

























Measurement Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 5	CCNM Design Option	Refined CCNM Design Option
<b>Aquatic Resources—OHWM or Edge of Wetland</b>						
Seasonal Wetland	2.3 acres	2.3 acres	1.2 acres	2.3 acres	No Change	-0.07 acres
Forested Wetland	0.9 acre	0.9 acre	1.0 acre	0.9 acre	No Change	No Change
Claypans	8.9 acres	8.9 acres	8.9 acres	8.8 acres	No Change	No Change
Streams and Washes	22.4 acres	22.4 acres	23.2 acres	22.4 acres	+0.19 acres	+2.53 acres
In-Stream Impoundments	0.5 acre	0.4 acre	0.5 acre	0.5 acre	No Change	No Change
Artificial Watercourses	31.2 acres	28.8 acres	31.3 acres	27.4 acres	No Change	+0.04
<b>Aquatic Resources—Top of Bank or Edge of Riparian</b>						
Streams and Washes	48.3 acres	48.1 acres	50 acres	48.5 acres	+0.41 acres	+4.09 acres
In-Stream Impoundments	0.5 acre	0.4 acre	0.5 acre	0.5 acre	No Change	No Change
Riparian	15.1 acres	15.1 acres	15.8 acres	15.1 acres	No Change	+2.02 acres
Artificial Watercourse	39.1 acres	36.8 acres	39.1 acres	35.5 acres	No Change	No Change
<b>Cultural Resources</b>						
Cultural resources (within 100 feet)	10	10	11	11	No change	Two fewer archaeological properties (-2)
Paleontological resources (linear miles crossed by alignment)	8.9 miles of geologic units with High sensitivity for paleontological resources	8.9 miles of geologic units with High sensitivity for paleontological resources	8.35 miles of geologic units with High sensitivity for paleontological resources	8.9 miles of geologic units with High sensitivity for paleontological resources	-0.02 mile	+ 0.15 mile
	48.32 miles of geologic units with "high at-depth" paleontological sensitivity	48.32 miles of geologic units with "high at-depth" paleontological sensitivity	47.4 miles of geologic units with "high at-depth" paleontological sensitivity	48.32 miles of geologic units with "high at-depth" paleontological sensitivity	+0.01 mile	+ 0.15 mile



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<b>Noise and Vibration</b>						
Noise and Vibration (within 2,500 feet)	Residential: 1,845 Non-residential: 12	Residential: 1,803 Non-residential: 12	Residential: 1,843 Non-residential: 12	Residential: 1,943 Non-residential: 12	No change	No change
Number of severe operational impacts to sensitive receptors	Total number of sensitive noise receptors: 1,857	Total number of sensitive noise receptors: 1,815	Total number of sensitive noise receptors: 1,855	Total number of sensitive noise receptors: 1,955		
Number of operational vibration impacts to sensitive receivers.	0	0	0	0	No change	No change
<b>Hydrology and Geomorphology</b>						
Fire hazard at the state classification level (Total number of miles within 100 feet on either side of the HSR centerline)	Very High: 0 mile High: 19.6 miles Moderate: 25.1 miles	Very high: 0 mile High: 19.6 miles Moderate: 25.2 miles	Very high: 0.4 mile High: 20.9 miles Moderate: 23.4 miles	Very high: 0 mile High: 19.6 miles Moderate: 25.1 miles	No change	No change
Floodplains (Total number of miles of flood zones crossed)	19.50 miles	19.52 miles	19.40 miles	19.52 miles	-0.01 mile	-0.02 mile
Stormwater (Disturbed soil area during construction)	9,825	8,753	8,864	8,733	+4.0 acres	+577 acres
Stormwater (Net permanent increase in impervious surface area)	764 acres	771 acres	743 acres	760 acres	-1 acre	-5.9 acres
Groundwater (miles/area of groundwater basins crossed)	61 miles/6,833 acres	61 miles/6,764 acres	60.5 miles/6,761 acres	61 miles/6,732 acres	No change	No change

Measurement Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 5	CCNM Design Option	Refined CCNM Design Option
Oil, gas, and geothermal resources (Total number of wells within 100 feet on either side of the HSR centerline)	There are seven wells and their associated sedimentary basins with oil, gas, and geothermal production.	There are six wells and their associated sedimentary basins with oil, gas, and geothermal production.	There are seven wells and their associated sedimentary basins with oil, gas, and geothermal production.	There are seven wells and their associated sedimentary basins with oil, gas, and geothermal production.	No change	No change

BLM = Bureau of Land Management

CCNM = César E. Chávez National Monument

CRHR = California Register of Historical Resources

EJ = environmental justice

HCP = Habitat Conservation Plan

HSR = high-speed rail

LEP = Limited English Proficiency

NRHP = National Register of Historic Places

OHWM = ordinary high water mark

PG&E = Pacific Gas and Electric Company

PEC = Potential Environmental Concern

RSA = resource study area

SR = State Route

UPRR = Union Pacific Railroad

USFWS = U.S. Fish and Wildlife Service

VFHCP = Valley Floor Habitat Conservation Plan

No change = This classification is being used for the CCNM Design Option and the Refined CCNM Design Option. No change means that the related design option does not change (positive or negative) the analysis of the alternative. This is mostly due to the fact that the resource being analyzed does not exist in the area of the CCNM Design Option or the Refined CCNM Design Option. If a change in the impacts was identified, then the number is presented indicated the change.

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