

SECTION 6.0

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES RELATED TO IMPLEMENTATION OF THE PROPOSED INITIATIVE

Consistent with the requirements of Section 15126.2(c) of the California Environmental Quality Act Guidelines (State CEQA Guidelines), this section of the Environmental Impact Report (EIR) summarizes the potential for implementation of the Single-Family Residential Hauled Water Initiative for New Development (proposed initiative) to result in significant irreversible environmental changes. Such a change refers to an irretrievable commitment of nonrenewable resources, or other environmental changes that commit future generations to similar uses. In evaluating the potential for irreversible environmental changes, the potential for irreversible environmental changes from potential accidents associated with the proposed initiative were also considered. The scope of this analysis has been focused on the use of nonrenewable resources to construct homes that, in absence of the ability to use hauled water as the primary source of water pursuant to the proposed initiative, would not otherwise have been eligible for issuance of a building permit to allow construction. The analysis also considers the ongoing commitment of water and energy that would result from the need to haul water throughout the occupancy of the single-family residence. The primary nonrenewable resources that would be affected by construction of single-family residence would be the conversion of vacant lands to development. The conversion of vacant lands would result in the permanent conversion of extensive areas of native and non-native plant communities. There would be an ongoing commitment of water and energy during the occupancy of the single-family residences. The analysis considers the reasonable worst-case scenario evaluated in the EIR, for anticipated impacts over the 20-year planning horizon. Although not reasonably foreseeable based on current rate of issuance of building permits in the proposed initiative study area, this section also provides an analysis of the total irreversible environmental change that would result if all 42,867 parcels in the proposed initiative study area were ultimately developed, referred to as the “full build-out” scenario.

6.1 REASONABLE WORST-CASE SCENARIO

The reasonable worst-case scenario assumes the annual average rate of issuance of building permits over the 20-year 2015 to 2035 planning horizon would be approximately 32 per year in the Santa Clarita Valley and approximately 152 per year in the Antelope Valley for a total of 184 permits per year for both areas. The total anticipated building permits over the 20-year 2015 to 2035 planning horizon would be approximately 3,680. As a result, it is anticipated that the disturbance area for the single-family residences constructed on these parcels would be approximately 5,295 acres (Table 2.7-1, *Estimated Number of Parcels to Be Developed and Disturbance Area in the Unincorporated Antelope Valley and Santa Clarita Valley, 2015–2035*).

Biological Resources

The analysis performed in Section 3.3, *Biological Resources, Regulatory Framework, Existing Conditions, Impacts, Mitigation, and Level of Significance after Mitigation*, determined that the proposed initiative would result in significant irreversible environmental changes throughout the proposed initiative study area. Therefore, the proposed initiative would have the potential to result in significant irreversible environmental changes to up to 59 sensitive plant communities. Permits would be required for take of habitat for plant and wildlife species listed as rare, threatened, or endangered pursuant to the Federal or State Endangered Species Act; therefore, impacts to habitat

would be reduced such that there would be no adverse effect of the ability of these species to survive and recover in the wild.

However, there are 75 species considered sensitive or rare in the State of California that have the potential to be present in the proposed initiative study area that are not afforded protection pursuant to the Federal or State Endangered Species Act (Table 3.3.2-3, *Other Sensitive Plant and Wildlife Species with the Potential to Occur within the Proposed Initiative*; Figure 3.3.2-3, *Other Sensitive Plant Species with the Potential to Occur within the Proposed Initiative*; Figure 3.3.2-4, *Other Sensitive Wildlife Species with the Potential to Occur within the Proposed Initiative*). This includes 41 plants, two fish, two amphibians, five reptiles, nine birds, and 16 mammals. Since there is no statutory requirement to obtain permits for impacts to habitat for special status species not listed as rare, threatened, or endangered, the proposed initiative could result in the loss of up to 5,295 acres of potentially suitable habitat for these species during the 20-year planning horizon.

Cultural Resources

The analysis performed in Section 3.4, *Cultural Resources, Regulatory Framework, Existing Conditions, Impacts, Mitigation, and Level of Significance after Mitigation*, determined that the proposed initiative would result in conversion of at least 637 previously recorded archaeological resources throughout the proposed initiative study area. Therefore, the proposed initiative would have the potential to result in significant irreversible environmental changes to at least 637 previously recorded archaeological resources and potentially unsurveyed resources. As current zoning does not require a cultural resources assessment prior to permitting single-family residential development initiatives, and mitigation measures could not fully mitigate impacts, significant irreversible changes to cultural resources would occur.

Energy

The energy used in the construction of the 3,680 single-family homes would be an irreversible and irretrievable commitment of energy and material resources. These resources would constitute a minimal portion of Los Angeles County's resources and not affect the availability of these resources for other regional projects. Consistent with the County of Los Angeles Building Permit application, construction would be expected to use the best available design and construction practices to achieve energy and water efficiencies compliant with the California Energy Code, California Code of Regulations, 2013 Title 24, Part 6 and the California Green Building Standards Code, California Code of Regulations, 2013 Title 24, Part 11 (also known as CALGreen).

Every year California households use 62 million Btu of energy per home,¹ so the assumed incremental annual build-out of 184 homes per year would increase energy consumption at current rates by 11.4 billion Btu annually. At the anticipated build-out over the 20-year planning horizon, the proposed initiative would result in the additional consumption of 338,952 gallons of fuel for transportation annually at 2015 rates and 291,730 gallons of fuel for transportation annually at 2035 rates. Over the 20-year period, the additional gallons of fuel used annually would decrease slightly due to fuel efficiency improving in vehicles. However, the proposed initiative would result in a net increase in single-family homes with a higher per capita fuel consumption related due to the fuel used to haul water, constituting a significant and unavoidable impact.

¹ Energy Information Administration. 2009. Household Energy Use in California, 2009. Available online at: http://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/CA.pdf

The electricity, diesel fuel, and gasoline fuel required to support these single-family homes in the operational phase would be a long-term commitment. The non-renewable fossil fuel use would be irreversible until technological advances lead to widespread adoption of clean burning passenger cars and hauling trucks with higher efficiency (increase miles per gallon).

6.2 FULL BUILD-OUT SCENARIO

Although not reasonably foreseeable, if all the potentially eligible parcels were ultimately developed using hauled water, there would be up to 42,867 single-family homes developed. As a result, it is anticipated that the disturbance area for the single-family residences constructed on these parcels would be approximately 122,565 acres of direct impact area.

Biological Resources

If all 42,687 parcels potentially eligible for the use of hauled pursuant to the proposed initiative were developed using hauled water, the proposed initiative would have the potential to result in significant irreversible environmental changes to 59 sensitive plant communities and 146,148.7 acres inclusive of direct, indirect, and cumulative impacts (28,247.2 acres covered by CalVeg data and 117,901.5 acres covered by DRECP data). The lands converted to development contain sensitive plant communities that provide suitable habitat for the 75 species that are considered sensitive or rare in the State of California and have the potential to be present in the proposed initiative study area (Table 3.3.2-3, *Other Sensitive Plant and Wildlife Species with the Potential to Occur within the Proposed Initiative*; Figure 3.3.2-3, *Other Sensitive Plant Species with the Potential to Occur within the Proposed Initiative*; Figure 3.3.2-4, *Other Sensitive Wildlife Species with the Potential to Occur within the Proposed Initiative*). This includes 41 plants, two fish, two amphibians, five reptiles, nine birds, and 16 mammals. There is no statutory requirement to obtain permits for impacts to habitat for special status species. Only those species listed as rare, threatened or endangered pursuant to the Federal or California Endangered Species Acts are afforded protection from "take." The proposed initiative could result in the loss of up to 122,565 acres of potentially suitable habitat for these species during the 20-year planning horizon.

Cultural Resources

As with the reasonable worst-case scenario, the proposed initiative would result in conversion of at least 637 previously recorded archaeological resources throughout the proposed initiative study area. Therefore, the proposed initiative would have the potential to result in significant irreversible environmental changes to at least 637 previously recorded archaeological resources and potentially unsurveyed resources. As current zoning does not require a cultural resources assessment prior to permitting single-family residential development initiatives, and mitigation measures could not fully mitigate impacts, significant irreversible changes to cultural resources would occur.

Energy

As with the reasonable worst-case scenario, the electricity, diesel fuel, and gasoline fuel required to support these single-family homes in the operational phase would be a long-term commitment. The non-renewable fossil fuel use would be irreversible until technological advances lead to widespread adoption of clean burning passenger cars and hauling trucks. As with the reasonable worst-case scenario, the construction of the 42,867 homes would also be an irreversible and

irretrievable commitment of energy and material resources. However, the resources required to construct the homes would be comparable to other homes constructed in Los Angeles County, and would constitute a minimal portion of Los Angeles County's resources and not affect the availability of these resources for other regional projects. Consistent with the County of Los Angeles Building Permit application, construction would be expected to use the best available design and construction practices to achieve energy and water efficiencies compliant with the California Energy Code, California Code of Regulations, 2013 Title 24, Part 6 and the California Green Building Standards Code, California Code of Regulations, 2013 Title 24, Part 11 (also known as CALGreen).

Every year California households use 62 million Btu of energy per home.² Although not reasonably foreseeable, if all 42,687 single-family homes that would be potentially eligible for the use of hauled water were developed, there would be an anticipated increase in energy consumption at current rates by 2,657.75 billion Btu annually. At full build-out, the project would result in the additional consumption of 3.9 million gallons of fuel for transportation annually at 2015 rates and 3.4 million gallons of fuel for transportation annually at 2035 rates. It is anticipated that technology would continue to provide enhanced efficiencies for transportation over the more than 100 years it would take to get to a full build-out scenario, but there are no readily available data.

Water

The 2010 UWMPs of surrounding agencies confirmed that there will be sufficient water supply for the build-out by 2035 for the average weather year scenario at the average number of building permit data rate issued by Los Angeles County. In the single-dry and multiple-dry year scenarios, there will not be sufficient water supply for the existing customers and those that would be added due to the proposed initiative.

The average year analysis projects that in the Case 1 scenario (see Table 6-1), there would be a surplus of 13,378 acre-feet (AF) in 2035. In the Case 3 scenario, the addition of the proposed initiative would result in a deficit of 15,972 AF.

In a single dry year the proposed initiative is expected to result in a deficit in 2035 for all cases of development. Without the proposed initiative, the area is estimated to have a deficit of 45,198 AF by 2035. The inclusion of the proposed initiative would result in a deficit of 47,953 AF for Case 1 and a deficit of 77,303 AF at build-out (Case 3) by 2035.

For the multiple dry year scenario, a deficit of 1,732 AF is expected in 2035 before the proposed initiative. The area's deficit is expected to increase after the proposed initiative has been added. A deficit of 4,487 AF is projected for Case 1 and a deficit of 33,837 AF is projected at build-out (Case 3).

² Energy Information Administration. 2009. Household Energy Use in California, 2009. Available online at: http://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/CA.pdf

**TABLE 6-1
REMAINING WATER SUPPLY AT PROJECT BUILD-OUT (ACRE-FEET PER YEAR)**

	Average Year	Single Dry Year	Multiple Dry Year
Case 1 (Low, 184 building permits/year)	13,378	-47,953	-4,487
Case 2 (Medium), 384 building permits/year)	10,382	-50,949	-7,483
Case 3 (High, 2,000 building permits/year)	-15,972	-77,303	-33,837

NOTE: The supply projections for the multiple-dry years scenario are higher than the supply projections in a single-dry year because some of the agencies plan to increase their groundwater pumping or obtain water from additional sources during a drought.

Therefore, the proposed initiative would result in irretrievable commitment to the water supply over the long term planning horizon.