

APPENDIX F

**DE LA SALLE UNIVERSITY AND COMMUNITY
SPECIFIC PLAN WATER SUPPLY ASSESSMENT**

Placer County Water Agency

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May 9, 2005
File No. De La Salle

Mr. Paul Thompson, Principal Planner
Placer County Planning Department
11414 B Avenue
Auburn, CA 95603

Re: De La Salle University and Community Specific Plan Water Supply Assessment

Dear Mr. Thompson:

This letter is in response to your request of March 7, 2005 for a water assessment pursuant to SB610 (Government Code 65858) for the proposed De La Salle University and Community Specific Plan (DLSSP) Project.

The Project includes 1,136 acres in the unincorporated portion of southwest Placer County.

The Project as described in the DLSSP is planned as a mixed-use community with two primary components; the 600-acre De La Salle University Campus and the adjoining 536-acre community consisting of residential, retail / office, public facilities, school, parks and open space. The DLSSP estimates that the proposed Project will have a total annual build out water demand of 2,890 acre-feet, of which 2,100 acre-feet annually will be for potable uses and 790 acre-feet will be for irrigation uses that could be supplied from a non-potable source. This assessment is based upon those estimates. The Agency has not prepared an independent estimate of the build out demand.

The Placer County Water Agency Board of Directors discussed and approved this response to your request at the meeting of May 5, 2005.

Please be aware that the Project will need to request and be annexed to the Agency's Zone 1 and detached from Zone 5 as a condition of service. This Water Supply Assessment should not be interpreted as indicating the Agency's action on any such annexation.

Additional comments, information and conditions relevant to water service to the Project follow.

SURFACE WATER

The Agency has several sources of surface water supply entitlements available for use in Western Placer County.

1. The first is a surface water supply contract with PG&E for 100,400 acre feet annually (afa) of Yuba/Bear River water that is delivered through PG&E's Drum Spaulding hydro system. This has been the Agency's primary source of supply for Zone 1 since the Agency began retailing water in 1968. Prior to that PG&E was the retail water purveyor in Zone 1.

This source of water has a high reliability during normal, single-dry and multiple-dry years. For example, between 1987 and 1992 the state experienced 5 years of drought, during which many areas in the state had reduced supplies. During that period, the Agency had a full Yuba/Bear river supply each year. 1977 was the only year in which the Agency has had to impose drought restrictions on its customers due to reduced PG&E supply. The Agency has a drought contingency plan, published in its December 2000 Urban Water Management Plan, that it will implement in the event of future droughts severe enough to curtail its water supplies.

2. The Agency's second source of surface water for consumptive use is its Middle Fork Project (MFP) water rights. The MFP reservoirs have 340,000 acre-feet of storage capacity; however, pursuant to agreements with the United States, the Agency is limited to a maximum consumptive use of 120,000 afa from this source. The Agency's MFP water right permits provide that this water supply may be diverted from the American River at either Auburn or at Folsom Reservoir. The Agency has done extensive modeling of the MFP system to determine its reliability during drought events using California's hydrologic record, which dates back to 1921. The conclusion of that analysis is that the MFP can provide 120,000 afa, even in dry years as severe as the 1976-1977 hydrologic event.
3. The Agency's third source of surface water is its federal Central Valley Project (CVP) Municipal and Industrial water supply contract with the United States Bureau of Reclamation. This contract is for 35,000 afa. This supply is subject to 25% deficiencies during single-dry and multiple-dry years. This water was originally to be provided to the Agency at Auburn Reservoir but the contract as amended now provides for its diversion at Folsom Dam or other locations mutually agreed to by the parties. As noted below in the discussion of infrastructure capacity, Reclamation and the Agency are now studying the feasibility of diverting this supply off of the Sacramento River instead of at Folsom. Under the Agency's Integrated Water Resources Plan, discussed in more detail below, the Agency plans to supplement its CVP contract supply with

groundwater in dry years to improve the reliability to the point where the full contract amount can be relied upon to serve urban development needs.

4. The Agency also has a surface water contract to purchase up to 5,000 afa from South Sutter Water District (SSWD). This supply is only available when it is surplus to SSWD's needs. Delivery is only available into the Auburn Ravine. The Agency's Board has directed that this water is to be made available as a supplemental supply to agricultural customers in Zone 5. No water is expected to be available from this source during dry years. Most of the Agency's Zone 5 customers also have groundwater available, and revert to that source when surface water is not available. This SSWD source is considered temporary because it is expected that the available supply will eventually be fully utilized by SSWD.

Under the Board's policy for the use of SSWD water, it is not anticipated that the loss of the SSWD supply, either due to drought or prior use by SSWD, would affect the water supply to Zone 1.

The total surface water supply available to the western Placer County area that includes Zones 1 & 5 is 255,400 afa of permanent supply, plus 5,000 afa of temporary surplus water. Out of that permanent supply, the Agency has contracted to deliver up to 25,000 afa to San Juan Water District for use within the Placer County portion of its service area and up to 30,000 afa to the City of Roseville.

The Agency has also contracted to deliver up to 29,000 afa to Sacramento Suburban Water District for groundwater stabilization in that district's service area, but only when the supply is surplus to the needs of Placer County. Because of the surplus nature of this contract, it is not a factor in determining water availability for the Agency's service area.

In 2004, the Agency used 112,768 af to meet the needs of its Zone 1 & 5 customers. In addition to this amount, to date the Agency has approved applications for water service totaling an additional 4,416 af, resulting in a total current committed demand of 117,184 af. In 2004, the Agency delivered 13,562 af to San Juan and 465 af to Roseville. Subtracting these amounts from the Agency's entitlements leaves 124,189 afa of surface water available in normal years for use in Western Placer County to meet future demands.

GROUNDWATER

Although groundwater use in Placer County by individual homes, farms and businesses is estimated to be about 90,000 acre-feet per year, the Agency does not currently use significant amounts of groundwater to meet its customer's demands. The Agency has a

single well located in the Sunset Industrial area that meets all drinking water standards but has not been utilized for several years due to customer concerns regarding water quality (hardness) related to industrial use.

The Agency has reviewed the document entitled *De LaSalle Specific Plan, Appendix F Water Master Plan*, Revised April 8, 2005 and has the following specific comments regarding the Project's proposed use of groundwater.

The DLSSP Water Master Plan puts forth 2 alternatives for the use of groundwater for this Project. Alternative 1 proposes that "all water supply requirements would be met using groundwater." Alternative 2 proposes that "potable requirements would be met using surface water supplemented by groundwater in dry and critical years, and non-potable irrigation requirements would be met using recycled water."

While some integrated use of groundwater is appropriate and necessary to ensure the highest level of reliability, particularly in times of drought and for backup in emergency situations, the Agency is opposed to developments in western Placer County such as this relying entirely on groundwater as proposed in Alternate 1 of the DLSSP Water Master Plan.

The following findings with regards to the use of groundwater can be concluded from the Agency's draft Integrated Water Resources Plan:

- The historic average annual rate of groundwater use within the Placer County portion of the North American River Groundwater Basin is estimated to be about 90,000 acre feet per year. (The estimated use will be refined in the development of the plan.)
- According to semi-annual well data collected by the State Department of Water Resources since the 1940s, the subsurface groundwater level in western Placer County in the area west of Roseville has been relatively stable since the early 1980s following decades of steady decline.
- Based upon this information we believe that the current groundwater use and natural recharge rate are in balance and that current average annual groundwater pumping rates within the basin can be sustained indefinitely without a further decline in the subsurface groundwater level.
- Therefore, as urban development replaces historic groundwater irrigated agriculture, there is an opportunity to develop groundwater for use in meeting urban domestic and irrigation demands without adversely affecting groundwater levels or long term groundwater reliability.

PCWA's surface water supplies, particularly its 35,000 afa CVP contract entitlement, will be subject to shortages in future dry years. To make up for such dry year shortfalls and

for backup in the event of emergency or planned outages, PCWA is planning on developing groundwater resources as its service area expands west over the groundwater basin and into the area most likely to be served long term from the Sacramento River using the Agency's CVP contract supply. But to insure that there is no adverse long term impact of such dry year groundwater use there must be groundwater banking in normal and wet years to offset the planned dry year use. That banking can most efficiently occur through "in-lieu recharge" which is the reduction of historic groundwater use in normal and wet years allowing the natural recharge flow to accumulate in the aquifer.

The De LaSalle project would provide just such an opportunity for in-lieu recharge of the groundwater basin in most years by offsetting historic groundwater use for agriculture on this property with surface water for urban development, as proposed under Alternative 2. However, continuing to use groundwater in normal and wet years, as proposed under Alternative 1, when surface water resources are available to meet project needs, unnecessarily depletes the resource making less available to the system when groundwater is needed in dry years. Alternate 1 is an inappropriate use of the west Placer's groundwater resources and PCWA encourages the County to reject this alternative.

Because the De LaSalle project is within the anticipated service area of the proposed Sacramento River Diversion and ultimately to be served with CVP water which is subject to 25% deficiencies in dry years, the Agency anticipates requiring the Project to develop groundwater infrastructure to provide up to 25 percent of the maximum day demand, in addition to surface water and reclaimed water facilities, as a requirement of water service.

RECLAIMED WATER USE

The Agency does not have jurisdiction over the distribution and use of reclaimed water in Western Placer County. The availability of reclaimed water to the Project is under the control of the Cities of Roseville and Lincoln and the County of Placer that have wastewater treatment plants and reclaimed water production facilities. The Agency anticipates that the Project will be required by the County to use reclaimed water for irrigation of its common area landscaping.

Such reclaimed water use by projects within a reasonable service perimeter of reclaimed water supplies is assumed in the Agency's draft Integrated Water Resources Plan.

WATER SUPPLY ASSESSMENT

On March 13, 2001, the Agency Board of Directors released a discussion paper titled "Surface Water Supply Update for Western Placer County." The paper concluded, with several significant assumptions, that the Agency's surface water supply entitlements

matched the build out demand of the then current General Plans of the Cities, Town and County in Western Placer County.

The discussion paper made simplifying, and we believe conservative, assumptions to create a baseline from which to gauge the capability of the Agency to meet future

demands. The assumptions for the General Plan build out condition were: there would be no increase in the use of groundwater; there would be no changes in raw or treated water use efficiency; there would be no significant increase in the use of reclaimed water; there would be no significant increase in the delivery of surface water for agriculture; and, the San Juan Water District and the City of Roseville would make full use of their MFP contract supplies within their Placer County service areas.

In the fall of 2004 the Agency and its consultant, Brown & Caldwell, began work on an Integrated Water Resources Plan (IWRP) for western Placer County that is intended to build on the 2001 Discussion Paper and incorporate: changes to General Plans within the Agency's west Placer service area since 2001; proposed changes to general plans currently under consideration by west Placer land use authorities, including the DLSSP Project; and quantify the previous assumptions on future water use efficiency, reclaimed water use, groundwater use and build out demand requirements in the San Juan and Roseville service areas. The Agency expects this plan to be completed in the second quarter of 2005.

Although the IWRP is not yet complete, the Agency has focused the work to date on those sections that would enable it to respond to this water supply assessment request.

Through the integrated use of existing surface water entitlements, reclaimed water and demand reduction resources and groundwater as proposed herein, the Agency has an adequate water supply to meet the anticipated build out demands of the De LaSalle University and Community Specific Plan Project in addition to the rest of the build out demands currently anticipated within the Agency's projected service area in western Placer County in normal, single dry and multiple dry years, subject to the qualifications set forth below.

INFRASTRUCTURE CAPACITY

To provide water service to a project the Agency must have both the water supply resources (discussed above) and adequate treatment and delivery infrastructure capacity. This section provides an assessment of the infrastructure capability and needs of the Agency to serve the De LaSalle Project.

Raw Water Delivery from the Yuba/Bear River

There are no infrastructure limitations to the delivery of 100% of the Agency surface water supply entitlements under its PG&E (100,400 afa) and SSWD (5,000 afa) contracts.

Raw Water Delivery from the American River

The only facility that the Agency currently has to deliver water to its service area from its American River supplies is the temporary American River Pump Station at Auburn. Under an agreement between the Agency and the United States, the U.S. is required to install temporary pumps in the American River so that the Agency can access up to

25,000 afa of its MFP water at a rate of 50 cubic feet per second (cfs). Because of flooding concerns which necessitates the seasonal removal of the temporary pumps, and other technical limitations, the Agency estimates that it can only reliably divert up to 13,000 afa with the current configuration installed by the U.S.

As limited by the temporary American River Pump Station, the total current raw water delivery capacity available to Zones 1 & 5 is 113,400 afa on a permanent basis and 118,400 afa on temporary basis in normal/wet years.

Progress by the Agency and the U.S. Bureau of Reclamation is being made in completing a new, permanent American River Pump Station. On June 13, 2003, Reclamation entered into a contract to construct Phase I of the American River Pump Station. It is anticipated that Phase I will be completed in May of 2006. Phase 2, which includes construction of the diversion facility and rewatering of the river, is currently in design. It is anticipated that the construction contract for Phase II will be awarded in 2005 and completion will be in April of 2007.

Completion of this project will increase the Agency's raw water delivery capacity to Zone 1 and Western Placer County to 135,900 afa on a permanent basis in normal/wet years. Subtracting 117,184 afa of current and committed demands will leave 18,716 afa of uncommitted raw water delivery capacity available for new development once the permanent American River pump station is complete in 2007.

Raw Water Delivery with Proposed Sacramento River Diversion Facilities

Because of environmental concerns, the Agency has agreed in the Water Forum Agreement, dated January 2000, to limit the Agency's diversions from the American River to 35,500 afa, provided the Agency is able to obtain a diversion off the Sacramento River for the remainder of its MFP and/or CVP water not delivered off the American River.

The Agency is studying the feasibility of a project in which a new treatment plant would serve proposed developments in southwest Placer County with water diverted from the Sacramento River north of the Sacramento Airport. The project would provide an additional 35,000 afa of raw water supply, and 65 mgd of treatment capacity into the Agency service area. In 2001, Congress authorized Reclamation to complete a feasibility study and EIS/EIR on the project. If the project is approved, the Agency anticipates construction of the project could be completed by about 2015.

Completion of both the permanent American River Pump Station and the Sacramento River Diversion facilities would increase the amount of surface water available to the Agency's west Placer service area to 175,900 af and should enable the Agency to meet the projected increase in the raw water delivery needs of its service area in western Placer County until 2030.

Treatment, Transmission and Storage

The Agency expects to complete the most recent expansion of its Foothill WTP in Newcastle in early summer 2005. The treatment plant capacity of this facility is 55 million gallons per day (mgd). Combined with the Sunset WTP, which has a capacity of 8 mgd, the Foothill/Sunset system has a treatment capacity of 63 mgd. In 2004, the maximum day treatment plant demand for the Foothill/Sunset system was 46 mgd, which leaves 17 mgd of unused capacity that is available to serve new demands. The Agency reserves capacity for new customers upon payment of the Agency's Water Connection Charge (WCC). There is typically an average time lag of approximately 18 months between the payment of WCC and the full development of demand from the occupied units. At this time, the Agency estimates that this reserved capacity for development that has already paid the WCC but the demands are not reflected in the 2004 maximum day demand is 7.9 mgd. This leaves 9.1 mgd of unallocated capacity that can serve approximately 7,900 equivalent dwelling units (EDUs) and which is available on a first-come, first-served basis. The annual growth in demand in the Agency's Foothill/Sunset system over the past three years has been about 3.0 mgd per year.

In addition, the Agency is in the design phase for a new water treatment plant that will be located on Ophir Road in the Newcastle/Ophir area. This plant is scheduled for completion in 2008. This plant is being designed with a capacity of 30 mgd. When complete, this facility will be able to serve an additional 26,000 EDUs.

The Agency completed construction of a 42-inch diameter treated water transmission line between Penryn and Lincoln in the fall of 2002. The Agency's transmission capacity is now equal to its treatment capacity in the Foothill/Sunset system serving Loomis, Rocklin, Lincoln and surrounding County jurisdiction areas. A new treated water transmission pipeline is being designed to convey water from the Ophir area plant to the existing Foothill/Sunset system at Penryn and near the City of Lincoln.

The Agency completed a new 10 million gallon (mg) tank near the Sunset WTP in 2001. This increased the storage capacity of the Foothill Sunset system to 30.0 million gallon (mg). In April of 2005 the Agency awarded a construction contract for the Sunset Industrial Tank and Pump Station project. This project will include the construction of a 10 mg storage tank and a dual pumping station. One pump station will be a low lift pump station to pump Agency water through the City of Roseville's system to the Baseline Road and Fiddyment Road area. The Agency has a contract with Roseville that allows the Agency to wheel up to 10 mgd through its distribution system to serve areas below Baseline Road and west of Fiddyment Road.

PCWA'S DEMAND MANAGEMENT MEASURES

The Agency was created by the Placer County Water Agency Act, a special act of the California Legislature. The California Urban Water Management Planning Act requires water purveyors that serve more than 3,000 customers prepare a long-term water

supply plan every five years. The Agency's most recent Urban Water Management Plan (UWMP) was published in December 2000. On June 4, 2002, the Agency was informed by the California Department of Water Resources that the Agency's December 2000 UWMP, including the discussion of the Agency's water demand management effort, was deemed complete. The Agency will be completing an update of its UWMP by the end of 2005.

The Agency is providing a comprehensive suite of demand management measures to its customers. All customers are metered. The Agency has implemented inclining rates based upon water usage. System wide water audits are being conducted and customer usage is tracked on a monthly basis. Leak detections are conducted whenever unaccounted water exceeds 10%. Agency rules and regulations require discontinuance of service upon excessive wasting of water. Residential water surveys are provided upon request. The Agency has a full time water conservation coordinator on staff.

The long term effects of the Agency's demand management measures on per capita water use will be quantitatively evaluated in the Agency's Integrated Water Resources Plan and included in the 2005 UWMP.

ADDITIONAL CONDITIONS FOR DELIVERY OF WATER SUPPLY

The Agency reserves water supply only when a project is located within an Agency service zone, a project proponent submits an application for water service and the Water Connection Charges are paid. The Project land will have to be annexed to Zone 1. Such annexation will require approval by the Board of the Agency, and is not assured.

CONCLUSIONS

This Project will require annexation to Zone 1 and detachment from Zone 5.

Through the integrated use of existing surface water entitlements, reclaimed water and demand reduction resources and groundwater as proposed herein, the Agency has an adequate water supply to meet the anticipated build out demands of the De LaSalle University and Community Specific Plan Project in addition to the rest of the build out demands currently anticipated within the Agency's projected service area in western Placer County in normal, single dry and multiple dry years.

However, depending upon the timing of water needs from this project and because the Agency has a first-come, first-served policy for serving new customers, the completion of any or all of numerous Agency planned infrastructure projects may be required before the Agency can provide water service for the build out of the De LaSalle Project. Those projects include: completion of the permanent American River Pump Station, which is currently under construction: completion of the Sunset Industrial Tank and Pump Station project, which is currently under construction: completion of additional treatment

capacity and transmission facilities associated with the Agency's planned Ophir area water treatment plant project, which are currently under design; and, completion of the Planned Sacramento River Diversion project, which is currently in the environmental/feasibility stage.

In addition, the DLSSP Project will need to extend the Agency's existing transmission infrastructure to the project site and construct the needed onsite infrastructure, including the potable water distribution system, needed groundwater facilities and reclaimed water facilities.

If you have any questions on this subject, please call Brian Martin or Einar Maisch at (530) 823-4886.

Sincerely,

PLACER COUNTY WATER AGENCY



Pauline Roccucci
Chair, PCWA Board of Directors

PR/EM/cs

c: PCWA Board of Directors
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