA’s are prepared utilizing existing and available data.

**SB 610 Requirements**
The purpose of SB 610 is to strengthen the process by which local agencies determine whether water supplies are adequate and sufficient to meet current and future demand. SB 610 amended the California Public Resources Code to incorporate Water Code requirements within the California Environmental Quality Act (CEQA) process for certain types of projects. SB 610 also amended the Water Code to broaden the types of information included in an Urban Water Management Plan (UWMP) (Water Code 10620 et seq.). The complete text of the WSA reporting requirements is contained in Appendix A.
**Water Sufficiency Assessment**

**Study Area**
The Study Area is located in the south-west portion of Basin 6-69, as shown in Figure 1. Basin 6-69 is located in eastern Kern County and can be accessed by either South Kelso Valley Road or Jawbone Canyon Road (Figure 1). The Study Area is located immediately south of the intersection of South Kelso Valley Road and Jawbone Canyon Road, in the south-west ¼ of the north-east ¼ of Township 29 South, Range 35 East, Section 33 (Section 33) as shown in Figure 2. Section 33 primarily consists of undeveloped land utilized for grazing cattle. Section 33 is bound by open cattle range to the south, east, and west, and by a glider airfield to the north. There are no major streams draining the valley. Drainage primarily occurs in ephemeral streams and as sheet flows across the land surface. Within Section 33, the ground surface slopes to the east. An ephemeral drainage originating just north of the Braitman Spring extends across Section 33 towards the axis of the valley. Small streams were observed to be flowing from the Piute Mountains to the west into the basin; however, these streams seem to terminate as they reach the alluvial sediments within Basin 6-69.

**Current Groundwater Use within Basin 6-69**
There are no existing public water systems within Basin 6-69. There are reported to be six residences within Basin 6-69; however none are occupied full time. These residences reportedly meet their water demands from springs along the western basin boundary above the basin floor. A spring also exists in Section 33 in the valley floor. This spring is reported to flow every year with greater discharge in the spring and very minimal flow in the fall. The pond below this spring was deepened by the owner to create a watering source for livestock in the fall.

Three wells were identified on the valley floor within Basin 6-69. Of these three wells, only one is currently equipped to produce water. This well was equipped to provide dust abatement for improvements to the glider plane airfield. This well is not currently used for water production. The water levels were monitored in the two wells on the Phillippe property as part of the field work described later in this report.

**Hydrogeologic Setting**

**Regional Geology**
The Sierra Nevada Mountains are a north-south trending mountain range situated in the eastern part of California. Near the Study Area, the Sierra Nevada Mountains are comprised of predominantly granitic rocks. Basin 6-69 is a northwest-trending trough situated in the southern tip of the Sierra Nevada Mountains.

**Basin Geology**
The understanding of the geology underlying Basin 6-69 has been developed through published geologic maps, the exploratory drilling program described below, and observations of current depositional processes. Basin 6-69 is comprised of: Quaternary alluvial sediments, Pleistocene non-marine alluvial sediments, decomposed granite, and granitic rock. Figure 3 shows a simplified geologic map depicting the sedimentary deposits of Basin 6-69. For the purpose of this study, the Quaternary alluvial sediments and the Pleistocene non-marine alluvial sediments
will be referred to as the “alluvial aquifer” because these sediments are both derived from the same source, having the same depositional environment, and are indistinguishable in the field.

Basin 6-69 is surrounded and underlain by crystalline granitic rocks to the north, east, and west, and metamorphic rock to the south. A south-east trending fault has been mapped in the west side of Basin 6-69 as shown in Figure 3. Displacement along the unnamed fault is unknown.

**Study Process**

There was insufficient existing geologic and hydrogeologic data to complete a WSA for the Project. An exploratory program was required to gain geologic and aquifer system information for Basin 6-69 in order to prepare this WSA. A site exploration program was designed to assess the presence of aquifers underlying Section 33, as shown in Figure 4. The site exploration program included drilling three test holes to depth to intercept competent granitic rock. One of the test holes was developed into a test well, while the other two were developed as monitoring wells. The Test Well was constructed to conduct an aquifer test of the alluvial aquifer. The Test Well has a perforated section from 27 to 87 feet below ground surface (bgs) as shown in Figure 5. The two monitoring wells were constructed to assess the pumping impacts on the aquifer(s) by the test well and to obtain site specific groundwater elevations. Monitoring Well 1 (MW-01) was constructed as a single completion well, with 40 feet of screened interval, from 37 feet to 77 feet bgs as shown in Figure 6. Monitoring Well 2 (MW-02) was constructed as a nested multiple-completion monitoring well, with screened intervals from 35 feet to 45 feet (MW-02-45), 60 feet to 70 feet (MW-02-70), and 82 feet to 92 feet (MW-02-92) as shown in Figure 7.

**Groundwater Levels**

Pressure transducers were installed to monitor water levels in the South Phillipe Well, MW-01, MW-02-70, MW-02-92, and the Test Well. Water level monitoring was conducted over the duration of the field work and during the aquifer testing. Data obtained from the monitored wells were plotted on hydrographs to show the groundwater elevations over time, and are included in Appendix B.

The hydrographs depict the static water levels in each well monitored as well as the responses to pumping during the constant rate pumping test in the Test Well. A groundwater elevation contour map (Figure 8) was prepared and indicates a south, south-west groundwater gradient. This suggests that groundwater flows within the Basin 6-69 from north to south.

**Pump Testing**

A 218 gpm, 72-hour pumping test, was conducted in the Test Well. During this test, the power supply was temporally interrupted 22.3 hours into the test. Recovery data indicated that the Test Well recovered in excess of 90 percent within 60 minutes during this power outage. The test was then resumed after a 2.5 hour delay for the remainder of the 72 hour pumping cycle. Following the 72 hour 218 gpm test, the Test Well recovered in excess of 88 percent within 60 minutes.

The drawdown data from the Test Well was plotted on a semi-logarithmic chart, as shown in Figure 9. The drawdown in the Test Well was consistent over time until the water level reached a depth of 53 feet. Below 53 feet, the slope of the drawdown is significantly greater. This change in slope suggests that the water produced below this depth may be drawing water from
decomposed granite. The alluvial aquifer produced the majority of water to the well; while the decomposed granite aquifer produced substantially less water. For the purposes of this WSA, the alluvial aquifer is considered the primary water producing aquifer.

Water levels were monitored in the Test Well, MW-01, MW-02-70, MW-02-92, and South Phillipe Well. Pumping influenced drawdown on the aquifer system was measured in: MW-01, MW-02-70, MW-02-92, and South Phillipe Well. The two zones monitored in MW-02 responded identically, with respect to each other, to the pumping in the Test Well. The amount of drawdown observed in the observation wells is shown in Table 1 below and graphically represented in Figure 10.

Table 1
Observed Drawdown at the end of 72-hour Pump Test (218 gpm)

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<tr>
<th>Well Name</th>
<th>Distance from Test Well (Feet)</th>
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<td>147</td>
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<tr>
<td>MW-02-70</td>
<td>361</td>
<td>5</td>
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<tr>
<td>MW-02-92</td>
<td>361</td>
<td>5</td>
</tr>
<tr>
<td>South Phillipe Well</td>
<td>2,441</td>
<td>0</td>
</tr>
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</table>

Groundwater in Storage
Groundwater exists in storage within Basin 6-69. There are three components of this storage: 1) water in the alluvial aquifer; 2) water in the decomposed granite aquifer; and 3) water in the fractured granite aquifer. For the purpose of this WSA, we are only going to attempt to estimate the quantity of groundwater storage in the alluvial aquifer, as that it is likely the highest yielding formation within Basin 6-69.

The Test Well was constructed to a depth of 97 feet and encountered alluvial material from the ground surface to a depth of 53 feet and decomposed granite from 53 to 99 feet. 40 feet of the alluvial material was saturated at the time the Test Well was constructed and tested. The three existing wells within Basin 6-69 are shallow, with depths that range from 52 to 82 feet. The Water Well Driller’s Reports for the existing wells were not available for this study due to the State of California imposed confidentiality of these documents. In 2009 a video survey was conducted in the North Philippe Well. This survey indicated that this well was 70 feet deep and was perforated between 40 and 50 feet. A short pumping test was conducted on this well which indicated this well could produce over 1,000 gpm; however the test was only conducted for about 15 minutes. Never the less, this high reported yield suggests that this well is completed in the alluvial aquifer system and the data from this well suggests that alluvial aquifer material is likely approximately the same thickness as the Test Well. We assume that the alluvial aquifer would thin towards the margins of the basin. Based upon the very limited data that we have on the thickness of the alluvial aquifer, we estimate that a basin-wide average saturated thickness of the alluvial aquifer could range be between 25 and 40 feet. For the purpose of this study, we used the low end of the thickness range to be conservative with our basin water-in-storage calculation. The specific yield of an unconfined aquifer is the amount of water released from storage per unit
surface area of aquifer per unit decline in the water table and is typically between 0.01 and 0.30 (Freeze, p 61). Assuming a range for the specific yield between 0.15 and 0.20 based on the material of the unconfined alluvial aquifer and 25 feet for the saturated aquifer thickness over the 11,200 acre basin, the amount of useable groundwater in storage in the alluvial aquifer is estimated at 42,000 to 55,000 acre-feet (over 150 times the Project water demands during the construction period of the Project). If the average saturated alluvial aquifer thickness is 40 feet over the basin, we would anticipate that there could be in excess of 85,000 acre-feet of water in storage within the alluvial aquifer. In addition, preliminary calculations suggest that the decomposed granite could have an additional 20,000 to 40,000 acre-feet of groundwater available in storage throughout Basin 6-69.

Precipitation and Groundwater Recharge
Precipitation records for water years 1992 to 2010 are available from a permanent remote automated weather station (RAWS) located approximately 5.5 miles south of the Study Area as shown in Figure 11. Over this period, Basin 6-69 received between 4 and 19 inches of rainfall per year (WRCC). Groundwater recharge and inflow into the Basin 6-69 aquifer system occurs primarily as streams flow losses and direct recharge from precipitation. Basin 6-69 watershed is approximately 52 square-miles as shown in Figure 11. For each inch of precipitation approximately 2,770 acre-feet of water enter the water shed that drains to Basin 6-69.

A major precipitation event occurred from March 19 to March 25, 2011. Water level transducers installed recorded groundwater recharge that occurred during that precipitation event. This data indicated approximately one foot of recharge as measured within Basin 6-69 as shown in Figure B-5 included in Appendix B. This data suggests that the alluvial aquifer within Basin 6-69 receives recharge at an estimated rate of 1,680 acre-feet/inch of precipitation. In a drought year with only 4-inches of precipitation, the basin would receive approximately 6,720 acre-feet of recharge, or approximately 25 times the Project water demands during the construction period of the Project.

Water Quality
In order to establish a general characterization of the water quality chemistry of Basin 6-69, water quality samples were collected from each of the wells included in our assessment. A summary of results from the sampling events are shown in Tables C-1 through C-4 in Appendix C. As a means to determine any variability in water chemistry from well to well, a piper diagram, utilizing the major cations and anions from the sampling event, was produced to compare water quality results, as shown in Figure 12. The plotted data shows that the water chemistry for each of the wells is similar, with the predominant cations and anions typically being sodium and calcium and bicarbonate and sulfate.

As shown in Table C-1 in Appendix C, the water produced from the Test Well meets the California Department of Public Health (CDPH) Title 22 water quality requirements for general mineral analysis and drinking water metals, with the exception of iron and manganese. Iron and manganese are both secondary or “aesthetic” based standards imposed on municipal water purveyors to prevent staining of clothing and appliances for their municipal customers. The Test Well is not intended to supply potable drinking water and therefore was not tested for Kern County bacteriological requirements. The ASTM Standard Specification for Mixing Water Used
in the Production of Hydraulic Cement Concrete suggests that the water produced from the Test Well should be suitable for most cement mixing applications (ASTM). However, the specific water quality requirements for the wind turbine concrete foundations should be confirmed to ensure this water will meet those specific requirements.

**Groundwater Sufficiency and Conclusions**

The Test Well was pumped for 72-hours at a flow rate of 218 gpm. This testing confirmed that water can be developed in Section 33 from the alluvial aquifer within Basin 6-69 at a sufficient volume to provide the Project water requirements.

Currently there is not any groundwater pumping from the alluvial aquifer within Basin 6-69. Volume calculations for the amount of water in storage in the alluvial aquifer within Basin 6-69 suggest that the construction pumping demands of approximately 170 gpm (270 acre-feet for one year) would only represent 0.64 percent of the available water in storage in the alluvial aquifer within Basin 6-69.

Removal of 270 acre-feet of water will locally decrease water levels in the vicinity of the production well. However, we estimate that full basin recovery would take place the following year. The Test Well recovered quickly at the conclusion of the pumping cycle. An additional production well will likely be needed to optimize pumping cycles and provide system redundancy.

Project water demands for the subsequent years at 2.8 gpm (4.5 acre-feet per year) would represent 0.01 percent of the available water in storage within Basin 6-69. 4.5 acre-feet per year of water extraction will likely have little or no impact on water levels within Basin 6-69.

The water quality from the Test Well appears to be suitable for all of the intended Project water uses, with the exception for potable water supply.
References


Map Figures

REGIONAL VICINITY MAP
JAWBONE/NSR WSA
KERN COUNTY, CALIFORNIA
APRIL 2011

SOURCES: Background Image - Microsoft Bing

DWR Groundwater Basin 6-69
Groundwater Basin 6-69

Area: 11,200 Acres
Geologic Material: Alluvial
Aquifer: Unconfined
Porosity: 20%
Saturated Thickness: 25 Feet
Groundwater in Storage: Approximately 55,000 acre-feet
Simplified Geologic Map
JAWBONE/NSR WSA
KERN COUNTY, CALIFORNIA
APRIL 2011

SITE MAP
JAWBONE/NSR WSA
KERN COUNTY, CALIFORNIA
APRIL 2011

SOURCES: Background Image - Microsoft Bing

0 250 500 FEET

FIGURE 4
**Lithology**

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<td>70-82</td>
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**USCS Field Classification**

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**Sample Photo Log**

- [Photo]
- [Log]

**Test Hole Data**

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<tr>
<td>MW-02-70</td>
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<td></td>
</tr>
<tr>
<td>MW-02-92</td>
<td>31.35'</td>
<td></td>
</tr>
</tbody>
</table>

**Static Water Levels**

- MW-02-44: 31.43'
- MW-02-70: 31.25'
- MW-02-92: 31.35'

**Well Casing**

- 2" Schedule 40 PVC (Typ.)
- Wall Screen:
  - 2" Schedule 40 PVC w/ 0.030" Slot Size (Typ.)

**Gravel Envelope**

- SRI #8 (Typ.)

**Well Screen**

- 2" Schedule 40 PVC w/ 0.030" Slot Size (Typ.)

**Bentonite Seal**

- (Typ.)

**Ground Surface**

- 05 Elevation 3850.4'
CONTOURS OF EQUAL GROUNDWATER ELEVATION
JAWBONE/NSR WSA
KERN COUNTY, CALIFORNIA
APRIL 2011

NOTES: Groundwater Elevation Data - MARCH 16, 2011
SOURCES: Background Image - Microsoft Bing

FIGURE 8

- Existing Well
- Test Well
- Monitoring Well

Contour of Equal
Groundwater Elevation
(5-foot Intervals)

Direction of Groundwater Flow
Figure 9
Jawbone Wind Energy, LLC
Test Well
Constant Rate Test

3/30/2011
SWL = 14.45 ft (T.O.C.)
72-HOUR TEST (218 GPM)  
PUMPING IMPACTS  
JAWBONE/NSR WSA  
KERN COUNTY, CALIFORNIA  
APRIL 2011

SOURCES: Background Image - Microsoft Bing

FIGURE 10
Kelso Valley Watershed

Area: 52 miles²
Average Annual Precipitation: 9 inches
*as Measured at the Jawbone RAWS Station

SOURCES: Background Map: NGS USA Topographic Maps
Figure 12
Water Quality Comparison
Piper Diagram
Senate Bill No. 610

CHAPTER 643

An act to amend Section 21151.9 of the Public Resources Code, and to amend Sections 10631, 10656, 10910, 10911, 10912, and 10915 of, to repeal Section 10913 of, and to add and repeal Section 10657 of, the Water Code, relating to water.

[Approved by Governor October 9, 2001. Filed with Secretary of State October 9, 2001.]

LEGISLATIVE COUNSEL’S DIGEST
SB 610, Costa. Water supply planning.

(1) Existing law requires every urban water supplier to identify, as part of its urban water management plan, the existing and planned sources of water available to the supplier over a prescribed 5-year period. Existing law prohibits an urban water supplier that fails to prepare or submit its urban water management plan to the Department of Water Resources from receiving drought assistance from the state until the plan is submitted.

This bill would require additional information to be included as part of an urban water management plan if groundwater is identified as a source of water available to the supplier. The bill would require an urban water supplier to include in the plan a description of all water supply projects and programs that may be undertaken to meet total projected water use. The bill would prohibit an urban water supplier that fails to prepare or submit the plan to the department from receiving funding made available from specified bond acts until the plan is submitted. The bill, until January 1, 2006, would require the department to take into consideration whether the urban water supplier has submitted an updated plan, as specified, in determining eligibility for funds made available pursuant to any program administered by the department.

(2) Existing law, under certain circumstances, requires a city or county that determines an environmental impact report is required in connection with a project, as defined, to request each public water system that may supply water for the project to assess, among other things, whether its total projected water supplies will meet the projected water demand associated with the proposed project. Existing law requires the public water system to submit the assessment to the city or county not later than 30 days from the date on which the request was received and, in the absence of the submittal of an assessment, provides that it shall be assumed that the public water system has no information.
to submit. Existing law makes legislative findings and declarations concerning "Proposition C," a measure approved by the voters of San Diego County relating to regional growth management, and provides that the procedures established by a specified review board established in connection with that measure are deemed to comply with the requirements described above relating to water supply planning by a city or county.

This bill would revise those provisions. The bill, instead, would require a city or county that determines a project is subject to the California Environmental Quality Act to identify any public water system that may supply water for the project and to request those public water systems to prepare a specified water supply assessment, except as otherwise specified. The bill would require the assessment to include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts. The bill would require the city or county, if it is not able to identify any public water system that may supply water for the project, to prepare the water supply assessment after a prescribed consultation. The bill would revise the definition of "project," for the purposes of these provisions, and make related changes.

The bill would prescribe a timeframe within which a public water system is required to submit the assessment to the city or county and would authorize the city or county to seek a writ of mandamus to compel the public water system to comply with requirements relating to the submission of the assessment.

The bill would require the public water system, or the city or county, as applicable, if that entity concludes that water supplies are, or will be, insufficient, to submit the plans for acquiring additional water supplies.

The bill would require the city or county to include the water supply assessment and certain other information in any environmental document prepared for the project pursuant to the act. By establishing duties for counties and cities, the bill would impose a state-mandated local program.

The bill would provide that the County of San Diego is deemed to comply with these water supply planning requirements if the Office of Planning and Research determines that certain requirements have been met in connection with the implementation of "Proposition C."

(3) The bill would incorporate additional changes in Section 10631 of the Water Code proposed by AB 901, to be operative only if this bill and AB 901 are enacted and become effective on or before January 1,
2002, each bill amends Section 10631 of the Water Code, and this bill is enacted last.

(4) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

The people of the State of California do enact as follows:

SECTION 1. (a) The Legislature finds and declares all of the following:

(1) The length and severity of droughts in California cannot be predicted with any accuracy.

(2) There are various factors that affect the ability to ensure that adequate water supplies are available to meet all of California’s water demands, now and in the future.

(3) Because of these factors, it is not possible to guarantee a permanent water supply for all water users in California in the amounts requested.

(4) Therefore, it is critical that California’s water agencies carefully assess the reliability of their water supply and delivery systems.

(5) Furthermore, California’s overall water delivery system has become less reliable over the last 20 years because demand for water has continued to grow while new supplies have not been developed in amounts sufficient to meet the increased demand.

(6) There are a variety of measures for developing new water supplies including water reclamation, water conservation, conjunctive use, water transfers, seawater desalination, and surface water and groundwater storage.

(7) With increasing frequency, California’s water agencies are required to impose water rationing on their residential and business customers during this state’s frequent and severe periods of drought.

(8) The identification and development of water supplies needed during multiple-year droughts is vital to California’s business climate, as well as to the health of the agricultural industry, environment, rural communities, and residents who continue to face the possibility of severe water cutbacks during water shortage periods.

(9) A recent study indicates that the water supply and land use planning linkage, established by Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code, has not been implemented in a manner that ensures the appropriate level of communication between
water agencies and planning agencies, and this act is intended to remedy that deficiency in communication.

(b) It is the intent of the Legislature to strengthen the process pursuant to which local agencies determine the adequacy of existing and planned future water supplies to meet existing and planned future demands on those water supplies.

SEC. 2. Section 21151.9 of the Public Resources Code is amended to read:

21151.9. Whenever a city or county determines that a project, as defined in Section 10912 of the Water Code, is subject to this division, it shall comply with Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.

SEC. 3. Section 10631 of the Water Code is amended to read:

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier’s water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments as described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

1. A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

2. A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed
description of the efforts being undertaken by the urban water supplier
to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of
groundwater pumped by the urban water supplier for the past five years.
The description and analysis shall be based on information that is
reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the location, amount, and
sufficiency of groundwater that is projected to be pumped by the urban
water supplier. The description and analysis shall be based on
information that is reasonably available, including, but not limited to,
historic use records.

(c) Describe the reliability of the water supply and vulnerability to
seasonal or climatic shortage, to the extent practicable, and provide data
for each of the following:

(1) An average water year.
(2) A single dry water year.
(3) Multiple dry water years.

For any water source that may not be available at a consistent level of
use, given specific legal, environmental, water quality, or climatic
factors, describe plans to replace that source with alternative sources or
water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on
a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current
water use, over the same five-year increments described in subdivision
(a), and projected water use, identifying the uses among water use
sectors, including, but not necessarily limited to, all of the following
uses:

(A) Single-family residential.
(B) Multifamily.
(C) Commercial.
(D) Industrial.
(E) Institutional and governmental.
(F) Landscape.
(G) Sales to other agencies.
(H) Saline water intrusion barriers, groundwater recharge, or
conjunctive use, or any combination thereof.

(2) The water use projections shall be in the same five-year
increments as described in subdivision (a).

(f) Provide a description of the supplier’s water demand management
measures. This description shall include all of the following:

...
(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:
   (A) Water survey programs for single-family residential and multifamily residential customers.
   (B) Residential plumbing retrofit.
   (C) System water audits, leak detection, and repair.
   (D) Metering with commodity rates for all new connections and retrofit of existing connections.
   (E) Large landscape conservation programs and incentives.
   (F) High-efficiency washing machine rebate programs.
   (G) Public information programs.
   (H) School education programs.
   (I) Conservation programs for commercial, industrial, and institutional accounts.
   (J) Wholesale agency programs.
   (K) Conservation pricing.
   (L) Water conservation coordinator.
   (M) Water waste prohibition.
   (N) Residential ultra-low-flush toilet replacement programs.
(2) A schedule of implementation for all water demand management measures proposed or described in the plan.
(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
(4) An estimate, if available, of existing conservation savings on water use within the supplier’s service area, and the effect of such savings on the supplier’s ability to further reduce demand.
(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
   (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
   (2) Include a cost-benefit analysis, identifying total benefits and total costs.
(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier’s legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the “Memorandum of Understanding Regarding Urban Water Conservation in California,” dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

SEC. 3.5. Section 10631 of the Water Code is amended to read:

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier’s water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments as described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:
(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(1) An average water year.

(2) A single dry water year.

(3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use
sectors, including, but not necessarily limited to, all of the following uses:

(A) Single-family residential.
(B) Multifamily.
(C) Commercial.
(D) Industrial.
(E) Institutional and governmental.
(F) Landscape.
(G) Sales to other agencies.
(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments as described in subdivision (a).

(f) Provide a description of the supplier’s water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

(A) Water survey programs for single-family residential and multifamily residential customers.
(B) Residential plumbing retrofit.
(C) System water audits, leak detection, and repair.
(D) Metering with commodity rates for all new connections and retrofit of existing connections.
(E) Large landscape conservation programs and incentives.
(F) High-efficiency washing machine rebate programs.
(G) Public information programs.
(H) School education programs.
(I) Conservation programs for commercial, industrial, and institutional accounts.
(J) Wholesale agency programs.
(K) Conservation pricing.
(L) Water conservation coordinator.
(M) Water waste prohibition.
(N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

SEC. 4. Section 10656 of the Water Code is amended to read:
10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

SEC. 4.3. Section 10657 is added to the Water Code, to read:

10657. (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

SEC. 4.5. Section 10910 of the Water Code is amended to read:

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).
(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system’s total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system’s existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.
(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contractholders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

1. A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

2. A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

3. A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be
(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant
to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

1. Changes in the project that result in a substantial increase in water demand for the project.

2. Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

3. Significant new information becomes available which was not known and could not have been known at the time when the assessment was prepared.

SEC. 5. Section 10911 of the Water Code is amended to read:

10911. (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

1. The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.

2. All federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.

3. Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.

(b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental
document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

SEC. 6. Section 10912 of the Water Code is amended to read:

10912. For the purposes of this part, the following terms have the following meanings:

(a) “Project” means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

(b) If a public water system has fewer than 5,000 service connections, then “project” means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system’s existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections.

(c) “Public water system” means a system for the provision of piped water to the public for human consumption that has 3000 or more service connections. A public water system includes all of the following:

(1) Any collection, treatment, storage, and distribution facility under control of the operator of the system which is used primarily in connection with the system.
(2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.

(3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.

SEC. 7. Section 10913 of the Water Code is repealed.

SEC. 8. Section 10915 of the Water Code is amended to read:

10915. The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:

(a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.

(b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.

(c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.

(d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.

(e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association’s most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.

(f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.

(g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water supply assessment that is prepared pursuant to Section 10910.

SEC. 9. Section 3.5 of this bill incorporates amendments to Section 10631 of the Water Code proposed by both this bill and AB 901. It shall only become operative if (1) both bills are enacted and become effective on or before January 1, 2002, (2) each bill amends Section 10631 of the Water Code, and (3) this bill is enacted after AB 901, in which case Section 3 of this bill shall not become operative.
SEC. 10. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.
Figure B-1
Jawbone Wind Energy, LLC
Test Well
Hydrograph
Figure B-2
Jawbone Wind Energy, LLC
MW-01 Hydrograph
(147 feet from Test Well)
Figure B-3
Jawbone Wind Energy, LLC
MW-02-70 Hydrograph
(361 feet from Test Well)
Figure B-4
Jawbone Wind Energy, LLC
MW-02-92 Hydrograph
(361 feet from Test Well)
Figure B-5
Jawbone Wind Energy, LLC
South Phillipe Well
Hydrograph

Date


Depth to Water (Feet)
Reference Point Top of Casing

Precision (inches)

Transducer Data ---- Precipitation Data
# TABLE C-1
## SUMMARY OF WATER QUALITY RESULTS

**Jawbone Wind Energy, LLC**  
Test Well  
Sample Date: 4/1/2011

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Notification Level</th>
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<th>Regulatory Action Level</th>
<th>Secondary MCL</th>
<th>Units</th>
<th>Result</th>
<th>Exceeds MCL</th>
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Note: "MCL" is the Maximum Contaminant Level established by the California Department of Public Health. Multiple values for MCL represent trigger levels or recommended/upper ranges.
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<th>Secondary MCL</th>
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<th>Exceeds MCL</th>
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Note: "MCL" is the Maximum Contaminant Level established by the California Department of Public Health. Multiple values for MCL represent trigger levels or recommended/upper ranges.
**TABLE C-2**
SUMMARY OF WATER QUALITY RESULTS

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<th>Secondary MCL</th>
<th>Units</th>
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### GENERAL MINERAL

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<th>Units</th>
<th>Result</th>
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<tr>
<td>Calcium</td>
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<td>mg/l</td>
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<tr>
<td>Carbonate Alkalinity (as CaCO3)</td>
<td></td>
<td>&lt;5</td>
<td>mg/l</td>
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<td>Hardness (as CaCO3)</td>
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### GENERAL PHYSICAL

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### INORGANICS

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Note: “MCL” is the Maximum Contaminant Level established by the California Department of Public Health. Multiple values for MCL represent trigger levels or recommended/upper ranges.
# TABLE C-3
## SUMMARY OF WATER QUALITY RESULTS

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<th>Secondary MCL</th>
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### GENERAL MINERAL

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### GENERAL PHYSICAL

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### INORGANICS

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Note: "MCL" is the Maximum Contaminant Level established by the California Department of Public Health. Multiple values for MCL represent trigger levels or recommended/upper ranges.
## TABLE C-4
### SUMMARY OF WATER QUALITY RESULTS

**Jawbone Wind Energy, LLC**  
**MW-02-92**

**Sample Date:** 3/16/2011

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<td>Hydroxide Alkalinity (as CaCO₃)</td>
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<td>Magnesium</td>
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<td>Potassium</td>
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<tr>
<td>Sulfate</td>
<td>250/500/600</td>
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<tr>
<td>Total Alkalinity (as CaCO₃)</td>
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<td>Specific Conductance</td>
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<td>Total Dissolved Solids</td>
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<td>Boron</td>
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**Note:** "MCL" is the Maximum Contaminant Level established by the California Department of Public Health. Multiple values for MCL represent trigger levels or recommended/upper ranges.