



# SECTION 7.0 ALTERNATIVES

As required by Section 15126(d) of the *State CEQA Guidelines*, this Draft EIR examines a range of reasonable alternatives to the proposed project that could feasibly achieve similar objectives. The following discussion focuses on alternatives that might reduce many of the adverse impacts associated with the proposed project. Included in this analysis are the following: (1) the CEQA-required “No Project” alternative; (2) an alternative that involves construction as proposed by the applicant but with a reduced pipeline size; (3) an alternative that would avoid all impacts to Mint Canyon Creek; and (4) an alternative that is environmentally superior to the applicant proposed alternative.

## 7.1 ALTERNATIVE 1: NO PROJECT

### 7.1.1 Description

This option assumes that the project is not constructed, thereby, not providing water service to existing residences and businesses in an approximate seven-square-mile service area. This option assumes that the project will not provide water service for proposed new housing developments. The No Project alternative also assumes that the project site will remain in its current state.

### 7.1.2 Impact Analysis

Since no construction would occur, no adjacent residents or property would be subject to hazards or impacts; therefore, impacts related to geologic resources, water resources and flooding, risk of upset from hazardous materials, and fire protection would be less than significant.

Since no water main would be installed with this option, the potential for growth inducement would be reduced, and ultimately, impacts based on per capita generation, including impacts to transportation, air quality, noise, public facilities, and recreation, would be less than significant. No natural resources or agricultural uses would be disturbed under this scenario; consequently, no impacts to biological resources, archaeological resources, agricultural land uses, or aesthetics would occur.

The water main is proposed to be constructed primarily under existing roads. However, the overall “No Project” impacts would be substantially less (no impacts) than those impacts resulting from the construction activities of the proposed project, particularly within the riparian zone of Mint Canyon Creek that the proposed project would have to cross.

## 7.2 ALTERNATIVE 2: REDUCED PIPELINE SIZE

### 7.2.1 Description

NCWD proposes to build an approximate 2.4-mile-long water main, to provide water service to existing residences and businesses in an approximate seven-square-mile (approximate 4,480-acre) service area, and for proposed new housing developments on Vasquez Canyon Road in the Santa Clarita Valley of Los Angeles County, California. This Alternative would reduce the pipeline size to an 8-inch diameter pipeline, which would only provide 44 percent of the water service compared to that of the proposed 18-inch pipeline project.





The Vasquez Water Main, which originates from an existing water main at the corner of Sand Canyon and Soledad Canyon Roads, will be primarily installed under existing roads, including portions of Sand Canyon Road, Sierra Highway, and Vasquez Canyon Road. In three locations, the water main will cross natural watercourses, including Mint Canyon Creek and two ephemeral drainages, will span the drainages. The Mint Canyon Creek crossing will involve trenching through the creek bed a few feet upstream from the Vasquez Canyon Road bridge; however, the two drainage crossings will not involve any channel soil disturbances.

### 7.2.2 Impact Analysis

The reduced size water main installment project, within the vicinity of the Mint Canyon Creek portion of the project site, includes a maximum impact area of approximately 50 feet wide along the length of the water main (a maximum of 25 feet along each side). This creek crossing will result in filling activities of the Mint Canyon Creek portion of the project site, which contains jurisdictional waters of the U.S., including wetlands. In addition, the water main construction activities may substantially adversely affect existing fish and wildlife resources within the project portion of Mint Canyon Creek, and existing vegetation and habitat resources in the vicinity of the project site. With the exception of growth-inducement, this alternative would have impacts identical to those expected and discussed in Section 5.0, Environmental Impact Analysis. Project-related direct, indirect, and cumulative impacts are assessed and addressed in the DEIR in Section 5.0. This alternative would eliminate all growth-inducing impacts; however, NCWD estimates that the pipeline would need to be replaced with the larger pipe in five to ten years resulting in additional temporary impacts to those resources identified in Section 5.0.

## 7.3 ALTERNATIVE 3: CREEK AVOIDANCE

The *Creek Avoidance* alternative is essentially the same as what is currently proposed by the applicant; however, the pipeline would be installed by pipe jacking, or microtunnelling methods, under Mint Canyon Creek specifically to avoid direct impacts to the creek and its habitats. All other aspects and issue areas of this alternative are the same as for the currently applicant-proposed project. This alternative would avoid direct impacts to biological resources and water quality within Mint Canyon Creek and would avoid the need to obtain permits to conduct work within jurisdictional waters of the U.S. and the State of California. The Creek Avoidance Alternative would still have potential to result in growth-inducing impacts since installation of an 18-inch water main would remove an existing impediment to growth.

### 7.3.1 Description

NCWD proposes to build an approximate 2.4-mile-long water main pipeline, to provide water service to existing residences and businesses in the NCWD service area, and for proposed new housing developments on Vasquez Canyon Road. The Vasquez Water Main, which originates from an existing water main at the corner of Sand Canyon and Soledad Canyon Roads, will be primarily installed under existing roads, including portions of Sand Canyon Road, Sierra Highway, and Vasquez Canyon Road. In three locations, the water main will cross natural watercourses, including Mint Canyon Creek and two ephemeral drainages, will span the drainages. The Mint Canyon Creek crossing will involve pipe jacking or microtunnelling methods, rather than open cut-and-cover techniques. The approximate diameter of the proposed water line is 18 inches. The invert to the water line is planned at approximately 9.5 feet below existing grades (at an approximate elevation of 1,698 feet) in the creek channel bottom. The two drainage crossings will not involve any soil disturbances within the channels.

### 7.3.2 Impact Analysis

NCWD contracted a geotechnical investigation for the installation of the proposed 18-inch pipeline beneath the Mint Canyon channel (Ganeshwara and Mills 2003). The geotechnical investigation study was completed on 27 June 2003. Two soil samples were acquired by borings, which were drilled to the depth of 40 feet and 50 feet beneath the ground surface. Laboratory testing and engineering analyses were performed to determine the suitability of the area for the pipe jacking or microtunnelling procedures. The conclusion of the report states that the subsurface conditions, a surficial layer of artificial fill underlain by alluvium, and the lack of groundwater at the level of the pipeline invert, make the geotechnical conditions suitable for the planned water line crossing. (Ganeshwara and Mills 2003.) (See Appendix F, Geotechnical Investigation Proposed 18-Inch Diameter Water Line Crossing beneath Mint Canyon Channel Adjacent to Vasquez Canyon Road, Unincorporated Los Angeles County, California.)

The application of the pipe jacking or microtunnelling techniques to the proposed pipeline project would eliminate the significant adverse impacts to the jurisdictional waters of the U.S. Performing all necessary work outside the jurisdictional boundaries of Mint Canyon Creek and the drainage ditches would eliminate the significant, adverse environmental impacts to biological resources.

## 7.4 ALTERNATIVE 4: ENVIRONMENTALLY SUPERIOR

The *Environmentally Superior* alternative is a combination of Alternatives 2 and 3 to maximize avoidance of direct and indirect impacts to the environment. Alternative 4 consists of (1) reducing the size (diameter) of the pipeline from 18 inches to 8 inches, which is the size currently required to meet existing needs, and (2) boring (microtunnelling) under Mint Canyon Creek to avoid water resources and creek habitats. All other aspects of this alternative are the same as for the applicant-proposed project.

### 7.4.1 Description

NCWD proposes to build an approximate water main pipeline to provide water service to existing residences and businesses in an approximate seven-square-mile service area. This Environmentally Superior Alternative would reduce the pipeline size to an 8-inch diameter pipeline, which would only provide 44 percent of the water service compared to that of the proposed 18-inch pipeline project. In addition to reducing the size of the water main, this alternative would avoid direct impacts to Mint Canyon Creek. In three locations, the 8-inch water main will cross/span natural watercourses, including Mint Canyon Creek and two ephemeral drainages. The Mint Canyon Creek crossing will involve pipe jacking or microtunnelling methods, rather than open cut-and-cover techniques. The invert to the water line is planned at approximately 9.5 feet below existing grades (approximate elevation of 1,698 feet) in the canyon channel bottom. The two drainage crossings will not involve any soil disturbances within the channels.

### 7.4.2 Impact Analysis

This Environmentally Superior Alternative involves a combination of Alternative 2 (Reduced Pipeline Size) and Alternative 3 (Creek Avoidance). By reducing the size of the water main pipeline, all growth-inducing impacts would be eliminated, and by microtunnelling under Mint Canyon Creek, all direct impacts to water quality and creek habitats would be eliminated.

A geotechnical investigation (Ganeshwara and Mills 2003) (Appendix F) was completed on 27 June 2003. Two soil samples were acquired by borings and laboratory testing and engineering analyses were performed to



determine the suitability of the area for the pipe jacking or microtunnelling procedures. The conclusion of the report states that the subsurface conditions, a surficial layer of artificial fill underlain by alluvium, and the lack of groundwater at the level of the pipeline invert, make the geotechnical conditions suitable for the planned water line crossing.

By reducing the size of the water main pipeline, all growth-inducing impacts would be eliminated. However, it should be noted that NCWD estimates that the pipeline would need to be replaced with the larger pipe in five to ten years resulting in additional temporary impacts to whose resources identified in Section 5.0.

The application of the pipe jacking or microtunnelling techniques to the proposed pipeline project would eliminate the significant adverse impacts to the jurisdictional waters of the U.S. in Mint Canyon Creek. Performing all necessary work outside the jurisdictional boundaries of Mint Canyon Creek and the drainage ditches would eliminate the significant, adverse environmental impacts to biological resources.

