3.0 Alternatives

The California Environmental Quality Act, Section 15126 (d), requires an EIR to describe a reasonable range of alternatives to a project or to the location of a project which could feasibly attain its basic objectives and evaluate the comparative merits of the alternatives. This section discusses a range of alternatives to the proposed Nacimiento Water Project including, alternative water supply options, alternative pipeline and facility locations, and a "No Project" alternative. Criteria used to evaluate the range of alternatives and remove certain alternatives from further consideration are addressed. CEQA Guidelines Section 15126.6 provides direction for the discussion of alternatives to the proposed project. This section requires:

- A description of *"...a range of reasonable alternatives to the project, or to the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."* [15126.6(a)]
- A setting forth of alternatives that *"...shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project."* [15126.6(f)]
- A discussion of the "No Project" alternative, *and "...If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."* [15126.6(e)(2)]
- A discussion and analysis of alternative locations *"...that would substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR."* [15126.6(f)(2)(B)]

This document has used an alternative screening analysis to limit the number of alternatives evaluated in detail throughout the EIR. The use of an alternative screening analysis provides the detailed explanation of why some of the alternatives were rejected from further analysis and assures that only the environmentally preferred alternatives are evaluated and compared in the EIR.

This screening methodology also uses the *"rule of reason"* approach to alternatives as discussed in CEQA (Guidelines Section 15126.6(f)). The rule of reason approach has been defined to require that EIRs address a range of feasible alternatives that have the potential to diminish or avoid adverse environmental impacts. The CEQA Guidelines state:

> *"The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effect of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project."* (Section 15126.6(f))

In defining feasibility of alternatives the CEQA Guidelines state:

> *"Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site."* (Section 15126.6(f)(1))

If an alternative was found to be technically infeasible, then it was dropped from further consideration. This was the primary feasibility factor that was used to eliminate an alternative without further screening analysis.

In addition, CEQA states that alternatives should "…*attain most of the basic objectives of the project* ..." (Section 15126.6(a)). If an alternative is found to not obtain the basic objective, then it was also eliminated.

NEPA Section §1502.14 also requires an analysis of alternatives to the Applicant's proposed project that provides for a comparison of alternatives and provides a clear basis for choice among options for the decisionmaker and the public. NEPA requires the alternatives analysis to:

(a) "Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives for which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."

(b) "Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits."

(c) "Include reasonable alternatives not within the jurisdiction of the lead agency."

(d) "Include the alternative of no action."

(e) "Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference."

(f) "Include appropriate mitigation measures not already included in the proposed action or alternatives."

The use of a screening analysis for the alternatives ensures that the full spectrum of environmental concerns is adequately represented, and that a reasonable choice of alternatives is selected for further evaluation throughout the EIR.

Alternatives screening analysis is used in EIR/EIS preparation as a tool for focusing the environmental review process and limiting the amount of detailed analysis. For example, in SLO County, this type of analysis has been used successfully in the Unocal Avila Beach Cleanup Project EIR/EIS (ADL 1998a), the Guadalupe EIR (ADL 1998b), and the WorldCom MFS Globenet EIR (Morro Group, 2000).

Given the CEQA mandates listed above, the remainder of this section covers: (1) a description of a range of reasonable alternatives to the proposed project, including alternative locations; (2) a screening analysis that summarizes and compares the significant environmental effects of the project and each alternative; and (3) the selection of alternatives chosen for further evaluation throughout the EIR.

3.1 Alternatives Selection Background Information

This section provides background information pertaining to project alternatives and policies that would influence the consideration of alternatives.

3.1.1 Project Objective

The objective of the NWP is to provide a reliable supplemental water source for a variety of uses within SLO County by supplementing the local ground and surface water supplies with a new surface water source. The objective is also to increase reliability of water deliveries, to improve water quality and to lessen the extent of future ground water pumping to existing residents, and provide sufficient supplies to support planning objectives in various communities of SLO County. The objective of the proposed project is, therefore, to ensure better management of water resources throughout the County.

3.1.2 San Luis Obispo County Master Water Plan

The San Luis Obispo County Master Water Plan Update of March 1986 concluded that the development of supplemental water sources were critical to address annual groundwater overdraft. The potential water supply elements for meeting supplemental water needs described in the update were:

- SWP through the Coastal Branch, Phase II, estimated at 25,000 acre feet per year (afy);
- NWP, estimated at 16,200 afy;
- Desalination of Sea Water, estimated at 9,200 afy;
- Reclamation of Waste Water, estimated at 5,600 afy;
- Enlargement of Salinas Dam, estimated at 1,300 afy;
- Enlargement of Lopez Dam, estimated at 640 afy;
- Enlargement of Nacimiento Dam, estimated at 4,000 afy; and
- Possible Construction of New Reservoirs.

The conclusions and findings included in the Master Water Plan Update regarding advantages and disadvantages of the above and other alternatives not quantified (e.g. watershed management and weather modification) are incorporated by reference into this EIR. The NWP was highly ranked as an alternative, second only to the State Water Project in terms of estimated cost to develop, anticipated yield, and ease of environmental or regulatory permitting.

In 1998, the County published an update of the Master County Water Plan. The 1998 Update included then-current estimates of water demand throughout twelve regions of the County (i.e., "Water Planning Areas") as well as projections of water needs at build-out. The updated water demand information was compared to the estimated yield from developed water sources in each Water Planning Area. In contrast to the 1986 Master County Water Plan, the Update did not address options for supplementing the County's water supplies. Rather, the idea was to take the basic demand and supply data to each Water Planning Area for confirmation. To date, this process is underway in the Nipomo area only. Staff is re-evaluating this approach to examining our regional water supply setting in light of the resource investment needed to address these, one area at a time.

Copies of both the Master Water Plan and the Update are available for public review at the County Public Works Department, County Government Center, Room 207, San Luis Obispo, CA 93408. In addition, a series of feasibility studies on the NWP were prepared under the direction of the County Public Works Department, as follows.

> *SLO County Flood Control and Water Conservation District, Preliminary Evaluation for the Nacimiento Water Supply Project, Phase I, Reliability Evaluation*, Boyle Engineering Corporation, October 7, 1992.
>
> *SLO County Flood Control and Water Conservation District, Preliminary Evaluation for the Nacimiento Water Supply Project, Phase II, and Phase III Preliminary Engineering Evaluation and Environmental Assessment, Final Report*, Boyle Engineering Corporation, May 1994.

The recommendations and conclusions of these studies were reviewed by the County Board of Supervisors at noticed public hearings. Copies of these documents, herein incorporated by reference, are available for public review at the San Luis Obispo County Public Works Department.

3.1.3 State Water Project

In 1992, the SLO County Board of Supervisors approved delivery of State Water to eleven entities, for a total of 4,830 afy of water. Although SLO County retains an excess entitlement (unsubscribed portion) of 16,553 acre feet (af), the pipeline was sized to deliver 4,830 afy of treated water to purveyors in SLO County. According to Central Coast Water Authority (CCWA) engineers, no more than 7% of additional capacity or approximately 340 afy would be available beyond the 4,830 afy of State Water designated for SLO County (Burnworth 1996). Both the participants and the required local facilities (pipelines) were addressed in the State Water Project Coastal Branch (Phase II) Local Distribution Lines and Facilities, Final Environmental Impact Report, March 1992 ("SLO EIR") and Addendum.

The local State Water contractors and their entitlements are shown in Table 3.l. The system became operational in 1997; however, in November of 1995, the County Board of Supervisors approved the sale of Shandon's 100 afy allocation (based on a community vote). Since that time the County has had numerous requests from other entities regarding the feasibility of purchasing Shandon's allocation.

Table 3.1 Status of State Water in San Luis Obispo County

Contractor	Deliverable Entitlement	Drought Buffer	Total
City of Morro Bay	1,313	2,290	3,603
City of Pismo Beach	1,240	0	1,240
Oceano CSD	750	0	750
Co Operations Center	425	425	850
CA Men's Colony	400	400	800
San Miguelito MWC	275	275	550
Cuesta College	200	200	400
Avila Beach CSD	100	0	100
Shandon	100	0	100
Avila Valley MWC	20	20	40
San Luis Coastal USD	7	7	14
TOTAL SUBSCRIBED	4,830	3,617	8,447
Excess Entitlement (Unsubscribed)			16,553
San Luis Obispo FC&WCD Total			25,000

Source: County Public Works Department, February 2003.

In January, 2003, the County Board of Supervisors adopted new policies for sale or transfer of any portion of the County's excess entitlement with the understanding there will be no permanent sales outside the District. Based on the definition that the District SWP "Excess Entitlement" is the portion of the District's total entitlement that is not contracted to others for their deliverable or drought buffer uses, the priority of use will be as follows:

1. Prior to transferring the excess entitlement for any other use, contractors of state water entitlement with capacity in Phase II of the Coastal Aqueduct shall have the first right to utilize the excess entitlement for "drought buffer" (reliability) purposes under the terms of a drought buffer agreement.
2. Preference shall be given to local agencies and water purveyors regardless of whether a transfer is on an annual, multi-year, or a permanent basis.
3. No permanent transfer of the excess entitlement for use outside District boundaries shall be made prior to a final update of the District's Master Water Plan adopted by the Board of Supervisors, and then only if the transfer is consistent with the then adopted Master Plan (see item #7).
4. No multi-year transfer for use outside District boundaries shall be made with a term in excess of five years prior to a final update to the District's Master Water Plan adopted by the Board of Supervisors, and then out of District transfers can only take place if the transfer is consistent with the adopted Master Plan.
5. On any out-of-District transfer, preference shall be given to those that provide: a) revenues that recover current costs and some or all of the District's past costs, b) maintain the District's right to use the water in the future, or c) which are used for environmental mitigation.
6. The Public Works Director is authorized to determine the annual amount of the excess entitlement to transfer to the SWP "Turnback Pools" established under the existing terms of State Water Agreements. In making that determination, the Public Works Director shall first

consider local needs and how the use of the Turnback Pool might impact other potential transfers.

7. The above policies were adopted by the Board of Supervisors with the understanding that there will be no permanent sales outside the District.

3.1.4 Reliability of the State Water Project and the Nacimiento Water Project

Reliability is defined as the ability of a water project to deliver water over an extended period of time. It may be acceptable for one component of a water purveyor's future water supply to have a reduced reliability, if the total water supply, consisting of two or more water sources, can make up for deficiencies in another water source during critical droughts (Boyle 1994).

3.1.4.1 State Water Project

Reliability of the SWP is generally dependent upon the following four factors:

- annual rainfall in northern California and snow levels in the Sierra Mountain ranges;
- the amount of water that will be allowed to be diverted from the Sacramento Delta for urban and agricultural use while preserving the environment for protected species;
- increased demands on the SWP from contractors; and
- the ability to construct new facilities designed to increase the yield of the SWP.

Estimated potential yields for the SWP range from a low of 20% during the driest year on record (1977) to 100% full entitlement. On the average, the State can deliver up to 76% of entitlement requests, when the project is at maximum demand (Table 5, pg. 13, Draft State Water Project Delivery Reliability Report, August 2002). Under current demand conditions, the State would have delivered 42% of entitlement requests during the 1987–1992 critical drought period. If no additional SWP facilities are constructed (such as the Los Banos Grandes Reservoir, Sacramento Delta improvement programs, and Kern Water Bank), each purveyor would only be able to rely on 24 to 74% (average 42%) of their entitlement (Table B-3, Draft State Water Project Reliability Report, August 2002). This SWP Reliability Report can be viewed at http://swpdelivery.water.ca.gov.

As shown in Table 3.1, in order to improve the reliability of State Water delivery schedules during times of drought, water purveyors choose to double or otherwise increase their initial requests. This means, for example, that if the County Operations Center can expect to receive approximately half of its entitlement due to reductions imposed by DWR, by doubling its entitlement it could receive its full 425 afy during drought periods. These supplemental requests do not affect the maximum capacity of the pipeline because no more than the initial request would be received in times of drought, at which time there would be excess capacity in the Coastal Branch pipeline due to general reductions in DWR water subscriptions.

In terms of obtaining State Water from other entities, within SLO County, Oceano Community Services District has expressed interest in marketing their State Water allocation (750 afy). However, they have not decided upon a preferred exchange arrangement (whether "short-term lease" or "permanent sale"). They are currently evaluating all their water sources to determine

the most cost-effective approach for meeting their build-out demand and maximizing their water production. As mentioned earlier, Shandon's allocation of 100 afy has been available for sale since 1995, but due to a complicated contracting process it has not been reassigned as of March, 2003. There are currently no communities in Santa Barbara County that are actively selling all or a portion of their permanent State Water allocation.

In conclusion, because of the limited amount of State Water available within this county, it is not considered a feasible alternative to the NWP as a whole because the SWP would not meet the identified project objective of providing a viable supplemental water source in the amount of 16,200 afy, as proposed by the NWP.

3.1.4.2 Nacimiento Water Project

Reliability of the NWP is generally dependent on the following four factors:

- annual rainfall and runoff received into the lake from the Lake Nacimiento watershed;
- operation model or flood rule curve used by the MCWRA to manage Nacimiento Reservoir, sustain required California Department of Fish and Game (CDFG) releases, and maximize conservation releases for groundwater recharge in the Salinas Valley to mitigate seawater intrusion;
- the amount of water which can safely be retained in Lake Nacimiento as determined by the California Division of Safety of Dams and the Federal Energy Regulatory Commission (FERC) requirements; and,
- the ability to construct future improvements to the Nacimiento Dam spillway, or other improvements designed to maximize the volume of water that can be retained in storage.

Boyle Engineering Corporation examined the issue of reliability using data from 1951 to 1991 on storage, inflow, net evaporation, conservation and flood protection releases. Below normal inflow patterns during this 40- year period occurred regularly in three year cycles. Boyle Engineering Corporation (Boyle) concluded that the Nacimiento Reservoir from October 1950 through September 1991 would have been capable of delivering 17,500 afy to the San Luis Obispo Flood Control and Water Conservation District (SLOFCWCD) during historic cycles of below-average inflow. However, during periods of sustained drought, beginning in December 1990 (the fifth year of drought), the operations model indicated that Lake Nacimiento would have reached the minimum pool of 10,000 af, which would have reduced theoretical deliveries of NWP until March 1991, when significant rainfall was received (Boyle 1992). Estimated potential yields for the NWP range from a low of 90% during the 1987–1992 drought to 100 % full subscriptions. On the average, NWP will deliver 99% of subscriptions, including both wet and dry years (Boyle 1992, 1997).

In October of 2002 Boyle updated the reliability assessment. As part of that assessment Boyle modeled the impact the Nacimiento Water Project (NWP) would have had on historic lake levels if 16,200 afy of their 17,500 afy entitlement was delivered to San Luis Obispo County, according to a seasonally adjusted delivery schedule.[1] It was assumed that MCWRA would modify their

[1] Refer to the October 2002 Boyle Engineering Report "Nacimiento Reservoir – Reliability As A Water Source For San Luis Obispo County" for additional details.

annual release schedule (MCWRA typically releases over 230,000 afy from the Nacimiento Reservoir) in such a way as to ensure the availability of San Luis Obispo County's annual entitlement of 17,500 af. Boyle examined reservoir storage, elevation, inflow, and outflow data from 1958 to 2001 and concluded the following:

- Short Term Drought (1–2 years): During such periods the Nacimiento Reservoir would have never fallen into dead pool[2], and Nacimiento water deliveries could have been reliably delivered without modification to the delivery schedule.
- Long Term Drought – There would have been 4 occurrences in the 43-year study period where it would have been necessary to modify the Nacimiento water delivery schedule to prevent dead pool lake levels. However, utilizing a modified delivery schedule the total annual delivery of 16,200 af could have been delivered without reaching dead pool.

3.2 Alternatives to the 2003 Proposed Project

As discussed in the introduction and project description chapters, this 2003 EIR evaluates two project alternatives that include the following.

1. A treated water alternative that would provide chlorinated water directly to the various purveyors, and
2. A raw water alternative that would discharge water into the Salinas River and/or treat the water at a purveyor's water treatment facility.

A wide variety of alternatives for the Nacimiento Water Project were considered in a screening analysis to address potential alternatives to the proposed project, as well as individual project components. Alternatives were considered for the following components of the proposed Nacimiento Water Project:

- No Project Alternative,
- 1997 NWP EIR Project Alignment,
- Combined Raw and Treated Water Alternative,
- Bradley Well Field Options,
- Alternative Camp Roberts Route,
- Lake Nacimiento Reservoir Intake Alternatives,
- Alternative WTP Sites,
- State Water Project,
- Additional Groundwater Pumping,
- Desalination,
- Reclamation, and
- Conservation.

[2] Dead Pool is defined as the Reservoir Outlet Elevation (670 feet).

The alternatives involving pipeline routes are presented in Figure 3-1. The alternatives that were evaluated for each of the projects are summarized in the following sections.

A screening analysis was performed for each alternative. The alternatives were screened based on the ability to avoid potentially significant impacts associated with the proposed project, and minimize environmental impacts. The results of the screening analysis are also summarized below for each alternative category.

3.2.1 No Project/No Action Alternative

CEQA requires that the specific alternative of the "No Project" be evaluated along with its impacts as part of the EIR (CEQA Guidelines Section 15126.6(e)). NEPA Section §1502.14 also requires a No Action Alternative. As such, the No Project/No Action Alternative was not subject to the screening analysis and has been evaluated as an alternative to the proposed project throughout the EIR.

The No Project Alternative describes a water supply situation that acknowledges the Board of Supervisors' decisions related to obtaining supplemental water from the SWP. However, it does not include assumptions that supplemental water supply projects will be developed when projects are either unfunded, unscheduled, or have not undergone environmental review.

Without the NWP, the communities that have expressed a desire to receive Nacimiento water would continue to depend on existing water supplies, and/or potential alternative water supplies, if developed at a later date. With regard to relying upon existing water supplies, 77% of the County water comes from groundwater (SLO County 2001), which continues to be used faster than it is replenished. Further, approximately 68% of all beneficial uses of water in SLO County are utilized for agriculture (Northwest Economic Associates 2002). Current water supplies for the whole County are 159,922 afy, with the existing demand of 186,550 afy, which already higher than the available supplies (SLO County 2001). By the year 2020, the demand is predicted to reach 205,660 to 264,000 afy (SLO County 2001). Water demands are already above the safe yields of the groundwater supplies. Without the development of supplemental water supplies, water demands would exceed dependable water supplies by approximately 45,700 to 104,000 afy for the entire county (SLO County 2001). In addition, there would be increased competition for groundwater among agricultural and urban users. Further, sustained and increasing groundwater pumping may result in lowering pumping water levels and deteriorating groundwater quality associated with seawater intrusion along the coast.

As noted in the following sections, there are numerous potential water supply alternatives that could, to a certain extent, offset the loss of the County's Lake Nacimiento allocation should the proposed project not move forward. These alternatives could be implemented in the event the NWP is never constructed to partially offset the loss of availability of the NWP allocation, or could be implemented in addition to the NWP, thus supplementing the County's ability to effectively manage water supply.

Under the No Project Alternative, each project participant would need to evaluate their specific water supply needs and available alternatives, which in many cases are quite divergent amongst the participants. While conjectural, it is likely that project participants would pursue a mix of water supply alternatives based on local need, availability, and cost. Beyond the continuing over

reliance on groundwater resources, it would be speculative to undertake an evaluation of what alternative each participant would pursue in the absence of the NWP. Each of the projects discussed in the following sections could serve, at least partially, as an alternative to the proposed project, especially for some project participants, and have been evaluated on their own merit instead of as part of the No Project Alternative. The dependability of local water resources was demonstrated during the 1988–1991 drought. The majority of SLO County water purveyors experienced decline in well pumping water levels and deteriorating groundwater quality. Agricultural users reported similar experiences. Some lost the ability to operate wells altogether while others watched surface reservoirs drop to precariously low levels. One coastal community (City of Morro Bay) constructed an emergency seawater desalination plant. Restricted water use policies were common throughout the county. The 1988-1991 drought experience caused many purveyors to revise (downward) their estimates of sustainable yield.

Even before the drought, the 1986 Master County Water Plan prepared by DWR concluded that even with full 25,000 afy State Water entitlement, 17,500 afy Nacimiento supplies, enlargement of Salinas and Lopez Dams, conservation, reclamation, and desalination, SLO County still would need supplemental water to meet projected water needs. Supply shortages and advanced conservation, which the county experienced during the 1988–1991 drought, would occur again if the NWP were not completed, perhaps to a worse degree as demands increase.

With regard to other supplemental water projects other than the NWP, the 1986 Master Water Plan Update cited desalination, construction of new reservoirs, Salinas Reservoir expansion, coastal streams diversion, reclamation, and Whale Rock conjunctive use as possible options. Not one of the projects listed above is expected to yield the same supply as the NWP, nor would any one project benefit as many purveyors.

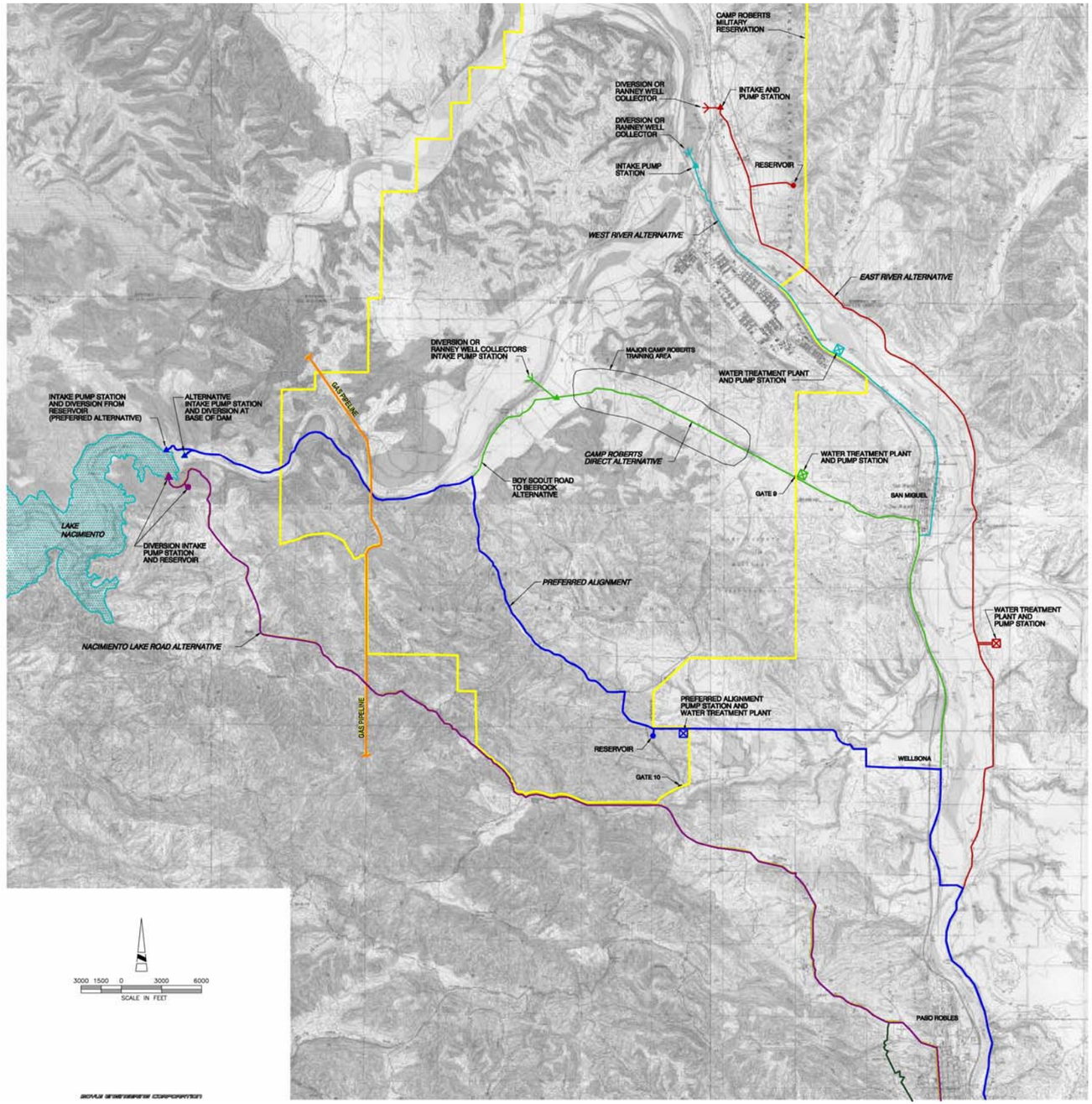
With no action, groundwater overdraft in some portions of San Luis Obispo County is expected to continue to increase, resulting in lowered groundwater levels, deteriorating water quality, potential aquifer subsidence and damage, and increased pumping costs, and increased competition between agricultural interests and domestic users. Supply shortages during drought periods could occur in some communities.

3.2.2 NWP 1997 EIR Alternative

3.2.2.1 Background

In May 1994, in light of the County Board of Supervisors decisions on the SWP and considering the need to develop supplemental water supplies as identified in the Master Water Plan Update, the Board of Supervisors adopted the NWP. The NWP was a conceptual water supply project which included a pipeline from Nacimiento Reservoir to the Edna Valley, south of San Luis Obispo. In 1995–1996 Carollo Engineers (Carollo) developed a number of project alternatives in the EIR Preparation Phase Engineering Reports, available for review at the County Public Works Department, and herein incorporated by reference. Carollo developed a set of criteria which were used to screen alternatives and make recommendations to the Nacimiento Participants Advisory Committee (NPAC).

Figure 3-1 Nacimiento Water Project Alternatives



LEGEND

- Camp Roberts Boundary
- West River (Bradley Well Field Concept)
- East River (Bradley Well Field Concept)
- Camp Roberts (Direct & Beerock Road)
- Proposed Project
- Gas Line Easements
- 1997 Draft EIR Alignment

These criteria included: (1) timing or phasing the development of water with water purveyors' forecasted needs; (2) water treatment options; and, (3) achieving the lowest cost of water. Some purveyors wanted Nacimiento water supplies immediately, while others did not require water for years. Some purveyors wanted raw water deliveries while others requested treated water. Carollo proposed that the cost of developing a regional water treatment plant could be deferred by developing a phasing concept, as recommended in the preferred project, and thus lower costs.

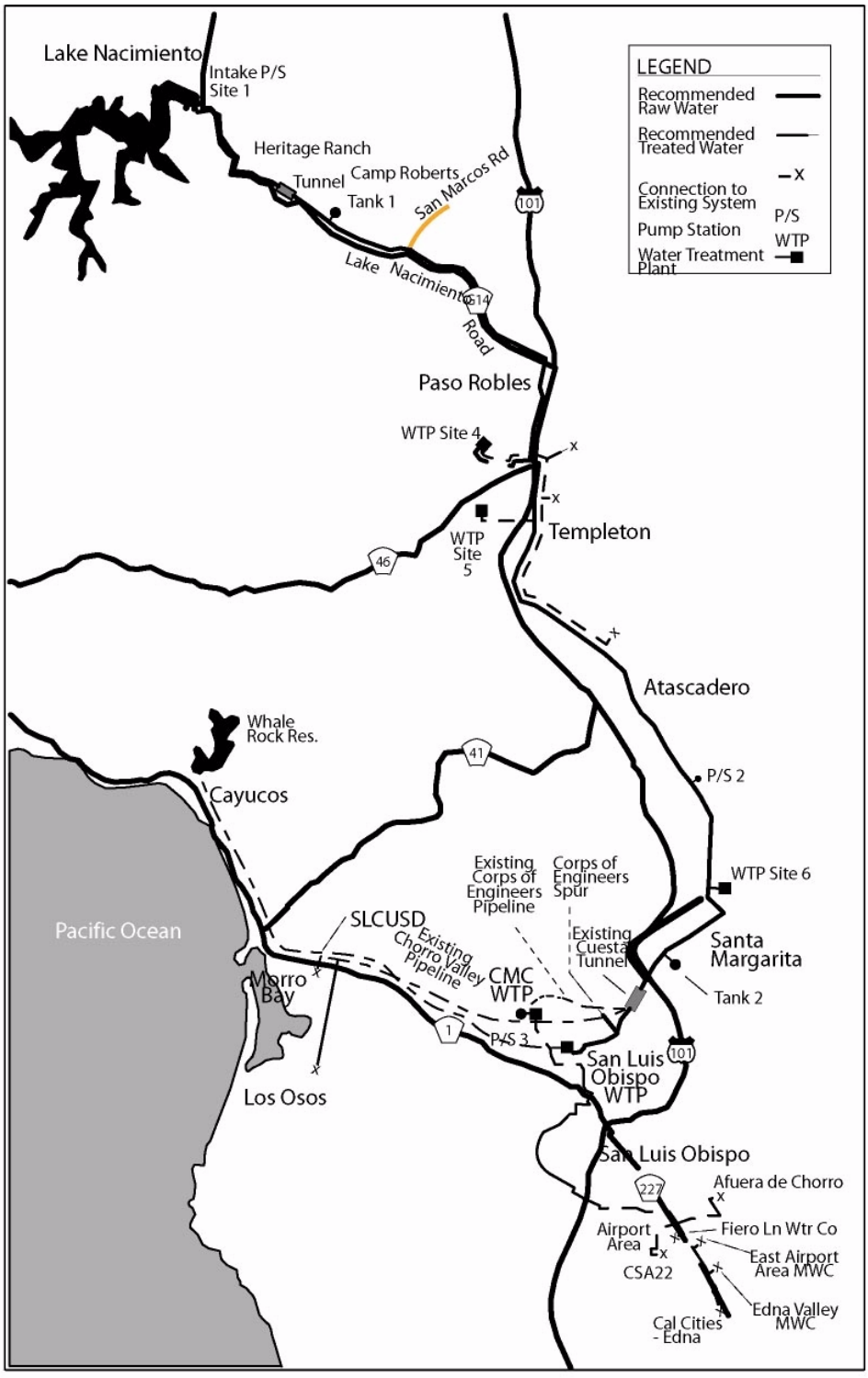
All project alternatives considered in the Carollo report include the construction of a water supply pipeline, originating at an intake within Nacimiento Reservoir. The first in a series of four conceptual project alternatives proposed a central water treatment plant WTP between Nacimiento Reservoir and Paso Robles which would treat the total water flow. The second alternative consisted of a raw water supply pipeline from the Nacimiento Reservoir to the City of SLO, with a single WTP constructed south of Paso Robles for the North County entities of Paso Robles, Templeton, Atascadero, and Santa Margarita; use of the existing City of SLO WTP for the City of SLO; treatment at the CMC WTP to serve the Los Osos area, SLO airport area participants, and a Whale Rock/Nacimiento water exchange with the City of SLO the community of Cayucos. The third alternative was the same as the second, except that two new WTPs were proposed to serve the community of Santa Margarita and Santa Margarita Ranch. The final alternative proposed by Carollo and adopted by the NPAC as the preferred project was the same as the third alternative, except that initial raw water discharge ponds for communities in the North County (Paso Robles, Templeton, Atascadero, and Santa Margarita) were added as part of the first phase of the project, as discussed in the Project Description below. The final alternative met the NPAC's initial criteria of phasing water supplies and deferring capital costs of a WTP with the purveyors' needs.

3.2.2.2 Project Description

This alternative was the subject of a previous NWP EIR in 1997 and has been thoroughly evaluated. The alternative is designed to take place in two timeframes. The first phase of the NWP 1997 EIR Alternative would include the construction and operation of an intake and pump station at Lake Nacimiento; a construction corridor of approximately 66 miles for water pipelines, two storage tanks and three pump stations; development of water discharge facilities north of the Cuesta Grade; upgrading an existing WTP at the CMC south of the Cuesta Grade; and a limited number of water exchange agreements. The second phase of the project would take place 5–10 years after Phase I. It would include construction of a WTP for Paso Robles, Templeton, and Atascadero; in addition, one or two WTPs would be constructed at the same site to serve both Santa Margarita purveyors. Water distribution pipelines and facilities are shown on Figure 3-2.

It is anticipated that the SLOFCWCD would act as Lead Agency for the construction and operation of the intake and pump station facility at Lake Nacimiento. Local pipelines would be constructed by the various agencies under contract to participate in the NWP, though the SLOFCWCD may act as Lead Agency for pipelines serving these water agencies. The SLOFCWCD would be responsible for constructing the improvements to the CMC's WTP.

Figure 3-2 NWP 1997 EIR Alternative, SLO County



Source: Carollo Engineers

Construction and operation of the four water discharge facilities would be the responsibility of the purveyors benefiting from the water (Paso Robles, Templeton, Atascadero, and Santa Margarita). SLOFCWCD (or a future joint powers authority), would serve as Lead Agency for the possible future construction of a WTP to treat water for Paso Robles, Templeton, and Atascadero, and for the possible future construction of one or two WTPs in Santa Margarita for Santa Margarita Water Works No. 6 and the Santa Margarita Ranch. Water treated at the upgraded CMC WTP would be placed in the existing Chorro Valley water pipeline for delivery to the SLCUSD in Morro Bay. SLCUSD would receive treated water through a water "wheeling" exchange agreement with the City of Morro Bay.

A direct water exchange agreement of Nacimiento water for Whale Rock Reservoir water between the three Cayucos water purveyors (CSA 10A, Morro Rock Mutual Water Company, and the Lewis Pollard Trust) and the City of San Luis Obispo is also proposed. The three Cayucos purveyors presently receive water from Whale Rock Reservoir under the terms of an agreement with the Whale Rock Commission for a total supply of 600 afy. Under the 1997 EIR Alternative, the City of San Luis Obispo would transfer additional water from Whale Rock Reservoir water to the three purveyors.

3.2.2.3 Intake and Pump Station (No. 1) at Lake Nacimiento

An intake would be constructed to convey water from Lake Nacimiento into the pipeline proposed under this alternative. The intake would be constructed in conjunction with Pump Station No. 1, located close to the dam, near the upstream face adjacent to Resort Drive. The intake and pump station would require up to two acres of disturbed area above the high-water level, and as much as 0.5 acre below the high-water level.

The multi-level intake structure would comprise a single, 20-foot diameter shaft drilled vertically into the ground from the shoreline pump station for approximately 160 feet where it would be connected with three horizontal intake tunnels. The shaft would be of sufficient diameter to accommodate the vertical turbine pumps and motors, switch gear, control gates, and maintenance access. Both the vertical shaft and the tunnels would be lined. Hydraulic control of the facility would be achieved within the vertical shaft where the control gates would be housed. Trash rack assemblies (debris screens) would be placed at the upstream end of the horizontal tunnel shafts. Water would flow through the horizontal tunnels and into the sump at the bottom of the vertical shaft where the pump bowl assemblies are located.

Pump Station No. 1 would be constructed in conjunction with the reservoir intake site, near the upstream face of the dam. Pump Station No. 1 would consist of five enclosed turbine pumps (800 horsepower each), located on the cover of the vertical shaft; a 20-foot shaft in the intake; and facilities including a building to house the motor control center and variable frequency drives, a generator building, a transformer yard, and a parking area. The pump station facilities would be constructed of masonry materials and landscaping would conform to local planning requirements.

Pump Station No. 1 would be designed to accommodate the surface water level of Lake Nacimiento, which varies from 670 to 800 feet in elevation. The pipeline from Pump Station No. 1 would convey water to a tunnel through the highest mountain on the pipeline route at an elevation of approximately 1,210 feet above sea level (asl), then to the first water tank (No. 1 or

1A). The water in the pipeline would then flow by gravity from the water tank (No. 1 or 1A), approximately 32 miles downstream to Pump Station No. 2 located south of the City of Atascadero.

3.2.2.4 Raw Water Distribution System

The raw water distribution pipelines would consist of approximately 52 miles (less Cuesta Tunnel) of pipeline ranging in diameter from 33 inches (in Nacimiento Lake Drive to the Templeton water system) to 12 inches (at the SLO WTP). Raw water distribution pipelines consisting of Reaches A through G are described below. In addition to the main pipeline, approximately 4 miles of pipeline would be constructed to connect WTPs, pump stations, tanks, and discharge areas.

North of the Cuesta Grade, raw water would be discharged into unlined basins located in Salinas River alluvium where it would percolate and then be drawn up through existing well fields, disinfected, and purveyed. South of the Cuesta Grade, two pipeline segments are proposed. One would distribute raw water to the City of San Luis Obispo WTP. The second pipeline ("Corps of Engineers spur") would distribute raw water to an existing pipeline where it would be deposited in an existing water reservoir and treated at the CMC WTP.

The pipelines would be laid in trenches at a minimum depth of cover of 4 feet (except where spanning of streams is proposed) and the construction corridor would generally be assumed to be 100-feet wide, unless special circumstances (e.g., traffic control or existing vegetation) dictate a narrower construction corridor. The construction corridor could be reduced to 30-feet wide or less where specialized construction techniques are implemented. The pipeline material would consist of cement-mortar lined and coated steel pipe or ductile iron pipe. Whenever feasible, the pipeline would be constructed in, or parallel to, existing roads and public ROWs in order to minimize the need to purchase new ROWs, facilitate access and maintenance, minimize traffic congestion, and avoid disturbance of vegetation.

Reach A (Lake Nacimiento to Highway 46 West)
Reach A would consist of a 33-inch diameter buried pipeline totaling approximately 18 miles in length. The pipeline would begin at the new inlet structure at Lake Nacimiento and run eastward along Resort Drive to Nacimiento Lake Drive, then follow Nacimiento Lake Drive to Paso Robles, where it would turn south on Vine Street to its intersection with Cuerno Largo Way. Within Reach A, the 1997 EIR Alternative follows the Nacimiento Lake Drive ROW in its entirety except for a 2,500-foot long tunnel segment and a segment on the perimeter of Camp Roberts.

Reach B (Highway 46 West to Main Street)
Reach B would consist of approximately 2.4 miles of 33-inch diameter buried pipeline located on the east side of Highway 101, opposite Cuerno Largo Way, to the Paso Robles River Discharge turnoff. It would then change to a 30-inch line as it follows Ramada Drive southward to the intersection of North Main Street and Highway 101 in Templeton.

Paso Robles River Discharge Area
Under Phase I, raw water would be discharged into bermed earthen ponds located approximately 2,000 feet from water wells operated by the City of Paso Robles. The turnoff to the Paso Robles river discharge area to the water wells would be located at an unnamed alley intersecting Ramada Drive opposite Cuerno Largo Way, approximately 1,000 feet south of the Highway 46 and 101 intersection. Disturbed area for site construction is estimated to be one acre, and would contain three ponds created by berming approximately 2 feet of earth around the pond's edges. The discharge facilities would consist of a series of three ponds with sufficient capacity to discharge the total flow (4.64 million gallons per day [mgd]) to each pond. There would be a pipe manifold with a valve on each pond influent pipe and a meter on the main influent line. Raw water from the NWP pipeline would be released into one of the discharge ponds at a time. This would allow for drying and maintenance (discing) of the idle ponds to prevent vegetation growth. The water would be expected to percolate into the Salinas River underflow where the naturally filtered water would be recovered (pumped) by existing wells, treated to meet State Drinking Water Standards through disinfection procedures (chlorination), and purveyed. The Salinas River discharge and extraction procedures proposed in Phase I would not be necessary once a WTP is constructed, as proposed in Phase II, but could be retained as a back up system when the WTP is off-line.

Templeton WTP Site
Under Phase II (expected to occur within a ten-year timeframe), the SLOFCWCD, or an appropriate joint powers authority, would construct and operate a new 9.8 mgd WTP. The turnoff to the WTP would be located on Cuerno Largo Way. The treated water pipeline from the WTP would cross under Highway 101 at Cuerno Largo Way in the same vicinity as the raw water line and follow the raw water pipeline route to Atascadero. The WTP site would be located in the foothills north of Templeton (at an elevation of approximately 900 feet asl) off Highway 101. It would be located along approximately 0.5 mile of existing frontage road and 0.36 mile of access road, 0.25 mile north of the intersection of South Vine Street and Highway 46. The WTP would serve Templeton, Paso Robles, and Atascadero during Phase II of the 1997 EIR Alternative. The site would result in approximately 15 acres of disturbed area (including 11 acres of facilities) plus improvements to the access road. Cut and fill material on both the WTP site and access road would be balanced on site. Separate raw and treated water lines to be constructed during Phase II would be located on opposite sides of the access road.

Reach C (Main Street to San Ramon Road)
Reach C would consist of a 30-inch diameter buried pipeline totaling approximately 2.8 miles in length, which would begin at the intersection of Ramada Drive and the Main Street overpass at the north end of Templeton. The route would extend southward on Main Street, through Templeton to Vineyard Drive, where it would cross and continue approximately 2,800 feet to the end of Main Street which terminates in a fenced materials storage area. The route would then cross under the east side of the SPRR tracks and follow them to Paso Robles Creek, north of Atascadero.

Templeton River Discharge Area
The connection point between the raw water pipeline and the discharge area would be located where the pipeline turns after crossing over the railroad in the materials storage area. Under

Phase I, raw water would be discharged into bermed earthen ponds located more than one mile away from water wells operated by the Templeton Community Services District. Disturbed area is estimated to be one acre, and would contain three ponds created by berming approximately 2 feet of earth around the pond's edges. The discharge facilities would consist of a series of three ponds with sufficient capacity to discharge the total flow (1.71 mgd) to each pond. There would be a pipe manifold with a valve on each pond influent pipe and a meter on the main influent line. Raw water from the NWP pipeline would be released into one of the discharge ponds at a time. This would allow for drying and maintenance (discing) of the idle ponds to prevent vegetation growth. The water would be expected to percolate into the Salinas River underflow where the naturally filtered water would be recovered by existing wells, treated to meet State Drinking Water Standards through disinfection procedures (chlorination), and purveyed. The Salinas River discharge and extraction procedures proposed in Phase I would not be necessary once a WTP is constructed, as proposed in Phase II.

Reach D (San Ramon Road to Santa Margarita Road)
Reach D would consist of approximately 9 miles of buried pipeline, which would begin at Paso Robles Creek and continue southward through the City of Atascadero along the east side of the SPRR tracks. The pipeline would be elevated over Atascadero Creek parallel to an existing bridge and would follow Sycamore Road for a distance of approximately 0.75 mile. From that point the alignment would continue, and, where necessary, be bored under the railroad tracks, ending south of Atascadero, near the convergence of the railroad and El Camino Real. The alignment would consist of 30-inch pipeline to the turnout for Atascadero's river discharge (Area 1), decrease to a 27-inch pipeline until it reaches Pump Station No. 2, and then reduce to a 24-inch pipeline.

Atascadero River Discharge Areas
Atascadero would have one river discharge area, however two discharge areas were evaluated for feasibility. Atascadero river discharge area No. 1 would be located adjacent to the Salinas River, off of the intersection of Ferrocaril Road east of Traffic Way and Chico Road west of Traffic Way. This location would serve as the connection point for both raw and treated water lines. Atascadero river discharge area No. 2 would be located approximately 2,000 feet south of Highway 41 and Sycamore Road.

Under Phase I, raw water at both river discharge areas would be deposited into bermed earthen ponds located approximately 200 feet from water wells operated by the Atascadero Mutual Water Company. Approximately one acre would be disturbed. The discharge facilities would consist of a series of three ponds created by berming approximately 2 feet of earth around the pond's edges, with sufficient capacity to discharge the total flow of water (3.48 mgd) to each pond. There would be a pipe manifold with a valve on each pond influent pipe and a meter on the main influent line. Raw water from the NWP pipeline would be released into one of the discharge ponds at a time. This would allow for drying and maintenance (discing) of the idle ponds to prevent vegetation growth. The water would be expected to percolate into the Salinas River underflow where the naturally filtered water would be recovered by existing wells, treated to meet State Drinking Water Standards through disinfection procedures (chlorination), and purveyed. The Salinas River discharge and extraction procedures proposed in Phase I would not be necessary once a WTP is constructed, as proposed in Phase II.

Pump Station No. 2
Pump Station No. 2 is proposed to boost water to Tank No. 2, from an elevation of 900 to 1,510 feet asl. The pump station would be located near the southeast corner of the intersection of Santa Clara Road and Sandoval Road, in the Garden Farms area of Atascadero, in an open area near the Salinas River. Pump station facilities would include a 2,500 square foot building to house five 400 horsepower vertical turbine electrical pumps. A diesel powered stand-by generator would be housed in a separate enclosure approximately 22-feet by 24-feet. A fenced area approximately 35-feet by 26-feet would be required for electrical transformers, plus construction of an access road and a parking lot.

Reach E (Santa Margarita Road to Estrada Avenue)
Reach E would consist of a 24-inch diameter buried pipeline totaling approximately 2.3 miles in length. Reach E would continue from the southern end of Reach D and follow along the east side of the SPRR tracks, except where the alignment would switch to the west side of the tracks to avoid an existing petroleum storage facility. Reach E would extend to the north end of Santa Margarita at the intersection of El Camino Real and Estrada Avenue.

Reach F (Estrada Avenue to Cuesta Tunnel)
Reach F would consist of a 24-inch diameter buried pipeline totaling approximately 4.8 miles in length. Reach F would run east along the road ROW of Estrada Avenue in Santa Margarita to the existing DWR pipeline alignment, then turn south and run parallel to the DWR pipeline to the connection point of the Cuesta Tunnel. The selected alignment south of Santa Margarita would parallel the State Water Project, Coastal Branch Phase II pipeline, which is presently under construction.

Santa Margarita WTP Site
A WTP site is proposed to be located southwest of town at an elevation of 1,380 feet on a ridgeline which slopes north toward the interchange between Highway 101 and Highway 58, just below the proposed raw water pipeline. The site is ringed by mature oaks, some of which were fire damaged. The eastern portion of the site contains a secondary power line which follows the ridgeline. An existing road would be improved to County Fire Department standards to serve both proposed Storage Tank No. 2 and the WRP. The site is approximately 3.5 acres, of which 2 acres are relatively level.

This WTP site was discussed in the Alternatives section of the NWP 1997 EIR, because the original site was determined to have unavoidable significant (Class I) impacts to cultural resources, and because the use of discharge ponds as proposed under Phase I is considered infeasible.

Storage Tank No. 2
Storage Tank No. 2 would be located in the foothills east of Highway 101 and south of Santa Margarita, at an elevation of approximately 1,488 feet asl. The tank site would be located approximately 9,700 feet south of the Estrada Avenue and DWR pipeline intersection. The site proposed for Storage Tank No. 2 may be visible from Highway 101; therefore, it is proposed to be a buried concrete tank approximately 160 feet in diameter and 24 feet deep. The storage volume would be 1.8 million gallons. Cut and fill material would be balanced on site.

Construction of the tank would result in up to two acres of disturbed land plus an access road. Landscaping would be designed to blend the tank site into the surrounding landscape. Facilities would include the tank, control valves located in underground vaults, and an access road. The tank site would be surrounded with fences and locked gates to limit and control access to the tank site and facilities.

Reach G (Cuesta Tunnel to Highland Drive)
Reach G would consist of a 24-inch diameter buried pipeline approximately 3.9 miles in length. Reach G would begin at the south portal of the Cuesta Tunnel and head southward under the Salinas and Chorro Valley pipelines to the SPRR alignment, cross under the railroad, then follow the railroad on the east side for nearly one mile before departing in a southeasterly direction to Stenner Creek Road. Within this segment, it would remain a 24-inch pipeline for approximately one mile south of the Cuesta Tunnel to a pipeline turnout called the Army Corps of Engineers (ACOE) spur ("COE spur"). At this point, the pipeline would split. The 12-inch "COE spur" would cross under the railroad tracks in a northwesterly direction through the foothills to a connection point with an existing 12-inch pipeline conduit described as the ACOE pipeline which eventually discharges the raw water into Chorro Creek and the unlined Chorro Reservoir utilized by the CMC WTP. The main pipeline would continue as a 12-inch main along Stenner Creek Road for approximately 2.9 miles to the San Luis Obispo WTP. The WTP would serve as the terminus of the main raw water pipeline.

"Corps of Engineers Spur"
The 12-inch "COE spur" pipeline would extend 0.4 mile to convey raw water into the existing ACOE pipeline, as described above.

Army Corps of Engineers Pipeline (Existing)
The existing, unused ACOE pipeline discharges into Chorro Creek which flows by gravity to a reservoir serving as the intake to the CMC WTP. Lake Nacimiento water would be treated at the CMC through a proposed WTP upgrade.

California Men's Colony WTP
As part of the 1997 EIR Alternative, the CMC WTP would be upgraded to serve the participating water districts in Los Osos, the SLCUSD, and the six San Luis Obispo airport participants: East airport area Mutual Water Company, CSA 22 – Airport, Cal Cities-Edna and Edna Valley Municipal Water Company, Fiero Lane Water Company, and Afuero de Chorro Water Company. Raw water would be diverted into the "COE spur" from the main Nacimiento pipeline to the existing, but unused, ACOE pipeline. The abandoned ACOE pipeline discharges to Chorro Creek which flows into a reservoir serving as the intake to the CMC WTP. The CMC presently has a 3 mgd treatment plant; however, less than half this capacity is currently being utilized.

Pump Station No. 3
The treated water from the CMC WTP delivered to Los Osos and SLCUSD would be pumped by Pump Station No. 3 into the Chorro Valley water line carrying State water to Morro Bay. Pump Station No. 3 is proposed to be a small station located on the grounds of the CMC WTP to boost water from the clearwell of the CMC WTP into the Chorro Valley pipeline. The pumps would be located within the CMC WTP fenced compound on a concrete foundation. The pump station

electrical controls and generator capacity would be included within the WTP facilities when the plant is upgraded. Pump Station No. 3 is designed to be powered by two active 25 horsepower vertical turbine electrical pumps with provisions for one stand-by pump. Each pump has the capacity to pump 300 gallons per minute (gpm).

City of San Luis Obispo WTP
The 1997 EIR Alternative would utilize the existing City of San Luis Obispo's WTP. No additional improvements to the City of San Luis Obispo WTP are proposed.

3.2.2.5 Treated Water Distribution System

Treated water distribution pipelines consisting of the remaining portion of Reach G, Reaches H and K are described below.

Continuation of Reach G (California Men's Colony to Highland Drive)
Reach G would continue as a 14-inch diameter treated water line, starting from the CMC WTP at the Chorro Reservoir, crossing the dam crest to a local access road running in a southeasterly direction. The pipeline would then follow the road in a southerly direction approximately 0.6 mile where it would turn east across an open field to the south side of the railroad alignment. It would follow the railroad for approximately 0.6 mile then continue across open fields southeast to Stenner Creek Road and then turn south on Stenner Creek Road to Highway 1. It would follow Highway 1 in a southeasterly direction to a location approximately 900 feet north of the Highland Drive intersection.

Reach H (Highland Drive to Dalidio Drive)
Reach H would continue as a 14-inch pipeline which would cross Santa Rosa Street to Chorro Street and turn south to the intersection of Highland Drive. It then would turn west and follow Highland Drive to Patricia Drive. At Patricia Drive, the route would head east on West Foothill Boulevard for approximately 0.3 mile, where it would gradually turn south in a sweeping semi-circle across open land behind Madonna Farms to a power line corridor. It would then follow the power line corridor through Laguna Park to Madonna Road. The route would turn south on Madonna Road and east on Dalidio Drive, to the east side of Highway 101 across from Prado Road. The total estimated length of Reach H is 4.3 miles.

Reach K (Dalidio Drive to Los Ranchos Road)
Reach K would continue as a 14-inch pipeline crossing under Highway 101 to Prado Road, then continue east on Prado Road to Highway 227. It would then turn south, and follow Highway 227 to Tank Farm Road. A 10-inch pipeline would continue from Tank Farm Road and Highway 227, to Buckley Road. The pipeline would then change to a 6-inch pipe at Buckley Road and continue southeasterly on Highway 227 to Los Ranchos Road and then along Los Ranchos Road to the main line termination point at the intersection of Glenview Drive. Reach K is approximately 4.4 miles long from Highway 101 to Los Ranchos Road.

County Service Area 22
An 8-inch spurline would be constructed approximately 1.3 miles to serve CSA 22. This spur would connect to Reach K at the intersection of Highway 227 and Tank Farm Road and head west to Santa Fe Road, then turn south on Santa Fe Road, past the San Luis Obispo airport to Buckley Road. This spur pipeline would then head east on Buckley Road, terminating at the intersection of Davenport Creek Road and Buckley Road.

Fiero Lane Water Company – Airport area
The Fiero Lane Water Company service area would be connected at Fiero Lane and the intersection of Highway 227.

Edna Valley Mutual Water Company
Edna Valley Mutual Water Company is a proposed purveyor south of the City of San Luis Obispo. A turnout at the intersection of Highway 227 and Buckley Road is proposed.

3.2.2.6 Screening of NWP 1997 EIR Alternative

This alternative, being the subject of a 1997 EIR, was subjected to identification of numerous potential impacts. Potential impacts that were identified for this alternative are included in Table 3.2. The NWP 1997 EIR identified several significant impacts in the areas of Air Quality, Water Resources, Biological Resources, Recreation and Growth Inducement. It is likely these impacts will also be identified for the proposed project, and at similar magnitudes. However, the proposed project would likely result in greater impacts to biological resources (given its more rural route), cultural resources, drainage/erosion/sedimentation, and agricultural resources. This alternative would avoid or lessen impacts in these areas. In addition, the proposed project raises some land use issues associated with segments of the route that cross private properties and could have implications for the future use of several properties.

Table 3.3 presents the results of the screening analysis, which compares the alternative to the proposed project. Given the potential for this alternative to avoid several potential impacts associated with the proposed project, the NWP 1997 EIR Alternative will be fully evaluated in Section 5.0 of this EIR.

3.2.3 Phased Raw and Treated Water Alternative

Similar to the NWP 1997 EIR Alternative, this alternative would be constructed in a phased approach, starting out as a raw water project as described in Section 2.4.2 (Figure 2-2), and upon completion, would be a treated water project as described in Section 2.4.1 (Figure 2-1). This alternative would not avoid or substantially lessen many of the impacts associated with the proposed project, but would spread many of the impacts out over a longer period of time. In addition, seasonally sensitive impacts could be avoided by scheduling construction activities during periods when impacts could be avoided or minimized, such as sensitive species breeding periods, or during rainy periods when erosion and sedimentation impacts would be greatest.

The results of the screening analysis for this alternative are presented in Table 3.4.

3.2.4 Alternative Project Configurations and Pipeline Alignments

Alternative project configurations and route modifications have also been evaluated for releasing the water from Lake Nacimiento for direct flow down the Nacimiento River through Camp Roberts to a well field where it would be pumped into a pipeline. The results of the screening analysis for each alternative water source considered are presented in Tables 3.5 through 3.7. Detailed discussions for each alternative are provided below.

3.2.4.1 West River (Bradley Well Field Concept) Alignment

This alternative would require a diversion pump station or intake diversion facility on either the Nacimiento or Salinas River and a pipeline to the Wellsona Road area. The location of Highway 101 in the area of the confluence severely constricts the site. This alternative would also require that the facilities include a large above ground surge tank to accommodate the long length of pipeline from the pump station to the nearest obtainable storage tank site. There are no storage tank sites available in the area on the west side of the Salinas River. The pipeline would have to be constructed in a constricted area between the railroad and the Salinas River and Highway 101. A WTP and pump station would be constructed on Camp Roberts property immediately east of Highway 101. The pipeline would follow the proposed project pipeline alignment from Wellsona Road southward.

Under this alternative, the pipeline would impact several areas of natural riparian habitat along the Salinas River. A portion of the alignment would cross Camp Roberts at areas where training activities and equipment would impact the pipeline and its operation. As a result, the project would require special design features in this active access route to the Camp Roberts training facilities east of the Salinas River.

The following are major reasons why the review of this alternative was discontinued:

A surface water diversion structure or well field would have to be constructed in the area of the confluence of the Nacimiento and Salinas Rivers. This area is highly vegetated and to get into the river channel would require major construction work in the wet below the confluence. The reason this would have to be done in the wet is that there are minimum flow requirements in the Nacimiento and Salinas Rivers at this point to comply with water rights and CDFG permits, similar to the proposed project. The diversion facilities would have to be flood protected and would also be in an area highly visible from Highway 101.

Archaeological investigations (Breschini 1983 and Gibson 2003) have determined that the area of the confluence of the Nacimiento and Salinas Rivers is likely an archaeologically sensitive area. Abundant water availability and local terrain features make the site ideal for habitation on a year round basis.

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
I. Unavoidable Significant Environmental Impacts (Decision-maker must issue a "Statement of Overriding Considerations" Under Section 15093 of the State CEQA guidelines if the project is approved).				
Air Quality	Emissions from pipeline construction equipment would exceed 6 tons per quarter (tons/qtr) for oxides of nitrogen (NO_X).	Short-term	A comprehensive construction activity and management plan shall be prepared in consultation with the SLO Air Pollution Control District (SLOAPCD). The plan shall include use of Best Available Control Technology (BACT).	Significant
	Particulate matter less than 10 microns in diameter (PM_{10}) (dust) during pipeline construction would exceed 2.5 tons/qtr PM_{10} threshold.	Short-term	To reduce the amount of disturbed ground and dust, mitigation strategies include: watering down the site area twice daily, use of soil binders, revegetating promptly, paving construction roads, and limiting vehicle speeds on unpaved surfaces.	Significant
Water Resources *NWP Phases I & II Operations*	During a sustained drought period, curtailed releases from Lake Nacimiento could increase seawater intrusion into aquifers near Monterey Bay.	Cumulative	When lake level reaches 748 feet, NWP participants shall implement increased water conservation for domestic water users.	Significant
Recreation	Restrictions on recreational use of Lake Nacimiento for swimming could potentially occur as a result of DHS conditions on bodily contact with a public water supply.	Long-term	DHS to review Watershed Sanitary Survey and Recreation Plan. Final EIR to evaluate potential impacts of the plan on recreational resources at the lake.	Significant
	NWP would lower the lake to minimum levels at a faster rate during periods of drought.	Long-term	During drought conditions, or when lake levels reach 748 feet or below, NWP participants shall implement increased water conservation consistent with best management practices for water users.	Significant
Biological Resources				
Amphibians and Reptiles	Direct impacts to red-legged frog and southwestern pond turtle in Reach G, "COE spur" to CMC WTP, and Los Osos spur.	Short-term	Project biologist to conduct pre-construction surveys for red-legged frogs and southwestern pond turtles at all drainages. If species present, avoid or capture and relocate or span drainage.	Potentially significant residual impacts where avoidance may not be possible for pipeline segments crossing Stenner and Chorro creeks (Reach G and Los Osos spur).
Fish	Direct impacts to steelhead trout, arroyo	Short-term	Pre-construction surveys of pipeline alignment shall be	Potentially

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
	chub, and tidewater goby potentially occurring in Salinas River, Santa Margarita, Stenner, San Luis Obispo, Los Osos and Chorro creeks.		conducted. If special status fish species is detected, fish shall be captured and relocated downstream, and/or construction will avoid breeding season.	significant residual impacts, if tidewater goby or steelhead trout is present along Los Osos spur.
	During a sustained drought period, curtailed releases from Lake Nacimiento could decrease the amount of water downstream, significantly affecting fishery resources in Nacimiento and Salinas rivers.	Cumulative	During drought conditions, or when lake levels reach 748 feet or below, NWP participants shall implement increased water conservation consistent with best management practices for water users.	Significant
Growth Inducement	Growth inducement is determined to be a significant impact because NWP supplies could result in additional growth or rate of growth in areas now subject to water resource constraints. Recently approved/updated General Plan have acknowledged that future growth will have significant, cumulative impacts. In areas where forecasted water supplies exceed future demand, NWP water could be used to foster growth outside existing service area boundaries. Private water companies in areas located outside of Urban Service Lines (USL) or in agriculturally-designated areas would be able to prove a source of water in applying for general plan amendments to change land use designations to accommodate projects with residential or other uses.	Long-term	The governing body of each water purveyor accepting NWP water shall include in their water management plans and programs, the goal of reducing groundwater basin overdraft in the long-term, with measurable objectives to accomplish this goal. Water purveyors in the Los Osos groundwater basin should continue to operate wells with the goal of preventing potential sea water intrusion into the aquifer.	Significant Significant
	The secondary or indirect impacts of growth depend on how local jurisdictions manage growth. School facilities would be significantly affected by future residential growth because existing funding sources are insufficient to fully mitigate impact.	Long-term	School districts shall be credited with sufficient water to allow development of planned improvements. If any of the Cayucos water purveyors decides to accept NWP supplies, a water allocation sufficient to build a school within CSA 10A shall be granted.	Significant

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
II. Significant Environmental Impacts That Can be Feasibly Mitigated or Avoided (Decision-maker must issue "Findings" Under Section 15091 of the State CEQA guidelines if the project is approved).				
Visual				
Intake & Pump Station No.1	Intake/pump station would be seen by large numbers of visitors to Lake Nacimiento Resort and would be inconsistent with natural terrain.	Long-term	Reduce building frontage along Nacimiento Lake Drive; increase landscape screening; match existing stone materials; use non-glare roofing and fencing materials; vary facade of electrical/generator building; and use hooded directional lighting fixtures.	Non-significant
Pipelines & Tunnel	Change in character of area as seen from public roads.	Short-term	Regrade terrain to natural contours; round slopes; revegetate with native vegetation.	Non-significant
Water Storage Tank 1 (Camp Roberts Alternative)	Visible from Nacimiento Lake Drive.	Long-term	Preserve existing trees; revegetate disturbed areas with fast growing native species; use non-reflective fencing; use hooded directional lighting fixtures. Water tanks shall be painted a matte gray green color to match surrounding landscape and sufficiently landscaped with oaks, laurels, and manzanitas so that at maturity, the majority of the tank will be obscured from public view.	Non-significant
Water Storage Tank 2	Grading for underground tank would alter character of area.	Long-term	Regrade terrain to natural contours, use non-reflective fencing; revegetate; use hooded directional lighting fixtures.	Non-significant
Water Treatment Plants (Phase II)	Construction of water treatment plants near Templeton and Santa Margarita would alter character of area.	Long-term	Architecture shall appear consistent with structures in area; limit height of elements to 24-feet; use earthtone colors; landscape with tall trees; minimize nightlighting by using motion detectors, hooded directional lighting fixtures. Site design plans to be reviewed by SLO County Environmental Coordinator's Office prior to General Plan Conformity Report.	Non-significant
Geology/Soils				
Human Health	Asbestos fibers in serpentinite formations is known to cause human health hazard. Serpentinite is known to exist in portions of Reaches A & G.	Short-term	Exact locations shall be mapped; a health and safety program shall be implemented by the contractor.	Non-significant
	Failure of steep or unstable slopes could damage project components. Landslide potential occurs in Reaches A,D, F & G.	Short-term	Site specific investigations of landslide potential shall be conducted by a qualified geologist and incorporated into final design.	Non-significant
	Safety of construction workers during excavation activities.	Short-term	Excavation safety shall conform to OSHA regulations.	Non-significant

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
Soils	Soil erosion near stream channels can adversely affect downstream water quality.	Short-term	Avoid trenching during rainy season (October 15 to April 15). Prepare Stormwater Pollution Prevention Plan (SWPPP) as required by the Regional Water Quality Control Board. Implement revegetation plan.	Non-significant
	Shrink-swell potential of expansive soils can adversely affect project components.	Long-term	Grading and specially designed foundations shall be constructed in accordance with the Uniform Building Code (UBC).	Non-significant
Seismic Risk (intake location)	Intake location is underlain by unnamed fault (Jolon Fault splay).	Long-term	Geotechnical seismic investigations shall be conducted for each pipeline segment, tunnel, and other components (intake, pump stations, tank sites, and WTPs) to be included in final construction plans; a geologist or civil engineer shall verify adherence to seismic design parameters of UBC or Engineering Association of California; detailed geotechnical investigations shall be conducted in areas with significant landslide and/or liquefaction potential; subsidence shall be mitigated by removal of liquefiable material and recompaction; and fail-closed valves and seismic detection sensors shall be installed.	Non-significant
Seismic Risk (pipelines)	Pipeline reaches A, B, D, and G cross the Rinconada, Jolon, and Nacimiento faults (potentially active faults which are capable of surface rupture).	Long-term	Geotechnical seismic investigations shall be conducted for each pipeline segment, tunnel, and other components (intake, pump stations, tank sites, and WTPs) to be included in final construction plans; a geologist or civil engineer shall verify adherence to seismic design parameters of UBC or Engineering Association of California; detailed geotechnical investigations shall be conducted in areas with significant landslide and/or liquefaction potential; subsidence shall be mitigated by removal of liquefiable material and recompaction; and fail-closed valves and seismic detection sensors shall be installed.	Non-significant
Water Resources	Construction could potentially alter surface water flow patterns causing erosion downstream during rainstorms.	Short-term	Within 100-year floodplains, construction shall occur only during non-rainy season (April-October) or periods of no flow.	Non-significant
			In-channel sedimentation basins shall be installed to trap fine soil materials prior to release downstream.	Non-significant
	Pipeline in Reaches A-F, H, K, & Los Osos spur would cross flood prone areas with potential for damage from flood flows.	Short-term	Emergency construction evacuation procedures shall be prepared and implemented by the contractor if flood flows occur. Obtain frequent weather updates.	Non-significant

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
	Potential for increased turbidity and sedimentation in streams.	Short-term	Construction activities shall be restricted to defined ROW. Equipment access and construction through drainages should be conducted from creek banks.	Non-significant
		Short-term	No storage of construction materials or spoil within channel or overbanks.	Non-significant
		Short-term	Lead or design agency shall prepare and implement erosion and sediment control plan that includes best management practices for sedimentation control.	Non-significant
	Potential for degradation of surface water and groundwater due to contamination by fuel.	Short-term	Establish "no fueling" zones within 25 feet of all drainages.	Non-significant
Operational Impacts	Potential for pipeline rupture causing erosion and downstream sedimentation.	Long-term	An emergency response plan to temporarily detain treated water shall be filed with the county and implemented by the contractor; Design Agency shall implement a regular pipeline maintenance and inspection program; Design Agency shall specify use of reliable pipeline materials; and pipeline shut-off values at suspended crossings shall be included in pipeline design.	Non-significant
	Potential public health effects if treated distribution water quality does not comply with applicable drinking water standards.	Long-term	Prepare Watershed Sanitary Surveys and manage the Lake Nacimiento watershed to control sources of contamination; institute focused monitoring programs; meet all State, federal and local requirements for drinking water quality.	Non-significant
	Potential for localized overdrafting caused by wells pumping from local aquifers where discharge ponds have failed to adequately recharge aquifers (Paso Robles, Templeton, Atascadero, and Santa Margarita).	Long-term	Demonstrate hydrogeologic feasibility of each recharge location.	Potentially significant for Santa Margarita where recharge/withdrawal location appears infeasible, and thus may have significant residual impacts.
Public Health	Potential for degradation of water quality in local aquifers due to sediments and metals from Lake Nacimiento or other sources.	Long-term	Compliance with RWQCB directives; Manage Lower Salinas Watershed to ensure additional contaminants do not reach water supply wells; monitor supply wells; meet all federal, state and local requirements for drinking water quality.	Non-significant

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
Phase I Operation	Degradation of surface water quality at percolation ponds.	Long-term	Periodic replacement of top sand filter layer within ponds. Implement groundwater monitoring for groundwater levels and water quality in wells near percolation ponds and production wells.	Non-significant
Air Quality				
Air Toxics	Potential for air toxic compounds to be emitted during water treatment process at WTP sites.	Long-term	A Health Risk Assessment (HRA) shall be performed as required by AB 2588.	Non-significant
	Cumulative construction emissions for 3 WTP sites would exceed the APCD threshold of 185 pounds per day for NO_x and PM_{10}.	Short-term	Phased construction of WTPs would reduce estimated cumulative construction emissions.	Non-significant
Biological Resources				
Flora and Fauna	General biological impacts to oak woodlands, wetlands, and special status plant and wildlife species could occur during construction (applies to all reaches).	Short-term	A project monitoring biologist(s) shall oversee construction activities to ensure compliance with the mitigation program. The lead project monitoring biologist shall have the authority to stop or delay construction activities that threaten significant biological resources.	Non-significant
			A contractor education program shall be implemented. Heavy equipment and construction activities shall be restricted to a defined construction ROW. Staging areas, construction routes, construction corridors, access roads, fueling sites, and storage locations for excavated soils shall be delineated on construction plans and reviewed by project monitoring biologist. The timing of construction activities shall minimize impacts to biological resources (e.g., avoidance of breeding season).	Non-significant
			"Exclusion zones" shall be designated where construction will be limited to a 15- to 30-foot corridor.	Non-significant
Flora	Direct impacts of up to 114.9 acres of oak woodland (215 trees) in Reaches A-G.	Long-term	During final design, the project monitoring biologist and project engineer shall identify a narrowed construction corridor to preserve individual oak trees.	Non-significant
	Direct impacts of up to 114.9 acres of oak woodland (215 trees) in Reaches A-G.	Long-term	Lead or design agency shall prepare tree replacement plan that includes oak tree replacement at a ratio of 4:1 for any trees subsequently lost due to damage from construction	Non-significant

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
			activities. Mitigation at 1:1 ratio for offsite replacement of oak woodland habitat.	
	Impacts to wetlands near Stenner Creek, Chorro Creek, Reach H, and Los Osos spur. Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG) policies state no net loss of wetland habitat quality/quantity.	Short-term	Permits from ACOE and CDFG require a detailed site-specific revegetation and monitoring plan prepared by a qualified biologist/ revegetation specialist. Where woody, vegetative growth is prohibited over pipeline, offsite mitigation may be warranted. Span drainages wherever feasible The construction easement shall be narrowed from 15 to 30-feet in drainages and other sensitive habitats.	Non-significant
	Potential impacts to needlegrass grassland, serpentine bunchgrass in Reaches G & H.	Short-term	Vegetation replacement and/or restoration plan shall include salvaging of topsoil, onsite seed collection, and native plant propagation.	Non-significant
	The following sensitive plant species may be impacted: Morro manzanita (observed in Los Osos spur), Blochman's dudleya (observed in Reach H), California suaeda (observed in Los Osos spur), San Luis mariposa lily (potential in all reaches), Brewer's spineflower (observed in Reach H), and San Luis Obispo sedge (expected in Reach G).	Short-term	Locations of sensitive plant species shall be shown on construction maps and labeled as areas to avoid. A detailed mitigation plan for salvage and restoration of special status plant populations shall be prepared where complete avoidance is not possible.	Non-significant
	Disruption of chaparral, central coastal scrub, and nonnative grassland would occur during grading for pipelines.	Short-term	A revegetation/restoration plan shall be prepared. Topsoil shall be segregated and stockpiled in disturbed areas delineated on construction plans and reviewed by biologist.	Non-significant
	Potential disruption of chaparral, central coastal scrub, and nonnative grassland at staging areas.	Short-term	Staging areas shall be located in disturbed habitat to the greatest degree feasible.	Non-significant
	Potential for toxic spills near streams during construction.	Short-term	Fueling of equipment shall occur at least 25 feet from all drainages.	Non-significant
Invertebrates	Potential disturbance to Monarch butterfly roosting sites along Los Osos spur.	Short-term	Preserve eucalyptus trees and/or restrict construction from mid-October to mid-March.	Non-significant
Birds	Special status bird species (yellow warbler and other riparian birds) observed in Reaches A, G, and Los Osos spur and potentially occurring in all riparian woodland.	Short-term	Pre-construction surveys of pipeline alignment shall be conducted. Avoid construction activities during breeding season (March 15 to September 15) near riparian areas and Morro Bay Estuary.	Non-significant

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
Mammals	Direct impacts to American badger and San Joaquin kit fox and Morro Bay kangaroo rat in Reaches A (Camp Roberts Alternative), E and Los Osos spur.	Short-term	A pre-construction survey per CDFG and/or USFWS mitigation protocols shall be conducted to avoid impacts to badger, kangaroo rat, and kit fox dens.	Non-significant
Traffic				
Short-term construction impacts	Heavily traveled commute routes with limited alternative roadways to destinations would be anticipated to experience significant vehicle delays. These roadways include: Nacimiento Lake Drive, Vine Street in Paso Robles, North and South Main Street in Templeton, Highway 41 in Atascadero, Estrada Avenue in Santa Margarita, and Highland Drive and Madonna Road in San Luis Obispo, Highway 227, and South Bay Boulevard in Los Osos.	Short-term	A Traffic Control Plan shall be developed by the design agency which addresses vehicle access issues; the design agency shall incorporate latest provisions of "Manual of Traffic Control for Construction and Maintenance Work Zones " into plan; the full width of the traveled way shall be available to traffic before 9 a.m. and after 4 p.m. Monday - Friday, weekends, and holidays.	Non-significant
			Construction scheduling on Nacimiento Lake Drive should be minimized during summer period (June 15-September 15). During the summer period the full width of Nacimiento Lake Drive shall be available to traffic from noon Friday through Sunday. A maximum delay of 20 minutes will be permitted.	Non-significant
			Along all roadway segments, the design engineer shall coordinate construction of pipeline with other public works projects, including Godfrey Grade widening.	Non-significant
Cultural Resources	Potential for damage to important archaeological resources (CEQA Appendix K) in Reach E (Santa Margarita area).	Long-term	Use Alternate Reach E, along the west side of El Camino Real to Reach F. If alternate Reach E is infeasible, prior to final design, Phase II testing shall be conducted by qualified archaeologists to assess importance of sites through test excavations; if sites are significant, pipeline alignments shall be relocated so that no impacts could occur; or, if avoidance is infeasible, a data recovery plan to excavate and analyze sensitive sites shall be implemented by the lead or Responsible Agency	Non-significant
	Potential for damage to important archaeological resources (CEQA Appendix K) at Santa Margarita WTP.	Long-term	Proposed Santa Margarita WTP site shall be moved to alternative location.	Non-significant. Alternative location proposed

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
				and evaluated in EIR Alternatives section.
Cultural & Historical Resources	Excavation and construction could directly impact 35 prehistoric and isolated artifact locations, 13 historic sites or features, and 2 modern cultural sites.	Short-term	Prior to final design, Phase II testing shall be conducted in 8 locations along the proposed alignment. After the Phase II testing and possible Phase III data recovery, each of the 8 areas shall be monitored during construction activity.	Non-significant
Public Services				
Fire Protection	Potential for wildland fires to occur as a consequence of construction activities.	Short-term	A Wildland Fire Protection Plan (WFPP) shall be required.	Non-significant
	Operation of facilities: intake, pump stations, water storage tanks, and water treatment plants.	Long-term	Final design plans shall incorporate fire safety requirements per SLO County Fire Department and the California Department of Forestry and Fire Protection Developer's Guide.	Non-significant
Risk Of Upset				
Construction	Construction of pipeline through contaminated areas (Reaches C,D,E, F,G, H & K) could impact the health and safety of workers and public during excavation.	Short-term	The design agency shall conduct detailed utilities survey. During design phase, the county shall perform Phase I and II hazardous materials site assessments prior to property acquisition or construction activities.	Non-significant
	Accidental releases of hazardous materials during transport or construction has the potential to adversely impact public health and environment. Fuel or chemical spills could result in fire or health danger.	Short-term	The contractor shall develop a Spill Contingency Plan, store hazardous materials in sealed containers within designated staging areas.	Non-significant
III. Other Environmental Impacts Which Are Potentially Adverse But Not Significant				
Agriculture	The pipeline would primarily affect grazing and pastureland. Land used for row crops may lose growing area for one season.	Short-term	Lead or Responsible Agency shall coordinate with agricultural land owners to minimize interference with agricultural operations; backfill materials shall reserve top soil for replacement.	Non-significant
WTPs, pump stations, and water storage tanks.	Construction of facilities would permanently displace land designated and utilized for agriculture.	Long-term	None proposed.	Non-significant
Pipeline easement	Pipeline easement could preclude planting of orchards or vineyards within maintenance corridors.	Long-term	None proposed.	Non-significant

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
Noise	Noise generated by construction of intake, pump stations, and water storage tanks in rural areas could exceed 100 decibels at 50 feet.	Short-term	Compliance with SLO County Noise Ordinance.	Non-significant
	Short-term construction noise associated with pipeline construction in urban areas could exceed 100 decibels at 50 feet.	Short-term	Sound generated from construction equipment is expected to comply with SLO County Noise Ordinance requirements. Equipment shall be operated and maintained in accordance with local noise ordinance requirements. All pipeline construction shall comply with the permitted hours as defined by each jurisdiction.	Non-Significant
	Potentially significant noise impacts could occur around areas supporting breeding bird habitat, such as riparian areas and the Morro Bay Estuary.	Short-term	Construction activities shall be limited during the breeding season (March 15 to September 15).	Non-significant
Operational Impacts	Noise associated with the operation of the intake and pump stations may exceed existing ambient conditions.	Long-term	Noise generating equipment associated with pump stations shall be enclosed or shielded to reduce noise levels to near ambient conditions.	Non-significant
	Noise from operation of Pump Station No. 2 could exceed existing ambient conditions.	Long-term	At 60% design phase for Pump Station No.2, plans shall be reviewed by a qualified acoustical engineer to assure that noise levels meet County Noise Element standards.	Non-significant
Risk Of Upset				
Transport and storage of chemicals at water treatment plants	The transport, handling, and storage of chlorine, ammonia, and liquid oxygen (if utilized) would increase the potential for a hazard to occur at WTPs.	Long-term	A Preliminary Hazard Analysis (PHA) shall be conducted during final design process.	Non-significant
Ozone	Risks associated with the transport, handling, and storage of liquid oxygen at WTPs.	Long-term	Generate ozone (if ozonation used) from air. Incorporate ambient and in-line ozone monitoring to determine ozone destruct system performance. Incorporate automatic power shutoffs.	Non-significant
	Risk associated with hazardous materials storage at WTPs.	Long-term	Hazardous materials storage and use areas shall include separate secondary containment areas for liquids, utilize non-combustible building construction materials, and install fire water sprinklers over inside storage/use areas.	Non-significant
Transportation	The use of residential streets and driveways would be interrupted during construction.	Short-term	Compliance with provisions of "Manual of Traffic Control for Construction and Maintenance Work Zones".	Non-significant

Table 3.2 Summary of Environmental Impacts and Mitigation Measures for the 1997 EIR Alternative

Resource	Description of Impact	Scope	Proposed Mitigation Measures	Residual Impacts
Visual	River discharge ponds would not be visible to general public.	Long-term	None proposed.	Non-significant
	Other facilities (blow-off valves, pump station 2) would have minimal visual impacts.	Long-term	Paint or screen with vegetation so that no visual impacts are created.	Non-significant
	California Mens Colony WTP is not visible from major public roads.	Long-term	None proposed.	Non-significant
Agriculture	Construction of Templeton WTP would remove 15 acres of dry land farming.	Long-term	None proposed.	Non-significant
Public Services	The use of potable water for dust suppression should be minimized.	Short-term	Use of non-potable water for dust suppression.	Non-significant
	Incremental contribution of spoils and sludge to area landfills.	Long-term	None proposed.	Non-significant
	Incremental increase in number of days hydroelectric facility downstream of Nacimiento Dam would not be able to operate.	Cumulative	None proposed.	Non-significant
IV. Beneficial Impacts				
Water Resources	Groundwater pumping competition between agriculture and municipal demand would be reduced.			
Water Supply	The NWP would provide an additional water supply not currently available to water purveyors. As a supplemental water source, it would have the potential to create a margin of safety should assumed firm water supplies be reduced or fail.			
Economic and Operational Benefits	The development of one large water supply project, such as NWP, would provide an economic benefit from not having to develop additional water supply projects to satisfy water demands at buildout.			

Table 3.3 Screening of 1997 DEIR Project Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	1997 EIR Project	Notes
Aesthetic/Visual Resources	+	Facility locations and design resulted in greater impacts for this alternative, but would be approximately the same following mitigation.
Agricultural Resources	-	Alternative mainly follows roadways and urban areas and impacted fewer agricultural areas.
Air Quality	0	Construction emissions would be approximately the same, or only slightly higher.
Biological Resources	-	Alternative would avoid more sensitive biological areas by following roadways and urban areas.
Cultural Resources	-	Alternative would avoid more previously undisturbed resources.
Drainage, Erosion & Sedimentation	-	Alternative would avoid construction in and around numerous drainages.
Geology and Soils	-	Impacts to some geologically sensitive areas would be avoided.
Growth	0	Project and alternative impacts on growth would be the same.
Hazards and Hazardous Materials	+	By constructing through urban areas, the likelihood of encountering contaminated soils would be greater for this alternative.
Hydrology and Water Quality	-	Alternative has fewer river and creek crossings, thus minimizing potential water quality impacts.
Land Use	-	Alternative impacts fewer areas where land use conflicts might occur.
Noise	0	Alternative would impact a larger number of people, but in a noisier urban environment.
Public Services and Utilities	+	With an urban route, the probability of impacting public services and utilities are higher for this alternative.
Recreation	0	Impacts would be roughly the same as the proposed project.
Transportation/Circulation	+	Alternative would impact numerous roadways to a much greater degree than the proposed project.

Table 3.4 Screening of Combined Raw and Treated Water Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	Combined Raw/Treated Water	Notes
Aesthetic/Visual Resources	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Agricultural Resources	-	Project phasing could allow scheduling of construction activities to avoid conflicts with seasonal agricultural activities.
Air Quality	-	Phasing of project construction would reduce peak period air pollutant emissions.
Biological Resources	-	Construction Phasing would allow for avoidance of construction activities that would conflict with sensitive biological periods.
Cultural Resources	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Drainage, Erosion & Sedimentation	0	Project phasing could allow scheduling of construction activities to avoid rainy periods when most impacts occur.
Geology and Soils	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Growth	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Hazards and Hazardous Materials	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Hydrology and Water Quality	0	Project phasing could allow scheduling of construction activities to avoid rainy periods when most impacts occur.
Land Use	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Noise	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Public Services and Utilities	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Recreation	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.
Transportation/Circulation	0	Impacts would be the same as the proposed project, but occur over a longer period, thus reducing the magnitude in some cases.

Table 3.5 Screening of Bradley West River Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	Bradley West River	Notes
Aesthetic/Visual Resources	0	Impacts would be roughly the same as the proposed project.
Agricultural Resources	0	Impacts would be roughly the same as the proposed project.
Air Quality	0	Emissions associated with pipeline construction would decrease, but would be offset by emissions from construction of a diversion or well field.
Biological Resources	+	Alternative would require construction activities within the Salinas River and impact sensitive species and habitat. Seasonal flow of the Nacimiento and Salinas Rivers would also be altered, potentially affecting several sensitive species.
Cultural Resources	-	Pipeline construction through areas with sensitive resources would be avoided.
Drainage, Erosion & Sedimentation	+	Alternative would require construction activities within the Salinas River, and seasonal flow of the Nacimiento and Salinas Rivers would also be altered.
Geology and Soils	0	Impacts would be roughly the same as the proposed project.
Growth	0	Impacts would be roughly the same as the proposed project.
Hazards and Hazardous Materials	0	Impacts would be roughly the same as the proposed project.
Hydrology and Water Quality	+	Alternative would require construction activities within the Salinas River, and seasonal flow of the Nacimiento and Salinas Rivers would also be altered.
Land Use	0	Impacts would be roughly the same as the proposed project.
Noise	0	Impacts would be roughly the same as the proposed project.
Public Services and Utilities	0	Impacts would be roughly the same as the proposed project.
Recreation	0	Impacts would be roughly the same as the proposed project.
Transportation/Circulation	0	Impacts would be roughly the same as the proposed project.

Table 3.6 Screening of Bradley East River Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	Bradley East River	Notes
Aesthetic/Visual Resources	0	Impacts would be roughly the same as the proposed project.
Agricultural Resources	0	Impacts would be roughly the same as the proposed project.
Air Quality	0	Emissions associated with pipeline construction would decrease, but would be offset by emissions from construction of a diversion or well field.
Biological Resources	+	Alternative would require construction activities within the Salinas River and impact sensitive species and habitat. Seasonal flow of the Nacimiento and Salinas Rivers would also be altered, potentially affecting several sensitive species.
Cultural Resources	-	Pipeline construction through areas with sensitive resources would be avoided.
Drainage, Erosion & Sedimentation	+	Alternative would require construction activities within the Salinas River, and seasonal flow of the Nacimiento and Salinas Rivers would also be altered.
Geology and Soils	0	Impacts would be roughly the same as the proposed project.
Growth	0	Impacts would be roughly the same as the proposed project.
Hazards and Hazardous Materials	0	Impacts would be roughly the same as the proposed project.
Hydrology and Water Quality	+	Alternative would require construction activities within the Salinas River, and seasonal flow of the Nacimiento and Salinas Rivers would also be altered.
Land Use	0	Impacts would be roughly the same as the proposed project.
Noise	0	Impacts would be roughly the same as the proposed project.
Public Services and Utilities	0	Impacts would be roughly the same as the proposed project.
Recreation	0	Impacts would be roughly the same as the proposed project.
Transportation/Circulation	0	Impacts would be roughly the same as the proposed project.

Table 3.7 Screening of Camp Roberts Direct Route Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	Camp Roberts Direct	Notes
Aesthetic/Visual Resources	0	Impacts would be roughly the same as the proposed project.
Agricultural Resources	-	Route would avoid some agricultural areas and slightly reduce impacts for this segment of the route.
Air Quality	0	Impacts would be roughly the same as the proposed project.
Biological Resources	+	Route would result in disturbance of Kit Fox habitat, an endangered species.
Cultural Resources	0	Impacts would be roughly the same as the proposed project.
Drainage, Erosion & Sedimentation	0	Impacts would be roughly the same as the proposed project.
Geology and Soils	0	Impacts would be roughly the same as the proposed project.
Growth	0	Impacts would be roughly the same as the proposed project.
Hazards and Hazardous Materials	0	Impacts would be roughly the same as the proposed project.
Hydrology and Water Quality	0	Impacts would be roughly the same as the proposed project.
Land Use	+	Pipeline would adversely affect training activities and could be damaged by live-fire military exercises.
Noise	0	Impacts would be roughly the same as the proposed project.
Public Services and Utilities	0	Impacts would be roughly the same as the proposed project.
Recreation	0	Impacts would be roughly the same as the proposed project.
Socioeconomics	0	Impacts would be roughly the same as the proposed project.
Transportation/Circulation	+	Construction would affect Camp traffic and training. Impacts outside of Camp Roberts would be the same as proposed project.

The pump stations/diversion works would impact a significant amount of natural riparian habitat. The pipeline would impact areas of the Salinas River natural habitat as there are no alternative alignments except for very close to the Salinas River because of the alignment of the railroad and Highway 101.

Large surge facilities would be required because of the inability to get to a storage tank in the area. This would cause a negative visual impact to travelers on Highway 101 in a natural habitat area.

After leaving Camp Roberts, the alignment can continue in existing County roadways and would be crossing the Salinas River in the area of the San Miguel Mission which would impact this historical site. Although this pipeline would be buried and backfilled, historical mapping and archaeological review is anticipated to be extensive in the area.

This alternative does not avoid or substantially reduce impacts associated with the proposed project. Therefore, this alternative has been excluded from further analysis.

3.2.4.2 East River (Bradley Well Field Concept) Alignment

As with the West River (Bradley Well Field Concept) Alignment, this alternative would entail moving the diversion point from Lake Nacimiento to the Salinas River channel on the east side of the river near the confluence of the Nacimiento and Salinas Rivers. This alternative would include a diversion from the Salinas River or a well field in the Salinas River channel, a pump station with reservoir, a pipeline along the farm and County roads and a portion of Camp Roberts on the east side of the river to a northerly (near North Paso Robles) crossing of the Salinas River. A WTP and pump station would be constructed east of North River Road between Estrella and Wellsona Roads. The pipeline would follow the proposed project pipeline alignment from an area north of Paso Robles southward.

This alternative was reviewed and preliminary concept designs proposed. It was found not to be worthy of further analysis based on those preliminary conceptual designs. The basis for this decision is described below:

A surface water diversion structure or well field would have to be constructed in the area of the confluence of the Nacimiento and Salinas Rivers. This area is highly vegetated and to get into the river channel would require major construction work in the wet below the confluence. This would have to be done while there is water in both rivers because there are minimal flow requirements for the Nacimiento and Salinas Rivers at this point as required by the water rights permit requirements.

The facilities would have major susceptibility to flooding during high flows on the Salinas River because of the constricted area of river channel in this area. A review of the soils in the area indicates that the soils are probably not amenable to construction of an infiltration gallery or Ranney type well.

The construction of a reservoir on the mountains east of the Salinas River appear to be in an area where there have been substantial sliding of the soils over time. Therefore, this alternative (pipeline and reservoir) would be subject to landslides and unstable soil conditions. The pipeline would have to be constructed across Camp Roberts and in an area where there are major training

exercises with heavy armored equipment. Thereby, the pipeline would be susceptible to damage caused by unusual loads as a result of the California Army National Guards' training area. The diversion pump station or wells that would constitute a major pump station would require a major power line construction into the area and this is not believed to be compatible with Camp Roberts operations as a training base.

This alignment while being shorter would impact more native riparian vegetation along the Salinas River.

This location would also require substantial protection from flooding by the Salinas River. Access to the diversion pump station and reservoir would require construction and maintenance of a road in an area that does not have any all-weather service roads.

Archaeological investigations (Breschini 1983 and Gibson 2003) have determined that the area of the confluence of the Nacimiento and Salinas Rivers is likely an archaeologically sensitive area. Abundant water availability and local terrain features make the site ideal for habitation on a year round basis.

The County's water rights permit for diversion of water from Lake Nacimiento would need to be modified and result in a diversion point located in Monterey County. The potential regulatory constraints could jeopardize the feasibility of the project moving forward.

This alternative does not avoid or substantially reduce impacts associated with the proposed project. Therefore, this alternative has been excluded from further analysis.

3.2.4.3 Camp Roberts Direct Alignment

This alternative follows a historic access route along a County road that is now within the Camp Roberts jurisdiction. The facilities would entail a diversion from the Nacimiento River near the historic Nacimiento Ranch Headquarters, a pipeline adjacent to existing roadways to San Miguel, and then on to a crossing of the Salinas River north of Paso Robles. This alternative alignment would entail construction of a diversion works on the Nacimiento River or, if found to be appropriate, a well field taking subsurface flows from the Nacimiento River and a pipeline along Beerock Road. A WTP and pump station would be constructed adjacent to the east side of Camp Roberts. The pipeline would follow the proposed project pipeline alignment from Wellsona Road southward.

This alignment is entirely within Camp Roberts and the active area of their training activities. This area is where actual maneuvers are held using heavy military vehicles. Their training is both during the day and night so restrictions exist to access and emergency lighting. A review of this alignment with the Commander of Camp Roberts and his staff indicated that the pipeline, if constructed in this area, would be subject to severe loading from the heavy military vehicles that do training in this area plus munitions that may be used in the training exercises. Based on the review with Camp Roberts and the design, this alternative is rejected for the following reasons:

A large above ground surge tank would be required to accommodate the surge control because there is not a location for a large gravity tank. This facility could be above ground and would be a severe hindrance to the Camp Roberts training mission.

There is not any major power source to this site and, therefore, power lines below ground would have to be brought in through the training area which would make the power lines susceptible to damage and possible injury to troops training in the area.

The pipeline adjacent to the historic Beerock Road is directly in the area of major training activities and would result in severe disruption to the training mission of the Camp and in all probability the Camp would not allow this alternative to be pursued even if it was found to be acceptable.

This area is in the habitat area of the Kit fox and is protected by an active program by the Environmental Team at Camp Roberts.

A variation to this alternative is a Beerock Road alignment. The diversion point would remain at Nacimiento Dam along with the pump station, surge control, and related facilities. From Boy Scout Road to Beerock Road the alignment would be a pipeline only and would be along Camp Roberts roads.

The Beerock Road alternative requires that Beerock Road be part of the alignment and as such impacts to the training mission, as described above, would occur. This alignment would not require power lines in Camp Roberts nor a pump station on Camp Roberts. Because the major training area on Camp Roberts will still be impacted this alignment is not desirable from the Camp Roberts standpoint.

This alternative does not avoid or substantially reduce impacts associated with the proposed project. Therefore, this alternative has been excluded from further analysis.

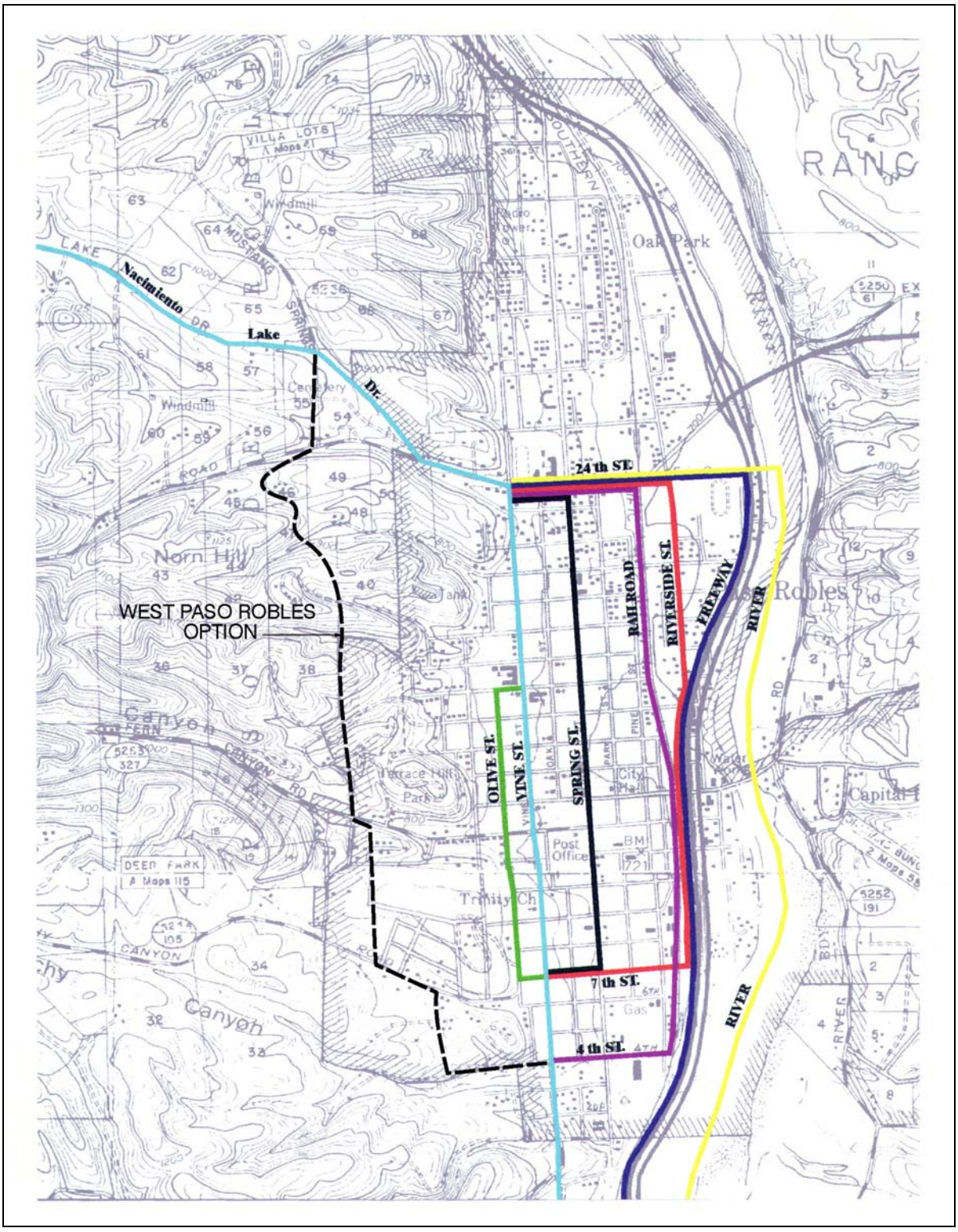
3.2.4.4 Paso Robles Vine Street Alternatives

Subsequent to the NWP 1997 EIR, six additional routes through Paso Robles were investigated as an option to Vine Street, including Spring Street, Olive/Vine, Riverside Avenue, railroad ROW, Highway 101 ROW, and the Salinas River as shown on Figure 3-3. These options required the pipeline to be extended further east and back west again to join the main line.

The Salinas River option was rejected as construction of a pipeline in or near the river would be unstable and obtaining a permit from the ACOE to build would be questionable given the potentially substantial impacts to biological habitat. Highway 101 was rejected as CalTrans does not allow parallel pipelines in Highway ROW.

The remaining options were also excluded from the analysis because they did not avoid or substantially reduce impacts associated with the proposed project, as each alternative would result in similar construction impacts on residents and businesses as Vine Street. The railroad option was not considered feasible due to space constraints, existing structures and potential incompatibility issues associated with railroad ROW contamination and hazardous materials that are transported through the ROW.

Figure 3-3 West Paso Robles Street Options per 1997 EIR



Another potential alignment bypassed the City of Paso Robles to the west. Due to hilly terrain, the route would need to traverse up and down several ridgelines, resulting in grading and tree removal impacts that would be similar to the proposed project. Because this alternative would not avoid or substantially reduce impacts associated with the proposed project, it has not been analyzed any further.

3.2.4.5 Templeton Main Street Alternatives

Subsequent to the NWP 1997 EIR, additional pipeline routes through Templeton were investigated as an option to Main Street as shown in Figure 3-4.

The Old Country Road option was not considered feasible due to narrow right of way, substantial existing utilities, and construction near a public school. An alignment within the Southern Pacific Railroad right of way was also eliminated due to limited construction area, property acquisition issues, and potential right of way contamination issues.

Additional routes east of the Salinas River were not evaluated due to potential impacts associated with pipeline river crossings. No suitable alternative routes west of Old Country Road were identified, mainly due to the lack of adequate north-south trending roadway right-of-way in this area.

3.2.4.6 Use of Gas and Oil Pipeline Easements

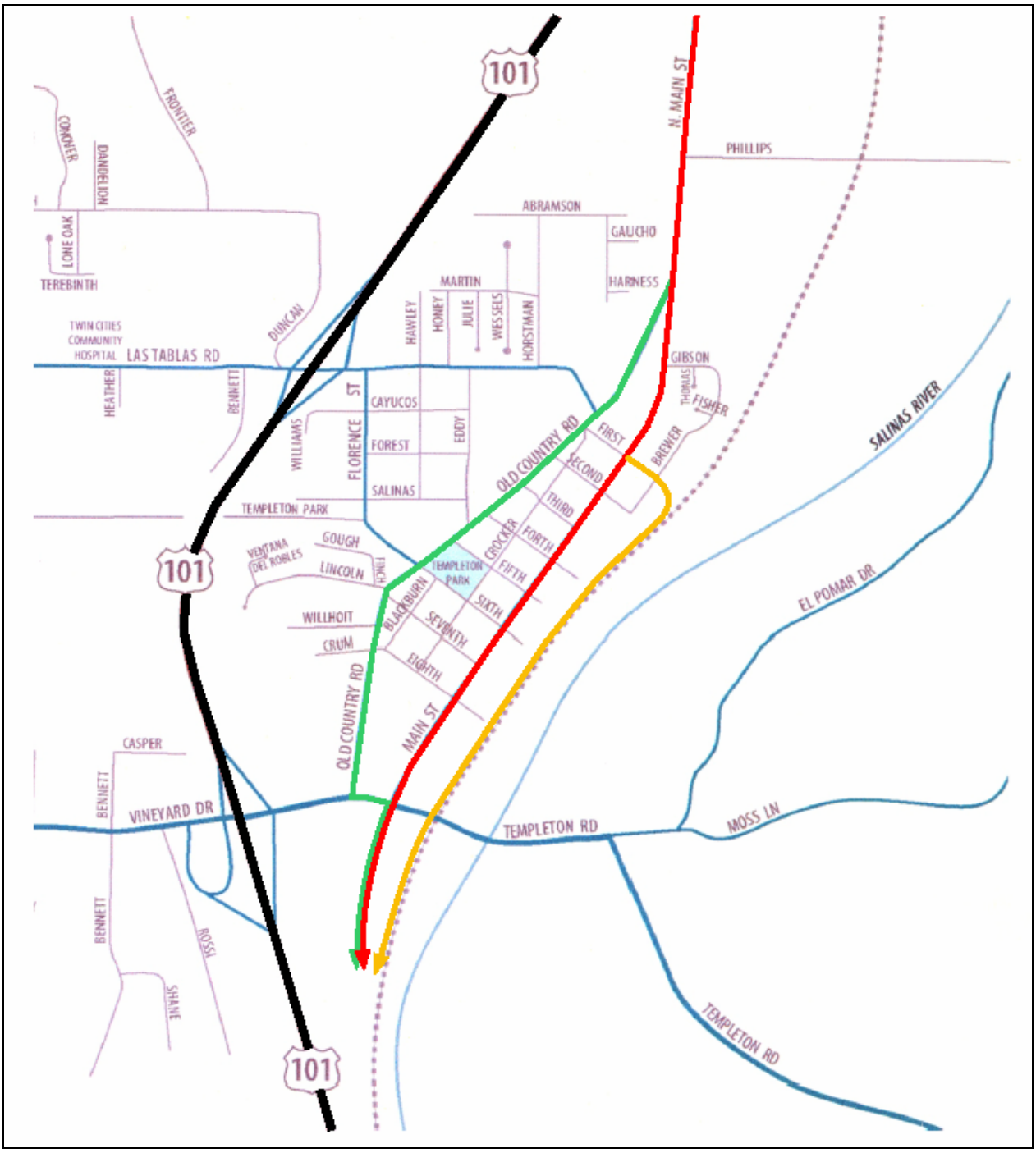
During the development of the new project alignment, the alternatives of utilizing existing gas and oil pipeline easements in the Paso Robles area and specifically using an existing oil pipeline easement extending from San Ardo (near Bradley) to Estero Bay near Cayucos were evaluated.

In this alternative, Lake Nacimiento water would be conveyed through existing unused pipelines or in a new pipeline built within the easement.

In terms of using existing gas or oil pipelines in the Paso Robles area, the known easements do not follow the general alignment of the proposed project (i.e., they run in an east-west direction, rather than in a north-south direction). Also, the gas pipelines are constructed in a straight line, over steep hills, which would make the construction of a pipe the size proposed for the Nacimiento water project infeasible due to additional pumping costs because the water would be pumped from higher elevations than required for the system needs.

The San Ardo oil pipeline easement spans approximately 17.5 miles from a point along Lake Nacimiento Road to the Old Creek arm of Whale Rock Reservoir near Cayucos. The easement is linear and traverses the Coastal Range in a north-south direction. The terrain is hilly, with numerous peaks and valleys. Elevations along the easement range from 200 to 1950 feet above msl.

Figure 3-4 Templeton Main Street Alternatives



Three steel pipelines lie within the easement, ranging in size from 4–12 inches in diameter and have been used for transporting heavy crude oil. Use of these existing pipes was studied from a hydraulics standpoint. In terms of capacity, the lines would be able to convey less than 40% of the planned capacity in this reach of pipeline. Maintaining recommended pipeline pressures would not be feasible due to the terrain. At least three pump stations would be needed in addition to the pump station at the lake, as well as a pressure regulator. Even with the combination of pumps and pressure regulators, it appeared uncertain that the existing pipelines could withstand the pressures that would be required to move the water through the pipes. Based on hydraulics (capacity, number and location of pump stations, and high line pressures) it is not feasible to use the existing oil pipelines in the San Ardo easement.

Installing a new pipe in the oil easement was also evaluated. A 24-inch diameter pipeline would be needed with two pump stations in addition to the pump station at the lake. The pipe material would require high pressure rating due to the high pressures required to move the water over the hilly terrain. While costly, a new pipeline would be feasible from a hydraulic standpoint. Project construction impacts would be similar to the proposed project with the addition of cleanup of contaminated soils that likely exist along an oil pipeline route installed as early as 1914, and installation of electrical improvements needed to provide power for the pump stations. In addition, this pipeline alignment would deliver water to participants located south of Cuesta Grade. North County participants with allocation requests totaling 8160 afy would not be served by this pipeline. The concept of delivering Lake Nacimiento water to Whale Rock Reservoir in exchange for additional releases from Salinas Reservoir to serve North County poses water rights issues in addition to the fact that Salinas does not have sufficient safe yield to meet the requested allocations. Based on insufficient yield, a pipeline (and eventually a treatment plant) would still need to be constructed to deliver the remainder of the Nacimiento allocation to North County.

This alternative does not avoid or substantially reduce impacts associated with the proposed project. Therefore, this alternative has been excluded from further analysis.

3.2.5 San Luis Obispo "Wheeling" Alternative

An alternative to serving the Edna Valley Mutual Water Company, Fiero Lane Water Company, and Airport CSA is the use of the City of San Luis Obispo's transmission, storage, and distribution system to deliver water to these entities. To make this wheeling arrangement work, water from the Nacimiento Water Project would be delivered to the City of San Luis Obispo's WTP and then wheeled through the City's system.

While the City of San Luis Obispo's system may not be sized to handle the demand of the Airport CSA, Edna Valley MWC, and Fiero Lane Water Company, it is believed that with relatively minor improvements, modifications and extensions service could be provided. According to the 1998 City Water Master Plan by Boyle Engineering Corporation, the City serves an average demand of 470 gallons per minute (gpm) to their Airport Service Area through a 12" pipe along Highway 227. This service area is located around Fiero Lane Water Company and adjacent to the Airport CSA, although neither entity is served by the City.

The Water Master Plan was reviewed and it appears that the existing 12" pipe along Highway 227 is adequate to carry an additional 1,620 acre-feet per year (AFY), or 1030 gpm average flow, which is the total requested allocation for the three Nacimiento participants. The existing 12"

pipe could be extended approximately 12,000 linear feet along Highway 227 to serve Edna Valley Mutual Water Company. The existing 12" pipe is located adjacent to the Fiero Lane Water Company, allowing a system connection without a significant pipeline cost. Another 6000 lf of 12" pipe could be extended along Buckley Road from the Highway 227 waterline extension to the Airport CSA.

This alternative would lend itself to phased construction which the preferred alternative does not. Also, improvements to the City's water system could be scheduled with their routine system maintenance, improvements, and expansions.

This alternative is currently deemed infeasible since the City has, by policy, not provided water service to potential users outside City limits. However, the City Council could make a finding that water wheeling does not violate this policy or decide to revise this policy in the future. Obviously, this alternative would require City approval and a wheeling agreement to be implemented. This alternative, while considered speculative under the current circumstances and thus not feasible, and not studied in depth herein, would avoid some Class II and III impacts associated with construction of the proposed project between the SLO WTP and Airport Area end users. However, because potential impacts associated with improvements to the City's water system would be similar to NWP pipeline construction south of the City, it is likely that a water wheeling agreement would be consistent with the EIR findings.

3.2.6 Reservoir Intake Alternatives

Alternative reservoir intake options were evaluated in the report entitled "Nacimiento Water Supply Project (Phase II) Reconnaissance Level Intake Alternative Evaluations" dated July 1996 prepared by Harza Engineering Company of California (the 1996 Harza Report). An additional evaluation of the proposed intake location was included in a subsequent geotechnical report from Fugro West, Inc. (Fugro), dated September 2000. These alternatives were summarized in the Carollo report "EIR Preparation Phase Engineering Report, Updated Draft" (April 2002)

3.2.6.1 Alternative Reservoir Intake Options

Nine intake options were reviewed at a conceptual level for this report. Out of the initial nine options, six were deemed not viable from a conceptual point of view and were therefore eliminated from further consideration. Screenings for initial viability of an option were based on engineering, technical feasibility, maximizing water supply reliability, and conflicts with current operational requirements of the existing outlet facilities. The following alternatives were evaluated in the Carollo Report as follows:

Viable Alternatives

Option 1	Single-Port Tunnel Intake with Lake Destratifier
Option 2	Multi-Port Sloping Intake
Option 4	Multi-Port Tunnel Intake (Proposed Project)
Option 7	Intake Facilities Upstream of South Abutment (1997 EIR)

Non-Viable Options

Option 3	Free-Standing Tower Intake
Option 5	Connection Upstream of Powerhouse
Option 6	Connection Downstream of Powerhouse
Option 8	Floating Intake
Option 9	Modification of Existing Low-Level Outlet Works

The feasibility of each option is discussed below.

3.2.6.2 Non-Viable Alternatives

Six reservoir intake options were rejected from consideration as an alternative to the proposed project option for a variety of environmental, engineering and economic reasons as summarized below.

Option 3 – Free-Standing Tower Intake
Because of the height of the towers, seismic concerns are of great importance in designing the facility. Due to these concerns, it is not considered economically feasible to construct free-standing intake towers in comparison with sloping intakes or the single-level submerged inlet. The design for the foundation of the intake tower is critical because the intake tower will need to be designed to withstand seismic forces that would be expected to occur in the region over the project lifetime. Given the potential impact on project reliability and economics, this option was eliminated from further consideration.

Option 5 – Connection Upstream of Powerhouse
This option for taking Nacimiento water from the Nacimiento reservoir was through a discharge pipe at the bottom of the reservoir, which is connected to the Monterey County Resources Agency's power plant. This outlet basically draws water from one elevation in the reservoir which means that reservoir turnover and other water quality issues such as sediment on the bottom of the reservoir would be passed along to a treatment plant located downstream from the intake. The reasons for eliminating this alternative diversion point are as follows:

- The water quality cannot be controlled (i.e., selective withdrawal) at the outlet as compared to the preferred alternative.
- The intake pump station would have to be located adjacent to the spillway and powerhouse of the Nacimiento reservoir. Access to the pump station would be severely restricted during flood flows on the Nacimiento Dam outlet works. Access to the powerhouse is via a small bridge over the Nacimiento River from the spillway to the powerhouse. The same access route would be required for the pump station.
- The pump station surge may have an impact on the dam outlet works that could create problems with the powerhouse of Monterey County Water Resources agency and therefore, may increase significantly the operational concerns and costs relative to this connection point.
- Impacts that will potentially require State of California Division of Safety of Dams (DSOD) review and approvals may be necessary with the pump station at the base of the dam because

this is in the area of the dam foot print. It is possible that this alternative could adversely impact dam safety.

Based upon the above factors, this option would not meet the project water quality goals and could raise serious safety concerns. Therefore, this alternative was eliminated from further consideration.

Option 6 – Connection Downstream of Powerhouse

For a connection downstream of the powerhouse, the major technical concerns are the construction of a check dam in the stream, the construction of a steep pipeline out of the riverbed, finding a suitable pump station location, possible interruption during flood events and the difficulty of installing bypass system/controls.

The facilities (pump station and appurtenances) would need to be located at a high enough elevation to avoid damage in the event of flooding due to flows that may overtop the dam spillway. Additionally, construction of a pipeline alignment up the steep canyon walls, to convey water to a booster pump station from the low-lift pump station, may prove to be infeasible.

Other water related technical concerns that would occur include inconsistent water supply, interruption of water supply due to dam operations, and construction challenges. Water supply for the intake may fluctuate greatly, due to hydraulic control of the hydroelectric facility, providing for an inconsistent water source for the project. The water supply to the project may be interrupted in the event the dam spillway were to overtop due to the degradation of the water quality downstream of the dam caused by turbulent waters drawing up sediments and debris into the water, and may not be suitable for treatment.

This alternative would not meet the proposed project reliability and water quality goals and was eliminated from further consideration.

Option 8 – Floating Intake

A floating intake is not considered a permanent or durable solution for providing water supply to the County. This option is difficult to maintain due to exposure of the facilities to wind, weather, and waves. Access and maintenance would be more difficult than for an on-shore facility. There are also inherent complications associated with the type of appurtenances needed to allow for connection to the shoreline as the reservoir elevation changes, which given the current and planned operation of the lake is a regular occurrence, that would adversely affect the reliability of the intake structure. Therefore, this alternative was dropped from further consideration.

Option 9 – Modification of Existing Low-Level Outlet Works

This option is deemed not viable due to MCWRA concerns with connections to its existing outlet works as it may compromise hydroelectric production downstream. Additionally, this alternative brings into question the safety concerns DSOD may have to alterations done on the main outlet facilities of the dam. Therefore, this alternative was eliminated from further consideration.

3.2.6.3 Viable Alternatives

Option 1 – Single-Port Intake with Lake Destratifier
This option would utilize a channel or tunnel with a single low-level intake structure that would be connected to the down stream end of the tunnel. The tunnel would extend horizontally to a drilled pump bowl shaft extending vertically into the ground from the shoreline pump station.

The horizontal distance between the submerged inlet and the shoreline pump station would be sufficient as to allow for a minimum of a 1H:1V excavation slope[2] from the shoreline pump station to a tunnel intake at elevation 670 feet. Water would reach the submerged intake via an underwater dredged channel from the low point of the reservoir.

The low-level intake structure would also be concrete encased, placed in either a vertical, horizontal, or inclined position, and would incorporate a trash rack or bar screen at the entrance. The tunnel would be steel-lined, approximately 72 inches in diameter for maintenance and construction access. The vertical shafts are expected to be 30 inches in diameter and slip lined with a steel pipe.

No provisions for maintenance accessibility under dewatered conditions are envisioned. The 72-inch diameter steel-lined tunnel is sized, not for maximizing hydraulic efficiency, but rather for construction access.

Advantages of this option are attributed in main part to offering a minimum amount of maintenance because there exists less appurtenant structures associated with this option.

The main disadvantage of this option is the inability to selectively withdraw water from different levels to maximize water quality. An aeration system would be utilized for destratification of the water column above the submerged inlet and increasing the dissolved oxygen content. An aeration system can reduce the concentrations of many contaminants, which remain in solution only under the anaerobic conditions that occur in the hypolimnion of a stratified reservoir. Aeration would be accomplished by incorporating piped air to the entrance of the submerged inlet thus creating a mixing of the water column around the inlet or by anchoring a diffuser system to the bottom of the reservoir near the entrance of the submerged inlet.

The facilities necessary for aeration include a compressor system located at the shoreline pump station with the air being piped along the pump bowl shafts and along the tunneled pipeline to the submerged inlet entrance. If an anchored air diffuser is used, then there is no need for a piping system to be installed parallel to the tunneled piping system, instead, the air diffuser would supply air via a floating rigid piping system extending into the reservoir from the shoreline. An additional disadvantage of this option is that maintenance to the trash rack will necessitate drawing down of the reservoir or the use of divers in order to access the facility.

Option 2 – Multi-Port Sloping Intake
Option 2 proposes construction of a sloping intake facility composed of a sloping collector pipeline approximately 48 inches in diameter to allow for 30 cfs withdrawal of water from the

[2] 1H:1V excavation slope refers to a slope with a ratio of 1 horizontal to 1 vertical length and is a typical terminology in construction.

reservoir at low water surface elevations and would allow for access into the intake assembly for maintenance purposes.

The sloping intake would incorporate three separate gated intake pipes along the sloping collector pipe system. Each gate would be operated automatically, with hydraulic controls, to shut off flow to the sloping collector pipe. Each intake pipe would incorporate placement of a trash rack or bar screen at the upstream entrance to keep out debris. Flow collected through the three gates would feed a shoreline pump station with a tunnel as described in Option 1.

All electrical components related to pumping would be located above the reservoir water surface at the shoreline pump station, improving access when maintenance is necessary. Access to the trash racks would require drawing down the reservoir or the use of divers.

Option 4 – Multi-Port Tunnel Intake (Proposed Project)
Option 4 proposes construction of a multi-level intake structure comprised of drilling a single 20-30 foot diameter shaft vertically into the ground from the shoreline pump station for approximately 160 feet, connecting it to three horizontal intake tunnels located at differing elevations. The bottom horizontal intake tunnel elevation would match the existing MCWRA outlet elevation of 670 feet. The shaft would be of sufficient diameter to accommodate several pump bowl assemblies, control gates, and maintenance access. Both the vertical shaft and the tunnels would be lined.

Hydraulic control of the facility would be achieved within the vertical shaft where the control gates would be housed. Trash/fish rack assemblies would be placed at the upstream end of the horizontal tunnel shafts. No hydraulic control is envisioned at the upstream end. Water would flow through the horizontal tunnels and into the sump at the bottom of the vertical shaft where the pump bowl assemblies are located.

Advantage associated with this option is the availability to control water quality by allowing for selection of reservoir releases at differing elevations. The disadvantages are the extensive tunneling required in combination with drilling of the vertical access shaft of relatively large diameter (20–30 feet in diameter).

Option 7 – Intake Facilities Upstream of South Abutment (NWP 1997 EIR)
This option is identical to the proposed project but located on the opposite side of the dam and was also evaluated in the 1997 EIR. This option is also a component of the 1997 EIR alternative that was evaluated in Section 3.2.2. Therefore, this option is already being evaluated in the EIR and will not be discussed further in this section.

3.2.6.4 Screening of Viable Alternatives

Table 3.8 provides an overview of potential impacts associated with each viable reservoir intake option as compared to the proposed project (i.e., Option 4 above). Only Option 2 with the use of submersible pumps could reduce an impact associated with the proposed project in the area of

visual resources. However, this option would not be capable of consistently delivering water of the same quality as the proposed project, and thus would not meet all of the proposed project goals. Therefore, with the exception of Option 7, which is part of the 1997 EIR alternative, none of these alternative reservoir options will be fully evaluated further in the EIR.

3.2.7 Alternative Water Treatment Locations

The proposed treated water project would utilize a single WTP that would be located within Camp Roberts. The NWP 1997 EIR evaluated the construction of WTPs to serve north County purveyors. The second phase of the 1997 EIR project included construction of a WTP for Paso Robles, Templeton, and Atascadero and one or two WTPs to serve Santa Margarita purveyors.

The 1997 EIR included five alternative WTP site locations that were identified by the project engineer (Carollo 1996). The locations selected were primarily based on hydrologic considerations and gravitational flow. Whether a proposed WTP location is feasible depends on the overall hydraulic profile of the pipeline route. Evaluation of alternative WTP locations was based on hydrologic, environmental, economic, and social factors. Alternative water treatment plant sites included either a regional water treatment scenario or a local water treatment plant proposal to address the varying needs of the project participants. Alternative water treatment plant sites that were considered in the 1997 EIR included the following:

- Site 1 – Heritage Ranch (Regional WTP);
- Site 2 – Chimney Rock (Regional WTP);
- Site 3 – San Marcos Road (Regional WTP);
- Site 4 – Templeton (Local WTP); and
- Site 5 – Templeton alternative (Local WTP).

3.2.7.1 WTP Sites 1 Through 3

Two of the regional WTP sites listed above (Sites 1and 2) would not be feasible alternatives to the proposed project due to their locations. These sites are viable alternatives for the NWP 1997 EIR route and were evaluated in that document. Site 3 at San Marcos Road is very close to the proposed project WTP. Site 3 is located approximately one-half mile west of Oak Flat Road and approximately one mile east of San Marcos Road. An access road of approximately 2,000 feet, plus raw and treated water pipelines totaling 1.5 miles would be constructed under this alternative. Site 3 would be constructed at an elevation of 1,100 feet or slightly higher than the hydraulic grade line of the main pipeline. Site 3 consists of approximately 19 acres of nonnative grassland, two acres of scrub and chaparral, and 0.28 acre of valley oak woodland onsite. This site was not carried forward for analysis because it does not offer any improvements over the proposed project and would likely have environmental impacts greater than the proposed WTP site on Camp Roberts.

Table 3.8 Screening of Alternative Reservoir Intake Options

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?			
	Option 1	Option 2	Option 7	Notes
Aesthetic/Visual Resources	0	-	+	Option 2 could avoid an above-ground pump station; Option 7 would be located in a more sensitive area.
Agricultural Resources	0	0	0	No substantial difference between alternatives.
Air Quality	0	0	0	No substantial difference between alternatives.
Biological Resources	0	0	+	All options, except 7, would be constructed on previously disturbed site.
Cultural Resources	0	0	0	No substantial difference between alternatives.
Drainage, Erosion & Sedimentation	0	0	+	Option 7 site would require more site alteration and potential for erosion and sedimentation.
Geology and Soils	0	0	+	Option 7 site would require more site soil alteration.
Growth	0	0	0	No substantial difference between alternatives.
Hazards and Hazardous Materials	0	0	0	No substantial difference between alternatives.
Hydrology and Water Quality	+	+	0	Options 1 and 2 would result in lower water quality than proposed project.
Land Use	0	0	0	No substantial difference between alternatives.
Noise	0	0	0	No substantial difference between alternatives.
Public Services and Utilities	0	0	0	No substantial difference between alternatives.
Recreation	0	0	0	No substantial difference between alternatives.
Transportation/Circulation	0	0	0	No substantial difference between alternatives.

3.2.7.2 WTP Site 4 Templeton WTP

Site 4 is located on a 48.89 acre parcel with access from Cuerno Largo Way, one mile west of South Vine Street in Paso Robles. The site, located at an elevation of 900 feet asl, would require approximately 15 acres of graded land which includes approximately 11 acres for the facility and the remaining for cut and fill slopes. Access to the plant would be from Highway 101 and a frontage road, then approximately 0.5 mile of existing road and 0.36 mile of new road.

The site is presently in and designated for agriculture in the Salinas Area Plan. The nearest residence is approximately 0.3 mile below the proposed site. This site was selected as the preferred project location and was analyzed in the 1997 NWP EIR. Because a new parcel would be created for a WTP site, a Public Lot procedure and General Plan Conformity Report would be required which would assess the proposed WTP site's consistency with the county's policies on conversion of agricultural land to a public facility. No significant environmental impacts were identified for this site. However, this site does not offer any benefit over the proposed WTP site on Camp Roberts. In addition, this site would require two pipelines (raw and treated water) between the pipeline and WTP route, which is located on the east side of the Salinas River. Therefore, an additional river crossing would be required to accommodate this WTP site. Because the site does not reduce or avoid any environmental impacts associated with the proposed WTP site on Camp Roberts, the site was not carried forward for further analysis in the EIR.

3.2.7.3 WTP Site 5 Templeton Alternative

Alternative WTP Site 5 would be located on farmland approximately three miles west of the main pipeline in Templeton at an elevation of 900 feet asl. This site was rejected for the same reasons as Site 4. In addition, the site would be located within sight distance near a large number of existing residential home sites. The nearest residence would be approximately 0.1 mile away and near the same elevation as the proposed WTP. Because the site does not reduce or avoid any environmental impacts associated with the proposed WTP site on Camp Roberts, the site was excluded from further analysis in the EIR.

3.2.7.4 Other Alternative WTP Sites

The Project Engineer (Carollo 2002), identified four alternative WTP site configurations, none of which would avoid or substantially reduce potential impacts associated with the proposed project and are not considered viable CEQA alternatives to the proposed project. Therefore, none of these alternatives were evaluated in this EIR.

In order to provide treated water to the first purveyor along the pipeline route (i.e., Paso Robles), an alternative WTP site would need to be located between Lake Nacimiento and the Paso Robles turnout. Otherwise, additional pipelines would be required to deliver treated water from a WTP site south of Paso Robles. A reconnaissance of the pipeline route between Lake Nacimiento and Templeton was conducted in order to evaluate additional alternative sites. While there are numerous alternative WTP sites along the pipeline route, none offered any environmental benefit

over the proposed WTP site on Camp Roberts. Therefore, no other additional sites were identified for evaluation in the EIR.

Under the raw water option, it is recognized that project participants may elect to receive raw water and pursue various treatment alternatives. However, in the absence of specific proposals, it would be speculative to evaluate the construction of additional water treatment facilities for each of the project participants when these facilities are not required to receive or distribute their NWP allocation. Additional construction of water treatment facilities under the raw water option would not substantially reduce or avoid any of the significant impacts identified in the EIR. In fact, construction of additional water treatment facilities by project participants would likely lead to the identification of new environmental impacts not identified in the EIR. Therefore, additional environmental review would be required prior to construction of water treatment facilities by any of the project participants.

3.2.8 Alternative Water Sources

Alternative sources of water have also been included in the alternative screening analysis. These alternatives have been evaluated in terms of potentially avoiding impacts that would be associated with the proposed project, as well as meeting the proposed project's goals and objectives. The results of the screening analysis for each alternative water source considered are presented in Tables 3.9 through 3.13. Detailed discussions for each alternative are provided below.

3.2.8.1 State Water Project

This alternative would utilize the unused 16,553 afy of water from the Coastal Branch of the SWP. Because the SWP Coastal Branch is operated at or near its capacity (see Section 3.1.3.1), a new SWP Coastal Branch pipeline would need to be constructed for portions of the SWP that cannot be upgraded to accommodate the increased 16,553 afy flow. In addition, a new pipeline would need to be constructed between Santa Margarita and Paso Robles in order to supply most north county locations.

This alternative was not selected for further review because it would share many of the same impacts as the proposed project due to the need to construction additional pipelines. In addition, this alternative does not meet the proposed project's basic needs of greater water supply reliability.

3.2.8.2 Additional Groundwater Pumping

In the absence of the NWP allocation, this alternative assumes that groundwater would continue to be used to meet current water demand and increased in the future at a level equivalent to the NWP water supply allocation, in part to meet the growth projected in the County's General Plan. In many instances, County purveyors would be required to obtain additional ground water rights, and potentially shift water usage between urban and agricultural uses.

Table 3.9 Screening of State Water Project Coastal Branch Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	State Water Project	Notes
Aesthetic/Visual Resources	+	The design of the Coastal Branch of the State Water Project resulted in numerous visual impacts that are greater than the proposed project.
Agricultural Resources	0	Impacts would be similar to the proposed project.
Air Quality	0	Impacts would be similar to the proposed project.
Biological Resources	0	Impacts would be similar to the proposed project.
Cultural Resources	0	Impacts would be similar to the proposed project.
Drainage, Erosion & Sedimentation	0	Impacts would be similar to the proposed project.
Geology and Soils	0	Impacts would be similar to the proposed project.
Growth Inducement	0	Impacts would be similar to the proposed project.
Hazards and Hazardous Materials	0	Impacts would be similar to the proposed project.
Hydrology and Water Quality	+	This source of water would not be available when it is needed most, during drought periods. The lower reliability of State Water would result in greater overdraft of County groundwater resources during drought periods, thus impacting local water quality.
Land Use	0	Impacts would be similar to the proposed project.
Noise	0	Impacts would be similar to the proposed project.
Public Services and Utilities	0	Impacts would be similar to the proposed project.
Recreational Resources	-	The proposed project will likely contribute to potential recreation impacts at Lake Nacimiento, mainly in association with the Salinas Valley Water Project. This alternative would avoid contributing to potential recreation impacts at Lake Nacimiento, but would only minimally reduce cumulative Salinas Valley Water Project impacts.
Transportation/Circulation	0	Impacts would be similar to the proposed project.

Table 3.10 Screening of Additional Ground Water Development Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	More Ground Water	Notes
Aesthetic/Visual Resources	-	Alternative would avoid impacts associated with proposed project construction.
Agricultural Resources	+	Alternative would reduce the future amount of water available for agricultural resources
Air Quality	-	Alternative would avoid impacts associated with proposed project construction.
Biological Resources	-	Alternative would avoid impacts associated with proposed project construction.
Cultural Resources	-	Alternative would avoid impacts associated with proposed project construction.
Drainage, Erosion & Sedimentation	-	Alternative would avoid impacts associated with proposed project construction.
Geology and Soils	-	Alternative would avoid impacts associated with proposed project construction.
Growth Inducement	-	Alternative would make less water available to accommodate the growth projected in the County General Plan.
Hazards and Hazardous Materials	-	Alternative would avoid impacts associated with proposed project construction.
Hydrology and Water Quality	+	Increased ground water pumping would result in decreased water quality.
Land Use	0	Impacts would be roughly the same as the proposed project.
Noise	-	Alternative would avoid impacts associated with proposed project construction.
Public Services and Utilities	-	Decreased water supply would limit the ability of local water purveyors to supply their customers, especially during a drought.
Recreational Resources	-	Alternative would avoid impacts associated with withdrawal of water from Lake Nacimiento.
Socioeconomics	-	Alternative would avoid impacts associated with withdrawal of water from Lake Nacimiento.
Transportation/Circulation	-	Alternative would avoid impacts associated with proposed project construction.

Table 3.11 Screening of Desalination and Salinas Reservoir Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	Desalination	Notes
Aesthetic/Visual Resources	+	Visual impacts at Salinas Reservoir and desalination facility would likely be significant and greater than proposed project.
Agricultural Resources	0	Impacts would be roughly the same as the proposed project, but in different locations.
Air Quality	+	Long-term air pollutant impacts associated with desalination process would be significant.
Biological Resources	+	Impacts would occur in vicinity of the Salinas Reservoir and to marine species from disposal of desalination brine.
Cultural Resources	0	Impacts associated with project pipeline construction would be avoided. Impacts to sensitive areas could occur elsewhere.
Drainage, Erosion & Sedimentation	0	Impacts would be roughly the same as the proposed project, but in different locations.
Geology and Soils	0	Impacts would be roughly the same as the proposed project
Growth Inducement	0	Impacts would be roughly the same as the proposed project
Hazards and Hazardous Materials	0	Impacts would be roughly the same as the proposed project
Hydrology and Water Quality	+	Disposal of brine from desalination process would adversely impact marine water quality.
Land Use	+	Shoreline areas around Salinas Reservoir would be lost.
Noise	+	Long-term noise associated with desalination facility would likely be significant.
Public Services and Utilities	0	Impacts would be roughly the same as the proposed project, but in different locations.
Recreational Resources	-	Alternative would avoid impacts associated with withdrawal of water from Lake Nacimiento.
Transportation/Circulation	0	Impacts would be roughly the same as the proposed project, but in different locations.

Table 3.12 Screening of Water Reclamation Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	Water Reclamation	Notes
Aesthetic/Visual Resources	0	Impacts would be roughly the same as the proposed project.
Agricultural Resources	+	Alternative would reduce the future amount of water available for agricultural resources
Air Quality	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Biological Resources	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Cultural Resources	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Drainage, Erosion & Sedimentation	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Geology and Soils	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Growth Inducement	-	Alternative would make less water available to accommodate the growth projected in the County General Plan.
Hazards and Hazardous Materials	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Hydrology and Water Quality	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Land Use	0	Impacts would be roughly the same as the proposed project.
Noise	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Public Services and Utilities	0	New pipeline construction for reclaimed water would have impacts similar to proposed project.
Recreational Resources	-	Alternative would avoid impacts associated with withdrawal of water from Lake Nacimiento.
Transportation/Circulation	+	New pipeline construction for reclaimed water would have impacts similar to proposed project.

Table 3.13 Screening of Water Conservation Alternative

Area of Impact	Would Alternative Substantially Lessen or Avoid Impacts (-), Result in Increased Impacts (+) or Remain Approximately the Same (0) when compared to the Proposed Project?	
	Water Conservation	Notes
Aesthetic/Visual Resources	-	Alternative would avoid impacts associated with proposed project construction.
Agricultural Resources	+	Alternative would reduce the future amount of water available for agricultural resources
Air Quality	-	Alternative would avoid impacts associated with proposed project construction.
Biological Resources	-	Alternative would avoid impacts associated with proposed project construction.
Cultural Resources	-	Alternative would avoid impacts associated with proposed project construction.
Drainage, Erosion & Sedimentation	-	Alternative would avoid impacts associated with proposed project construction.
Geology and Soils	-	Alternative would avoid impacts associated with proposed project construction.
Growth	-	Alternative would make less water available to accommodate the growth projected in the County General Plan.
Hazards and Hazardous Materials	-	Alternative would avoid impacts associated with proposed project construction.
Hydrology and Water Quality	+	Increased ground water pumping would result in decreased water quality.
Land Use	0	Impacts would be roughly the same as the proposed project.
Noise	-	Alternative would avoid impacts associated with proposed project construction.
Public Services and Utilities	-	Decreased water supply would limit the ability of local water purveyors to supply their customers, especially during a drought.
Recreation	-	Alternative would avoid impacts associated with withdrawal of water from Lake Nacimiento.
Transportation/Circulation	-	Alternative would avoid impacts associated with proposed project construction.

The amount of water pumped during dry years should not exceed an aquifer's capacity for recharge during the next occurrence of above-average rainfall. However, there is effectively no program in place to ensure that aquifers are managed in this manner. In aquifers subject to excessive overdraft from year to year, the long-term trend of water in storage is downward, a condition that can lead to such undesirable consequences as land subsidence, higher pumping costs and loss of the aquifer as an effective source of supply during droughts.

Table 3.14 lists each participant in the NWP, their requested allocation, and whether the groundwater basin has been determined for planning purposes to be over-subscribed. Under this alternative, many of the County's groundwater basins would remain over subscribed and susceptible to overdraft and supply interruptions or poor water quality during drought years.

Table 3.14 NWP Purveyors and Associated Groundwater Basins

Water Purveyor	NWP Allocation (acre feet)	Groundwater Basin	Over Subscribed Yes/No
San Miguel CSD	610 af	Paso Robles	Yes
City of Paso Robles	4,000 af	Paso Robles	Yes
Templeton CSD	250 af	Paso Robles	Yes
Atascadero MWC	3,000 af	Paso Robles	Yes
Santa Margarita Ranch	200 af	Paso Robles	Yes
CSA 23–Santa Margarita	100 af	Paso Robles	Yes
City of San Luis Obispo	3,380 af	San Luis Obispo	Yes
Camp San Luis Obispo	200 af	San Luis Obispo	Yes
CSA 22–Airport Area	890 af	San Luis Obispo	Yes
Fiero Lane WC–Airport Area	30 af	San Luis Obispo	Yes
Edna Valley MWC–Airport Area	700 af	Edna Valley	Yes
San Luis CUSD–Morro Bay	55 af	Not Applicable	No
CSA 10A Cayucos	80 af	Not Applicable	No
Morro Rock MWC–Cayucos	30 af	Not Applicable	No
Lewis Pollard Trust–Cayucos	50 af	Not Applicable	No
Lakeside Use	1,300 af	Not Applicable	No

This alternative was not selected for further analysis because it would exacerbate potential impacts associated with overdraft in several groundwater basins, and would likely result in additional overdraft problems in the future. In addition, this alternative does not meet the proposed project's basic needs of greater water supply reliability. Potential impacts associated with additional ground water pumping are also evaluated as part of the No Project Alternative.

3.2.8.3 Desalination and Salinas Reservoir Expansion Alternative

Under this alternative, areas south of the Cuesta Grade would utilize water obtained through seawater desalination, while areas north of the grade would use water from the Salinas Reservoir Expansion project to recharge groundwater supplies.

Desalination is the process that converts seawater or brackish groundwater to fresh water (or water in an otherwise more usable condition) through the removal of dissolved solids. It has been used successfully in many parts of the world lacking fresh water supplies. The most common desalination method is reverse osmosis. Reverse osmosis is a process that uses special membranes to allow the passage of water while blocking the passage of dissolved salts and minerals. Depending on the quality of the source water, the "recovery" or production ratio of the treatment process can range from 35% for straight seawater to 75% for brackish water (City of Morro Bay 1990). The recovery level would depend upon the end use of the water and the criteria set by the DHS.

Desalination facilities can be developed in incremental stages more readily than other types of water supply projects to provide desired quantities of potable water. Within SLO County, the City of Morro Bay has used desalination of brackish groundwater as a supplemental water supply on a temporary emergency basis (with a capacity of 645 afy), although their desalination facility is currently not being utilized due to cost and technical issues. The City of SLO and the City of Morro Bay studied desalination as an alternative water supply; however, the City of Morro Bay is no longer interested in pursuing a cooperative project or sharing in that facility with the City of SLO (Moss 2003). Cambria CSD Desalination facility's design capacity is 565 afy. The desalination facility at the Diablo Canyon Power Plant is capable of producing up to 645 afy, however, produced water is only used on site for the power plant's needs. The Morro Bay Power Plant desalination plant is capable of producing water at a rate of approximately 480 afy. These plants are potentially capable of producing over 2,000 afy of water. Additional capacities could be developed.

The use of desalination to replace the NWP allotment would result in many of the same impacts as the proposed project given water supply and distribution issues. Also, distribution pipelines would still need to be constructed for delivery to individual purveyors. Additional adverse environmental impacts would occur from disposal of mineral- and metal-rich brine (reverse osmosis byproduct) into the marine waters.

As a water supply option, desalination is most suited to coastal communities because of the costs associated with transporting water (pipeline construction and energy to pump water). The operational disadvantages of desalinated water are its high cost and limited yield. General impacts associated with desalination are related to energy demand, sea water intake, and waste brine disposal. Many mitigation measures exist that can lessen these impacts (California Coastal Commission [CCC] 1993), but not to a level of insignificance in all cases. Typically, discharge of water with high salt concentrations into the ocean waters (that have similar salt constituents), does not present an environmental problem; at the same time, care must be taken relative to possible environmental changes related to the receiving waters for the discharge from added constituents, dissolved oxygen levels, and different water temperatures (Buros 2002). High energy demand for desalination would also create energy impacts.

The Final EIR for the City of Santa Barbara's and Ionics, Inc. Temporary Emergency Desalination Project (SB-106-90, March 1991) states that all impacts can be mitigated for that project; however, discharge of desalination waste brines into the ocean would require a comprehensive monitoring and reporting program regulated by the Regional Water Quality Control Board. The Cambria Desalination Facility Final EIR (R. Bein, W. Frost & Associates 1994) has also concluded that there would not be any unavoidable significant impacts to the environment from construction or operation of the proposed facility after all proposed mitigation measures are implemented.

The City of SLO has been pursuing the Salinas Reservoir Expansion Project for the past 10 to 15 years. The installation of a spillway gate on Santa Margarita Lake would raise the maximum water surface level by approximately 19 feet. This would increase the storage capacity by almost 18,000 af (currently 23,843 af) and would result in an estimated increase of safe annual yield of 1,650 af.

The City of SLO published a Draft EIR on the Salinas Reservoir Expansion Project in November 1993. Issues addressed in the project EIR included: the effects of the expansion on water resources and water quality to downstream users; biological resources within the reservoir and downstream (estimates of more than 1,000 oak trees would be inundated and approximately 80 acres of high quality wetland habitat used by environmentally sensitive species would be lost); cultural resources; land use and recreational issues; and possible growth inducement due to increased water supplies to the City of SLO. The major issues associated with the project involve environmental impacts due to inundation of areas around the lake, opposition by agencies and individuals in the north county due to concerns of impacts to groundwater resources, and strengthening of the dam to safely store the additional water.

The City commissioned additional evaluation of the seismic safety of the Salinas Dam which was prepared by URS Corporation (formerly Woodward-Clyde). The analysis was undertaken to determine whether the facility could meet current design standards if the spillway gates were installed to increase the water level. The analysis revealed that due to new design requirements, the dam with spillway gates installed would not be structurally adequate. The analysis concluded that significant strengthening of the dam would be required if the project were to move forward. The consultants also provided a preliminary assessment of the existing dam (i.e., without the gates) and concluded that the facility could meet the current design standards. The estimated costs for strengthening the dam would add an additional $10 million to the project costs. This would bring the total project cost to approximately $30 million. Peer review by the Bureau of Reclamation located in Denver Colorado reached the same conclusions relative to the required strengthening of the dam if the spillway gates were installed.

Another issue with the Salinas Reservoir Expansion Project involves the City's water rights permit. The State Water Resources Control Board granted a ten year time extension to the City for the water rights permit at Salinas Reservoir. Based on the ten-year time extension granted by the State Water Resources Control Board, a deadline of December 31, 2010, has been established relative to completing the expanded storage capacity at the Salinas Reservoir.

In summary, the Salinas Reservoir Expansion Project would result in many acres of land being lost to permanent inundation, resulting in loss of habitat, displacement of wildlife, and damage to County Park facilities. The Salinas Reservoir also has a limited yield of water (5–6,000 afy)

which is not enough to serve the requested allocations for the North County, and the City of SLO retains the water rights to this water source.

This alternative does not avoid or substantially reduce impacts associated with the proposed project. Therefore, this alternative has been excluded from further analysis.

3.2.8.4 Water Reclamation

Wastewater reclamation is the use of treated municipal sewage effluent in lieu of potable water for specific applications. Reclaimed water must meet DHS quality standards and requirements for a specified use (i.e., irrigation, groundwater recharge, in-stream flows). Uses for reclaimed wastewater include golf course watering, landscaping, and irrigation for non-food crops, such as pasture. Approximately 20% more reclaimed water than potable water is needed to water landscapes and gardens because of the relatively high salt content of reclaimed water. By saturating the ground longer, the dissolved salt will soak beneath the roots, where it will not affect the life of the plant.

The County Master Water Plan (SLO 2001) lists several future water supply options and there are several projects that target water reclamation: City of San Luis Obispo Water Reuse Project (utilization of tertiary treated wastewater for irrigation primarily to parks and other areas that currently receive potable water off of the City system, with potential supply of 1,233 afy), City of Morro Bay Reuse (construction of a satellite wastewater treatment plant that would divert approximately 40% of the wastewater flow from the existing Morro Bay-Cayucos treatment plant; water reclaimed at the proposed satellite plant would be used to both sustain year-round flow in Chorro Creek as well as to supply some irrigation users in the vicinity of the proposed plant, with potential supply of 1,680 afy), South County Sanitation District Reclamation (upgrade of the existing wastewater treatment plant from oxidized secondary treatment to disinfected tertiary treatment; also includes construction of transmission facilities to deliver water to area golf courses, highway landscaping, schools, and City parks, with potential supply of 1,100 to 4,400 afy). The total water supply from these water reclamation projects would be equal to between 4,013 and 7,313 afy.

Effluent quality, legal constraints on treated wastewater use, costs of adequate treatment, and the costs to construct a completely separate distribution network, as well as environmental health considerations and public acceptance, are factors which will influence the use of reclaimed water in the future. Wastewater reclamation would only supply a small portion of water needed. Therefore, this alternative would not meet the basic reliability goals of the proposed project.

3.2.8.5 Water Conservation

Water conservation includes water use reductions realized from voluntary, more efficient water use practices; from mandated requirements to install water-conserving fixtures in buildings; and from measures that increase irrigation efficiency. Voluntary water conservation is encouraged through programs such as public information and product distribution campaigns, home water use surveys, and through financial incentives such as low-flow toilet rebates and payments for turf reduction. Mandated requirements for water conservation fixtures include fixture

requirements for all new construction, water offset or retrofitting of existing buildings for new water allocations, and prohibitive water use codes.

The amount of water conserved through water conservation varies from community to community and depends on such factors as public education, cost of water supplies, and enforcement of water conservation measures. In the City of SLO, water consumption reduced by nearly 50% after the city's June 1990 implementation of a Mandatory Water Conservation (35% reduction) Program. However, the city's 50-percent reduction was temporary and drought-related. It cannot be projected long-term. Five to ten percent is more realistic in urban areas, and one percent in agricultural areas.

According to the Coastal Branch FEIR, even a combination of conservation and reclamation is "too limited to be considered a reasonable option." For many communities, "conservation and reclamation are already being implemented and the potential for expansion to meet future water supply is limited" (DWR 1991). Therefore, this alternative would not meet the basic reliability goals of the proposed project.

3.3 Summary of Alternatives Selected for Analyses throughout the EIR

CEQA requires that alternatives be *considered "...which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project..."* [CEQA Guidelines Section 15126.6(a)]. Many of the alternatives summarized in the previous section do not meet the minimum CEQA standard for alternatives and have been eliminated from further consideration and environmental review.

NEPA Section §1502.14 also requires that the environmental review *"[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives for which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."* This alternatives screening analysis has provided a comprehensive review of potential alternatives and the reasons for eliminating alternatives not considered feasible under CEQA or NEPA.

Based on the results of the alternative screening analysis, several alternatives were selected for analysis throughout the EIR. The alternatives selected for full environmental review are listed in Table 3.15 and are evaluated by issue area in Section 5.0 of the EIR.

Table 3.15 List of Alternatives Selected for Analysis Throughout the EIR

Alternative	Brief Description	Location of Detailed Description and Screening
No Project/No Action Alternative	The proposed project would not move forward. Existing water supplies would be utilized. This alternative would avoid all of the construction-related impacts associated with the proposed project, but would exacerbate future water shortages and impacts associated with overdraft of County groundwater basins.	Section 3.2.1
NWP 1997 EIR Alternative	This alternative would follow the route, phasing and treatment options that were evaluated in an EIR prepared in 1997. This route would mainly follow public rights-of-way, such as city and county roads, thus avoiding many biologically sensitive areas. However, this alternative could result in greater disruption to County residents along the proposed pipeline right-of-way due to temporary construction and traffic impacts.	Section 3.2.2
Phased Raw and Treated Water Alternative	This alternative would combine the co-equal projects (raw and treated water alternatives) and phase development in over a longer period. The project would initially be constructed as a raw water project, adding treatment as necessary in the future. While this alternative would experience all of the same impacts as the two co-equal projects (raw and treated water), phasing of the project over a longer time period would potentially reduce the magnitude of numerous impacts, as well as provide more flexibility in meeting County-wide water needs.	Section 3.2.3