

# CHAPTER 6

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## Alternatives Analysis

### 6.1 Introduction

#### 6.1.1 CEQA Requirements for Alternatives Analysis

The *CEQA Guidelines* require EIRs to describe and evaluate a reasonable range of alternatives to a project, or to the location of a project, that would feasibly attain most of the basic project objectives and avoid or substantially lessen significant project impacts. The *CEQA Guidelines* set forth the following criteria for alternatives (§15126.6):

- **Identifying Alternatives.** The range of alternatives is limited to those that would avoid or substantially lessen any of the significant effects of the project, are feasible, and would attain most of the basic objectives of the project. Factors that may be considered when addressing the feasibility of an alternative include site suitability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, economic viability, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site. An EIR need not consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote and speculative. The specific alternative of ‘no project’ shall also be evaluated along with its impact.
- **Range of Alternatives.** An EIR need not consider every conceivable alternative, but must consider a reasonable range of alternatives that will foster informed decision-making and public participation. The “rule of reason” governs the selection and consideration of EIR alternatives, requiring that an EIR set forth only those alternatives necessary to permit a reasoned choice. The lead agency, LACWWD40, is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives.
- **Evaluation of Alternatives.** EIRs are required to include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the project. Matrices may be used to display the major characteristics of each alternative and significant environmental effects of each alternative to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed but in less detail than the significant effects of the project.

In general, there are two types of alternatives that may be reviewed in an EIR: (1) alternatives *to* the project that are other projects entirely, or other approaches to achieving the project objectives rather than the project or modified project; and (2) alternatives *of* the project that include modified project components, such as alternative project sites or processes and/or modified facilities, layout, size, and scale. This alternatives analysis discusses both types of alternatives.

In accordance with the *CEQA Guidelines*, the alternatives considered in this EIR include those that 1) could accomplish most of the basic objectives of the project, and 2) could avoid or substantially lessen one or more of the significant effects of the project. To provide the appropriate context for this alternatives analysis, the project objectives and key significant effects are summarized below.

### **6.1.2 Project Objectives**

The proposed project would implement a regional recycled water backbone system of pipelines, pump stations, and storage reservoirs to convey recycled water to various end users in the Antelope Valley. The objectives of the proposed project are as follows:

- Provide recycled water conveyance backbone infrastructure sufficient to accommodate planned regional recycled water demands;
- Integrate regional recycled water production, distribution, and re-use capabilities in the Antelope Valley;
- Provide conveyance, storage, and pumping capacity sufficient to accommodate peak future demands;
- Reduce the region's demands for imported water;
- Augment local water supplies;
- Promote the State's policies for beneficial reuse of recycled water to replace potable water where possible.

### **6.1.3 Key Impacts of the Proposed Project**

Chapter 3 of this EIR identifies potential impacts associated with the proposed project for each environmental issue area including long-term and short-term impacts. Mitigation measures are identified to render impacts less than significant, where possible. Implementation of the proposed project would result in significant and unavoidable impacts to noise during project construction.

## **6.2 Project Alternatives**

This section presents the No-Project Alternative and other feasible alternatives to the proposed project that were considered by LACWWD40. The alternatives presented below include alternatives *to* the proposed project and alternatives *of* the proposed project.

## 6.2.1 Alternatives Rejected from Further Consideration

One potential alternative of the proposed project would include alternate pipeline routes and alternate locations for pump stations and/or storage reservoirs. Such modifications to the project components already have been considered as part of the preliminary design phase, which is described in the Facilities Planning Report (Kennedy/Jenks, 2006). The proposed pipeline alignment reflects the following screening criteria considered during preliminary design: (1) minimize the distance between the water reclamation plants; (2) minimize the distance between the recycled water pipeline and the identified end users; (3) optimize existing utility easement corridors; and (4) optimize the use of existing recycled water pipes and routes. The locations of the storage reservoirs are based on the pipeline alignment and elevations. Based on the analyses provided in this PEIR, there are no long-term significant unavoidable impacts associated with operation of the project components that would be avoided if such facilities were located elsewhere. Only temporary, construction-related, significant noise and vibration impacts might be avoided if alternative facility locations were considered. During the final design phase of the proposed project, some refinements to the project components may be necessary, but for the purposes of this PEIR, alternative locations for project components have been eliminated from further consideration.

## 6.2.2 No-Project Alternative

According to Section §15126.6(e) of the *CEQA Guidelines*, discussion of the No-Project Alternative must include a description of existing conditions and reasonably-foreseeable future conditions that would exist if the project were not approved. Under the No-Project Alternative, LACWWD40 and the partner agencies would not implement the Regional Recycled Water Project. The LWRP, PWRP, and RWWTP would be upgraded as planned to produce tertiary-treated effluent; however, there would be no integrated system to distribute this recycled water to end users in the Antelope Valley. LACSD Nos. 14 and 20 would manage recycled water with agricultural reuse only. RCSD would need to develop alternative measures for discharge or distribution of the recycled water produced at the RWWTP. Under the No-Project Alternative, future water demand in the Antelope Valley would continue to grow and would be met with increased quantities of groundwater, surface water, and imported water, and/or increased conservation measures.

### Ability to Meet Project Objectives

Implementation of the No-Project Alternative would result in no regional backbone system to connect the three producers of recycled water in the Antelope Valley and would hinder regional plans, such as the *Antelope Valley Integrated Regional Water Management Plan (IRWMP)*, to use recycled water to meet water demands in the region. In the absence of the proposed project, there would no distribution system to convey recycled water to locations where it can be beneficially used. There would be no system to integrate recycled water production, distribution, and use in the Antelope Valley. The demand for imported water and local water (i.e. groundwater and surface water) would increase as population in the region grows and recycled water is not

available to replace uses of potable water as appropriate. Therefore, implementation of the No-Project Alternative would not meet any of the stated project objectives.

## Impact Analysis

Under the No-Project Alternative, the impacts identified in Chapter 3 that are associated with construction and operation of the proposed project would be avoided. Short-term construction impacts to aesthetics; air quality; agricultural resources; geology, soils and seismicity; hazardous materials; hydrology and water quality; noise; traffic; and utilities and service systems would be avoided. Potentially-significant long-term project impacts to aesthetics; geology, soils, and seismicity; hydrology and water quality; land use; and noise also would be avoided.

Under the No-Project Alternative, water demand in the Antelope Valley would continue to be met with water imported from the San Joaquin-Sacramento Delta (Delta) through the SWP and with local groundwater and surface water. The reliability of delivery of imported water from the Delta varies each year depending on annual precipitation and is subject to additional supply reductions from environmental constraints within the Delta (DWR, 2008). Although AVEK and PWD have Table A entitlements that exceed actual annual water deliveries, these water wholesalers may experience restrictions on imported water in the future. The groundwater aquifer that underlies the project region is currently experiencing overdraft conditions and associated groundwater quality issues (RWMG, 2007). In addition, the Antelope Valley groundwater basin is not an adjudicated basin, although the adjudication process is in progress (RWMG, 2007). An increased dependence on local groundwater resources could further exacerbate existing overdraft conditions and further degrade groundwater quality. Surface water flows from Littlerock Creek, which are captured and stored in Littlerock Reservoir, currently are being utilized to their full potential. PWD is in the planning and design stage for a sediment removal project in Littlerock Reservoir to recover lost yield from the Reservoir.

### 6.2.3 Alternative 1: Non-Integrated System

Under Alternative 1, instead of implementing the proposed project, LACWWD40, PWD, QHWD, and RCSD would design, construct, and operate their own recycled water systems. Alternative 1 would result in four separate recycled water systems in the Antelope Valley instead of one integrated regional system. LACWWD40 would construct recycled water pipelines, pump stations, and storage reservoirs within its service area. LACWWD40 would contract independently with LACSD No. 14, LACSD No. 20, and RCSD to purchase recycled water for the end users in its service area.

#### Ability to Meet Project Objectives

Implementation of Alternative 1 would result in no regional backbone system to connect the three producers of recycled water in the Antelope Valley and would hinder regional plans, such as the *Antelope Valley Integrated Regional Water Management Plan (IRWMP)*, to use recycled water to meet water demands in the region. Instead, under Alternative 1 each water district in the Antelope Valley would act independently to implement its own recycled water project in order to meet

future demands for recycled water in its service area. Alternative 1 would augment local water supplies by using recycled water instead of potable water where appropriate and thus would reduce demand for imported water in the Antelope Valley. Therefore, implementation of Alternative 1 would meet some of the stated project objectives.

## Impact Analysis

Under Alternative 1, the impacts identified in Chapter 3 that are associated with construction and operation of the proposed project at least would be similar and could even be worsened. Short-term construction impacts to aesthetics; air quality; agricultural resources; geology, soils and seismicity; hazardous materials; hydrology and water quality; noise; traffic; and utilities and service systems likely would be similar for each district's project. Potentially-significant long-term project impacts to aesthetics; geology, soils, and seismicity; hydrology and water quality; land use; and noise also would be similar for each district's project. However, cumulative impacts to air quality, noise, traffic, and water quality could be greater if all four recycled water projects are constructed simultaneously (as opposed to the phased approach for the proposed project) and if the four individual projects together affect a greater footprint than the proposed project.

## 6.3 Summary of Alternatives Analysis

A summary of the alternatives analysis is provided in **Table 6-1**, which provides a comparison of the proposed project to each alternative with respect to project objectives and project impacts. The alternatives evaluated in this PEIR present tradeoffs between achieving project objectives and impacting the environment. The No-Project Alternative would avoid all the environmental impacts of the proposed project but would not meet any of the project objectives. Alternative 1 would have similar environmental impacts relative to the proposed project (with the exception of increasing cumulative impacts) but would meet only some of the project objectives.

## 6.4 Environmentally Superior Alternative

CEQA requires that an EIR identify the environmentally-superior alternative of a project other than the No-Project Alternative (*CEQA Guidelines* Section 15126.6 (e)(2)). The proposed project is considered the environmentally-superior alternative because it meets all the project objectives and does not result in any significant, unavoidable impacts that would otherwise be avoided by implementing one of the project alternatives. As stated at the beginning of this chapter, the purpose of this alternatives analysis is to consider a reasonable range of alternatives that could feasibly attain most of the basic project objectives and avoid or substantially lessen significant project impacts. Implementation of the No-Project Alternative or Alternative 1 would not avoid any significant, unavoidable impacts, and none of these alternatives meet all the project objectives. Therefore, the proposed project is environmentally superior to these alternatives and is the preferred alternative.

**TABLE 6-1  
SUMMARY OF ALTERNATIVES ANALYSIS**

Issue Area	Proposed Project	No-Project Alternative	Alternative 1
<b>Meets Project Objectives?</b>	Yes	No	Partial
Environmental Impacts			
Aesthetics	LSM	None	Same
Air Quality	LSM	None	Same
Biological Resources	LSM	None	Same
Cultural Resources	LSM	None	Same
Geology, Soils and Seismicity	LSM	None	Same
Hazards and Hazardous Materials	LSM	None	Same
Hydrology and Water Quality	LSM	None	Same
Land Use and Agriculture	LSM	None	Same
Noise	SU	None	Same
Environmental Justice	NI	None	Same
Transportation and Traffic	LSM	None	Same
Utilities and Service Systems	LSM	None	Same
Cumulative	LSM	None	Increased

SOURCE: ESA, 2008.

NI = no impact

LTS = less than significant

LSM = less than significant with mitigation

SU = Significant and Unavoidable