

## 2. Changes to the Draft EIS/EIR

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### INTRODUCTION

The following pages provide specific changes made to the Draft EIS/EIR to correct errors or to clarify issues of concern brought forward in the Comments on the Draft EIS/EIR. [All comments are provided in Section 3 of this document and Responses to the Comments are provided in Section 4.] The changes are referenced to the specific sections and subsections of the Draft EIS/EIR being changed, with additional reference to the page number in the Draft EIS/EIR also provided. In instances where text is being added or deleted from the Draft EIS/EIR, these changes are shown with new text being underlined and deleted text crossed out. Changes to the Executive Summary have been incorporated in the Executive Summary included as part of this Final EIS/EIR.

### ***Global Changes to EIS/EIR***

The following changes to the EIS/EIR shall apply globally throughout the document:

- Alternative 4a: Full Dam Removal/Long-Term Sediment Transport – Long-Term Transport Period shall be revised to read: “Alternative 4a: Full Dam Removal/On-Site Sediment Stabilization: Long-Term Transport Period.”
- Alternative 4b (Recommended Plan): Full Dam Removal/Long-Term Sediment Transport – Short-Term Transport Period shall be revised to read: “Alternative 4b: Full Dam Removal/On-Site Sediment Stabilization: Short-Term Transport Period.”
- Mitigation B-11 (Giant Reed Eradication) shall be revised to read: “Mitigation B-11 (BMPs for Giant Reed Control).”
- Mitigation B-12 (Predator removal plan) shall be revised to read: “Mitigation B-12 (Predator Control Plan).”
- Pages 1-6, 1-15, and 5-12: All areas where it indicates that the EIS/R “will be revised” should be replaced with “has been revised”.

### ***Specific Changes to the EIS/EIR***

#### **Section 1: Introduction**

Page 1-3, second paragraph (after bulleted list), fourth sentence, revise as follows:

Current members include: the National Park Service, National Marine Fisheries Service (NMFS), United States Geologic Survey (USGS), United States Fish and Wildlife Service (USFWS), United States Forest Service - Los Padres National Forest, United States Bureau of Reclamation (BOR), Congressman Gallegly, State Senator Jack O’Connell, the California Department of Fish and Game (CDFG), the California Regional Water Quality Control Board, California Coastal Conservancy, National Fish and Wildlife Foundation, Cities of San Buenaventura (Ventura),

Page 5.2-9, after first paragraph, insert following:

Ojai Valley Sanitary District has sanitary sewer pipelines located along the edge of the Ventura River in the vicinity of Baldwin Road. The slurry sites proposed for the project may cause changes in channel flows resulting in potential flood and/or erosion damage to the infrastructure just upstream (east side) and downstream (west side) of the bridge.

Page 5.2-9, fifth paragraph, third sentence, revise as follows:

The Cañada Larga area includes residences, a school, the City of Ventura Water Filtration Plant, Ojai Valley Sanitary District Treatment Plant, and a gasoline refinery located on the south side of the channel. Alternative 4b includes raising the existing 10,102-foot long levee.

Page 5.2.9, **Groundwater and Surface Water Supplies**, this section of the September 2004 version of the Final EIS/EIR was significantly modified to clarify the discussion relative to impacts to Groundwater and Surface Water supplies. The September 2004 version had black text (from the DEIS/EIR), red text (additions to the DEIS/EIR) and strikeout (deletions from the DEIS/EIR). The black and red text are presented below. New text for this version (December 2004) are in blue; deleted text has strikeout through it.

This section is revise as follows:

Groundwater and surface water supplies are affected by amount and duration of rainfall, the turbidity and sediment loads in the runoff, and the composition of the riverbed and watershed. Potential impacts to water supply caused by ~~t~~The removal of Matilija Dam are considered adverse but less than significant (under CEQA), as described in the following text. ~~—could potentially deplete groundwater or surface water supplies or interfere with groundwater flow or recharge due to increases in turbidity and sedimentation.~~

## FOSTER PARK

It is estimated that project-related turbidity increases would cause surface diversions from existing facilities at Foster Park to be reduced by approximately 90 to 460 acre feet the first year after construction of the dam, diminishing to no reduction in diversions after 15 years. The first year reduction amounts to approximately 2 to 8 percent of total yearly diversion. Total reduction in diversions over the 15-year period is estimated to between 1,400 and 5,000 acre-feet, which represents approximately 4 to 19 percent of the six-year diversion total. The proposed project alternative includes the construction of two groundwater wells at Foster Park to offset the possible reduction. ~~It is estimated that project-related turbidity increases would cause surface diversions from existing facilities at Foster Park to be reduced by approximately 470 acre feet the first year after construction of the dam, diminishing to no reduction in diversions after six years. The first year reduction amounts to approximately seven percent of total~~

~~yearly diversion. Total reduction in diversions over the six-year period is estimated at 1,600 acre-feet, which represents approximately four percent of the six-year diversion total.~~ The proposed project alternative includes the construction of two groundwater wells at Foster Park to offset the possible reduction. With the inclusion of these wells as part of the project, impacts to City of Ventura water supply facilities are considered adverse, but less than significant (Class III) at Foster Park.

The groundwater extracted from the Foster Park wells is expected to be no more than the amount of surface water the City would divert from the Ventura River to offset if not for the loss of diversion resulting from Project Matilija sediment-generated turbidity. As such, no net increase of water is expected to be lost from the Foster Park area. No overall impact to aquatic or riparian resources are expected as the total groundwater and surface water amount the City extracts is expected to be unaffected. (Class III)

The wells are proposed to be located on opposite sides of the river in the vicinity of Foster Park. The east well will be located in an open space area of the Foster Park recreation area and out of the active river area. The area has a few large trees and an understory of non-native grasses that appear to be mowed annually. The second well will be located on a low flood terrace at the west riverbank edge approximately 1,500 feet upstream of the park. The area may be categorized as passive agriculture with patches of small trees. Access to both wells would be via existing roads.

## LAKE CASITAS

Potential impacts to diversion operations at Lake Casitas are addressed above, and are prevented by the proposed sediment bypass structure. Impacts would be adverse, but less than significant (Class III).

## WATER LOST DUE TO LAKE REMOVAL

Casitas MWD has a lease with Ventura County Watershed Protection District allowing the use of stored water at Matilija Dam until 2009, when the current lease expires. ~~Matilija Dam provides an average of 590 acre-feet/year of water for Robles diversions under current operating criteria.~~ The construction timeframe for the project is not anticipated to begin until 2008 at the earliest. The first year of construction will include downstream features such as bridge modifications, levee construction and slurry pipeline and disposal site construction. The slurry of fines and dam deconstruction will not begin until the second year of construction, in 2009. Therefore, the CMWD lease with the VCWPD will expire prior to any construction activities that may impact the Matilija Dam water supply. Regardless of the lease or any water rights agreements, the loss of water supply caused directly by the removal of Matilija Dam is considered adverse, but less than significant, as explained below. ~~The safe yield water supply that is estimated to be lost when the Dam is removed in year 2007 is 1,180 acre-feet. Obtaining a similar amount of water from alternative source would offset this loss. At this time,~~

~~Alternative 4b assumes this would involve purchasing water from the California State Water Project. During Preconstruction Engineering and Design other alternatives, such as obtaining water from groundwater or other less costly sources, would be considered for mitigation. Because the water could be obtained from other sources, the loss of Matilija Dam storage water is considered adverse, but less than significant (Class III).~~

Water supply currently available due to the Matilija Dam reservoir will be lost both with the proposed project and under the No Action alternative. With implementation of the project, the reservoir will be lost 11 years sooner than the No Action alternative. The loss of water refers to the storage capacity of the lake currently managed by Casitas MWD to maximize diversion opportunities.

Casitas MWD currently (2003) diverts an average of 590 ac-ft of water per year by controlling releases of water trapped behind Matilija Dam. Today, this represents about 5% of the average amount (12,500 ac-ft) diverted by Casitas from the Robles facility per year, although water diversions vary from 0 to 45,000 ac-ft depending on the rainfall. The Robles facility provides approximately one-half of the total Casitas MWD water supply.

Deconstruction of Matilija Dam is expected to begin in 2009, therefore the potential water losses are calculated beginning with this date. Over the course of 11 years following 2009, the water supply will diminish substantially under the No Action alternative from 2% (estimated for 2009) of the annual diversion to near zero in 2020. Matilija Dam will continue to fill with sediment and the effective storage of the dam will be 230 ac-ft in 2009 and less than 50 ac-ft in by 2020 (Table 5.23, p. 169 of Appendix D of the Main Report, Hydrologic, Hydraulic and Sediment Transport Studies). This assumes that the current trap efficiency is 45% and the trap efficiency decreases with storage capacity and that extreme variability in annual hydrology conditions does not occur during this period.

The total estimated loss of water is 2,200 ac-ft for the time period between 2009 and 2020. The current benefit of Matilija Dam to the diversion capacity at Robles will be unavailable after 2020. The projection of the cumulative benefit, starting in 2003, of Matilija Dam is shown in Figure 2.19 on p. 99 of Main Report Appendix D. To generate this graph, it was assumed that the benefit in 2003 was 590 ac-ft/yr and the benefit was assumed to decrease linearly with the storage capacity of Matilija Reservoir. The storage capacity was taken from Table 5.23. Based on this analysis, the total benefit of Matilija Dam under the Without-Project Conditions is approximately 5,000 ac-ft from 2003 until the reservoir capacity is completely gone, which occurs effectively in 2020. If the total benefit is calculated from 2009, the benefit is approximately 2,200 ac-ft.

The loss of water is considered an adverse, but less than significant impact (Class III) because it represents a very small portion of the overall water supply of the Ventura River Basin, compared to the No Action alternative. In 2009, this lost water represents only 2% of the Casitas MWD annual water supply and diminishes to zero in the

following 11 years. When compared to the overall water budget of the Ventura River, this water loss constitutes a less than significant impact to regional water supply. Further, the Ventura River Basin is not currently overdrafted according to the Ventura County Water Resources Division of the Public Works Agency. Per the Ventura County Initial Study Assessment Guidelines (CEQA), a significant impact is defined as causing the overdrafting of surface water in a basin or further withdrawing water from an already overdrafted basin. Once the dam is removed or the lake fills completely with sediment (under No Action), water previously trapped by the dam would flow downstream and under many circumstances would be available for diversion and aquifer recharge, thereby retaining at least a portion of the current beneficial uses and availability.

Although the loss of water from dam removal, estimated to total 2,200 ac-ft over the period of 11 years from 2009 to 2020, is considered a less than significant impact, the Ventura County Watershed Protection District investigated opportunities that would replace the benefits of this water without incurring new and substantial impacts to regional water supplies. Currently, the City of Ventura, in conjunction with United Water Conservation District, is exploring ways to reduce reliance on water from Lake Casitas (personal communication with Don Davis, City of Ventura, 12/2/04). The following options are considered feasible and could be utilized to offset the 2,200 ac-ft of water lost as part of the project. These include:

- Delivery of State water could occur via the Santa Clara River without the need for constructing new facilities. The Fox Canyon Groundwater Management Agency (GMA) has allowed pumping credits in the Oxnard Plain Basin for State Water delivered in this way by United, depending on stream flow conditions at the time of delivery. The City of Ventura has a significant bank of GMA pumping credits and could pump the water represented by the earned credits from the Fox Canyon and thereby proportionally reduce the City's water required from Casitas.
- Delivery could occur by wheeling State water through Metropolitan Water District facilities to the point of connection planned between the City of Oxnard and the City of Ventura water systems. This would require facilities and institutional arrangements for wheeling water through Metropolitan, Calleguas, and Oxnard, which are currently not in place, but could feasibly occur. Delivery of State water in this manner would reduce quantities of water taken from Casitas.
- Build the Santa Clara River pipeline to allow direct delivery of State water to the City of Ventura, Lake Casitas, and others. This option involves the design and construction of significant facilities but water would be delivered with minimal losses to the City and potentially Casitas MWD.
- The City could increase groundwater production from the Mound, Santa Paula and Oxnard Plain groundwater basins at any time. The current infrastructure and allocations would allow for the production of 1,000 ac-

ft per year without agreements with other agencies. This option is available over the short-term to reduce the allocation from Lake Casitas because City development or drought protection would not be offset by new water brought to the system.

- Reclamation of the Ojai Valley Sanitary District (OVSD) wastewater could be routed to users currently served by Casitas customers that do not require potable water, such as oilfield injection and irrigation. Approximately 1,000 ac-ft per year could be replaced with reclaimed water if some new facilities are constructed. Upgrades at the OVSD facility would also be required. The City of Ventura owns the property where the OVSD treatment facility is located and has ownership of the effluent from the plant. A portion of the reclaimed water would likely be retained for releases into the lower Ventura River to maintain ecological benefits.

Adoption of the following project condition with the approval of the proposed project and certification of the CEQA portion of this EIS/EIR, would direct the Watershed Protection District to pursue options to replace the 2,200 ac-ft of water lost as part of the project.

#### PROJECT CONDITION A:

As a condition of the proposed project, the replacement of the 2,200 ac-ft of water supply will be replaced by the Ventura County Watershed Protection District by negotiating with the City of Ventura to provide water to offset the potential loss. Feasible alternatives, including but not limited to those described above, will be explored and at least one will be executed to ensure water delivery.

#### WATER LOST DUE TO LAKE SEDIMENT REMOVAL

The water trapped in the sediments behind Matilija Dam is not currently utilized as a water supply, but represents a potential water supply. Due to the small amount of water available and the high costs to extract it, this loss of potential water supply comprises an adverse, but not significant, water supply impact caused by the proposed project (Class III). No mitigation is required.

The original water capacity of Matilija Reservoir was 7,018 ac-ft following construction of the dam in 1947. The original dam crest was at an elevation of 1125 ft. The dam was notched to an elevation of 1,095 ft in 1965 due to safety concerns and the reservoir capacity was reduced to 3,856 ac-ft. Since that time, sediment has filled in the reservoir and reduced its "open water" capacity to 500 ac-ft. The amount of sediment that would

store water could be approximated by subtracting the 500 ac-ft from the 3,856 ac-ft of storage after notching, approximately 3,356 ac-ft.

Tests conducted for the Feasibility Study measured the bulk density of the sediment in the reservoir area to be 72 lb/ft<sup>3</sup>. Approximately half of the sediment available to store water can be classified as "reservoir sediment" and half as "delta sediment." The reservoir sediment is 18% sand, 52% silt, and 30% clay. The sediment in the delta area comprises 13 % gravel, 54 % sand, 28 % silt, and 5 % clay. Therefore, of the sediments available to store water, approximately 17.5% is clay, 40 % is silt, 36 % is sand, and 6.5 % is gravel. Based upon the data from Morris and Johnson (1967) the average specific yields of gravel, sand, silt and clay are approximately 25%, 25%, 8%, and 3%. This results in a weighted average specific yield of 15%. There is some uncertainty in this estimate, but it is likely that the specific yield would be between 7 % and 25%. Using this range of estimates, the amount of water that could be obtained from the trapped sediments is between 230 and 840 ac-ft.

Lake water, including that trapped in some sediments, was available at one time by a 48-inch diameter outlet structure located in the middle of the dam. This outlet has been inoperable since the 1969 flood events. Casitas Municipal Water District operates the currently serviceable outlet closer to the top of the dam. Today, to access the water within the reservoir sediments, either sediment would have to be excavated from behind the dam to allow water out of the lower outlet, or groundwater wells would have to be installed in the reservoir area. Restoring function to the outlet structure and installing wells would not be cost efficient for the resultant water yield as estimated above. Neither of these operations to utilize stored water has been conducted by Casitas MWD and therefore, this water was not considered as a current source of water supply.

Further, extracting water from the sediments above Matilja Dam would diminish available supply at existing downstream wells and diversions. Because water stored in the sediments has not been and is not currently drained via an outlet structure, this aquifer remains full, losing small amounts to evaporation and transpiration near the surface and through cracks in the bedrock below. Water flowing in from Matilja Creek cannot be trapped in the full aquifer and remains available as a water source as impounded lake water or flows over the crest of the dam during storm events. Therefore, the water currently trapped in the lake sediments is not considered an annual renewable source without some water loss to downstream reaches. After implementation of the project, water will not become trapped behind the dam, resulting in a beneficial impact, as water will flow downstream.

Most of the water currently trapped in the sediments will be utilized during grading and slurry activities in Reach 7. Currently saturated fines will be mixed with additional water during slurry activities. If water draining from the non-slurried sediments is captured during dewatering activities (sump pumps and coffer dams) it will likely be used for on site dust control and compaction. Much of the water will adhere to the sediment particles and not be available for extraction, and will simply be moved with the material during construction.

## GROUNDWATER

Groundwater in the Upper Ventura Basin is primarily recharged via rainfall and runoff which percolates through the soil into the shallow basin. Thus, water supply could be affected if infiltration rates were diminished due to increased fine deposition in the river bed materials. Wells that access and draw water from this aquifer could potentially be affected if physical damage occurs, such as by river channel meandering, flood-borne sediments leaking into the wells, or if flood-borne or other sediment deposition buries the wells. These potential impacts are discussed in the following text.

There are numerous groundwater wells that access the water in the Upper Ventura Groundwater Basin ~~Aquifer~~ that could potentially be affected by the proposed project. Wells are located primarily ~~and includes floodplains~~ along the mainstem of the Ventura River from Casitas Springs upstream through Meiners Oaks to Camino Cielo Road. Meiners Oaks County Water District (MOCWD) operates 2 wells located approximately 1 mile downstream of Matilija Dam and 2 wells further south near Meiners Oaks adjacent to Rice Road. Ventura River County Water District (VRCWD) operates three wells located between Meiners Oaks and the Highway 150 crossing. Rancho Matilija Mutual Water Company also operates several groundwater wells along the west side of the Ventura River, serving agricultural water to approximately 400 acres. This analysis and proposed conditions pertains to other wells that occur in the project vicinity. The City of Ventura diversion structure is located at Foster Memorial Park,

### Infiltration

The infiltration to the Upper Ventura Basin ~~Aquifer~~ occurs primarily through the active channel bed of the Ventura River as well as through percolation in the 75 square mile watershed. The river bottom carries runoff flows and also allows percolation to occur readily due to the bed composition of gravel and cobbles, with some sand and very few fines. The floodplain terraces are less important for aquifer recharge because they are subject only to rainwater and generally have soils with more fines and are therefore less conducive to percolation. The median particle diameter in the bed of the Upper Ventura River is over 4 inches. There is almost no silt or clay in the river bed because storm flow velocities carry most of the fines in suspension for long distances, usually out to the ocean. The Upper Ventura River Basin Aquifer is recharged during the wet season as rainfall and river flows percolate into the aquifer. The floodplain terraces contribute less per unit area to aquifer recharge because they generally have soils with more fines and are therefore less conducive to percolation. However, cumulatively, the terraces and watershed area do substantially contribute to the overall groundwater supply via percolation and subsurface flows because of the large surface area.

There is approximately 6 million yd<sup>3</sup> of sediment behind Matilija Dam.



Approximately 2.1 million yd<sup>3</sup> of fine sediment will be transported by slurry line to disposal sites downstream. The remaining 3.9 million yd<sup>3</sup> of sediment stored in the reservoir will be allowed to erode with storm flows and transported downstream carried by natural stream flows. The proposed soil cement revetment in the reservoir will allow graduated erosion of the 3.9 million yd<sup>3</sup>.

Of the 3.9 million yd<sup>3</sup> of sediment, approximately 800,000 yd<sup>3</sup> is silt and clay, 1.7 million yd<sup>3</sup> is sand, and 1.4 million yd<sup>3</sup> is gravel and cobble. The silt and clays are mixed in with the coarser material. All sediment transport modeling to date shows that the gradual release erosion of this material will not substantially change the composition of the Ventura River Bed. The model indicates that most silts and clays remain are primarily suspended in the water column and are discharged to the ocean, and therefore will not deposit onto the river bed. The majority of material that does and will continue to deposit on the river bed under the with project condition comprises is cobble, gravel and some sand sized sediment. Minor amounts of fines will settle on sand bars and the edges of flood terraces as storm flows recede. Therefore, no substantial impact to groundwater supply caused by project released fines during storm flows is expected. Even where aggradation is expected, the deposited bed material composition will not include large quantities of fines for these same reasons. As a result of intermittent and temporary aggradational level changes in the river bed, the impact to groundwater percolation is considered adverse, but less than significant (Class III). The recharge to the Upper Ventura River Basin is and will continue to be limited by the supply of rainwater.

The Ventura River by nature has a large capacity to transport sediment because of its steep slope (over 1%) and high flows. In fact, the Ventura River transported over 4,000,000 yd<sup>3</sup> of sediment in less than 1 month in 1969. Ventura River regularly transports large amounts of sediment during large storms and after fires, with the same result of fines transported to the ocean and coarse materials settling in the bed. The infiltration of water from the Ventura River into the Upper Ventura River Aquifer will continue to occur at present rates after dam removal because neither the amount of water allowed to percolate nor the percolation rates will change with implementation of the project. The recharge to the Upper Ventura River Aquifer is and will continue to be limited by the supply of rainwater:

To further avoid and minimize potential percolation impacts, tThe 2.1 million yd<sup>3</sup> of slurried reservoir sediment (mostly silts) placed at disposal sites, located just upstream and downstream of the Baldwin Road Bridge (Highway 150), will be stabilized and protected as part of the proposed project so that this sediment is not accessed by flows smaller than the 10-yr flood. Sediment will be placed at or above the 10-yr flood elevations on the river terraces. In addition, the upper layers of the deposited material will be mixed with and covered with topsoil suitable for planting vegetation. This will reduce the potential for runoff to erode and carry fines into the river. Flows larger than the 10-yr flood may contact and mobilize some of the sediment, while smaller flows will not. These high flows typically transport very large amounts of sediment and have a large sediment supply. Therefore, sediments eroded from the disposal sites will constitute a small incremental increase in sediment concentrations during these events.

When the high flows event captures this slurry sediment, it will not substantially change the overall character of the flow or result in substantial changes to the riverbed composition or configuration. As described previously, the majority of the fines will be carried out to the ocean, and the minor amounts deposited in the river will not affect percolation.

### Slurry Disposal

Disposal of the slurried reservoir fine material would have no measurable impact to the overall percolation capacity of the watershed. Therefore, tThe disposal of sediments at the proposed sites will not substantially reduce the percolation of water into the Upper Ventura Basin Aquifer. The disposal sites have been designed to block water passage through the fine material to protect the aquifer below. The potential for fines to migrate into the pore spaces below the slurry site will be limited due to the low permeability of the fine sediment. In addition, the sites will be lined with sand or other filter that will prevent the potential downward movement of fines through soil pores carried by water. Compaction of the lower layers of the deposited fines would actually form a hard pan that would further be another barrier to water passage. As a result, the disposal areas will be removed from the watershed percolation area that contributes to overall groundwater supply. However, removal of approximately 100 to 150 acres of upland percolation area in the total watershed area is not considered to result in a significant loss of water supply because the majority of recharge occurs in the river bottom. Further, the placement of the material on the disposal sites will not affect transmissivity of water in the aquifer beneath the sites, and therefore not affect water movement within the aquifer or the ability to extract water. Therefore, the loss of percolation area by disposing of slurry sediments and creating an impermeable area within the watershed will not result in a substantial loss or interruption in groundwater supply. This impact is classified as adverse, but not significant. No mitigation is required. In addition, the upper layers of the deposited material will be mixed with and covered with topsoil suitable for planting vegetation. This will reduce the potential for runoff to erode and carry fines into the river;

### Physical Well Damage

Disposal of the slurried reservoir fine material could potentially bury water wells or otherwise render them operable at less than optimal capacity due to physical access impairment or the potential for fines to enter the well casings through openings at the wellhead. Further refinement of the slurry disposal locations will be conducted during the Preconstruction, Engineering, and Design phase of the project. During this phase, the disposal locations will be adjusted to avoid wells and other facilities or infrastructure to the extent feasible. If wells are located within the disposal areas, additional casings can be added as part of the project to ensure the wells remain operable under the changed surface elevation conditions. Each water purveyor is responsible for maintaining wells in standard operating conditions, including sealing to keep out surface water contaminants. Properly sealed wells will not be impacted by the placement of sediments around them. To minimize potential impacts to wells located near or within the disposal site areas, the

wells will be inspected prior to project implementation. Inspection will result in the repair of leaking casings to minimize the potential for fines to infiltrate and damage the wells;

If large sediment concentrations exist at low flows, it is possible that the riverbed may become clogged with sediment. This could only occur until the next high flows mobilize the sediment, but during this period the yield from subsurface wells may be reduced. For this to occur, the infiltration throughout the entire Ventura River would have to be reduced. Because such an occurrence would be temporary until sediment discharges stabilize, and intermittent as a result of sediments being transported by high flows, this impact is considered adverse, but less than significant (Class III).

Many water wells are located in the current floodplain of the Ventura River and are currently subject to flood flows and erosion/migration of the active channels. These processes will continue with or without project implementation. There is minimal risk of increased damage to existing wells due to added turbidity, channel bed erosion and flood damage related to the Project. Therefore, potential physical impacts to wells directly resulting in the reduced capacity to produce groundwater are considered potentially adverse, but not significant (Class III).

In summary, no significant impacts to well water productivity or yield is expected to be caused by implementation of the proposed project based on the analyses of available data. Nevertheless, the Project description includes a substantial post-project adaptive management program to address and mitigate unforeseen impacts. Any significant loss of water well productivity or yield that can be substantiated to have been caused by the project will be mitigated through this adaptive management program. Further, the following condition, if adopted as a part of the project approval, would provide for mitigation of potential impacts.

**PROJECT CONDITION B:**

While loss of well-water production is not an expected impact, if Project related significant reductions in water production are verified and validated, mitigation measures shall be implemented under the Project's Adaptive Management Program. Further, the Project shall provide additional well casings to currently serviceable water wells if they would be impacted by the direct disposal of sediment from the slurry. The Project shall provide protection from the increment of flood inundation that would occur as a result of the Project to the same degree, and consistent with the same criteria, as provided by the Project to other affected facilities, if warranted.