6.0 ALTERNATIVES

6.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) describe a reasonable range of alternatives to the project, or to the location of the project that could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives. This section sets forth potential alternatives to the proposed project and evaluates them, as required by CEQA.

Key provisions of the *State CEQA Guidelines*[1] pertaining to the alternatives analysis are summarized below:

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

- The No Project alternative shall be evaluated along with its impact. The No Project analysis shall discuss the existing conditions at the time the notice of preparation is published. Additionally, the analysis shall discuss what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. Because the proposed project is a development project, the *State CEQA Guidelines* are directly applicable to the project.[2]

  If the project is a development project on an identifiable property, the No Project Alternative is the circumstance under which the project does not proceed. Discussion of this alternative shall compare the environmental effects of the property remaining in its existing state to the environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this no project consequence should be discussed. In certain instances, the No Project Alternative means "no build," wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical results of not approving the project rather than create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.[3]

- The range of alternatives required in an EIR is governed by a "rule of reason"; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.

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1 California Code of Regulations, Title 14, Division 6, Chapter 3, *California Environmental Quality Act Guidelines*, Section 15126.6.

2 Ibid, Section 15126.6(e)(3)(B).

3 California Public Resources Code, Title 14, Division 6, Chapter 3, *California Environmental Quality Act Guidelines*, Section 15126.6.

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.[4]

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the applicant could reasonably acquire, control, or otherwise have access to the alternative site.[5]

6.2 PROJECT OBJECTIVES

The City of Solvang has identified the following objectives:

- Ensure a future reliable water supply to meet the projected water demand at City buildout as provided for in the General Plan;
- Secure adequate water rights to reliably meet the City's water supply requirements;
- Ensure adequate infrastructure to deliver water to the City's users and meet water quality requirements; and
- Avoid impacts either to public trust resources or to other water rights holders that have priority.

6.3 ALTERNATIVES CONSIDERED

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are feasible, and therefore merit in-depth consideration, and which are infeasible. Alternatives considered include a range of potential projects to meet the applicant's objectives while eliminating or reducing significant environmental impacts identified in **Section 5.0, Considerations and Discussions of Environmental Impacts**.

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4 California Public Resources Code, Title 14, Division 6, Chapter 3, *California Environmental Quality Act Guidelines*, Section 15126.6(f)(3).

5 Ibid, Section 15126.6(f)(1).

Alternatives considered include the following:

Alternative 1: No Project Alternative – divert only the baseline amount of 1,053 acre-feet per year (afy) of groundwater from the Santa Ynez River underflow pursuant to water right Permit 15878. All diversions would occur from the existing permitted reach for diversion.

The No Project Alternative would continue existing operations and the City would rehabilitate or replace Well Nos. 3, 7A, and 5 as necessary to extract the 1,053 afy. No other facilities proposed by the Master Plan Update would be constructed. The No Project Alternative is not a no-build scenario, however. The City will continue to grow to full buildout under the approved General Plan because all of the development and all other infrastructure contemplated in the General Plan have been authorized.

Alternative 2: Supplement proposed Santa Ynez River diversions with State Water Project (SWP) water – under this alternative, the full buildout water demand of 1,980 afy would be supplied by both the Santa Ynez River underflow and SWP water from the City's existing Table A Amount (1,500 afy). Solvang has chosen to use 40 percent of the Table A Amount as the multiple dry year production amount or 600 afy. Therefore, under this alternative, the total demand of 1,980 afy would be met by using a maximum of 1,380 afy of groundwater diverted from the Santa Ynez River with the remaining 600 afy of demand met by SWP water.

Alternative 3: Increase Santa Ynez River Diversions to 2,400 afy – this alternative reflects the City's prior Master Plan diversion which includes providing irrigation water for uses outside of the City boundary but within the currently permitted place of use for the water diverted from the Santa Ynez River underflow. The additional 420 afy would be provided to existing irrigation uses outside the Solvang City limits. The City has a history of providing irrigation water although it has not done so recently. The remainder of the water to be diverted (1,980 afy) would be used as noted to meet demand within the City's service area. This alternative would include the proposed downstream extension of the Additional Reach of Diversion and installation of new wells in the area downstream of Alisal Bridge within Well Sites A and B. This alternative would also include the renovation and use of Well Nos. 3 and 7A and, possibly No. 5.

Alternative 4: Obtain the 1,980 afy diversion from the Santa Ynez River underflow and group all new and existing wells within the Existing Reach of Diversion per water right Permit 15878.

6.4 ALTERNATIVE IMPACT ANALYSIS

This subsection provides a comparison of the impacts of these alternatives and the proposed project for those environmental issues addressed in this document. In all cases, the comparison of impacts assumes that the impacts resulting from each alternative are addressed by implementing all feasible mitigation measures identified in this document and those other feasible mitigation measures that may be applicable for impacts of a specific alternative. In accordance with the *State CEQA Guidelines*, the discussion of the environmental effects of the alternatives may be less detailed than that provided for the proposed project.[6]

6.4.1 Alternative 1: No Project Alternative

Description and Analysis

Under the No Project Alternative, the proposed project would not be constructed. The City would maintain diversion of the maximum amount of 1,053 afy diverted in recent years under the existing water right Permit 15878. All diversions would occur from the existing reach for diversion as provided for under water right Permit 15878. The No Project Alternative would continue existing operations and the City would either rehabilitate Well Nos. 3 and 7A, and repair or replace Well No. 5 to obtain wells yields to extract the 1,053 afy. No other facilities proposed by the Master Plan Update would be constructed.

The No Project Alternative is not a no-build scenario, however. The City will continue to grow to full buildout under the approved General Plan because all of the development and all other infrastructure contemplated in the General Plan have been authorized.

Without the Project, the increased water demand at full buildout will be more dependent on State Water Project (SWP) water purchased from ID No. 1. In addition, the City may drill additional upland wells. The increased reliance on SWP and ID No. 1 supplies will decrease water supply reliability and increase costs as compared to the Project. In addition, the amount of energy used to provide the Solvang water supply will increase due to much higher amount of energy per acre foot required for pumping and treatment of SWP water.

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6 California Public Resources Code, Title 14, Division 6, Chapter 3, *California Environmental Quality Act Guidelines*, Section 15126.6(d).

Hydrology, Water Supply and Water Quality

The Santa Ynez River flows are dependent on the release of reservoir water either for water right users downstream, fish flow requirements, or prior to winter storms to prevent excessive flooding. The flows would be consistent with the Biological Opinion (BO), the Lower Santa Ynez River Fish Management Plan (FMP) and the Settlement Agreement; the BO and FMP specify flow targets at the Highway 154 Bridge and at Alisal Bridge. The water supply to the City would still include 1,053 afy from the Santa Ynez River underflow with the remaining portion of the 1,980 water demand supplied by SWP water and water purchased from ID No. 1.

Surface water flows in the Santa Ynez River would continue under the No Project Alternative similar to baseline conditions from Bradbury Dam to Highway 154, Alisal Bridge and Lompoc Narrows. The No Project Alternative would result in similar groundwater storage as baseline conditions in the Above Narrows Riparian Aquifer and the Santa Ynez, Buellton and Santa Rita Subbasins.

Well Nos. 3 and 7A would be rehabilitated and Well 5, which are located adjacent to wells for ID No. 1 and Alisal Ranch would be repaired or replaced to ensure the City's ability to reliably extract the 1,053 afy of Santa Ynez River underflow. Under the No Project Alternative, potential impacts to adjacent wells operated by ID No. 1 and Alisal Ranch would continue. This would result in greater impacts to adjacent wells than the proposed project.

Cachuma Project members receive an allotment of 25,714 afy under normal water years to meet the various service area demands. Under the No Project Alternative, Cachuma Project members would continue to receive this amount and would only see potential decreases in supply from Lake Cachuma as a result of increase diversions by the City of Solvang to the extent that Solvang purchases Cachuma water from ID No. 1. As such, this alternative would result in fewer water supply impacts to Cachuma Project members when compared to the proposed project.

The water quality within the Santa Ynez River would continue to be consistent with historic flows of the Santa Ynez River. Impacts to water quality would be similar to the proposed project.

The water supply impacts would result in decreased reliability for the City, which would have to rely on additional SWP imports and purchases from ID No. 1 to meet demand.

Terrestrial Biological Resources

The No Project Alternative would continue existing operations and the City would either rehabilitate Well Nos. 3 and 7A, and repair or replace Well No. 5 to obtain wells yields to extract the 1,053 afy. No other facilities proposed by the Master Plan Update would be constructed.

As such the No Project Alternative would not involve any earth moving operations (except for the repair or rehabilitation of Well No. 5), and would not disturb or change the character of riparian resources within the Master Plan Update area. In addition, no terrestrial biological resource impacts would result from the implementation of the No Project Alternative. Impacts would be less than the proposed project.

Fisheries Resources

As stated above under Hydrology, Water Supply and Water Quality, the No Project Alternative would operate under current conditions up to the baseline diversion of 1,053 afy, which is consistent with the BO, FMP and Settlement Agreement. The existing annual Santa Ynez River water use of 1,053 afy (baseline amount) would continue and the current surface water flows within the Santa Ynez River, which allow for public trust resources, including the *O. mykiss,* to continue to migrate upstream in average to wet years for spawning and allow outmigration of smolts while retaining habitat for successful spawning and rearing. Therefore, impacts to fisheries resources would be similar to those of the proposed project.

Cultural Resources

Because the No Project Alternative would involve limited construction of any facilities (i.e., rehabilitate Well Nos. 3 and 7A, and repair or replace of Well 5) that would require earth moving operations, it is anticipated that no cultural resource impacts. Therefore, the No Project Alternative would result in fewer impacts than the proposed project.

Air Quality

The No Project Alternative would continue existing City operations and all other development of housing, commercial and related infrastructure described in the approved General Plan. The City would rehabilitate Well Nos. 3 and 7A, and repair or replace Well No. 5 to ensure its ability to reliably extract the 1,053 afy. Therefore, the No Project Alternative could result in some construction emissions associated with these activities and have some construction-related impacts on air quality. The No Project Alternative would result in some new additional maintenance vehicle trips for Well No. 5 (or its replacement). Additionally, some increase in indirect stationary source emissions would occur from

operational related impacts on air quality. Therefore, the No Project Alternative would result in similar air quality impacts when compared to the proposed project.

Greenhouse Gas

The No Project Alternative would continue existing operations and all other development of housing, commercial and related infrastructure described in the approved General Plan. The City would rehabilitate Well Nos. 3 and 7A, and repair or replace Well No. 5 to reliably extract the 1,053 afy. Therefore, the No Project Alternative would result in construction greenhouse gas (GHG) emissions and would have some increase in construction-related impacts on GHGs. The No Project Alternative would result in some additional new maintenance vehicle trips for Well No. 5 (or its replacement). Additionally some increase in indirect stationary source GHG emissions would occur from operational related impacts on GHGs. The No Project Alternative would result in similar impacts when compared to the proposed project.

Land Use

The No Project Alternative would continue existing operations and the City would not construct any new water facilities (other than repair or replacement of Well No. 5) and there would be no changes in land uses except as otherwise authorized under the General Plan. Additionally, there would no change in use of the Alisal Commons open space area for the construction and operation of a water treatment plant. Therefore, land use impacts under the No Project Alternative would be fewer than those of the proposed project.

Recreation

This alternative would not require the construction of any facilities within areas such as the Alisal Commons open space or other recreation areas in the City. As such, it would result in fewer recreational impacts than the proposed project.

Noise

The existing noise environment within the City consists mainly of roadway noise along Highway 246 and arterial roadways, such as Alisal Road. There would be no construction in the Alisal Commons open space area for the water treatment plant.

Under the No Project Alternative, Well Nos. 3 and 7A would be rehabilitated and Well No. 5 would be repaired or replaced to reliably extract the 1,053 afy from the Santa Ynez River underflow: as such, the No Project Alternative would result in some increase in construction-related noise impacts. The incremental

increase in construction related noise would be less under this alternative than the proposed Master Plan Update. As such, construction-related noise impacts would be fewer under the No Project Alternative when compared to the proposed project.

Operations of existing water facilities (i.e., pump stations and water treatment facilities) and routine maintenance trips would continue under the No Project Alternative. Additionally, some increase in routine maintenance trips would occur. Under this alternative, operation of a water treatment plant would not occur. Therefore, impacts under this alternative would be fewer when compared to the proposed project.

Hazards and Hazardous Materials

The No Project Alternative would continue existing operations of the City's municipal water system. The system currently treats water at the source with chlorine when extracted from wells and these operations would continue. The likelihood of release of hazardous materials would be similar to the proposed project.

Aesthetics

Since the No Project Alternative would not involve the construction of any facilities beyond those that already exist (including the repair or replacement of Well No. 5), no change to the visual resources would occur and there would be no impact. This alternative would result in fewer aesthetic impacts when compared to the proposed project.

Energy

The No Project Alternative would not construct any new facilities (e.g. water treatment plant) that would require energy. However, the City would rehabilitate Well Nos. 3 and 7A, and repair or replace Well No. 5 to reliably extract the 1,053 afy under this alternative. As a result, there would be no increase in energy use that would occur from operation of the wells. However, to meet water demand requirements, there could be significant increases in energy use for transport and treatment of SWP water however. Therefore, impacts would be less than the proposed project.

Utilities/Services Systems

The No Project Alternative would continue existing operations and the City would rehabilitate Well Nos. 3 and 7A, and repair or replace Well No. 5 to obtain well yields to extract 1,053 afy. No other facilities proposed by the Master Plan Update would be constructed. However, as Wells Nos. 3 and 7A would be

rehabilitated and Well No. 5 would be repaired or replaced, operational impacts under this alternative would be similar to the proposed project.

The City would supplement General Plan buildout water demand with SWP and ID No. 1 water that is presently available. The planned installation and upgrade of existing water facilities, such as new pipelines or needed storage demand, would not occur, and there would be fewer construction related environmental impacts when compared to the proposed project.

Conclusion and Relationship to Project Objectives

A summary comparison of impacts associated with the project alternatives is provided in **Table 6.0-1, Comparison of Alternatives to the Proposed Project** (shown later in this section).

Generally, the No Project Alternative would result in similar surface hydrology and water quality, groundwater quality, and Cachuma Project storage and elevation impacts. Impacts to the City's water supply would be greater than the proposed project as demand would be more reliant on SWP and ID No. 1 water. Additionally, as the City's wells would be located adjacent to the ID No.1 and Alisal Ranch wells, localized impacts to groundwater levels and well interference would be greater than the proposed project.

Impacts related to terrestrial biological resources, air quality, greenhouse gas emissions, hazards and hazardous materials, energy, and utilities and service systems would be similar to those of the proposed project. Fewer impacts to fisheries, cultural resources, land use and planning, recreation, noise, and aesthetics would result.

No new significant impacts would occur and Class II impacts that would occur under the proposed project would be reduced under the No Project Alternative. Therefore, it is considered environmentally superior when compared with the proposed project.

While the No Project Alternative is generally considered environmentally superior to the proposed project, it does not meet all of the project objectives including:

- Ensure a future reliable water supply to meet the projected water demand at City buildout as provided for in the General Plan

The No Project Alternative would continue to meet almost half the water demand needs with SWP water and ID No. 1. As discussed in **Section 5.1**, the SWP water has become a less reliable source of water over the past years due to drought conditions and endangered species. As a result, the City would depend on

the less reliable source of SWP deliveries to meet the rest of projected water demand at full General Plan buildout conditions. The No Project Alternative would not satisfy this objective.

- Secure adequate water rights to reliably meet the City's water supply requirements

The No Project Alternative would only maintain the 1,053 afy of Santa Ynez River extraction rights currently established by the City and recognized by the SWRCB staff under water rights permit 15878. However, the City would need to continue to rely on SWP and ID No. 1 water for the remainder of the General Plan buildout demand. Therefore, the No Project Alternative would not be consistent with this objective.

- Ensure adequate infrastructure to deliver water to the City's users and meet water quality requirements

The No Project Alternative would not provide future planning for the aging water infrastructure of the City. The City would be short on water storage for additional demand and emergency backup needs. There may be shortages to City residents during peak water demand as the infrastructure would not be able to support future growth. The No Project Alternative would not satisfy this objective.

6.4.2 Alternative 2: Supplement Proposed Santa Ynez River Diversions with State Water Project (SWP) water

Description and Analysis

Under this alternative, the City's total water demand at full buildout of 1,980 afy would be met by using a maximum of 1,380 afy of groundwater diverted from the Santa Ynez River with the remaining demand (600 afy) planned to be met by SWP water.

Hydrology, Water Supply and Water Quality

Under Alternative 2, the City's total water demand at full buildout of 1,980 afy would be met by using 1,380 afy of groundwater diverted from the Santa Ynez River with the remaining demand, 600 afy, met by SWP water. This would result in a 30 percent decrease in diversion from the Santa Ynez River underflow as compared to the proposed project. As demonstrated in the analysis and modeling of the City's proposed diversions (see **Appendix 5.1**) surface flows, water right releases, and dewatered storage along the Santa Ynez River would be similar when compared to the proposed project.

Alternative 2 would maintain Well Nos. 3 and 7A and construct new wells downstream in the extended reach of diversion. The City anticipates that renovated Well Nos. 3 and 7A would provide up to 530 afy and that new wells installed downstream would provide the remainder (approximately 850 afy) of the

1,380 afy diversion. Because Alternative 2 would place new wells downstream from existing wells and other well operators (i.e. ID No.1 and Alisal Ranch), Alternative 2 would result in similar impacts to groundwater hydrology when compared to the proposed project.

Under this alternative, Cachuma Project members would continue to receive their 25,714 afy of water from Lake Cachuma. However, potential impacts to water supply for the Cachuma project members would be less than the proposed project should water releases from Bradbury Dam be necessary to meet required surface water flows in the Santa Ynez River pursuant to the BO and FMP. Therefore, this alternative would result in less water supply impacts to Cachuma Project members when compared to the proposed project.

Alternative 2 would result in similar water levels and elevations in Lake Cachuma as the proposed project, similar flows along the Santa Ynez River both upstream and downstream of Alisal Bridge, including flows at Highway 154 Bridge and to the Lompoc Narrows, similar groundwater storage in the Above Narrows Aquifer, and similar average monthly groundwater level elevation for the Santa Rita Subbasin.

Alternative 2 would result in a decrease of approximately 55 afy in WR 89-18 releases, as indicated in the modeling completed (see **Appendix 5.1)**, to meet increased withdrawals due to pumping by the City. As a result, there could be a decrease in dewatered storage in the Santa Ynez and Buellton Subbasins. Impacts would be slightly less or similar when compared to the proposed project.

The water quality within the Santa Ynez River would continue to be consistent with historic flows of the Santa Ynez River. That is, the existing Santa Ynez River water quality conditions are generally high concentrations of TDS during low flows that occur mostly in the summer months, with a decrease in TDS concentrations during high flows that occur in the winter. The minimal impacts Alternative 2 would have on the existing pattern of water quality would be similar to the proposed project.

Terrestrial Biological Resources

Under Alternative 2, all components of the Master Plan Update would be constructed, including new wells and a water treatment plant. Since a portion of the water supply to the City would continue to be from the SWP, the annual diversion of Santa Ynez River underflow would be 1,380 afy under Alternative 2, compared to 1,980 afy under the proposed project. Hence, fewer wells would be needed and new wells would be located downstream in the Additional Reach of Diversion similar to the proposed project. Construction activities involving earth-moving and drilling would impact biological resources along the Santa Ynez River and within disturbed and developed areas of the City similar to the proposed project.

Since the water treatment plant would be constructed at the same location as the proposed project, potential impacts to the biological resources would be similar.

Alternative 2 could result in similar potentially significant impacts to terrestrial biological resources that would be expected with the implementation of the proposed project.

Fisheries Resources

The impacts to fisheries resources for Alternative 2 would be similar to those of the proposed project because new wells would be installed downstream of Alisal Bridge in the Extended Reach of Diversion. The diversion of 1,380 afy of Santa Ynez River underflows would be less than the proposed project. Although flows would be slight less under this alternative when compared to the proposed project, they would still be in excess of the baseline of 1,053 afy. The analysis and modeling of surface water flows (see **Appendix 5.1**) indicated that there would be no changes in the Santa Ynez River from pumping in the proposed downstream locations. However, similar to the proposed project, this alternative has the potential to isolate *O. mykiss* individuals in refugia pools in locations not currently monitored under the Cachuma Project. Impacts to fisheries resources would similar.

Cultural Resources

It is anticipated that fewer wells and potentially fewer pipelines would need to be constructed under Alternative 2. Therefore, while construction activities involving earth-moving and drilling could potentially impact unknown subsurface cultural resources, they would probably affect less area than the proposed project. To the extent that fewer wells would be required under Alternative 2, the potential to encounter subsurface cultural resources would be less than the proposed project.

The water treatment plant would be constructed at the same location as the proposed project and potential impacts to the identified archaeological site would be similar.

Alternative 2 would result in similar cultural impacts when compared to the proposed project.

Air Quality

As the diversion would be less (1,380 afy vs. 1,980 afy) fewer wells are anticipated to be constructed under Alternative 2. Therefore, Alternative 2 would result in fewer construction related emissions related to well construction than the proposed project. Air quality impacts for construction of other facilities such as the water treatment plant under Alternative 2 would be similar to the proposed project.

Alternative 2 would result in slightly fewer maintenance vehicle trips due to the reduction in the number of wells. However, area and indirect stationary source emissions for other components of Alternative 2 would be similar to the proposed project.

Greenhouse Gas

As with air quality impacts (see discussion above), this alternative would have fewer emissions related to well construction which would result in fewer GHG emissions than the proposed project. GHG emissions for construction of other facilities such as the water treatment plant under Alternative 2 would be similar to the proposed project.

Alternative 2 would result in slightly fewer maintenance vehicle trips and therefore fewer GHG emissions due to the reduction in the number of wells. However, area and indirect stationary source GHG emissions for other components of Alternative 2 would be similar to the proposed project.

Land Use

Alternative 2 would extend the City's reach of diversion downstream of Alisal Bridge approximately 1.5 miles downstream from its current location and would occur almost entirely within the City, except for the portion of Well Site B, which is located in unincorporated Santa Barbara County. This could result in new wells being located outside the City's jurisdiction. Similar to the proposed project, the City would be required to obtain necessary access agreements and/or easements to construct wells within this area. Therefore, land use impacts would be similar to the proposed project.

All other components of this alternative would be similar to the proposed project and would result in similar land use impacts. The construction of the water treatment plant would be located within Alisal Commons open space; this is consistent with existing land use and zoning designations.

Impacts under Alternative 2 would be similar to the proposed project.

Recreation

Alternative 2 would involve construction of components under the Master Plan Update similar to the project, including the construction of a water treatment plant in the Alisal Commons open space area.

Although fewer wells would be needed, the infrastructure required throughout the City would be the similar to that for the proposed project. Therefore, future construction projects could take place within areas used by the public for recreation activities. As such, Alternative 2 would result in similar impacts related to recreational uses as the proposed project.

Noise

As with the proposed project, implementation of Alternative 2 would involve the construction of storage reservoirs, pump stations, water lines, and new wells within the City, and potentially Santa Barbara County. Construction activities could potentially be located near sensitive receptors (e.g., residential uses). Therefore, construction impacts under Alternative 2 would be similar to the proposed project.

Operational impacts would be similar to the proposed project. The proposed wells would use submersible pumps and the water treatment plant would be in the same location.

Overall, noise impacts for Alternative 2 are similar as for the proposed project.

Hazards and Hazardous Materials

As with the proposed project, alternative 2 would involve construction of a water treatment plant at the Alisal Commons open space that would result in the storage and transportation of chemicals. The water treatment plant would require similar types and quantities of chemicals; therefore, the potential for accidental release of chemicals would remain.

Similar to the proposed project, compliance with applicable regulations related to handling and storing chemicals would reduce potential impacts. Therefore, Alternative 2 would result in similar impacts to the proposed project.

Aesthetics

Alternative 2 would provide for similar facilities as the proposed project although it would reduce the number of wells to be constructed.

New wells would still be constructed downstream of Alisal Bridge and in areas that are currently not developed. As with the proposed project, construction of wells adjacent to the Santa Ynez River would represent a potentially significant impact to visual resources.

Alternative 2 would result in similar aesthetic impacts when compared to the proposed project.

Energy

Alternative 2 would reduce the number of wells to be developed near the Santa Ynez River compared to the proposed project. Therefore, the long-term demand for energy related to operation of the wells would be reduced. However, energy needs to deliver SWP project could be increased. All other components of Alternative 2, similar to the proposed project, would be constructed and operational as provided for in

the Master Plan Update. The energy impact under Alternative 2 would be similar to that of the proposed project.

Utilities/Services Systems

Implementation of components of the proposed Master Plan Update under Alternative 2 would be similar to the proposed project. Alternative 2, however, would develop fewer wells, as the amount of water to be pumped from the Santa Ynez River underflow would be less than the proposed project.

Other components of the proposed Master Plan Update, such as the water treatment plant, water lines and reservoirs, would still be constructed under Alternative 2. Therefore, utilities and service systems impacts under Alternative 2 would be similar impacts to the proposed project.

Conclusion and Relationship to Project Objectives

A summary comparison of impacts associated with the project alternatives is provided in **Table 6.0-1,** (shown later in this section). Generally, Alternative 2 would result in impacts similar to those for the proposed project. As such, Alternative 2 would not be considered environmentally superior to the proposed project.

Alternative 2 does not meet the project objectives including:

- Ensure a future reliable water supply to meet the projected water demand at City buildout as provided for in the General Plan

Alternative 2 would supplement the City's remaining water demand with 600 afy of SWP water. As discussed in Section 5.1, the SWP water has become a less reliable source of water over the past years due to drought conditions and endangered species. As a result, the City would depend on the less reliable source of SWP deliveries to meet the rest of projected water demand at full General Plan buildout conditions. Under a conservative analysis, there would be the potential for the City to not receive the requested allotment of 600 afy. Consequently, the City would have to implement severe water conservation measures in order to meet buildout demand. Therefore, Alternative 2 would not satisfy this objective.

- Secure adequate water rights to reliably meet the City's water supply requirements

The City would continue to rely on SWP water for the remainder of the General Plan buildout demand. In the event that the SWP water becomes unreliable and unavailable, the City under Alternative 2 would not be able to supply water to its residents. Alternative 2 would also result in a lesser amount of Santa Ynez River water than the proposed project. Therefore, Alternative 2 may not be able to secure adequate

water to reliably meet the City's water supply requirements. Alternative 2 would not satisfy this objective.

6.4.3 Alternative 3: Increase Diversion to 2,400 AFY

Description and Analysis

This alternative reflects the City's prior Master Plan diversion of 2,400 afy which includes providing irrigation water for uses outside of the City boundary but within the currently permitted place of use for the water diverted from the Santa Ynez River underflow. The additional 420 afy would be provided to existing irrigation uses outside the Solvang City limits. The remainder of the water to be diverted (1,980 afy) would be used as noted to meet demand within the City's service area.

This alternative would include the proposed Additional Reach of Diversion installation of new wells in the area downstream of Alisal Bridge within Well Sites A and B. This alternative would also include the retention and use of Well Nos. 3 and 7A.

Hydrology, Water Supply and Water Quality

Under Alternative 3, the City would implement all components under the proposed Master Plan Update, though the City would divert an additional 420 afy of Santa Ynez River underflow for a total of 2,400 afy.

Although there would be an increase in diversion to 2,400 afy, as shown in analysis (see **Appendix 5.1**), when compared to the proposed project, Alternative 3 would result in similar flows to the Highway 154 Bridge, Alisal Bridge, and to the Lompoc Narrows, dewatered storage in the Above Narrows Aquifer, and average monthly groundwater level elevations for the Santa Rita Riparian Subbasin.

Alternative 3 would result in an increase in WR 89-18 releases and an increase in dewatered storage in the Santa Ynez and Buellton Subbasins when compared to the proposed project. Even though Alternative 3 would result in an increase in these releases and dewatered storage in the subbasins, the location of the wells would result in similar localized groundwater impacts to Alisal Ranch and ID No. 1 when compared to the proposed project.

In addition, Alternative 3 would result in greater shortages to Cachuma Project supplies to Cachuma Project Members during a critical drought year and period as a result of potential increases in water releases from Bradbury Dam. Consequently, Alternative 3 would result in greater impacts to water supply when compared to the proposed Master Plan Update.

Impacts to water quality would be the same as for the proposed project.

Terrestrial Biological Resources

The City would implement all components of the proposed Master Plan Update under Alternative 3, though the number of wells would likely increase in order to enable the increase in groundwater diversion, new wells would still occur within Well Sites A and B and impacts would be similar as the proposed project. This alternative would result in impacts to terrestrial biological resources during construction of various components of the Master Plan Update and similar to the proposed project.

Fisheries Resources

While the diversion of 2,400 afy Santa Ynez River underflows (an increase of 420 afy over the 1,980 afy) of the proposed project would increase, analysis and modeling (se Appendix 5.1) indicate that impacts, while slightly increased, would be similar to the proposed project. However, as with the proposed project, there is potential to isolate *O. mykiss* individuals in refugia pools in locations not currently monitored under the Cachuma Project. As a result of the increased diversion, Alternative 3 could potentially have more interference with outmigration of smolts and the potential loss of habitat for rearing. Therefore, impacts to fisheries resources under Alternative 3 would be slightly increased but similar to the proposed project.

Cultural Resources

Under Alternative 3, the City would implement all components under the proposed Master Plan Update including the installation of downstream wells and the water treatment plant. The alternative would result in impacts to cultural resources during construction of various components of the Master Plan Update, similar to the proposed project.

Air Quality

While the all components of the Master Plan Update would be the same, the number of wells could increase under Alternative 3 to enable the increase in groundwater diversion. Therefore, Alternative 3 would result in potentially greater construction-related emissions than the proposed project. However, the increase in construction-related emissions would be minor and would be similar.

This Alternative would result in slightly increased maintenance vehicle trips due to the increase in the number of wells; however, the increase in motor vehicle-related emissions would be minor and would be similar. Area and indirect stationary source emissions would be similar to the proposed project.

Therefore, Alternative 3 would generate similar emissions compared to the proposed project.

Greenhouse Gas

As with air quality, all components of the Master Plan Update would be the same. Additional wells could be constructed under Alternative 3 and would result in slightly greater construction-related GHG emissions than the proposed project. However, the increase in construction-related GHG emissions would be minor and would be similar. Alternative 3 would result in slightly increased maintenance vehicle trips due to the increase in the number of wells; however, the increase in motor vehicle-related GHG emissions would be minor and would be similar. Area and indirect stationary source GHG emissions would be similar to the proposed project.

Alternative 3 would generate similar GHG emissions compared to the proposed project.

Land Use

Under this alternative, the project components would be same as for the proposed Master Plan Update.

The proposed water treatment plant would be located in Alisal Commons open space areas as identified by the proposed project. Under this alternative, the wells could be located outside of the City's jurisdiction, and within unincorporated Santa Barbara County. Therefore, as with the proposed project, this alternative would be required to conform to the County of Santa Barbara land use and zoning regulations.

Alternative 3 would result in similar land use impacts when compared to the proposed project.

Recreation

Alternative 3 would involve construction of components under the Master Plan Update, including the construction of a water treatment plant in the Alisal Commons open space area. Even though additional wells would be needed, they would be located adjacent to the Santa Ynez River, which is not considered a designated recreational area within the City.

Infrastructure required to implement the Master Plan Update throughout the City would be substantially the same as the proposed project, and future construction projects could take place within public areas used for recreation.

Therefore, Alternative 3 would result in similar impacts related to recreational uses as the proposed project.

Noise

Potential construction noise impacts of the additional wells would result in similar impacts to sensitive receptors. Implementation of other components of the Master Plan Update (water lines, storage reservoirs and the water treatment plant) under Alternative 3 would result in similar construction related noise impacts as would occur for the proposed project.

Operation under Alternative 3 would result in similar impacts as the proposed project.

Hazards and Hazardous Materials

This alternative would involve construction of the water treatment plant at the Alisal Commons open space, which would result in the storage and transportation of chemicals. As with the proposed project, the potential for accidental release chemicals into the environment would be minimized by compliance with applicable regulations. Therefore, Alternative 3 would result in similar impacts when compared to the proposed project.

Aesthetics

Alternative 3 would construct elements under the Master Plan Update that would be similar to the proposed project. Since there could still be views of future wells from the vantage point of the Alisal Bridge the visual impact would be similar to the proposed project. Alternative 3 would continue to implement the Master Plan Update for all other water components (including storage reservoirs, pump stations, the water treatment plant and water lines). Aesthetic impacts would be similar to the proposed project.

Energy

The long-term demand for energy related to operation of the additional wells would be incrementally greater than the proposed project. Alternative 3 would result in an increase of 420 afy from the Santa Ynez River underflow. The increase in the diversion of water would be approximately 20 percent greater than the proposed Master Plan Update. Therefore, the energy impact under Alternative 3 would be slightly greater than the proposed project.

Utilities/Services Systems

The increase in the diversion of Santa Ynez River underflow would more than adequately meet the General Plan buildout demand of the City. The increase in water use would result in the need for additional wells for extraction, expansion of the water treatment plant, and additional storage and pump

facilities. Therefore, Alternative 3 would result in similar utility and service system impacts when compared to the proposed project.

Conclusion and Relationship to Project Objectives

A summary comparison of impacts associated with the project alternatives is provided in **Table 6.0-1, Comparison of Alternatives to the Proposed Project** (shown later in this section).

Generally, Alternative 3 would result in similar impacts for all issues evaluated except for water supply and energy.

Alternative 3 does not meet the following project objectives:

- Ensure a future reliable water supply to meet the projected water demand at City buildout as provided for in the General Plan

While Alternative 3 would be consistent with this objective as the City's water supply would consist of diverted Santa Ynez River underflows, it would provide more water (2,400 afy) than the City would demand at buildout (1,980 afy) and could be considered growth inducing.

6.4.4 Alternative 4: Maintain the 1,980 AFY Santa Ynez River diversion but group Wells within the Existing Point of Diversion

Description and Analysis

Under this alternative, the City would divert 1,980 afy from the Santa Ynez River underflow and group new and existing wells within the Existing Reach of Diversion area per water right Permit 15878.

Surface and Groundwater Hydrology, Water Supply and Water Quality

Under Alternative 4, the City would implement all components of the proposed Master Plan Update, but would locate the new wells within the City's existing point of diversion. The location of the new wells would increase diversions from the Santa Ynez River underflow upstream of Alisal Bridge.

Based on the analysis and modeling of all wells within the Existing Reach of Diversion (see **Appendix 5.1**), Alternative 4 would result in a decrease in the groundwater level elevation in the Santa Ynez Subbasin and in surface flows at the Alisal Bridge and at the Lompoc Narrows. Locating wells within the City's Existing Reach of Diversion would result in potential impacts to adjacent wells operated by ID No. 1 and Alisal Ranch. Therefore, Alternative 4 would result in greater impacts to adjacent wells when compared to the proposed project.

Alternative 4 would result in similar water levels and elevations in Lake Cachuma as the proposed project. In addition, this alternative would result in similar impacts to Cachuma Project members supply from the Cachuma Project during critical drought years and periods. Alternative 4 would result in an increase in WR 89-18 releases and cause an increase in dewatered storage in the Santa Ynez Subbasin when compared to the proposed project.

Surface water flows in the Santa Ynez River below Bradbury Dam to the Highway 154 Bridge, Alisal Bridge and to the Lompoc Narrows would result in similar dewatered storage in the Above Narrows Aquifer, and average monthly groundwater level elevation for the Buellton and Santa Rita Subbasins.

Impacts to water quality would be the same as for the proposed project.

Terrestrial Biological Resources

The City would implement all components of the proposed Master Plan Update under Alternative 4. However, new wells would be located within the Existing Reach of Diversion and not downstream of the currently permitted area. The proposed location of new wells would disturb similar sized areas along the Santa Ynez River. Impacts to terrestrial biological resources would be similar to the proposed project.

This alternative would result in impacts to terrestrial biological resources during construction of various components of the Master Plan Update and similar to the proposed project.

Fisheries Resources

The Cachuma Project monitors surface water flows of the Santa Ynez River upstream of Alisal Bridge are implemented within the requirements of the BO and FMP in order to maintain "good" habitat conditions for *O. mykiss*.

The groundwater in the alluvial aquifer is in direct hydraulic communication with the river's surface flow. Although the proposed wells would be located outside of the active river channel and upstream of the Alisal Bridge, drawdown of groundwater resources could result in the reduction of surface flow in the reach during spring, summer and fall months, when the river is in a drier state (see **Appendix 5.1**).

The residual depth of refugia pools that may exist upstream could also be impacted as groundwater resources are removed. The potential impacts associated with the pumping of new wells upstream under drought conditions indicate that increased pumping could also result in reduction in surface flow below baseline conditions during certain times, increase in water temperature, impacts to riparian canopy, and possible increased algae blooms lowering dissolved oxygen levels. Impacts would be greater than the proposed project.

Alternative 4 would provide for location of wells within the City's existing point of diversion that could create decrease groundwater levels upstream of Alisal Bridge that would have the potential to create refugia pools where none currently exist. Therefore, there would be the potential to isolate *O. mykiss* individuals in refugia pools during the seasonal low flows of the River within this reach. Consequently, impacts to fisheries resources resulting from Alternative 4 would be greater than the proposed project.

Cultural Resources

This alternative would result in impacts to cultural resources during construction of various infrastructure components under the Master Plan Update, similar to the proposed project. Since construction related impacts from the new wells and the water treatment plant would be similar to those for the proposed project, the potential impact to cultural resources would remain the same as the proposed project.

Air Quality

Alternative 4 would result in similar construction related emissions when compared to the proposed project. Alternative 4 would also result in similar maintenance vehicle trips and area and indirect stationary source emissions. Thus, this alternative would generate similar construction and operational emissions when compared to the proposed project.

Greenhouse Gas

As discussed under air quality above, Alternative 4 would result in similar construction related GHG emissions compared to the proposed project. Alternative 4 would also result in similar maintenance vehicle trips and area and indirect stationary source GHG emissions. Thus, this alternative would generate construction and operational GHG emissions similar to the proposed project.

Land Use

Alternative 4 would construct wells within the City's existing point of diversion as well as provide for all other components of the Master Plan Update. The proposed location of the new wells would be within the City's Existing Reach of Diversion which includes areas in Santa Barbara County outside of the City's jurisdiction. Therefore, depending upon the location of the wells, this alternative could be required to conform to the County of Santa Barbara land use and zoning regulations. As such, Alternative 4 would result in similar impacts when compared to the proposed project.

Recreation

The infrastructure improvements identified by the proposed Master Plan Update, would be substantially the same as the proposed project.

New wells would be located adjacent to the Santa Ynez River, including areas adjacent to the existing golf course (Ranch Course at the Alisal) which is considered a recreational area. As a result, future construction projects could take place within areas used by the public for recreation. Depending upon the location of wells, impacts to this recreation area could occur. Impacts would be greater than the proposed project.

Noise

Construction of the Master Plan Update components would be similar to the proposed project, including construction of the new wells within the Existing Reach of Diversion and the water treatment plan. As such, construction related noise impacts would be similar to the proposed project.

All other components of the Master Plan Update under this alternative, such as water lines, pump stations, the water treatment plant and storage reservoirs, would have similar impacts to the proposed project.

Hazards and Hazardous Materials

Alternative 4 would involve construction of the water treatment plant at the Alisal Commons open space area, which would result in the storage and transportation of chemicals. The water treatment plant would handle similar quantities and types of chemicals as the proposed project. Therefore, the impact related to hazards would be similar to the proposed project.

Aesthetics

Visual impacts under this alternative would be largely similar to the proposed project. New wells would be constructed within the City's Existing Reach of Diversion and would be visually similar to existing wells located along the Santa Ynez River.

Other uses proposed within the Master Plan Update, including the water treatment plant, would also be similar to those for the proposed project.

Energy

Alternative 4 would develop the same facilities as the proposed project which would result in energy demand similar to the proposed project. Therefore, the long-term demand for energy would be similar to the proposed project.

Utilities/Services Systems

Under Alternative 4, the proposed river wells would be located within the City's Existing Reach of Diversion upstream of Alisal Bridge. The City would be able to meet its General Plan projected water demand through the extraction of Santa Ynez River underflow.

As described above under the **Hydrology, Water Supply and Water Quality** discussion, there would be the potential for well impacts to Alisal Ranch and ID No. 1. Less water would be able to be withdrawn from the underflow because of the high concentration of wells upstream of Alisal Bridge. As a result, Alternative 4 may result in greater operational impacts to the City's, Alisal Ranch, and ID No. 1's ability to extract underflow from the Santa Ynez River. Impacts would be greater than the proposed project.

Conclusion and Relationship to Project Objectives

A summary comparison of impacts associated with the project alternatives is provided in **Table 6.0-1**. Generally, Alternative 4 would result in similar impacts to all issues except water supply, fisheries resources, and utilities/services systems.

Alternative 4 does not meet the following project objectives:

- Avoid impacts either to public trust resources or to other water rights holders that have priority

The increase in diversion of 1,980 afy could result in the lowering of the groundwater level upstream of Alisal Bridge which in turn could result in lower surface water flows in the reach upstream of Alisal Bridge that could impact both public trust resources and existing wells. Alternative 4 would result in continued and more frequent localized water supply impacts due to the clustering of City wells, Alisal Ranch wells, and ID No. 1 wells upstream of Alisal Bridge. This could result in greater water supply impacts to nearby water right holders and greater fish flow impacts to public trust resources (steelhead) as a result of the reduced flows. Consequently, Alternative 4 would not satisfy this objective and would result in greater impacts than the proposed project to public trust resources and water right holders with higher priorities along the Santa Ynez River.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The findings of the alternatives impact analysis discussed above are summarized in **Table 6.0-1, Comparison of Alternatives to the Proposed Project**.

The *State CEQA Guidelines* require that an environmentally superior alternative be identified among the selected alternatives (excluding the No Project alternative).[7] If the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives.

The No Project Alternative (Alternative 1) would have the fewest impacts and would not result in any new significant impact. Therefore it is the most environmentally sensitive. However, the No Project Alternative would not meet the objectives of the proposed project. Furthermore, as noted above, if the No Project Alternative is determined to be environmentally superior, then another alternative must also be identified as an environmentally superior alternative among the remaining alternatives.

The environmentally superior alternative among the remaining alternatives would be Alternative 2 – Supplement Proposed Allocation with SWP water. This alternative would result in similar or incrementally reduced impacts for all issues when compared to the proposed project. Alternative 2 would result in fewer diversions of Santa Ynez River underflow and would locate additional river wells downstream of Alisal Bridge. However, Alternative 2 relies on supplementing 600 afy of its water supply needs on SWP water, which has become less reliable over the years due to increased litigation and potential impacts on endangered species, such as the delta smelt. Because it relies upon 600afy of SWP water, Alternative 2 requires the City to forgo the opportunity to develop sufficient, relatively reliable, inexpensive and less energy intensive local water supplies to meet all of Solvang's needs at full buildout.

As discussed above, by developing Alternative 2, as opposed to the proposed project, the City would not achieve the following objectives to the same extent as the proposed project:

- Ensure a future reliable water supply to meet the projected water demand at City buildout as provided for in the General Plan.
- Secure adequate water rights to reliably meet the City's water supply requirements.

Therefore, this alternative, while environmentally superior to the proposed project is not considered as feasible and is rejected.

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7 California Public Resources Code, Title 14, Division 6, Chapter 3, *California Environmental Quality Act Guidelines*, Section 15126.6(e)(2).

Table 6.0-1
Comparison of Alternatives to the Proposed Project

Issue	Proposed Project - (After Mitigation)	Alternative 1 – No Project Alternative	Alternative 2 - Supplement Proposed Allocation with State Water Project (SWP) water	Alternative 3 - Increase Diversion to 2,400 afy	Alternative 4 - Maintain 1,980 afy Diversion Request with Wells Grouped within the Existing Point of Diversion area
Hydrology, Water Supply and Water Quality	Less than Significant (Class II)	Similar Impacts	Similar Impacts	Greater Impacts	Greater Impacts
Terrestrial Biological Resources	Less than Significant (Class II)	Fewer Impacts	Similar Impacts	Similar Impacts	Similar Impacts
Fisheries Resources	Less than Significant (Class II)	Fewer Impacts	Similar Impacts	Similar Impacts	Greater Impacts
Cultural Resources	Less than Significant (Class II)	Fewer Impacts	Similar Impacts	Similar Impacts	Similar Impacts
Air Quality	Less than Significant (Class II)	Similar Impacts	Similar Impacts	Similar Impacts	Similar Impacts
Greenhouse Gas	Less than Significant (Class III)	Similar Impacts	Similar Impacts	Similar Impacts	Similar Impacts
Land Use	Less than Significant (Class III)	Fewer Impacts	Similar Impacts	Similar Impacts	Similar Impacts
Recreation	Less than Significant (Class II)	Fewer Impacts	Similar Impacts	Similar Impacts	Greater Impacts
Noise	Less than Significant (Class II)	Fewer Impacts	Similar Impacts	Similar Impacts	Similar Impacts
Hazards and Hazardous Materials	Less than Significant (Class III)	Similar Impacts	Similar Impacts	Similar Impacts	Similar Impacts
Aesthetics	Less than Significant (Class II)	Fewer Impacts	Similar Impacts	Similar Impacts	Similar Impacts
Energy	Less than Significant (Class III)	Fewer Impacts	Similar Impacts	Greater Impacts	Similar Impacts
Utilities/Services Systems	Less than Significant (Class III)	Similar Impacts	Similar Impacts	Similar Impacts	Similar Impacts