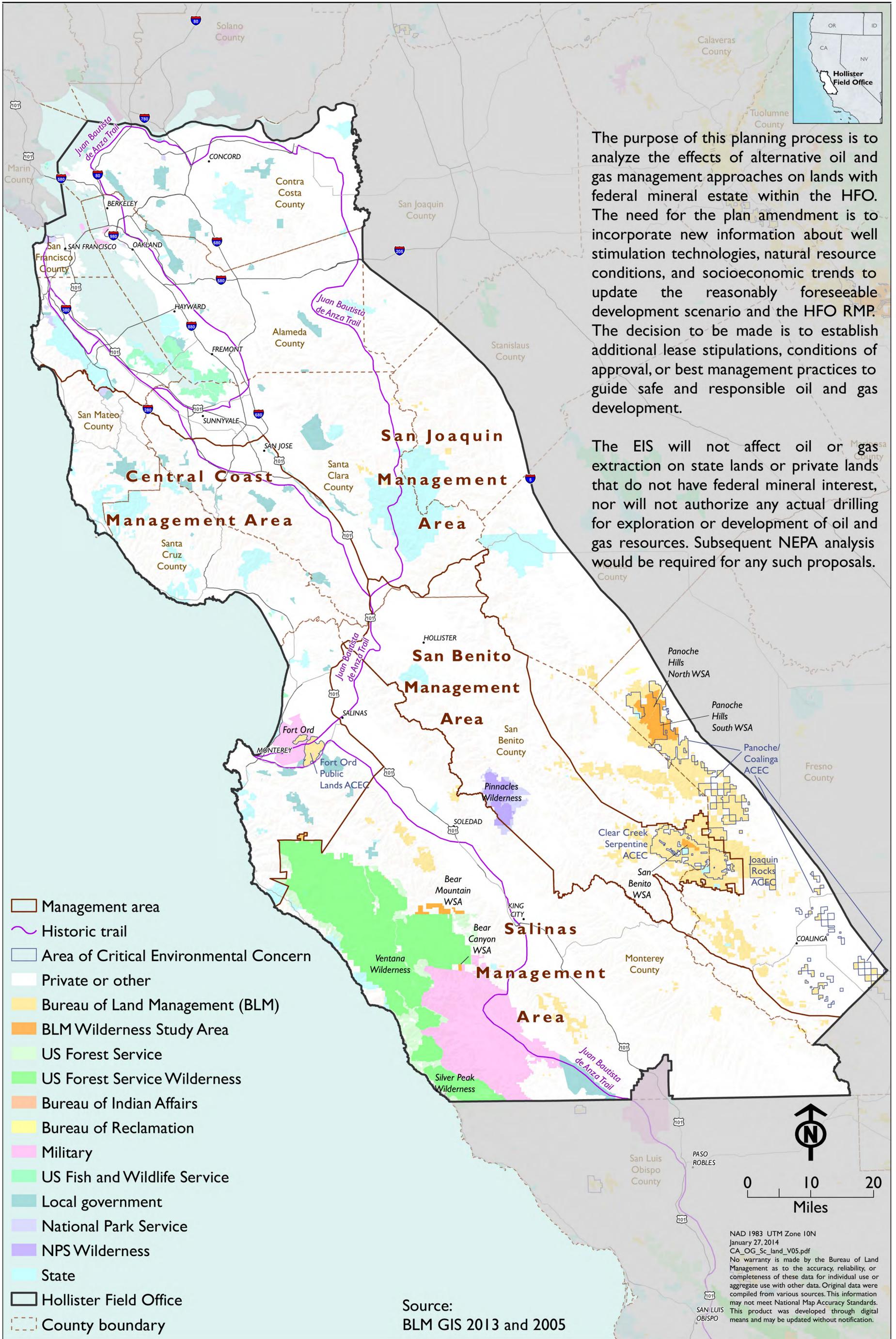


BLM Hollister Field Office Surface Administration

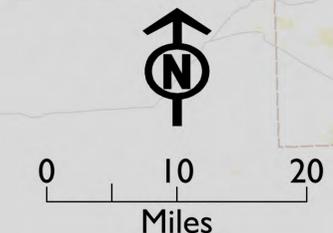
California Oil and Gas Leasing and Development EIS, Hollister Field Office



The purpose of this planning process is to analyze the effects of alternative oil and gas management approaches on lands with federal mineral estate within the HFO. The need for the plan amendment is to incorporate new information about well stimulation technologies, natural resource conditions, and socioeconomic trends to update the reasonably foreseeable development scenario and the HFO RMP. The decision to be made is to establish additional lease stipulations, conditions of approval, or best management practices to guide safe and responsible oil and gas development.

The EIS will not affect oil or gas extraction on state lands or private lands that do not have federal mineral interest, nor will not authorize any actual drilling for exploration or development of oil and gas resources. Subsequent NEPA analysis would be required for any such proposals.

- Management area
- Historic trail
- Area of Critical Environmental Concern
- Private or other
- Bureau of Land Management (BLM)
- BLM Wilderness Study Area
- US Forest Service
- US Forest Service Wilderness
- Bureau of Indian Affairs
- Bureau of Reclamation
- Military
- US Fish and Wildlife Service
- Local government
- National Park Service
- NPS Wilderness
- State
- Hollister Field Office
- County boundary

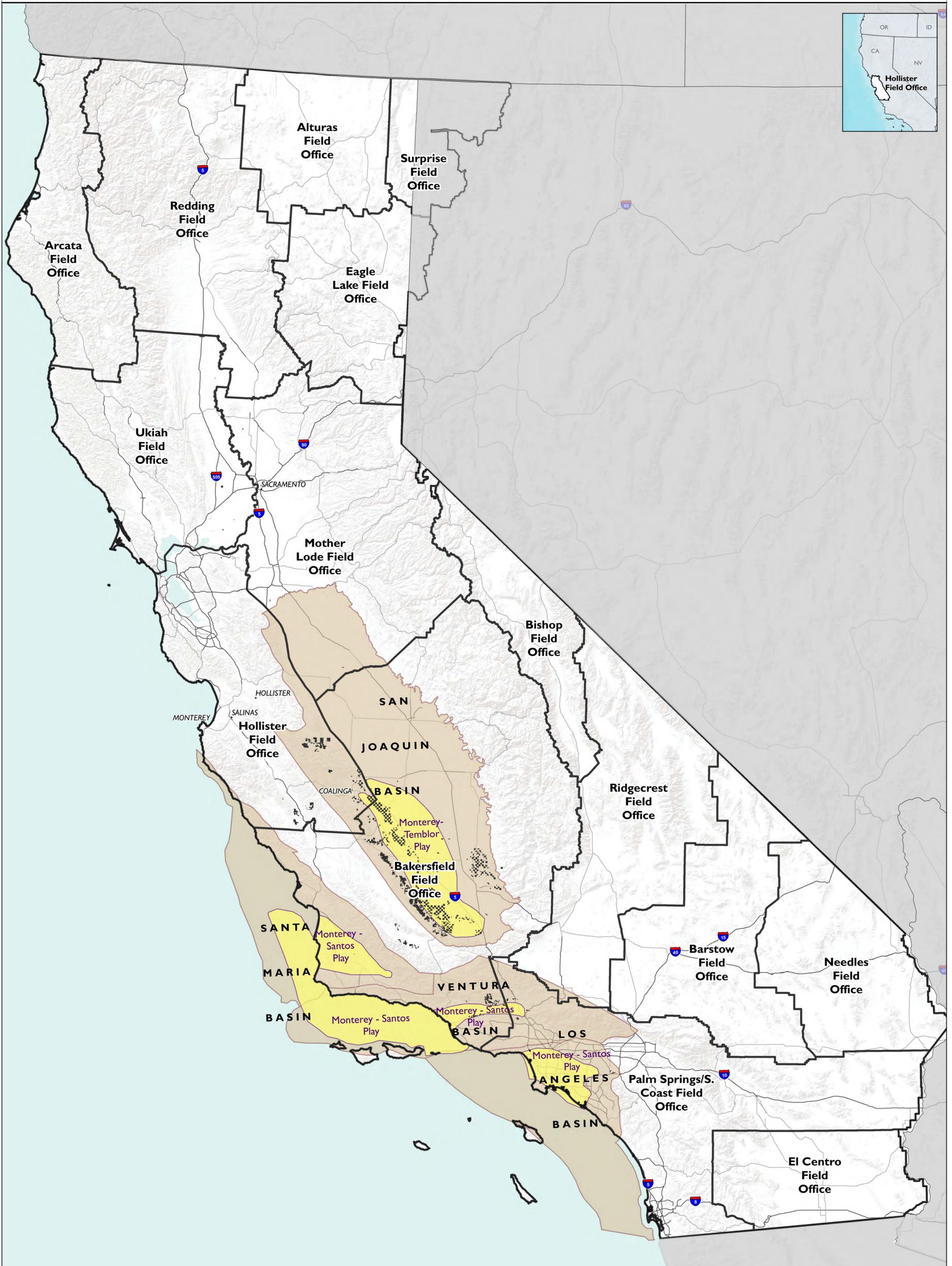


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Source:
 BLM GIS 2013 and 2005

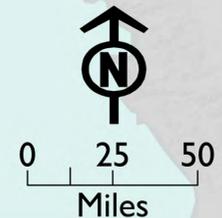
California BLM Field Offices and Geologic Basins

California Oil and Gas Leasing and Development EIS, Hollister Field Office



- Monterey shale play
- Basin
- Current authorized oil and gas leases on federal mineral estate
- BLM field office boundary

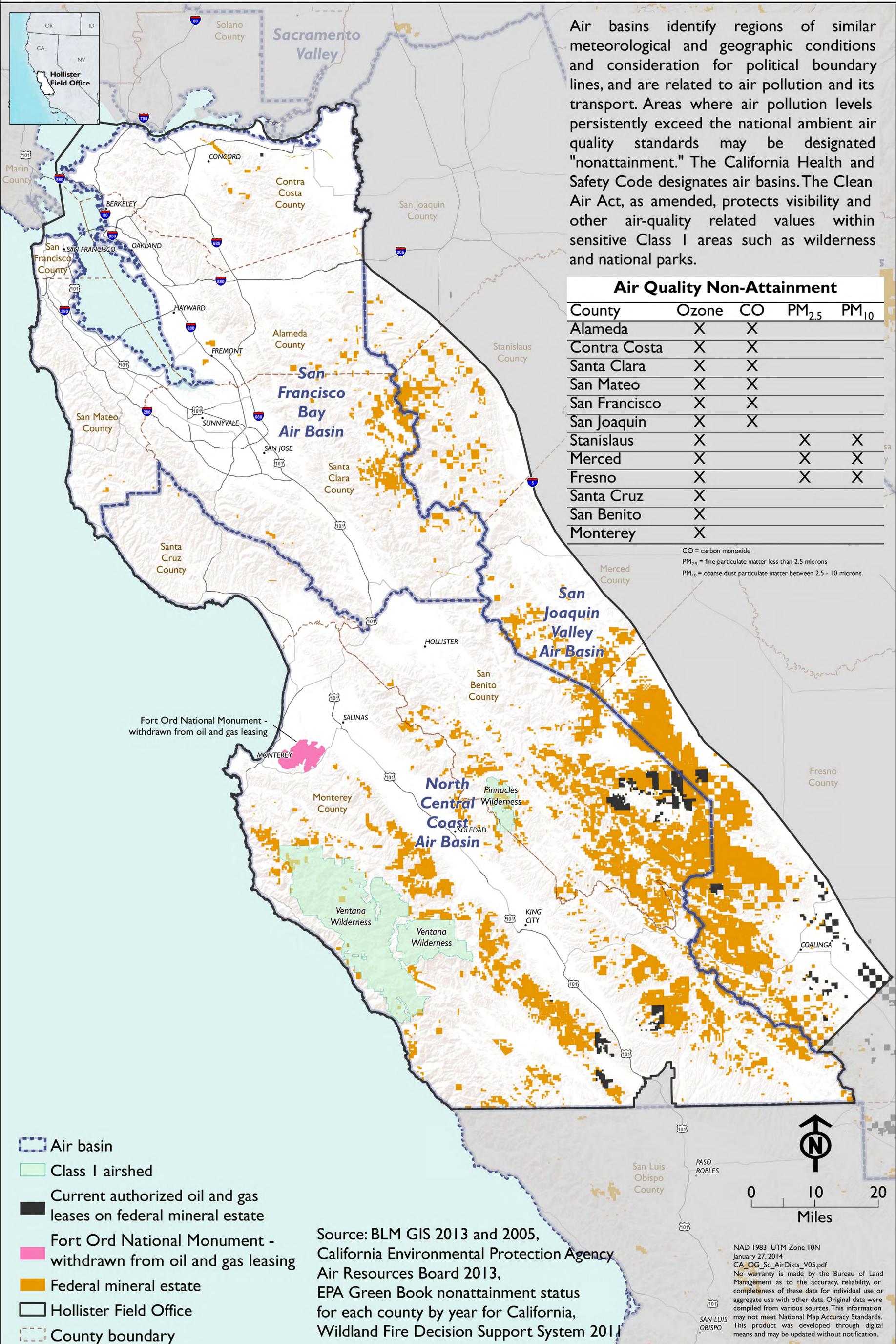
Source: BLM GIS 2013 and 2005, Energy Information Administration 2011, based upon play data from Todd Stevens, Oxy VP, 2010 and Tim Marquez, CEO Venoco Inc. 2010



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Air Basins

California Oil and Gas Leasing and Development EIS, Hollister Field Office



Air basins identify regions of similar meteorological and geographic conditions and consideration for political boundary lines, and are related to air pollution and its transport. Areas where air pollution levels persistently exceed the national ambient air quality standards may be designated "nonattainment." The California Health and Safety Code designates air basins. The Clean Air Act, as amended, protects visibility and other air-quality related values within sensitive Class I areas such as wilderness and national parks.

Air Quality Non-Attainment				
County	Ozone	CO	PM _{2.5}	PM ₁₀
Alameda	X	X		
Contra Costa	X	X		
Santa Clara	X	X		
San Mateo	X	X		
San Francisco	X	X		
San Joaquin	X	X		
Stanislaus	X		X	X
Merced	X		X	X
Fresno	X		X	X
Santa Cruz	X			
San Benito	X			
Monterey	X			

CO = carbon monoxide
 PM_{2.5} = fine particulate matter less than 2.5 microns
 PM₁₀ = coarse dust particulate matter between 2.5 - 10 microns

- Air basin
- Class I airshed
- Current authorized oil and gas leases on federal mineral estate
- Fort Ord National Monument - withdrawn from oil and gas leasing
- Federal mineral estate
- Hollister Field Office
- County boundary

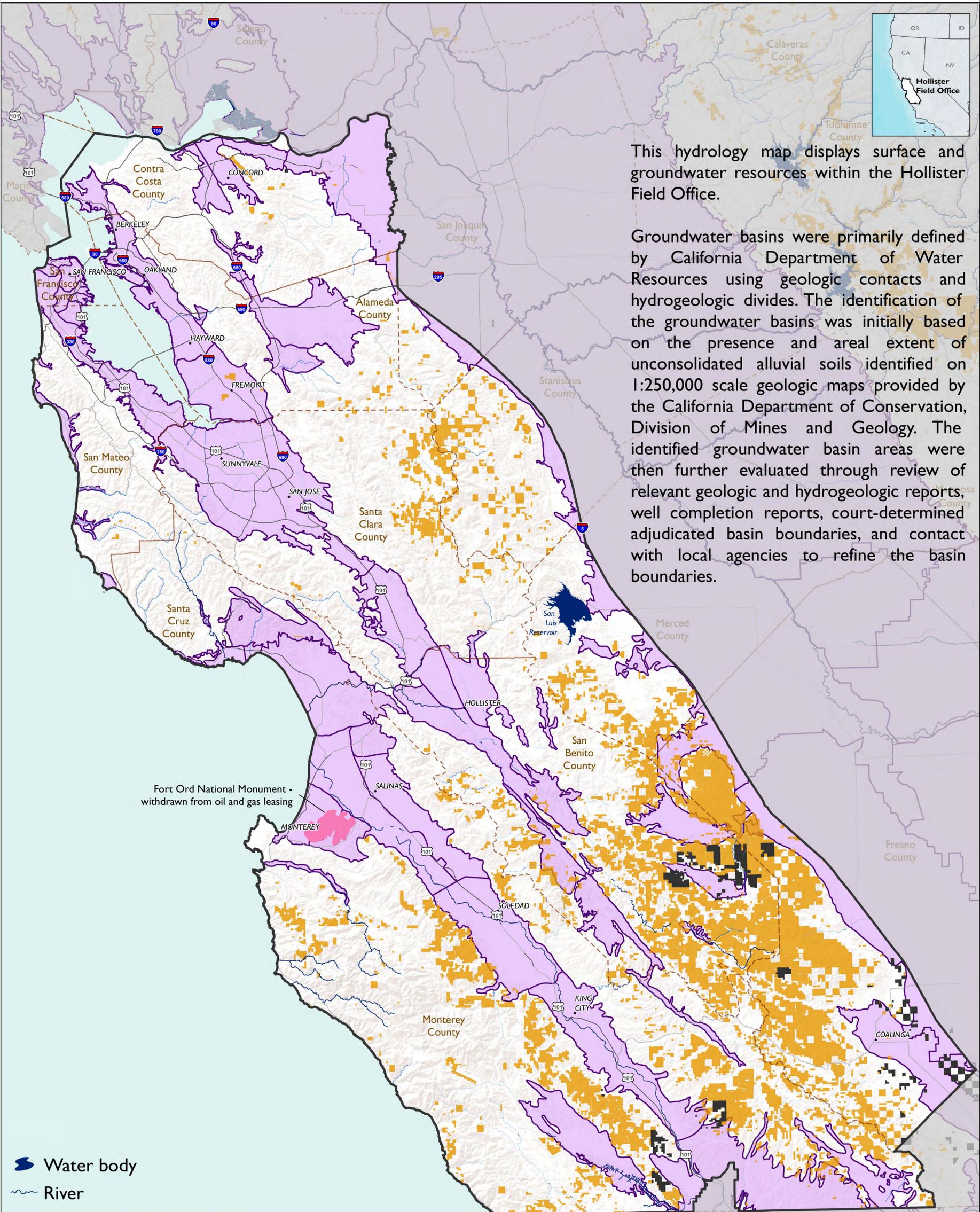
Source: BLM GIS 2013 and 2005, California Environmental Protection Agency Air Resources Board 2013, EPA Green Book nonattainment status for each county by year for California, Wildland Fire Decision Support System 2011

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 Miles

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Hydrology

California Oil and Gas Leasing and Development EIS, Hollister Field Office



This hydrology map displays surface and groundwater resources within the Hollister Field Office.

Groundwater basins were primarily defined by California Department of Water Resources using geologic contacts and hydrogeologic divides. The identification of the groundwater basins was initially based on the presence and areal extent of unconsolidated alluvial soils identified on 1:250,000 scale geologic maps provided by the California Department of Conservation, Division of Mines and Geology. The identified groundwater basin areas were then further evaluated through review of relevant geologic and hydrogeologic reports, well completion reports, court-determined adjudicated basin boundaries, and contact with local agencies to refine the basin boundaries.

- Water body
- River
- Perennial stream or creek
- Intermittent stream or creek
- Groundwater basin
- Current authorized oil and gas leases on federal mineral estate
- Fort Ord National Monument - withdrawn from oil and gas leasing
- Federal mineral estate
- Hollister Field Office
- County boundary

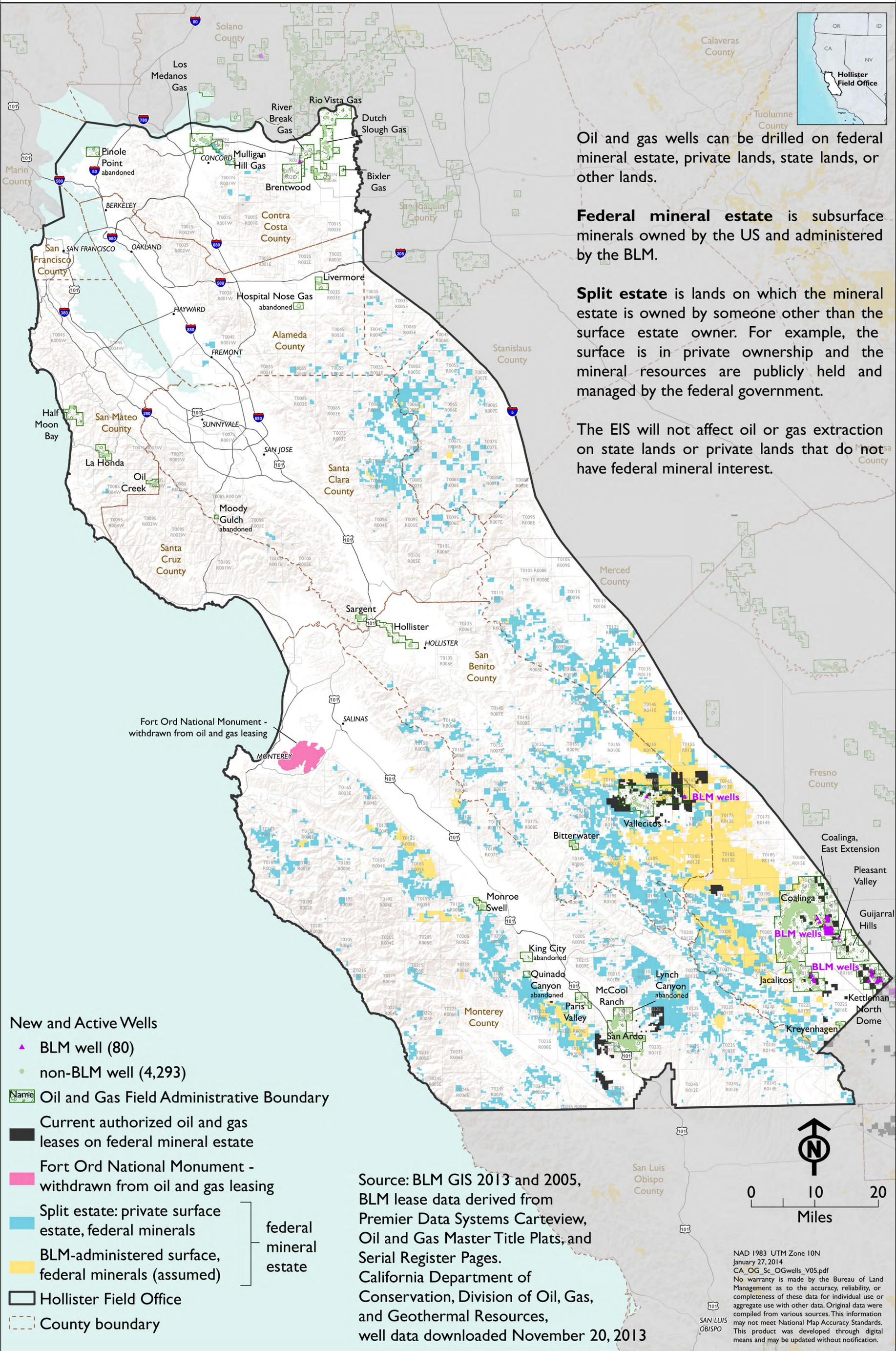
Source: BLM GIS 2013 and 2005, California Department of Water Resources 2013, National Hydrography Dataset rivers and water bodies data edited by the BLM for statewide display



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Active Oil and Gas Wells

California Oil and Gas Leasing and Development EIS, Hollister Field Office



Oil and gas wells can be drilled on federal mineral estate, private lands, state lands, or other lands.

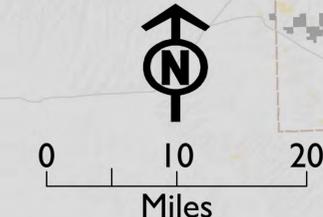
Federal mineral estate is subsurface minerals owned by the US and administered by the BLM.

Split estate is lands on which the mineral estate is owned by someone other than the surface estate owner. For example, the surface is in private ownership and the mineral resources are publicly held and managed by the federal government.

The EIS will not affect oil or gas extraction on state lands or private lands that do not have federal mineral interest.

- New and Active Wells**
- ▲ BLM well (80)
 - non-BLM well (4,293)
- Oil and Gas Field Administrative Boundary**
- Current authorized oil and gas leases on federal mineral estate
 - Fort Ord National Monument - withdrawn from oil and gas leasing
 - Split estate: private surface estate, federal minerals
 - BLM-administered surface, federal minerals (assumed)
 - Hollister Field Office
 - County boundary
- } federal mineral estate

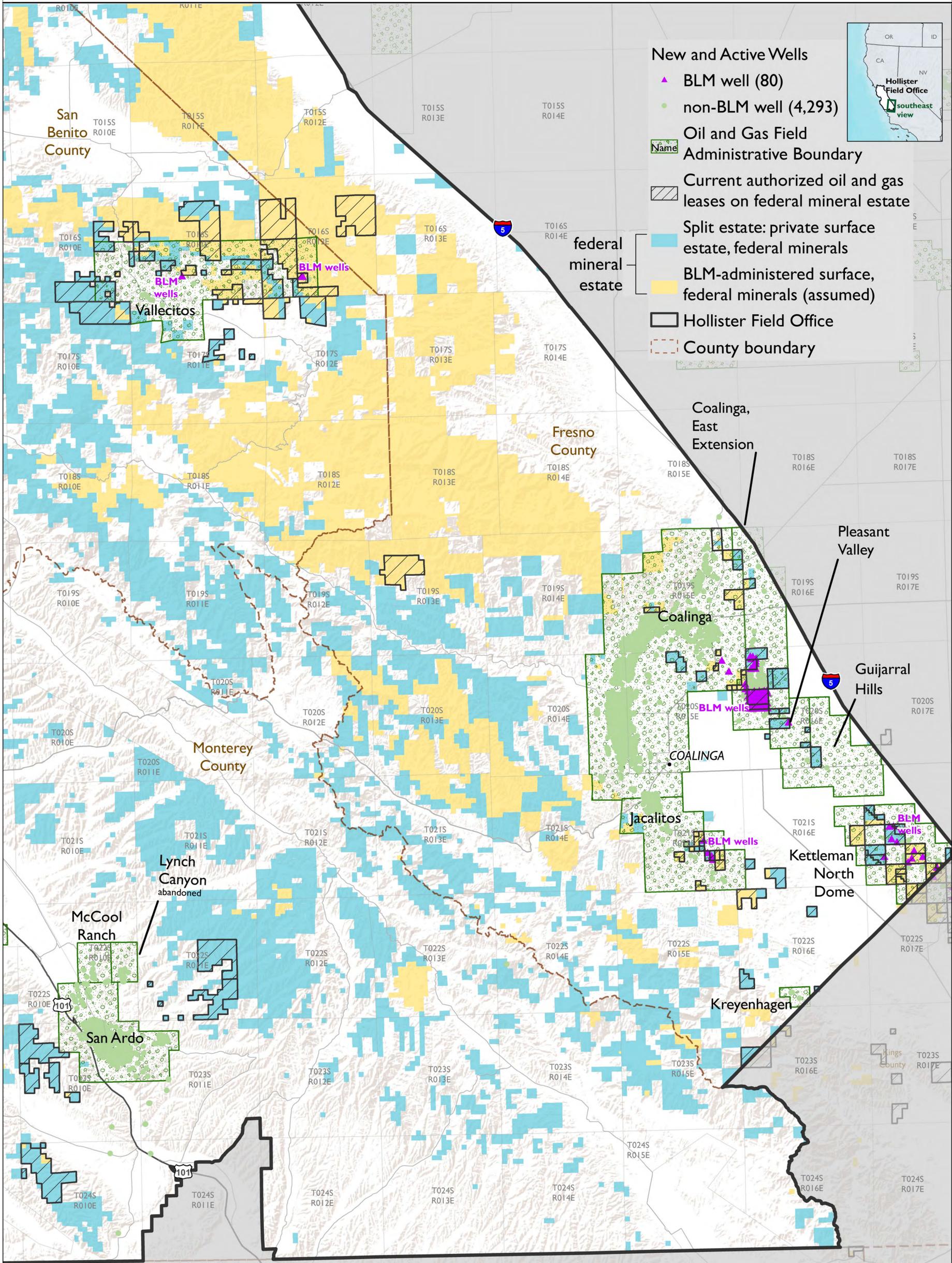
Source: BLM GIS 2013 and 2005, BLM lease data derived from Premier Data Systems Cartevier, Oil and Gas Master Title Plats, and Serial Register Pages. California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, well data downloaded November 20, 2013



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Active Oil and Gas Wells

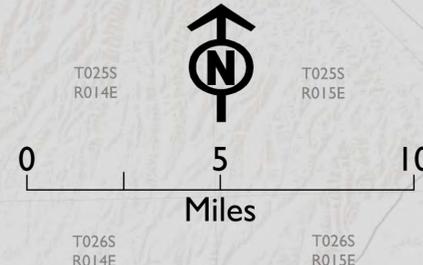
California Oil and Gas Leasing and Development EIS, Hollister Field Office, southeast view



- New and Active Wells**
- ▲ BLM well (80)
 - non-BLM well (4,293)
- Oil and Gas Field**
- Name
- Administrative Boundary**
- Current authorized oil and gas leases on federal mineral estate**
- Split estate: private surface estate, federal minerals**
- BLM-administered surface, federal minerals (assumed)**
- Hollister Field Office**
- County boundary**



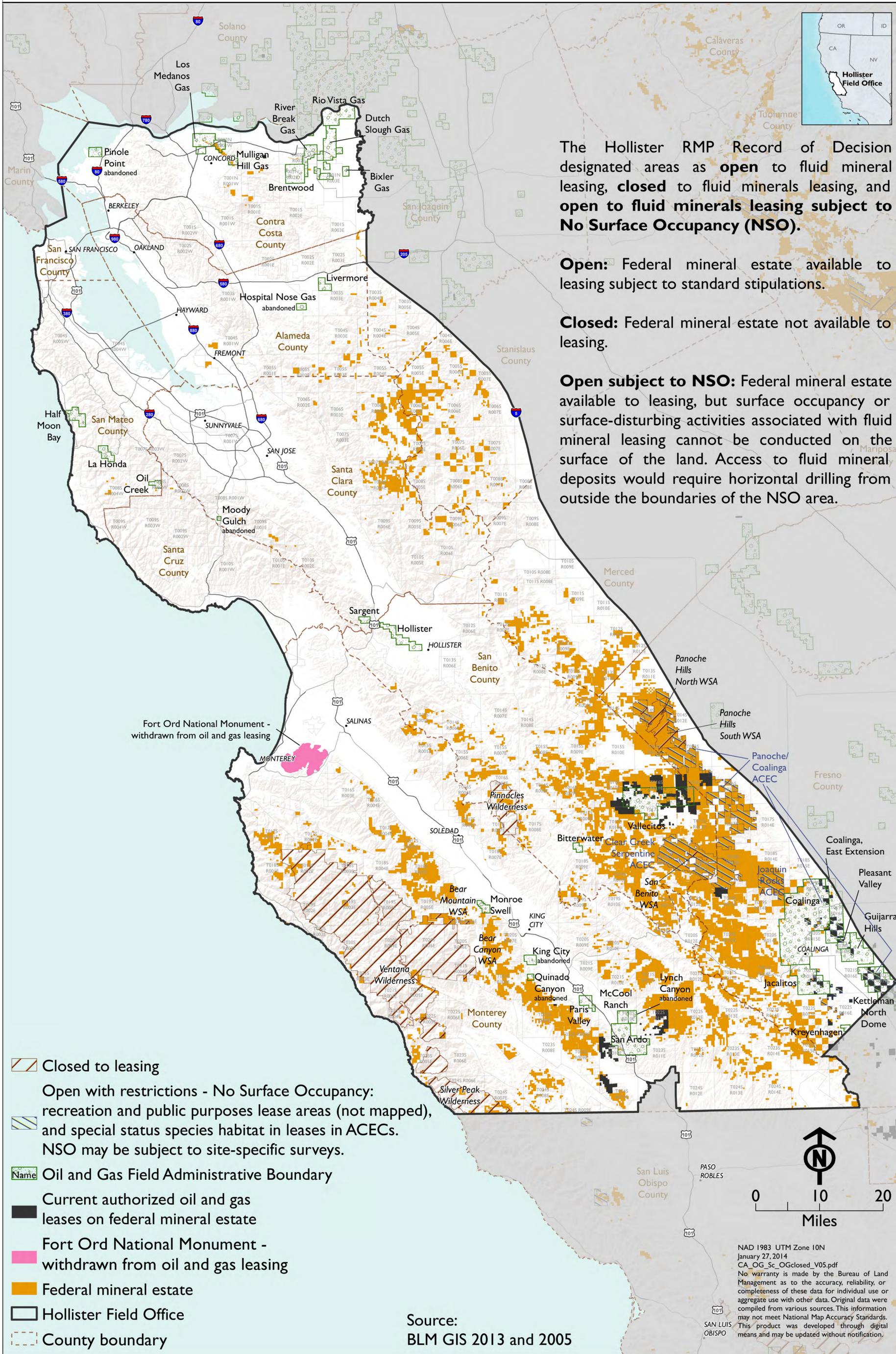
Source: BLM GIS 2013 and 2005, BLM lease data derived from Premier Data Systems Cartevier, Oil and Gas Master Title Plats, and Serial Register Pages. California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, well data downloaded November 20, 2013



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Oil and Gas Leasing: Open, Closed, and Restricted Areas

California Oil and Gas Leasing and Development EIS, Hollister Field Office



The Hollister RMP Record of Decision designated areas as **open** to fluid mineral leasing, **closed** to fluid minerals leasing, and **open to fluid minerals leasing subject to No Surface Occupancy (NSO)**.

Open: Federal mineral estate available to leasing subject to standard stipulations.

Closed: Federal mineral estate not available to leasing.

Open subject to NSO: Federal mineral estate available to leasing, but surface occupancy or surface-disturbing activities associated with fluid mineral leasing cannot be conducted on the surface of the land. Access to fluid mineral deposits would require horizontal drilling from outside the boundaries of the NSO area.

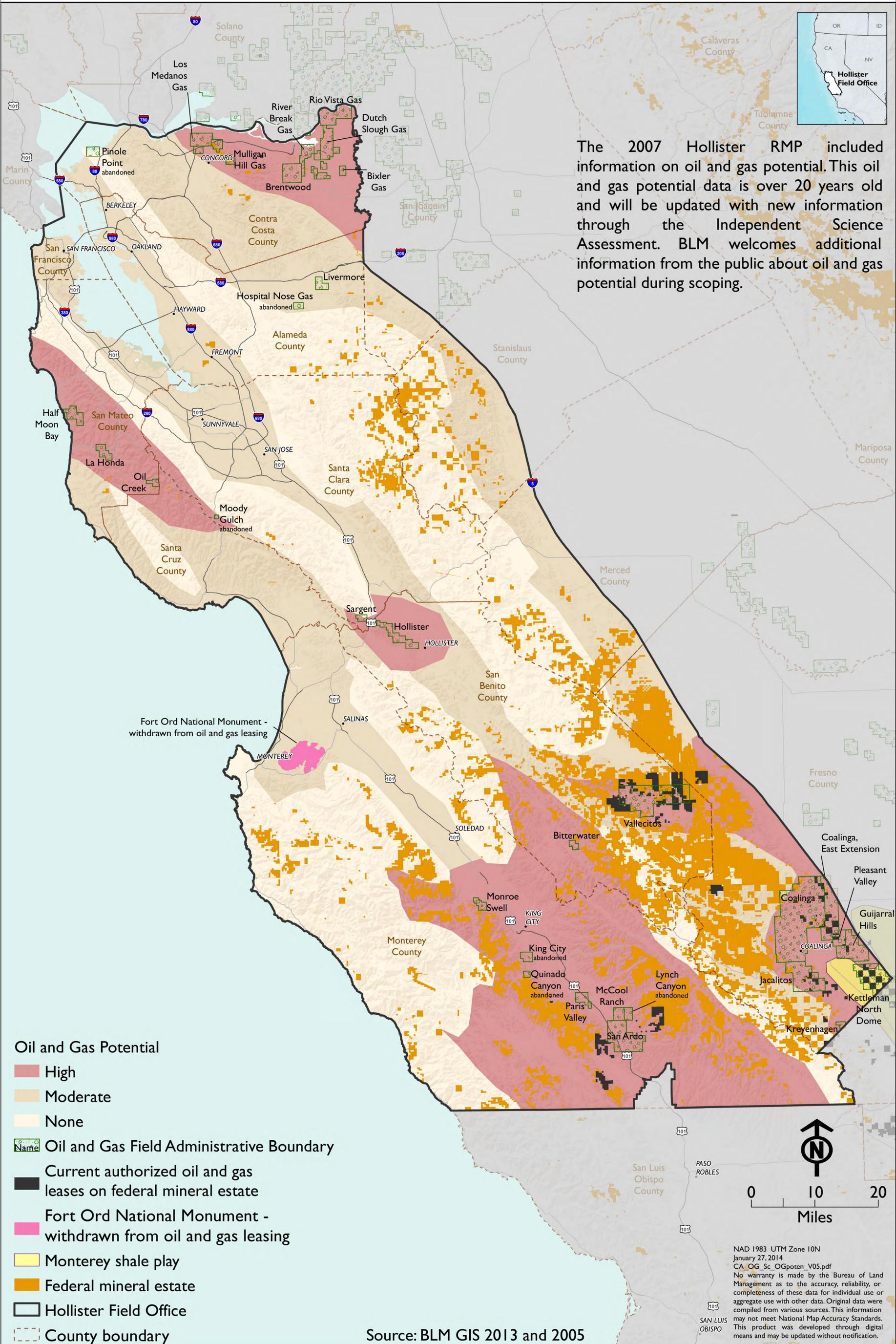
- Closed to leasing
- Open with restrictions - No Surface Occupancy: recreation and public purposes lease areas (not mapped), and special status species habitat in leases in ACECs. NSO may be subject to site-specific surveys.
- Name** Oil and Gas Field Administrative Boundary
- Current authorized oil and gas leases on federal mineral estate
- Fort Ord National Monument - withdrawn from oil and gas leasing
- Federal mineral estate
- Hollister Field Office
- County boundary

Source:
BLM GIS 2013 and 2005

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Oil and Gas Potential

California Oil and Gas Leasing and Development EIS, Hollister Field Office



The 2007 Hollister RMP included information on oil and gas potential. This oil and gas potential data is over 20 years old and will be updated with new information through the Independent Science Assessment. BLM welcomes additional information from the public about oil and gas potential during scoping.

Oil and Gas Potential

- High
- Moderate
- None
- Oil and Gas Field Administrative Boundary
- Current authorized oil and gas leases on federal mineral estate
- Fort Ord National Monument - withdrawn from oil and gas leasing
- Monterey shale play
- Federal mineral estate
- Hollister Field Office
- County boundary

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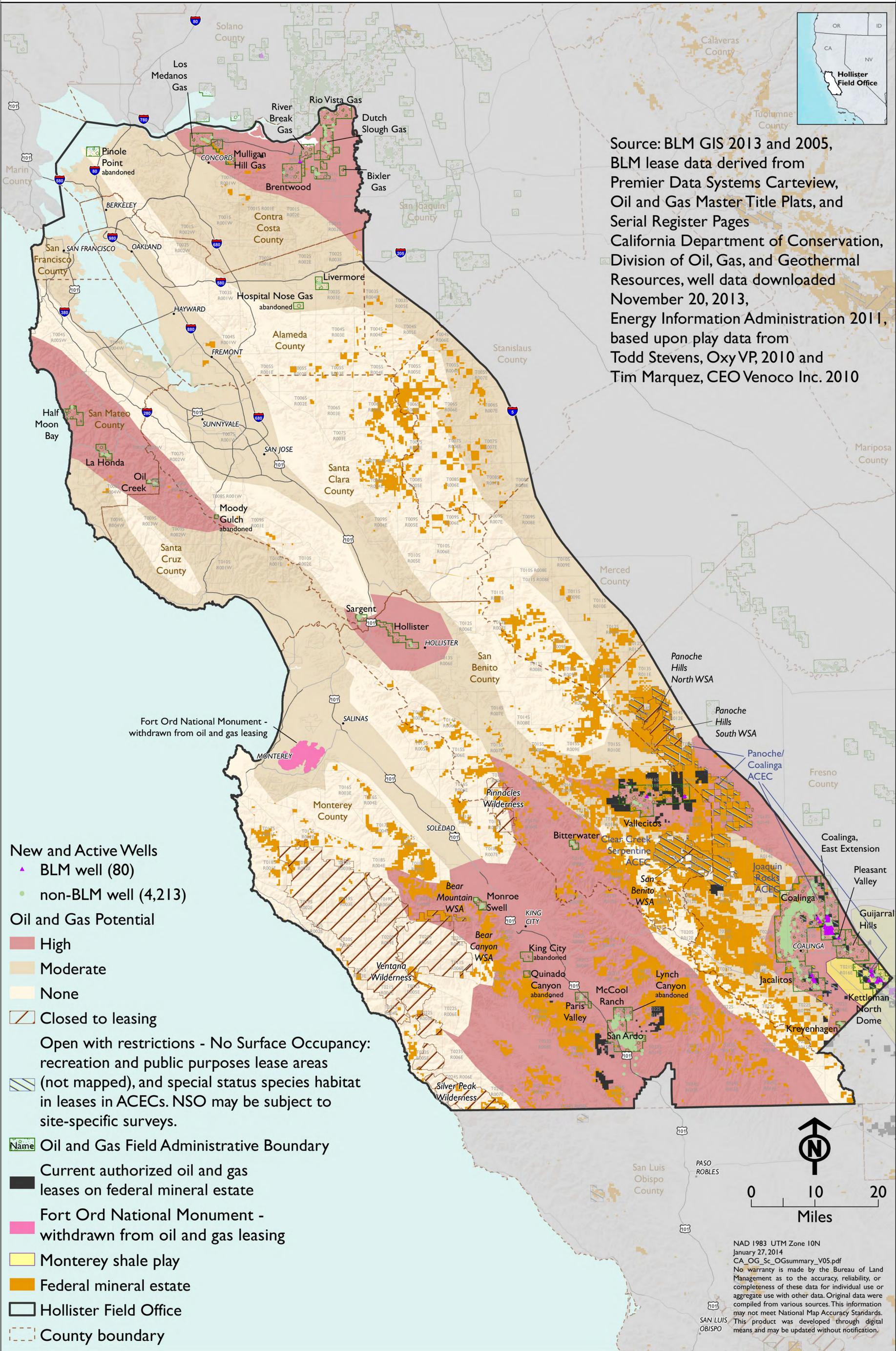
Source: BLM GIS 2013 and 2005

Fluid Minerals Leasing: Summary of Restrictions, Wells, and Potential

California Oil and Gas Leasing and Development EIS, Hollister Field Office



Source: BLM GIS 2013 and 2005, BLM lease data derived from Premier Data Systems Cartevision, Oil and Gas Master Title Plats, and Serial Register Pages California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, well data downloaded November 20, 2013, Energy Information Administration 2011, based upon play data from Todd Stevens, Oxy VP, 2010 and Tim Marquez, CEO Venoco Inc. 2010



New and Active Wells

- ▲ BLM well (80)
- non-BLM well (4,213)

Oil and Gas Potential

- High
- Moderate
- None
- ▨ Closed to leasing

Open with restrictions - No Surface Occupancy: recreation and public purposes lease areas (not mapped), and special status species habitat in leases in ACECs. NSO may be subject to site-specific surveys.

Oil and Gas Field Administrative Boundary

- Current authorized oil and gas leases on federal mineral estate
- Fort Ord National Monument - withdrawn from oil and gas leasing
- Monterey shale play
- Federal mineral estate
- ▭ Hollister Field Office
- ▭ County boundary



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