



C A L I F O R N I A
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Via Electronic Submission on ePlanning

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RE: Comments on the U.S. Bureau of Land Management's Draft Central California Oil and Gas Lease Sale Environmental Assessment and Finding of No Significant Impact, DOI-BLM-CA-C060-2026-0090-EA

Dear Mr. Thomas:

On behalf of the Attorney General of California, Rob Bonta,¹ we submit these comments on U.S. Bureau of Land Management's (BLM) draft environmental assessment (Draft EA) and Finding of No Significant Impact (FONSI) to address the environmental consequences of selling 44 oil and gas leases totaling nearly 36,000 acres across Fresno, Kern, Kings, and San Luis Obispo Counties (the Proposed Action) and the legal deficiencies in these documents.

Despite proposing to auction off nearly 36,000 acres of public lands to the oil and gas industry, BLM fails to consider reasonable alternatives that would reduce impacts to public health and to sensitive habitat and species. The Draft EA purports to tier its environmental analysis to prior programmatic environmental impact statements (EISs) of resource management plans (RMPs) for the Bakersfield Planning Area (which covers 43 of the proposed parcels) and the Central Coast Planning Area (which covers 1 proposed parcel). However, these prior reviews are themselves deficient because they failed to supplement the environmental analysis with updated scientific information (especially on the public health impacts of oil and gas development), and failed to sufficiently analyze and mitigate the environmental impacts of oil

¹ The California Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. See Cal. Const., art. V, § 13; Cal. Gov't Code §§ 12511, 12600–12612; *D'Amico v. Bd. of Med. Examiners*, 11 Cal.3d 1, 14 (1974).

and gas development at the planning stage, as we pointed out in comment letters submitted on March 13, 2026, and which we incorporate by reference and attach as Exhibits A and B.² The Draft EA suffers from these same flaws. It also relies on many of the same incorrect assumptions, particularly the assumption that hydraulic fracturing may occur, despite the fact that this drilling technique was phased out in California.

As we pointed out in our July 31, 2026 scoping comment letter, which is attached as Exhibit C, BLM must take a hard look at the public health impacts of oil and gas drilling near communities, especially since at least 17 of the 44 proposed parcels are within 3,200 feet of residences, schools, hospitals, or other sensitive receptors. Despite this mandate under the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*, the Draft EA includes no discussion of the specific impacts that leasing these parcels may have on nearby communities.

For these reasons, we urge BLM to withdraw its Draft EA and prepare a new analysis that adequately addresses these deficiencies.

BACKGROUND

I. History of Oil and Gas Development in the Bakersfield and Central Coast Planning Areas

A. Bakersfield Field Office

The BLM Bakersfield Field Office manages 400,000 acres of public lands and an additional 1.2 million acres of federal mineral estate in Fresno, Kern, Kings, Madera, San Luis Obispo, Santa Barbara, Tulare, and Ventura Counties (the Planning Area). In 2012, BLM issued a Final EIS purporting to evaluate the environmental impacts of its proposed RMP for the Planning Area. This planning effort sought to update two existing plans that were finalized in 1984 and 1997. Under the preferred alternative (Alternative B), 1,011,470 acres of federal mineral estate, or about 85 percent of the Planning Area, would be open to oil and gas leasing. BLM also completed a Reasonably Foreseeable Development Scenario (RFDS) that projected the exploration, drilling, and production activity that would likely occur in the next 10 years. This activity was estimated to be 100–400 wells drilled on federal mineral estate each year, including 90–360 wells on existing leases and 10–40 wells on new leases. BLM estimated that 25 percent of these wells would be hydraulically fractured. BLM approved the RMP in 2014.

In 2015, the Center for Biological Diversity and Los Padres ForestWatch challenged this final approval in the U.S. District Court for the Central District of California. On September 6, 2016, the District Court found that BLM violated NEPA by failing to analyze the impacts of hydraulic fracturing in the Planning Area and required BLM to supplement its analysis. *Los Padres ForestWatch v. U.S. Bureau of Land Mgmt.*, 2016 WL 5172009, *10–13 (C.D. Cal. Sept.

² California Attorney General's Office, *Comments on DOI-BLM-CA-C060-2025-0053-EIS* (Mar. 13, 2026); California Attorney General's Office, *Comments on DOI-BLM-CA-C090-2025-0017-EIS* (Mar. 13, 2026).

6, 2016). On May 3, 2017, the District Court approved a settlement agreement in which BLM agreed to prepare the appropriate NEPA documents to address the deficiencies identified by the District Court and to issue a new decision document that would amend or supersede the 2014 RMP, if appropriate.

In 2019, BLM issued a Draft Supplemental EIS purporting to analyze the environmental effects of the use of hydraulic fracturing technology in oil and gas development on new leases within the Planning Area. The State of California as well as the Center for Biological Diversity, Central California Environmental Justice Network, Los Padres ForestWatch, National Parks Conservation Association, Natural Resources Defense Council, Patagonia Works, Sierra Club, and The Wilderness Society filed a lawsuit against BLM challenging the decision because the Supplemental EIS did not take a hard look at environmental impacts, consider reasonable alternatives, discuss feasible mitigation measures for impacts on special status species, or consider conflicts with state policies, and was issued without an adequate opportunity for public comment in violation of NEPA. *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, Complaint, No. 2:20-cv-00371 (C.D. Cal. Jan. 14, 2020). Following summary judgment filings, the parties entered into a settlement. Under the settlement, BLM agreed to prepare a supplement to the 2019 Supplemental EIS pursuant to NEPA and consider whether to amend the 2014 RMP. *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, Stipulated Settlement, No. 2:20-cv-00371 (C.D. Cal. Jul. 31, 2022).

In 2026, BLM issued a Draft Supplemental EIS pursuant to the settlement agreement. BLM received 66,265 comments on the Draft Supplemental EIS, including comments from the California Attorney General's Office (Ex. A). In May 2026, BLM issued the Final Supplemental EIS, which remained largely unchanged from the Draft Supplemental EIS and ultimately did not include any new alternatives from the 2012 EIS, updates to the RFDS, or updates to any prior modeling or analyses.

B. Central Coast Field Office

The BLM Central Coast Field Office manages 284,000 acres of public land and 793,000 acres of federal mineral estate in Alameda, Contra Costa, Fresno, Merced, Monterey, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, and Stanislaus Counties (the Planning Area). In early 2017, BLM published a Draft EIS and RMP Amendment. BLM prepared the EIS and RMP Amendment after a court found that BLM's environmental analysis for several oil and gas lease sales, held pursuant to the existing RMP, failed to comply with NEPA. *Ctr. for Biological Diversity et al. v. Bureau of Land Mgmt.*, 937 F. Supp. 2d 1140 (N.D. Cal. 2013).

The 2017 Draft EIS analyzed five alternatives and selected a preferred alternative (Alternative C) that would open roughly 400,000 acres of land to drilling—368,800 acres with controlled surface use stipulations and 29,800 acres with no surface occupancy (NSO) stipulations. BLM relied on a 2015 RFDS that projected the exploration, drilling, and production

activity that would likely occur in the next 15 to 20 years—roughly 32 to 37 wells and 179 to 206 acres of disturbance. Well stimulation technologies and enhanced oil recovery techniques were “assumed to be used on any or all of these wells.”³

In 2019, BLM released a Final EIS and proposed RMP Amendment. The Final EIS identified an entirely new proposal as the preferred alternative (Alternative F) that would open nearly twice as much public land and mineral estate to oil and gas leasing as was considered in the Draft EIS—683,100 acres with controlled surface use stipulations and 42,400 acres with NSO stipulations. This alternative also stripped NSO stipulations from categories of lands that, under all the other alternatives, were protected by an NSO stipulation or closed to leasing, including public lands within state parks and a regional preserve.

Several environmental groups and counties filed a lawsuit alleging that, in approving the RMPA and Final EIS, BLM violated NEPA, the Federal Land Policy and Management Act (FLPMA), and the Administrative Procedure Act. *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, Complaint, No. 3:19-cv-07155-JSC (N.D. Cal. Oct. 30, 2019). When the case settled in 2022, BLM agreed to prepare a supplement to the 2019 Final EIS. Pending issuance of a final decision, BLM also agreed to defer any oil or gas lease sale in the Planning Area.

In January 2026, BLM published the Draft Supplemental EIS for the Central Coast Planning Area. The Draft Supplemental EIS carried forward the same six alternatives identified in the 2019 Final EIS, and again chose Alternative F as the preferred alternative. BLM also relied on the same 2015 RFDS and, except for updated air emissions inventories, BLM did not update any of its modeling or analyses from prior EISs. BLM received 59,925 comments on the Draft Supplemental EIS, including comments from the California Attorney General’s Office (Ex. B). In May 2026, BLM issued the Final Supplemental EIS, which remained largely unchanged from the Draft EIS.

II. Proposed 2026 Lease Sale

On July 2, 2026, BLM proposed an oil and gas lease sale of 50 parcels of land totaling just under 36,000 acres in Fresno, Kern, Kings, and San Luis Obispo Counties. Some of the parcels were combined during the scoping phase, resulting in a total of 44 parcels. These parcels include 18,700 acres of split-estate lands and 16,503 acres of public lands. Draft EA at 1. The vast majority, 97 percent, of the lands proposed for leasing (34,456 acres) are in Kern County. *Id.* Once a lease is issued, the oil and gas operator has 10 years to develop the parcel, and the lease continues so long as oil and gas is being sufficiently produced. *Id.*

During the 30-day public scoping period, BLM received 158 comment submissions, including four submissions that included a combined total of 7,997 additional individual

³ U.S. Bureau of Land Mgmt., Draft EIS for the Central Coast Field Office, DOI-BLM-CA-C090-2016-0035-RMP-EIS, at ES-6 (Jan. 2017), <https://eplanning.blm.gov/documents/?id=1824cb97-a7f2-f011-8407-001dd80db62a&spid=e58b3453-a8f2-f011-8407-001dd80c29f3#>

comments. Draft EA at 5. The California Attorney General’s Office also submitted comments (Ex. C).

The Draft EA and FONSI rely on the flawed Bakersfield Supplemental EIS and RMP and the flawed Central Coast Supplemental EIS and RMP Amendment for the analysis of the lease sale’s environmental impacts. BLM concludes that the December 2026 lease sale “will not significantly affect the quality of the human environment,” that anticipated impacts are within the range of impacts addressed by the Bakersfield RMP and the Central Coast RMP Amendment, and that therefore the Proposed Action “does not constitute a major federal action having a significant impact on the human environment.” Draft FONSI at 2.

NEPA COMMENTS ON DRAFT EA

I. NEPA’s Requirements

NEPA has two fundamental purposes: (1) to guarantee that agencies take a “hard look” at the consequences of their actions before they occur to ensure that “the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts,” and (2) to guarantee that “the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

NEPA requires the preparation of a detailed EIS for any major federal action that will have a reasonably foreseeable significant impact on the human environment. 42 U.S.C. §§ 4332(C), 4336(b)(1). To determine whether an EIS is necessary for a project, the agency may prepare an EA, which should provide sufficient evidence and analysis to justify the agency’s determination whether to prepare an EIS or make a FONSI. *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1225 (9th Cir. 1988).⁴ An EA prepared to support an individual proposed action can be “tiered” to a programmatic EIS—meaning it relies on and incorporates by reference discussion of general matters from another environmental review document. DOI NEPA Handbook at 26. However, an EA is appropriate, and a FONSI may be issued only if that programmatic EIS “fully analyzes” the proposed action’s significant effects. *Id.* at 18. If a proposed action’s significant effects have not been sufficiently analyzed, the agency must prepare an EIS.

Regardless of whether an agency prepares an EIS or an EA, the agency must analyze the reasonably foreseeable effects of the proposed action and reasonable alternatives. DOI NEPA Handbook at 4.

⁴ See also U.S. Dept. of the Interior, 516 DM 1 - NEPA Handbook of National Environmental Policy Act Implementing Procedures (Feb. 2026) [hereinafter “DOI NEPA Handbook”], <https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing>.

II. The Draft EA Fails to Consider Reasonable Alternatives to the Proposed Action

The Draft EA fails to consider a reasonable range of alternatives to the Proposed Action. NEPA requires project proponents to provide a “detailed statement” that includes “alternatives to the proposed action” that “meet the purpose and need of the proposal.” 42 U.S.C. § 4332(C)(iii). The requirement to consider reasonable alternatives “lies at the heart of any NEPA analysis.” *California ex rel. Lockyer v. U.S. Dep’t of Agric.*, 459 F. Supp. 2d 874, 905 (N.D. Cal. 2006). *See also Robertson*, 490 U.S. at 349. The range of alternatives included in an environmental analysis should reflect a “site-specific” analysis, particularly if the programmatic EIS does not include that review, and should include alternatives that reflect a reduced amount of oil and gas operations. *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050–51 (9th Cir. 2013) (holding that an EA that did not consider a reduced grazing option violated NEPA).

Here, the Draft EA only discusses the Proposed Action (Alternative A) and a No Action alternative (Alternative B). Draft EA at 7–8. Although the Draft EA lists other alternatives, BLM did not analyze them. *Id.* at 9. BLM states that the purpose of the Proposed Action is to “respond to [expressions of interest] or nominations to lease Federal oil and gas resources.” *Id.* at 1. And that the need is established by BLM’s responsibility under the Mineral Leasing Act, the Federal Onshore Oil & Gas Leasing Reform Act, and the Federal Land Policy and Management Act to “make mineral resources, such as oil and gas, available for development” as part of BLM’s “multiple-use and sustained-yield mandate.” *Id.* at 1–2.

The Draft EA subsequently states that removing any parcels from lease consideration “would not contribute to the fulfillment of E.O. 14154, Unleashing American Energy.” Draft EA at 10. This arbitrary limitation conflicts with BLM’s statutory mandates and purpose. As BLM recognizes, it must make lands available for oil and gas development consistent with its multiple-use and sustained yield mandate, which requires BLM to “safeguard[] the public welfare,” manage public lands “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values” and “take any action necessary to prevent unnecessary or undue degradation of the lands.” 30 U.S.C. § 187; 43 U.S.C. §§ 1701(a)(8), 1732(b); 43 C.F.R. § 3120.32. BLM cannot arbitrarily ignore these longstanding statutory mandates that define the scope of its obligations.

The Draft EA fails to analyze alternatives that would reduce impacts to public health and that would more fully protect environmental values and prevent undue degradation. For instance, BLM should consider an alternative that does not offer for lease parcels in close proximity to homes, schools, and other sensitive receptors. California law prohibits oil and gas operations within 3,200 feet of sensitive receptors—so-called health protection zones—because of the documented health risks from living near oil and gas operations. Of the 44 parcels BLM has proposed offering for lease, at least 17 overlap with established health protection zones. *See* Exs. E–H. The parcels that overlap with health protection zones include: CA-2099-01-0136, CA-2099-01-0132, CA-2099-01-0175, CA-2099-01-0144, CAP106818522, and CA-2099-01-0177, *see* Ex. E; CA-2099-01-0081, CA-2099-01-0103, CA-2099-01-0149, CA-2099-01-0123, CA-

2099-01-0162, CA-2099-01-0165, CA-2099-01-0167, and CA-2099-01-0135, *see* Ex. F; CA-2099-01-0147, CA-2099-01-0188, *see* Ex. G; and CAP106820777, *see* Ex. H.

BLM should analyze an alternative that excludes these health protection zones from leasing. At the very least, BLM should consider an alternative that requires NSO stipulations for these parcels. NSO stipulations prevent operators from being physically present on the surface of a parcel but still allow for directional drilling of that parcel’s mineral resources as long as such drilling is conducted without any occupying of the surface of the parcel.

The Draft EA also fails to analyze an alternative that would reduce impacts to wildlife habitat or connectivity areas in accord with its own regulations. 43 C.F.R. § 3120.32(b). Around 10 of the parcels included in the proposed list are in the sensitive ecoregion of the Temblor Range, adjacent to Carrizo Plain National Monument. Ex. D. Listed species such as the California condor, San Joaquin antelope ground squirrel, giant kangaroo rat, and San Joaquin kit fox can be found living, foraging, or traveling through this region, which also serves as an important habitat linkage between kit fox populations in the Carrizo Plain and the San Joaquin Valley.⁵ As we pointed out in our March 2026 comments on the Bakersfield Supplemental EIS and again in our July 2026 scoping comments for the Proposed Action, impacts of oil and gas development on these species have never been sufficiently analyzed.⁶ BLM should accordingly include in its NEPA analysis a reasonable alternative that would not offer for lease or include NSO stipulations on the proposed parcels adjacent to Carrizo Plain National Monument.

In addition, many proposed parcels are located within or overlap with Areas of Critical Environmental Concern (ACEC) or other sensitive areas, including one parcel within the Chico Martinez ACEC (CA-2099-01-0147), one within the Kettleman Hills ACEC (CA-2099-01-0186), four within the Lokern-Buena Vista ACEC (CA-2099-01-0081, CA-2099-01-0098, CA-2099-01-0102, and CA-2099-01-0103), one within the Panoche-Coalinga ACEC (CAP106820777), and one parcel that overlaps with the state-owned Lokern Ecological Preserve (CA-2099-01-0188). Draft EA at 9, 13–14; *see* Ex. I (Lokern Ecological Preserve map). BLM should analyze an alternative that would effectuate its duties under FLPMA to provide the requisite “special management attention [that] is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important” resources and “give priority to the ... protection of areas of critical environmental concern.” 43 U.S.C. §§ 1702(a), 1712. Excluding these lands from the lease sale, or applying NSO stipulations to the proposed parcels, is a reasonable alternative that BLM should consider to comply with its requirements under FLPMA to protect ACECs and prevent unnecessary and undue degradation of public lands. Not offering parcels that overlap with state protected lands

⁵ U.S. Bureau of Land Mgmt., *Carrizo Plain National Monument Approved Resource Management Plan and Record of Decision* (Apr. 2010), <https://archive.org/details/recordofdecisionc00bake>.

⁶ *See also* Cal. Dep’t of Fish and Wildlife, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 10, 2019), <https://oag.ca.gov/system/files/attachments/press-docs/2019.06.10-bakersfield-sdeis-comments-final.pdf>.

for leasing is especially reasonable given BLM’s position that such lands have “low to no potential for oil and gas leasing development.”⁷

III. The Draft EA Is Tiered to the Inadequate Bakersfield and Central Coast RMP EISs

The Draft EA tiers to programmatic EISs that rely on flawed data and that do not analyze the specific impacts associated with the Proposed Action. The Draft EA fails to supplement that analysis and is therefore deficient under NEPA.

When an agency has prepared a programmatic EIS, a later related proposed action may rely on the analysis done in (i.e., tier from) the programmatic EIS, so long as the programmatic EIS “fully analyzes those significant effects” and “so long as any previously unanalyzed effects are not significant.” DOI NEPA Handbook at 17–18. The programmatic EIS must “adequately cover[] the new proposed action.” *Id.* at 18; *see also id.* at 26, 36.

Although tiering is permissible, the mere existence of a programmatic EIS (such as the RMP EISs here), does not necessarily obviate the need for any future project-specific EIS. *N. Alaska Env’tl. Ctr. v. U.S. Dep’t of the Interior*, 983 F.3d 1077, 1092 (9th Cir. 2020); *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 997–98 (9th Cir. 2004); *Ctr. for Biological Diversity*, 937 F. Supp. 2d at 1157. It is “improper to tier to an EIS that lacks specific impacts of a proposed project.” *Western Watersheds Project*, 719 F.3d at 1052 (citing *Klamath-Siskiyou Wildlands Ctr.*, 387 F.3d at 997–98). Furthermore, NEPA requires agencies to ensure that the analysis and assumptions of any existing EIS they rely on remain adequate. DOI NEPA Handbook at 16–17, 23; *see Western Watersheds Project*, 719 F.3d at 1052 (“An agency errs when it relies on old data without showing that the data remain accurate.”).

Here, the Draft EA tiers from and incorporates by reference analysis in the 2012 Bakersfield Field Office Proposed RMP and Final EIS (2012 Bakersfield RMP and EIS), the Bakersfield Field Office Supplemental EIS Analyzing Hydraulic Fracturing (2019 Bakersfield SEIS), the Bakersfield Field Office Oil and Gas Leasing Development Supplemental EIS (2026 Bakersfield SEIS), the Central Coast Field Office RMP Amendment for Oil and Gas Leasing Development and EIS (2019 Central Coast RMPA and EIS), and the Central Coast Field Office Oil and Gas Leasing and Development Supplemental EIS (2026 Central Coast SEIS). Draft EA at 4. However, the analyses in these documents is inadequate because, as each of those documents explicitly point out, none analyze site-specific impacts. Instead, all of these documents state that site-specific impacts—including impacts to greenhouse gas emissions, water resources, surface water quality and supply, biological resources, air toxics, and more—will be analyzed later. *E.g.*, 2026 Bakersfield SEIS at 50, 60–62.

⁷ U.S. Bureau of Land Mgmt., *Final SEIS for the Bakersfield Field Office*, DOI-BLM-CA-C060-2025-0053-EIS, at A-20 (May 2026) [hereinafter 2026 Bakersfield SEIS], <https://eplanning.blm.gov/Documents/?id=270BABE9-A7F2-F011-8406-001DD802FDEA&spid=45b90693-a8f2-f011-8407-001dd803d067#>.

The Proposed Action will have geographically specific impacts that must be analyzed. Because the proposed locations of the lease parcels are known, certain impacts, including impacts to public health, water, air pollution, cultural resources, and sensitive habitat and species, can be analyzed more specifically than were analyzed in the programmatic EISs, as discussed more fully below in Section IV. For instance, while the Proposed Action seeks to lease nearly 36,000 acres across four different counties, 97 percent of the land BLM proposes to auction is located in Kern County. Thus, it is insufficient to solely rely on the Bakersfield SEIS, which analyzes oil and gas operations across a much broader geographic territory encompassing around 1.6 million acres of lands in eight counties: Fresno, Kern, Kings, Madera, San Luis Obispo, Santa Barbara, Tulare, and Ventura. 2026 Bakersfield SEIS at ES-1.

The assumptions in the programmatic EISs are also inaccurate. The 2019 and 2026 Bakersfield SEISs focus on the impacts of hydraulic fracturing, a specific type of well treatment to enhance oil and gas recovery.⁸ 2019 Bakersfield SEIS at 2; 2026 Bakersfield SEIS at 4. But as of 2024, the California Geologic Energy Management Division (CalGEM), which has the authority to regulate well treatment, has entirely phased out hydraulic fracturing in the state. Cal. Code Regs. tit. 14, § 1780(d); see Draft EA at 20 (acknowledging that CalGEM regulates well treatment). The Draft EA not only fails to acknowledge this important development, but it continues to rely on the assumption in the programmatic EISs about the number of wells that will be drilled and the number of wells that will be hydraulically fractured, assuming “that up to 4 of the 40 wells which may result from the proposed lease sale could be completed using hydraulic fracturing technology.” Draft EA at 15. Because the 2019 and 2026 Bakersfield SEISs focus on analyzing impacts from a well treatment that is no longer permitted in California, the analysis and assumptions in these documents cannot be relied upon to analyze the impacts of the Proposed Action.

Even if it were appropriate to assume hydraulic fracturing could occur, the assumption that only 4 out of 40 new wells would be hydraulically fractured per year is unsupported and is contradicted by BLM’s own prior statements that about 90 percent of new wells drilled on public lands are hydraulically fractured. 80 Fed. Reg. at 16,190; see also Ex. A at 9. And BLM has not shown how this data remains accurate. *Western Watersheds Project*, 719 F.3d at 1052; *Ctr. for Biological Diversity*, 937 F. Supp. 2d at 1148, 1155 (invalidating an EA that relied on unfounded assumptions about the frequency of hydraulic fracturing).

IV. The Draft EA Fails to Take a Hard Look at the Impacts of Oil and Gas Drilling

NEPA requires agencies to take a “hard look” at the environmental consequences of proposed agency actions before those actions are undertaken. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004); see 42 U.S.C. § 4332. This hard look

⁸ U.S. Bureau of Land Mgmt., *Final Hydraulic Fracturing SEIS for the Bakersfield Field Office*, DOI-BLM-CA-C060-2018-0082-EIS, at 2 (Oct. 2019) [hereinafter “2019 Bakersfield SEIS”], <https://eplanning.blm.gov/documents/?id=92a98fa5-a7f2-f011-8407-001dd80c29f3&spid=a7916569-a8f2-f011-8407-001dd80bcf93#>

analysis must be conducted at the earliest reasonable time. *Kern v. Bureau of Land Mgmt.*, 284 F.3d 1062, 1072 (9th Cir. 2002).

A hard look analysis requires the agency to provide sufficient evidence and analysis to support its conclusions. “General statements about ‘possible effects’ and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998). Agencies also “may not rely on incorrect assumptions or data.” *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953, 964 (9th Cir. 2005). In addition, to fulfill NEPA’s “hard look” requirement, an agency must consider all “reasonably foreseeable environmental effects” of the proposed action, including cumulative impacts. 42 U.S.C. § 4332(C); *N. Alaska Env’tl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006); *Ctr. for Biological Diversity v. Salazar*, 695 F.3d 893, 916–17 (9th Cir. 2012); *Kern*, 284 F.3d at 1076 (holding that EAs must consider cumulative impacts). Here, BLM has failed to consider several environmental impacts related to its Proposed Action and to support its conclusions with adequate analysis.

A. Impacts of Enhanced Oil Recovery Methods

The Draft EA fails to consider any impacts specific to enhanced oil recovery (EOR) methods, including hydraulic fracturing, cyclic steam injection, water flooding, and steam flooding.

As previously stated, and as pointed out in our March 13, 2026 comment letters, hydraulic fracturing should not occur on any new leases, but if it could occur, BLM must take a hard look at hydraulic fracturing’s impacts. See Ex. A at 8–11 and Ex. B at 7–8. BLM’s unsupported assumption that only up to four wells will be hydraulically fractured distorts its analysis of the environmental impacts. See Ex. A at 10–20. In addition, the Draft EA fails to discuss any impacts specific to the use of hydraulic fracturing. For instance, with regards to hydraulic fracturing’s impacts on water, hydraulic fracturing occurs at shallower depths—where groundwater is typically present—in California compared to other states, and tends to occur in oilfields with many existing active and inactive wells that can serve as leakage pathways.⁹ The Draft EA fails to analyze or even acknowledge these specific risks. Nor does it recognize the risks of hydraulic fracturing in drought-prone regions or areas prone to land subsidence or seismic activity—all of which are at play with regard to this lease sale.

The Draft EA also fails to consider the unique impacts of other EOR methods, despite acknowledging that these methods already occur in the areas where BLM is proposing to lease lands for oil and gas. For instance, the Draft EA notes that more than 7,000 acres of land across nine parcels in Kern County are located in an area where operators use steam injection, which is “the process of heating underground tar-like crude” to decrease viscosity. Draft EA at 12.

⁹ U.S. EPA, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary* (Dec. 2016), https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf

Another 4,500 acres across 11 different parcels are located in a different area of Kern County near oilfields that also regularly use cyclic steam injection. Draft EA at 13. Cyclic steam injection and other EOR techniques have the potential to increase the impacts already associated with oil and gas development because EOR extends oil and gas development in areas where it would otherwise cease. Steam injection and other EOR techniques also use significantly more water than primary oil recovery and even hydraulic fracturing.¹⁰ In 2013, the total volume of freshwater injected by operators for EOR is estimated to have been up to 60 million cubic meters (49,000 acre-feet).¹¹ This compares to about 1 million cubic meters (800 acre-feet) per year for hydraulic fracturing.¹² EOR also generates more air pollution and GHG emissions.¹³ *See also* Ex. A at 12–13 and Ex. B at 13–15.

In its prior environmental analyses, BLM acknowledges that EOR methods are “commonly used and may have water use, emissions, and operational profiles that differ from other production methods.” 2026 Bakersfield SEIS at 61. But it defers analysis of these impacts because the “relevance and magnitude of those effects would depend on site-specific factors such as location, reservoir characteristics, water source, infrastructure, and proposed operations.” *Id.* Because the proposed lease locations are now known and because many of the leases occur in areas where cyclic steam injection is common, BLM must analyze the impacts of these techniques, including the factors it identified in the SEIS as bearing on those impacts, such as reservoir characteristics and water sources. But despite acknowledging that some of these techniques are used in the very locations for which it is proposing to lease additional lands, the Draft EA contains no analysis of the impacts of using these practices.

B. Public Health Impacts of Drilling Near Communities

The Draft EA fails to take a hard look at the health risks of oil and gas operations on nearby communities. Although 17 of the 44 proposed parcels overlap at least partially with identified health protection zones (*see* Exs. E–H), meaning they are within 3,200 feet of sensitive receptors, the Draft EA fails to examine the impacts of leasing these lands on nearby residents. Instead, the Draft EA concludes that because the air quality in the San Joaquin Valley Air Basin (SJVAB) is already so poor, the impacts of oil and gas operations will be negligible. Draft EA at 23–24 (“SJVAB residents are exposed to a substantial rate of ongoing air toxics emissions and

¹⁰ Yaha Amin, et al., *Comprehensive Evaluation of Cyclic Steam Stimulation for Enhanced Heavy Oil Recovery: Assessing Production and CO2 Emissions*, J. OF PETROLEUM EXPLORATION AND PRODUCTION TECH. (Sept. 2025), <https://link.springer.com/article/10.1007/s13202-025-02052-1>; Cal. Council on Sci. and Tech., *An Independent Scientific Assessment of Well Stimulation in California, Summary Report* (“CCST Summary Report”) 18–19 (2015), http://ccst.us/projects/hydraulic_fracturing_public/SB4.php.

¹¹ *Id.* at 19.

¹² *Id.* at 18.

¹³ *Id.* at 40; *see also* Raymond Millemann, et al., *Enhanced oil recovery: Environmental issues and state regulatory programs*, 7 ENV'T INTERNAT'L 3 (1979) at 165–177, <https://www.sciencedirect.com/science/article/pii/0160412082901039?via%3Dihub>.

related health risks. The RFDS would increase these emissions; however, as described above, the increase would be too small to cause a discernible change to existing health risks.”).

This conclusory statement fails to consider the site-specific impacts on residents who live, work, and congregate near the proposed lease parcels. Such site-specific impacts are not speculative. Indeed, scientific research has found that proximity to oil and gas operations increases the likelihood of adverse health outcomes—particularly adverse perinatal and respiratory outcomes like reduced fetal growth, preterm birth, asthma, and reduced lung function. These outcomes worsen where the density of wells is greater. Specifically, a Public Health Rulemaking Scientific Advisory Panel in California concluded “with a high level of certainty that the epidemiologic evidence indicates that close residential proximity to [oil and gas development] is associated with adverse perinatal and respiratory outcomes....”¹⁴ Further, scientific studies “consistently demonstrate evidence of harm at distances less than 1 km, and some studies also show evidence of harm linked to [oil and gas development] activity at distances greater than 1 km.”¹⁵

Similarly, the Draft FONSI concludes that impacts to public health and safety will not be significant in part because the Proposed Action “does not authorize lease development or surface use and, through the application of standard lease terms and lease stipulations, would avoid or minimize impacts including to public health and safety.” Draft FONSI at 8–9. But BLM fails to identify and explain the data it relies on to support this conclusion. It also fails to acknowledge that none of the proposed lease parcels include NSO stipulations, meaning BLM lacks the discretion to prohibit drilling outright. As courts have consistently upheld, the issuance of non-NSO leases triggers the need for BLM to “conduct a thorough NEPA analysis,” because non-NSO leases constitute an “irretrievable commitment of resources.” *Ctr. for Biological Diversity*, 937 F. Supp. 2d at 1152–1153; *Conner v. Burford*, 848 F.2d 1441, 1451 (9th Cir. 1988).

The Draft EA fails to consider how leasing parcels within 3,200 feet of known sensitive receptors would impact health risks for residents, instead generalizing impacts to the entire air basin. Such generalization fails to meet NEPA’s hard look standard and BLM offers no justification for why it could not provide more specific information. Indeed, elsewhere in the Draft EA, it considers the geographic location of the proposed lease parcels in relation to existing oil and gas fields for purposes of determining environmental impacts. *See, e.g.*, Draft EA at 11–13, 15, 31–32, 35. Because the location of the lease parcels and their proximity to sensitive receptors is not speculative, BLM should have analyzed the health impacts of its Proposed

¹⁴ Seth Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel*, at 1 (Oct. 2021), <https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf>.

¹⁵ *Id.*; *see also* David Gonzalez et al., *Upstream Oil and Gas Production and Ambient Air Pollution in California*, 806 SCI. OF THE TOTAL ENV’T 150298 (2022), <https://www.sciencedirect.com/science/article/pii/S0048969721053754> (finding elevated levels of particulate matter, nitrogen oxides, volatile organic compounds, ozone, and carbon monoxide up to 4 km from preproduction and production wells).

Action. Instead, it attributed any impacts to the entire air basin. Such generalization fails to meet NEPA's hard look requirement, including NEPA's mandate that agencies confront the full extent of environmental impacts from a proposed action at the earliest reasonable time. *Kern*, 284 F.3d at 1072.

As noted in our scoping comments, the parcels within 3,200 feet of sensitive receptors include CA-2099-01-0123. Based on the mapping data from the preliminary parcel list, the Maricopa Unified School District's elementary, middle, and high schools were located on this parcel. Although it appears that BLM may have removed the school's footprint from the parcel, *compare* Ex. F with Ex. C at 4, the parcel still falls within 3,200 feet of the school. Ex. F. Yet the Draft EA includes no discussion of how attending school next to an active oil and gas site may impact those children's health. Similarly, multiple proposed parcels are near communities outside of Bakersfield and Oildale, see Ex. E, a region that already bears a disproportionate amount of pollution from oil and gas operations and that has failing grades for air quality, where according to the American Lung Association, simply breathing the air may put residents' health at risk.¹⁶

The public health impacts of oil and gas operations go beyond the impacts of breathing polluted air to include drinking contaminated water and suffering sleep disturbances from the noise impacts associated with oil and gas development. For instance, Kern County, where the majority of the proposed parcels are located, suffers from some of the worst groundwater threats to drinking water contamination in California. Of the nine proposed parcels located north of Oildale, see Draft EA at 11 (described as Unit 1), six are located within 3,200 feet of sensitive receptors and are also located in a region that faces more groundwater threats than 82 to 96 percent of the state, according to CalEnviroScreen. See Exs. E and J. Many of these groundwater threats are due to oil and gas operations, such as produced water ponds. Not surprisingly, these same regions have higher levels of drinking water contamination than 87 to 94 percent of California. Ex. K. Research has also found that the noise associated with oil and gas operations can have public health impacts that include sleep disturbance and even cardiovascular impacts on nearby residents.¹⁷

C. Water Impacts

BLM's analysis of water quality and supply suffers from many of the same deficiencies as the water quality and supply analysis in the Bakersfield and Central Coast SEISs, on which the Draft EA relies. Ex. A at 12–15; Ex. B at 12–17. The Draft EA fails to even attempt to quantify the impacts, asserting that the “nature and magnitude of those effects would depend on site-specific conditions and development decisions that are not known at the leasing stage.” Draft EA at 50. Although the Draft EA acknowledges that water quality and quantity impacts “could

¹⁶ Am. Lung Assoc., *State of the Air 2026*, <https://www.lung.org/research/sota/city-rankings/states/california/kern>.

¹⁷ Jake Hays, *Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development*, 580 SCI. OF THE TOTAL ENV'T 448 (2017), <https://www.sciencedirect.com/science/article/abs/pii/S0048969716325724?via%3Dihub>.

be more consequential where pumping was concentrated near other users or sensitive receptors, occurred during dry conditions, or contributed to applicable groundwater-management thresholds,” it fails to quantify, or to even attempt to quantify, those impacts. Draft EA at 53. Yet, BLM knows the locations of the parcels it has proposed to auction for oil and gas development, and knows which are near sensitive receptors and which are located in critically overdrafted water basins. BLM must analyze these reasonably foreseeable impacts.

Regarding water supply, the Draft EA fails to quantify the amount of water that may be used. Draft EA at 51. And it fails to analyze how that usage will impact water supply in the areas of the proposed lease parcels, which is unreasonable because data is available to estimate these reasonably foreseeable impacts. For instance, the California Council on Science and Technology, a non-partisan organization that provides objective advice to state entities, found that in 2017, the oil and gas industry extracted more than 408,000 acre-feet of water and that the industry is extracting increasing amounts of water per barrel of oil recovered.¹⁸ In Kern County alone, the oil and gas industry produced 233,893 acre-feet of water in 2017, more than any other county.¹⁹ Yet the Draft EA impermissibly defers consideration of this impact because “no [water] source or quantity has been proposed.” Draft EA at 50.

Similarly, the Draft EA acknowledges the potential for impacts to water quality, including from accidental releases of “fuels, drilling fluids, chemicals, and produced water,” the migration of “drilling fluids in permeable formations, commingling of waters of different sources and quality,” and the injection or disposal of drilling fluids. Draft EA at 50–52. But it makes no attempt to quantify these impacts and dismisses the impacts as incremental without providing any data to support that conclusion.

D. Air Impacts

Despite BLM’s statements to the contrary, it is reasonably foreseeable that the Proposed Action will significantly increase air pollution. Oil and gas facilities emit significant air pollution, including 30 percent of all sulfur oxides, over 70 percent of hydrogen sulfide, and 8 percent of anthropogenic volatile organic compounds in the San Joaquin Valley, which in turn react with nitrogen oxides to create ozone.²⁰ Oil and gas development is also responsible for the majority of emissions of multiple toxic air contaminants in the Valley, including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide.²¹ In addition, the ponds that store

¹⁸ Cal. Council on Sci. and Tech., *An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report* (Aug. 2019) at 17, <https://ccst.us/wp-content/uploads/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf> (hereinafter “CCST SB 1281 Phase II Report”).

¹⁹ *Id.* at 10.

²⁰ Cal. Council on Sci. and Tech., *An Independent Scientific Assessment of Well Stimulation in California, Vol. II* (July 2015) at 182, <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-7.pdf> (hereinafter “CCST Report Vol. II”).

²¹ Seth Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel*, at 10 (Oct. 2021), <https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf>.

produced water from oil and gas operations—including from both conventional production and EOR techniques—have the potential to generate significant air pollutant emissions.²² There are more than 1,200 produced water ponds in California, and most are located in the Central Valley.²³ Hydraulic fracturing on public lands also produces significant air pollution emissions, including nitrogen oxides, sulfur dioxide, fine particulate matter, volatile organic compounds, silica dust, and toxic air contaminants like benzene.²⁴

The Draft EA states that to determine whether air pollution impacts are significant, it will compare air pollution emissions related to the lease sale with “public data on overall air pollutant emissions and pollutant concentrations in the [San Joaquin Valley Air Basin].” Draft EA at 16. But this analysis is misleading for several reasons.

First, just as it did in the 2026 Bakersfield SEIS, BLM attempts to diminish the significance of air pollution impacts from oil and gas production by presenting tables with sources of criteria air pollutant emissions and other hazardous air pollutant emissions from oil and gas production relative to other sources. Draft EA at 23. As we pointed out in our March 13, 2026 comment letters, lumping all criteria and hazardous air pollutants together across the entire air basin makes it impossible to understand how oil and gas operations contribute to the harmful pollutants most associated with those operations, including sulfur oxides, hydrogen sulfide, and volatile organic compounds. Different pollutants are emitted at different tonnage rates, which explains why the total emissions of “wildfire” dwarf other source categories. For example, when isolating the EPA National Emissions Inventory data for sulfur dioxide from Kern County, oil and gas production is the second highest category, with 20 percent of the emissions. See Ex. A at 16–17. Similarly, isolating the data to volatile organic compound emissions from Kern County, oil and gas production is the fourth highest category. One study similarly estimates that VOC emissions from oil and gas extraction in the Central Valley are akin to total transportation emissions in the region.²⁵ Bakersfield in particular attributes 22 percent of all anthropogenic emissions during the spring and summer months to petroleum operations, and 8 percent of all total potential ozone precursors.²⁶ This study and the California Council on Science and Technology report noted above suggest that petroleum operations are responsible for significant amounts of relevant air pollutant emissions in the San Joaquin Valley.

²² CCST SB 1281 Phase II Report at 117, 141. See also Seth N. Lyman, et al., *Emissions of Organic Compounds from Produced Water Ponds I: Characteristics and Speciation* 619 SCI. OF THE TOTAL ENV'T 896 (2018), <https://www.sciencedirect.com/science/article/abs/pii/S0048969717332199>.

²³ CCST SB 1281 Phase II Report at 192.

²⁴ Natural Resources Defense Council, *Fracking Fumes* (Dec. 2014), <https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf>.

²⁵ D.R. Gentner et al., *Emissions of Organic Carbon and Methane from Petroleum and Dairy Operations in California's San Joaquin Valley*, ATMOS. CHEM. PHYS. 14 (2014), at 4971, <https://doi.org/10.5194/acp-14-4955-2014>.

²⁶ *Id.*

The Draft EA's air pollution analysis is also misleading because it assumes air pollution impacts will be dispersed evenly throughout the air basin. But in fact, 97 percent of the land BLM has proposed to lease (more than 34,000 acres out of nearly 36,000 acres) is located in a single county—Kern County. Draft EA at 1. Kern County already has more days where air pollutants exceed regulatory thresholds than it does “good” air quality days. Draft EA at 17 (Table 3-3). But the Draft EA does not consider how air pollution from the lease sale will impact Kern County, or any other specific county where the leases are located or sensitive receptors near those leases, instead generalizing across the entire air basin. This distorts the localized air pollution impacts that will be felt, particularly in Kern County where the overwhelming majority of the lease activity will occur.

BLM's approach to evaluating impacts on air pollution—by aggregating the total emissions of all “criteria air pollutants” together—is also inconsistent with BLM's own guidance. According to BLM's recent Instruction Memorandum (IM), criteria pollutants are typically assessed individually, relative to specific thresholds for each pollutant, rather than in the aggregate.²⁷ This IM takes the well-established approach of evaluating air pollutants individually rather than in the aggregate, albeit in the context of assessing the conformity of federal actions to a state implementation plan under the Clean Air Act, as opposed to the NEPA analysis at issue here. However, the IM explicitly specifies that in the development of a FONSI pursuant to NEPA, BLM is required to consider effects on public health and safety, including air quality, which “includes consideration of the relationship of effects to established regulatory thresholds.” *Id.* These “regulatory thresholds” are defined with respect to each individual pollutant.

The Draft EA also fails to look at the cumulative impacts of the lease sale on air pollution, especially in Kern County. In Kern County, oil and gas development is expected to make up a large share of all air pollution emitted by 2035—40 percent of fine particulate matter emissions, 70 percent of nitrogen oxide emissions, and 97 percent of sulfur dioxide emissions.²⁸ Similarly with hazardous air pollutants, a science advisory panel recently noted that oil and gas development is “responsible for the majority of emissions of multiple toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide” in the already overburdened San Joaquin Valley.²⁹ The Draft EA acknowledges that all 44 of the proposed parcels are within 5 miles of existing oil and gas development. Draft EA at C-1. While this assessment interprets proximity to existing development as a reason for giving preference to

²⁷ U.S. Bureau of Land Mgmt., IM 2026-011 (Instruction Memorandum), Guidance for Conducting Air Quality General Conformity Evaluations (Mar. 13, 2026), <https://www.blm.gov/policy/im-2026-011>.

²⁸ Kern County Planning & Community Dev. Dep't, *Supplemental Recirculated Environmental Impact Report for Revisions to the Kern County Zoning Ordinance*, 4.3-164 (Oct. 2020), https://psbweb.kerncounty.com/UtilityPages/Planning/EIRS/OG_SREIR/aVol1/Oil_Gas_SREIR_Oct%202020_Vol%201_04.03_Air%20Quality.pdf.

²⁹ Seth Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel*, at 10 (Oct. 2021), <https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf>.

certain parcels, it also indicates that there may be especially severe concerns about adding to the air pollution in already-overburdened communities. But the Draft EA fails to consider how adding additional oil and gas development—particularly to Kern County where more than 95 percent of all federal drilling in California occurs³⁰—will impact air quality.

E. Impacts on Cultural Resources

BLM’s Draft EA impermissibly defers any analysis of impacts to cultural resources, despite acknowledging that Native American cultural resources and heritage sites such as “bedrock mortar and milling-stone food processing stations, lithic scatters and quarries, large village sites and smaller camps, as well as historic period settlements” are common to the area. Draft EA at 36. The Draft EA also acknowledges that culturally important Native American ancestral remains are “scattered throughout the area.” *Id.* Yet, despite this potential for cultural resources, for 16 of the proposed parcels—CA-2099-01-0132, CA-2099-01-0136, CA-2099-01-0138, CA-2099-01-0139, CA-2099-01-0141, CA-2099-01-0142, CA-2099-01-0150, CA-2099-01-0162, CA-2099-01-0169, CA-2099-01-0171, CA-2099-01-0177, CA-2099-01-0180, CA-2099-01-0186, CA-2099-01-0189, CAP106818522, and CAP106820777—none of the land area has been surveyed for cultural resources. Appendix H, Draft EA. And of the 44 proposed parcels, only three have been fully surveyed. *Id.* But even for the fully surveyed parcels, the Draft EA fails to include any analysis of potential adverse impacts on known cultural resources.

In *Pit River Tribe v. U.S. Forest Service*, 469 F.3d 768 (9th Cir. 2006), the Ninth Circuit found that federal agencies violated both NEPA and the National Historic Preservation Act (NHPA) when they extended leases for a geothermal plant without conducting an EIS that analyzed the impacts of leasing on cultural resources. The Court found that the lease sale itself was the point at which the agency made an irreversible and irretrievable commitment of resources and the agency should have analyzed the impacts. *Id.* at 784. BLM argues that all leases will include a stipulation notifying operators of the potential presence of cultural resources and requiring a full analysis before approving ground disturbing activities. Draft EA at 37. But it is not clear whether BLM can prohibit absolutely all ground disturbance on lease parcels with this stipulation. And as the Court stated in *Pit River Tribe*, unless the lease stipulations “absolutely prohibits surface disturbance in the absence of specific government approval,” the stipulation does not cure the deficient analysis in the NEPA document. *Pit River Tribe*, 469 F.3d at 782-784. *See also Bob Marshall Alliance*, 853 F.2d at 1226.

The failure to identify cultural resources that will be impacted by the lease sale is also a violation of the NHPA. *Pit River Tribe*, 469 F.3d at 787. In *Pit River Tribe*, like here, it was “undisputed” that no “consideration of historical sites occurred in connection with the lease extensions.” *Id.* The Court held that the failure to conduct that analysis at the point at which the decision to lease was made violated the NHPA and that the agency’s later NHPA review “cannot cure the earlier violation, because it did not deal with the question of whether the land should

³⁰ U.S. Bureau of Land Mgmt., *California Oil and Gas*, <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/about/california> (last visited Sept. 10, 2026).

have been leased at all.” *Id.* Here too, BLM must conduct an analysis of cultural resources that will be impacted by the lease sale *before* it makes the decision of whether to lease the land.

F. Impacts to Sensitive Habitat and Species

The Draft EA dismisses any impacts to biological resources as being “incremental” and “dispersed.” Draft EA at 35. But BLM offers no support for this conclusion. As the Draft EA acknowledges, many of the proposed parcels overlap with or are located entirely within ACECs, “public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes.” 43 U.S.C. § 1702(a). Four proposed parcels are within the Lokern-Buena Vista ACEC, and one proposed parcel is within each of the Chico Martinez ACEC, the Kettleman Hills ACEC, and the Panoche-Coalinga ACEC. Draft EA at 9, 13–14.

According to the Draft EA, the RFDS estimates up to 88.95 acres of surface disturbance per year over the 10-year lease, so 889.5 acres in total. Draft EA at 35. Many of the proposed parcels are clustered near each other and near sensitive habitats. For instance, there are 13 proposed parcels covering nearly 15,000 acres on the eastern slope of the Temblor Range in Kern and San Luis Obispo Counties. Draft EA at 32. Six of these parcels also border the Carrizo Plain National Monument: CA-2099-01-0187, CA-2099-01-0179, CA-2099-01-0133, CA-2099-01-0152, CA-2099-01-0153, CA-2099-01-0134. Ex. F.³¹ The Draft EA does not explain why oil and gas development in one year would not be concentrated in this region as opposed to dispersed throughout all 36,000 acres. Nor does it explain how, if development were concentrated in this region, such development would impact various listed species such as the California condor, San Joaquin antelope ground squirrel, giant kangaroo rat, and San Joaquin kit fox. If development were concentrated in this region, it would likely have significant impacts on San Joaquin kit fox populations that travel between the Carrizo Plain and the San Joaquin Valley.³²

Similarly, the Draft EA states that any impacts to species and habitat will be incremental because oil and gas development “would generally expand existing disturbed areas rather than introduce widespread new fragmentation across previously undisturbed landscapes.” Draft EA at 35. But the Draft EA fails to acknowledge that expanding the boundary of an oil field may also result in habitat fragmentation, reduce the availability of habitat, and negatively impact listed species. And these impacts could be even more pronounced when those boundaries are expanded into ACECs, which are known to have important and unique cultural and environmental values.

³¹ Parcel number CA-2099-01-0185 has been consolidated with CA-2099-0179. Draft EA at 9, fn. 2.

³² U.S. Bureau of Land Mgmt., *Carrizo Plain National Monument Approved Resource Management Plan and Record of Decision* (Apr. 2010), <https://archive.org/details/recordofdecisionc00bake>.

CONCLUSION

The Draft EA fails to consider reasonable alternatives to reduce the impacts of oil and gas development, relies on unfounded assumptions and inaccurate data in the Bakersfield and Central Coast SEISs, and fails to take a hard look at the environmental impacts of the proposed lease sale, including by failing to conduct any geographically specific analysis. At a minimum, BLM must correct the deficiencies of the Draft EA prior to offering any of the proposed parcels at a lease sale. However, given the serious deficiencies of the Draft EA and significant environmental impacts associated with the Proposed Action, BLM should withdraw the Draft EA and prepare a full EIS.

Sincerely,

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For ROB BONTA
Attorney General

Index of Materials Submitted in Support of Comments of the California Attorney General on the Bureau of Land Management, Central California District Oil and Gas Lease Sale, DOI-BLM-CA-C060-2026-0090-EA

No.	Description
1	American Lung Association, State of the Air 2026 Report, https://www.lung.org/research/sota/city-rankings/states/california/kern
2	Amin, et al., Comprehensive Evaluation of Cyclic Steam Stimulation for Enhanced Heavy Oil Recovery: Assessing Production and CO2 Emissions, Journal of Petroleum Exploration and Production Technology (Sept. 2025), https://link.springer.com/article/10.1007/s13202-025-02052-1
3	BLM, California Oil and Gas, https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/about/california (last visited Sept. 10, 2026).
4	Bureau of Land Management, Bakersfield Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (2012)
5	Bureau of Land Management, Bakersfield Field Office Record of Decision and Approved Resource Management Plan (2014)
6	Bureau of Land Management, Final Hydraulic Fracturing SEIS for the Bakersfield Field Office (Oct. 2019)
7	Bureau of Land Management, Bakersfield Field Office Final Supplement Impact Statement for RMP (May 2026)
8	Bureau of Land Management, Carrizo Plain National Monument Record of Decision and Approved RMP (April 2010)
9	Bureau of Land Mgmt., Draft EIS for the Central Coast Field Office, (Jan. 2017), https://eplanning.blm.gov/documents/?id=1824cb97-a7f2-f011-8407-001dd80db62a&spid=e58b3453-a8f2-f011-8407-001dd80c29f3#
10	Bureau of Land Mgmt., IM 2026-011 (Instruction Memorandum), Guidance for Conducting Air Quality General Conformity Evaluations (Mar. 13, 2026), https://www.blm.gov/policy/im-2026-011
11	California Council on Science and Technology, An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report (Aug. 2019), https://ccst.us/wp-content/uploads/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf
12	California Council on Science and Technology, An Independent Scientific Assessment of Well Stimulation in California, Vol. II (July 2015), https://ccst.us/wp-content/uploads/160708-sb4-vol-II-7.pdf
13	California Council on Science and Technology, An Independent Scientific Assessment of Well Stimulation in California, Summary Report (2015), http://ccst.us/projects/hydraulic_fracturing_public/SB4.php
14	California Department of Fish & Wildlife, Comments on DOI-BLM-CA-C060-2018-0082-EIS (June 10, 2019), https://oag.ca.gov/system/files/attachments/press-docs/2019.06.10-bakersfield-sdeis-comments-final.pdf
15	Department of Interior, 516 DM 1 NEPA Handbook (2026), https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing
16	Gentner et al., Emissions of Organic Carbon and Methane from Petroleum and Dairy Operations in California's San Joaquin Valley, Atmospheric Chemistry and Physics (2014), https://doi.org/10.5194/acp-14-4955-2014
17	Gonzalez et al., Upstream Oil and Gas Production and Ambient Air Pollution in California, 806 Sci. of the Total Env't 150298 (2022), https://www.sciencedirect.com/science/article/pii/S0048969721053754
18	Hays, Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development, 580 Science of the Total Environment (2017), https://www.sciencedirect.com/science/article/abs/pii/S0048969716325724?via%3Dihub
19	Kern County Planning & Community Development Department, Supplemental Recirculated Environmental Impact Report for Revisions to the Kern County Zoning Ordinance, 4.3-164 (Oct. 2020), https://psbweb.kerncounty.com/UtilityPages/Planning/EIRS/OG_SREIR/aVol1/Oil_Gas_SREIR_Oct%202020_Vol%201_04.03_Air%20Quality.pdf
20	Lyman, et al., Emissions of Organic Compounds from Produced Water Ponds I: Characteristics and Speciation, Science of the Total Environment (2018), https://www.sciencedirect.com/science/article/abs/pii/S0048969717332199
21	Millemann, et al., Enhanced oil recovery: Environmental issues and state regulatory programs, 7 Environment International 3 (1979), https://www.sciencedirect.com/science/article/pii/0160412082901039?via%3Dihub
22	Natural Resources Defense Council, Fracking Fumes (Dec. 2014), https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf .
23	Shonkoff et al., Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel, at 1 (Oct. 2021), https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf
24	U.S. EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary (Dec. 2016), https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf



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March 13, 2026

Via Electronic Submission on ePlanning and to BLM_CA_BKFO_OIL_GAS_SEIS@blm.gov

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RE: Comments on the Bureau of Land Management, Bakersfield Field Office Oil and Gas Leasing and Development Draft Supplemental Environmental Impact Statement, DOI-BLM-CA-C060-2025-0053-RMP-EIS

Dear Ms. Mathews:

On behalf the Attorney General of California, Rob Bonta,¹ we submit these comments on the 2025 Draft Supplemental Environmental Impact Statement (“Draft SEIS”) issued by the U.S. Bureau of Land Management’s (“BLM”) Bakersfield Field Office to “analyze the environmental effects of hydraulic fracturing technology for oil and gas leasing and development of new leases within the Planning Area,” which consists of 400,000 acres of public lands and 1.2 million acres of federal mineral estate in eight central California counties. Draft SEIS at ES-1.

The Draft SEIS was allegedly prepared to address the deficiencies a federal district court found in BLM’s 2014 plan to open lands to oil and gas drilling without addressing impacts related to hydraulic fracturing, as well as to respond to a 2022 stipulated settlement requiring additional analysis. However, BLM also committed in the 2022 settlement to “consider whether to amend the 2014 [resource management plan],” yet the Draft SEIS evinces no real consideration of an amendment. Given the increased knowledge and documentation of the harms drilling poses to human health, natural resources, and the climate over the last decade, the significant shifts in California’s oil and gas drilling policies, and the changes to the scope and

¹ The California Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. *See* Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12612; *D’Amico v. Bd. of Medical Examiners*, 11 Cal.3d 1, 14 (1974).

methods of oil and gas development in the Planning Area, BLM should have revised or amended its resource management plan (“RMP”). Further, there is no legitimate justification for limiting the Draft SEIS to impacts related only to hydraulic fracturing.

Even if it were appropriate to limit the supplemental analysis to consideration of impacts from hydraulic fracturing, BLM’s analysis fails to take a “hard look” at many of the significant impacts associated with hydraulic fracturing, or provide sufficient evidence regarding its conclusions, in violation of the National Environmental Policy Act (“NEPA”). In particular, the Draft SEIS relies on the unfounded assumption that up to 4 of the 40 new wells that BLM anticipates will be drilled on new leases per year will be hydraulically fractured. Hydraulic fracturing should not occur at all in the Planning Area due to state law changes. And, even if BLM were correct that hydraulic fracturing could occur, BLM’s estimates are unsupported and contradicted by prior statements that about 90 percent of new wells drilled on public lands are hydraulically fractured. BLM’s unsupported assumption distorts its consideration of environmental impacts and findings of significance. Furthermore, the Draft SEIS fails to properly consider many issues, including potential contamination from hydraulic fracturing fluids, increased subsidence, and the use of hydraulic fracturing to extend the life of wells with declining production. BLM’s analysis of impacts to disadvantaged communities living near federal oil and gas operations, including impacts to water supply and air pollution, is particularly deficient. The Draft SEIS also fails to consider reasonable alternatives, including those that could limit or mitigate the adverse impacts of hydraulic fracturing on the environment and nearby communities.

BLM also failed to consider conflicts with state plans and policies in the Draft SEIS, including efforts by California to protect communities living near oil and gas operations and to reduce greenhouse gas (“GHG”) emissions and fossil fuel consumption to mitigate the devastating consequences of global climate change. In addition, BLM failed to supplement its analysis to address new information that oil and gas development will lead to significant harms that were not previously considered in prior environmental review documents.

Finally, BLM failed to consider impacts to species proposed for listing or formally listed under the Endangered Species Act since 2019 and it failed to consult with the U.S. Fish and Wildlife Service in violation of the Endangered Species Act.

For these reasons, Attorney General Bonta recommends that BLM withdraw its Draft SEIS and prepare a new analysis that fully considers the environmental impacts of opening over one million acres of public lands in California to new oil and gas leasing.

STATUTORY BACKGROUND

NEPA has two fundamental purposes: (1) to guarantee that agencies take a “hard look” at the consequences of their actions before the actions occur by ensuring that “the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts,” and (2) to ensure that “the relevant information will be made available to the larger audience that may also play a role in both the

decisionmaking process and the implementation of that decision.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349-50 (1989).

NEPA requires the preparation of a detailed environmental impact statement (“EIS”) for any “major federal action significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). In taking a “hard look,” NEPA requires federal agencies to consider the direct, indirect, and cumulative impacts of its proposed action. *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 973 (9th Cir. 2002); *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975); *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972). Moreover, “an agency may not rely on incorrect assumptions or data.” *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 964 (9th Cir. 2005). Supplemental EISs are required when BLM makes substantial changes to a proposed action or “there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its effects.”² Courts review decisions not to prepare supplemental EISs utilizing the “arbitrary and capricious” standard of the Administrative Procedure Act and do not automatically defer to an agency when it decides to not supplement an EIS. Instead, this analysis entails “carefully reviewing the record and satisfying themselves that the agency has made a reasoned decision based on its evaluation of the significance—or lack of significance—of [] new information.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 378 (1989).

Pursuant to the Federal Land Policy and Management Act (“FLPMA”), 43 U.S.C. § 1701 *et seq.*, BLM develops RMPs to guide the management of public lands within BLM’s jurisdiction. In particular, FLPMA requires that BLM “develop, maintain, and when appropriate, revise land use plans” to ensure that land management be conducted “on the basis of multiple use and sustained yield.” 43 U.S.C. §§ 1701(a)(7), 1712(a), 1732. FLPMA also requires that public lands be managed “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.” *Id.* § 1701(a)(8). BLM must, “by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of [public] lands” under its management. *Id.* § 1732(a). RMPs are revised or amended based on “monitoring and evaluation findings, new data, new or revised policy, and changes in circumstances,” and are subject to environmental review under NEPA. 43 C.F.R. §§ 1610.5-5, 1610.5-6.

FLPMA requires that BLM, in developing and revising RMPs, “provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans;” “coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs” of the “local governments within which the lands are located;” and “provide for meaningful public involvement of State and local government officials, both elected and appointed, in the development of land use programs, land use regulations, and land use decisions for public lands.” 43 U.S.C. § 1712(c)(8)-(9).

² Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (2026), <https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing>.

FACTUAL BACKGROUND

BLM's NEPA Review for the Bakersfield Resource Management Plan

The BLM Bakersfield Field Office manages 400,000 acres of public lands and an additional 1.2 million acres of federal mineral estate in Fresno, Kern, Kings, Madera, San Luis Obispo, Santa Barbara, Tulare, and Ventura Counties (the “Planning Area”). In 2012, BLM issued a Final EIS purporting to evaluate the environmental impacts of its proposed RMP for the Planning Area. This planning effort sought to update two existing plans that were finalized in 1984 and 1997. Under the preferred alternative (Alternative B), 1,011,470 acres of federal mineral estate, or about 85 percent of the Planning Area, would be open to oil and gas leasing. BLM also completed a Reasonably Foreseeable Development Scenario that projected the exploration, drilling, and production activity that would likely occur in the next 10 years. This activity was estimated to be 100-400 wells drilled on federal mineral estate each year, including 90-360 wells on existing leases and 10-40 wells on new leases. BLM estimated that 25 percent of these wells would be hydraulically fractured. BLM approved the RMP in 2014.

In 2015, the Center for Biological Diversity and Los Padres ForestWatch challenged this final approval in the U.S. District Court for the Central District of California. On September 6, 2016, the District Court ruled on the parties’ cross-motions for summary judgment, finding that BLM violated NEPA by failing to analyze the impacts of hydraulic fracturing in the Planning Area and required BLM to supplement its analysis. *Los Padres ForestWatch v. U.S. Bureau of Land Mgmt.*, 2016 WL 5172009, *10-13 (C.D. Cal. Sept. 6, 2016). On May 3, 2017, the District Court approved a settlement agreement in which BLM agreed to prepare appropriate NEPA documentation to address the deficiencies identified by the District Court, and issue a new decision document that would amend or supersede the 2014 RMP, if appropriate.

On August 8, 2018, BLM issued a notice of intent to prepare a Draft SEIS and potential RMP amendment for the Planning Area and requested scoping comments. 83 Fed. Reg. 39,116. Among other commenters, six California state agencies—the Department of Conservation, Department of Fish and Wildlife, Department of Water Resources, Department of Parks and Recreation, Air Resources Board, and State Water Resources Control Board—submitted a joint letter expressing concerns with the potential significant adverse effects of this activity and its impact on the state’s ability to meet its fossil fuel and GHG emissions reduction goals. In a cover letter, then-Governor Jerry Brown wrote that BLM “should abandon this effort and not pursue opening any new areas for oil and gas leases in this state,” given that such an approach is “contrary to the course California has set to combat climate change and to meet its share of the goals outlined in the Paris Agreement.”

On April 26, 2019, BLM issued a Draft SEIS. 84 Fed. Reg. 17,885. The purpose of that Draft SEIS, as described by BLM, was “to analyze the environmental effects of the use of hydraulic fracturing technology in oil and gas development on new leases within the Planning Area and to determine whether changes are needed to the fluid minerals decisions in the 2014 RMP.” 2019 Draft SEIS at 2. Based on the District Court’s ruling on alternatives, BLM “carried-

forward” the prior alternatives into its Draft SEIS, including Alternative B, which would open 1,011,470 acres of federal mineral estate to oil and gas leasing (the “Proposed Action”). 2019 Draft SEIS at 13-15. For its updated analysis, BLM assumed that 40 wells on new leases would be drilled each year, and that “zero to four” of these wells would be hydraulically fractured. 2019 Draft SEIS at 44. Given this low estimate, BLM concluded that no significant impacts would result, including impacts related to GHG emissions, air quality, water resources, biological resources, and induced seismic events. 2019 Draft SEIS at Chapter 4. Because BLM did not find any “notable increase in total impacts” resulting from the Proposed Action, it also determined that an amendment to the 2014 RMP was “unnecessary.” 2019 Draft SEIS at 15. The California Attorney General and several state agencies filed comments documenting the deficiencies in the 2019 Draft SEIS, which are attached and incorporated here by reference.³

The State of California as well as the Center for Biological Diversity, Central California Environmental Justice Network, Los Padres ForestWatch, National Parks Conservation Association, Natural Resources Defense Council, Patagonia Works, Sierra Club, and The Wilderness Society filed a complaint for declaratory and injunctive relief against BLM challenging the 2019 Record of Decision because the 2019 Supplemental EIS did not take a hard look at environmental impacts, consider reasonable alternatives, discuss feasible mitigation measures for impacts on special status species, or consider conflicts with state policies, and was issued without an adequate opportunity for public comment in violation of NEPA. Following summary judgment filings, the parties entered into a settlement. Under the settlement, BLM agreed to prepare a supplement to the 2019 Supplemental EIS pursuant to NEPA and consider whether to amend the 2014 RMP. As part of the public notice and comment process, BLM agreed to hold at least one meeting for the public to provide input with Spanish translation and transcription if requested, prepare certain documentation in Spanish, and translate the new decision into Spanish.

On June 23, 2025, BLM issued a notice of intent to prepare a Draft SEIS and potential RMP amendment for the Planning Area and requested scoping comments. 90 Fed. Reg. 26,605. Although BLM solicited comment on its intent to prepare a supplemental EIS, the notice also set forth the agency’s cabined view of what the Supplemental EIS would address. Specifically, BLM stated that: “Only those portions of the existing plan that need to be updated to respond to the issues and management concerns *identified in the court order and settlement agreement* will be reviewed. Other portions of the plan will be brought forward from the existing Bakersfield RMP approved on December 22, 2014, and the supplemental EIS for hydraulic fracturing approved on December 12, 2019.” *Id.* at 26,605 (emphasis added). Several state agencies commented in opposition to the proposal during the scoping period, including the California Department of Conservation, California Department of Fish and Wildlife, California Department of Parks and Recreation, State Water Resources Control Board, California Coastal Commission, and California Department of Water Resources.

³ California Attorney General, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 10, 2019); California EPA, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 10, 2019); California Department of Fish and Wildlife, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 6, 2019).

The Department of Interior posted a notice in the federal register on January 13, 2026, announcing that the Draft SEIS was available and the deadline for comments would be 45 days following the date the Environmental Protection Agency (“EPA”) published the Notice of Availability. 91 Fed. Reg. 1330, 1331 (Jan. 13, 2026). EPA posted the Notice of Availability on January 16, 2026. 91 Fed. Reg. 2131, 2131. The deadline was later extended to March 13, 2026. 91 Fed. Reg. 5474, 5474.

The Draft SEIS carries forward the same five alternatives identified in the 2012 Final EIS. Draft SEIS at ES-1. BLM also relies on the same Reasonably Foreseeable Development Scenario as was used in the 2012 Final EIS, projecting the same amount of exploration, drilling, and production activity (for the next ten years, 100-400 wells drilled on federal mineral estate each year, including 90-360 wells on existing leases and 10-40 wells on new leases). *Id.* at 2. BLM does not disclose projections of the number of wells that will likely be hydraulically fractured on existing leases, but notes that the Reasonably Foreseeable Development Scenario anticipates that “(up to) four (10 percent) of” the “(up to) 40 new wells on new leases per year” will be hydraulically fractured. *Id.* at 25, 35. BLM states that it identified five resource areas to consider further based on information or circumstances identified during the scoping period: air and atmospheric values, biological resources, soil resources, and water resources. *Id.* at 9-10. Additional issues identified during the scoping period were not carried forward for further analysis. *Id.* at 10-12. Except for “updated emissions inventories” based on “a review of new data related to air quality,” BLM did not update any of its modeling or analyses from prior EISs. *Id.* at ES-1. BLM also did not address any changes in state, local, or federal policy that have occurred since 2012 or explain how such changes affect oil and gas development in the Planning Area.

Hydraulic Fracturing on Public Lands

In recent years, the United States has experienced a boom in oil and gas production through the use of well stimulation treatments such as hydraulic fracturing and horizontal drilling. 80 Fed. Reg. 16,128, 16,131 (Mar. 26, 2015). Hydraulic fracturing is a process by which oil and gas producers inject water, sand, and certain chemicals at high pressure into rock formations to create fissures and allow oil and gas to escape for collection in a well. While most of the fluid is water, an assortment of chemicals, some of which are known carcinogens or other types of toxins, are added for different purposes such as lubrication of the fracture and minimization of corrosion. Much of the fracturing fluid, along with subsurface fluids, flows back to the surface and can be held in open pits or circulation tanks at the well site prior to disposal. This water is typically disposed of by subsequent injection into underground wells.

A growing body of science connects hydraulic fracturing with water and air pollution, increased seismic activity, and a prolonged dependence on fossil fuels. For example, inadequate well casings that run through groundwater zones can break during hydraulic fracturing operations and allow hydraulic fracturing fluids to infiltrate groundwater. Air pollution can occur due to the handling of the flowback fluids, which contain toxic chemicals that could evaporate

through handling and storage. Lastly, some areas of heavy hydraulic fracturing operations have seen a pronounced increase in the frequency of seismic events.

BLM is the agency responsible for overseeing oil and gas development on over 245 million acres of public lands and 700 million acres of subsurface mineral estate across the United States, including 15 million acres of public lands and 47 million acres of subsurface mineral estate in California. Most hydraulic fracturing on federal lands occurs in nine states, and California historically had the fifth or sixth largest number of fracking operations per year. *See* 80 Fed. Reg. at 16,206. In 2015, BLM estimated that ninety percent of new wells drilled on federal lands are now being stimulated using hydraulic fracturing. *Id.* at 16,131, 16,190.

One relevant development is that the California Geologic Energy Management Division (“CalGEM”) has not approved a state permit for hydraulic fracturing since 2021, and hydraulic fracturing was entirely phased out by CalGEM regulations that went into effect on October 1, 2024. Cal. Code Regs. tit. §1780(d). BLM has historically respected state regulation of oil and gas extraction methods on federal land and consistently acknowledged CalGEM’s jurisdiction to regulate hydraulic fracturing operations on federal lands within the state. Draft SEIS at 18 (“BLM does not have regulatory authority over hydraulic fracturing in California; that authority rests with the California Department of Conservation’s Geologic Energy Management Division (CalGEM), which oversees all well stimulation activities in the state.”) Other state law changes to protect human health and the environment have occurred and are discussed in detail below, but are not addressed by BLM in the Draft SEIS.

BLM’S DECISION NOT TO REVISE OR AMEND THE 2014 RMP WAS ARBITRARY AND CAPRICIOUS

BLM argues that no amendment to the 2014 RMP is warranted because its consideration of hydraulic fracturing “did not show notable increase in total impacts” and its range of alternatives has not changed since 2012. Draft SEIS at 13-14. This reasoning is arbitrary and capricious because it is divorced from the criteria for determining whether to revise or amend an RMP. BLM was required to consider whether to amend the 2014 RMP by the 2022 settlement, and the amendment must be prepared if there is a “need to consider monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.” 43 C.F.R. § 1610.5-5. Similarly, an RMP “shall be revised as necessary, based on monitoring and evaluation findings, new data, new or revised policy and changes in circumstances.” *Id.* § 1610.5-6. Notably, an amendment is initiated “by the need to consider” new information and changes in circumstances, which is certainly the case here. BLM “need[ed] to consider” new information and changes in circumstances as a court in 2016 found it had “failed to analyze the environmental concerns unique to fracking,” and thus needed to analyze information specific to hydraulic fracturing to comply with NEPA. *ForestWatch v. United States Bureau of Land Mgmt.*, No. CV154378MWFJEMX, 2016 WL 5172009, at *13 (C.D. Cal. Sept. 6, 2016). This need to consider new information and changes in circumstances

continued to the current SEIS because BLM agreed in a 2022 settlement to supplement its prior environmental review.

A decade has elapsed since the 2016 court decision. During this time, there have been significant new developments in the knowledge and evidence of the harms caused by drilling to human health, natural resources, and the climate, significant shifts in California policies, and significant changes to the oil and gas development in the Planning Area (described in detail, *infra*). Given these changes, BLM was required to amend or revise its 2014 RMP and prepare a supplemental EIS to account for issues that go beyond hydraulic fracturing. In particular, the recent prohibition of hydraulic fracturing in California renders BLM's decision to focus on potential impacts of hydraulic fracturing nonsensical. It also makes BLM's reasoning for failing to prepare an RMP amendment arbitrary and capricious. BLM cannot limit its analysis to consideration of hydraulic fracturing, despite the fact that hydraulic fracturing should no longer occur, to claim that there will be no "notable increase in total impacts" in the Planning Area.

THE DRAFT SEIS FAILS TO TAKE A HARD LOOK AT THE IMPACTS OF HYDRAULIC FRACTURING IN THE PLANNING AREA

Even if it were appropriate for BLM to limit its supplemental analysis to consideration of hydraulic fracturing, BLM's analysis fails to take a "hard look" at many of the significant impacts associated with hydraulic fracturing, or provide sufficient evidence to support its conclusions.

I. The Draft SEIS Relies Upon an Incorrect Assumption Regarding the Number of Hydraulic Fracturing Operations.

NEPA requires agencies to take a "hard look" at the environmental consequences of proposed agency actions before those actions are undertaken. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004); *see* 42 U.S.C. § 4332. "To take the required 'hard look' at a proposed project's effects, an agency may not rely on incorrect assumptions or data." *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953, 964 (9th Cir. 2005); *see also* DOI Handbook (Feb. 2026), pp. 16-17, 23 (NEPA requires agencies to ensure that the analysis and assumptions of any existing EIS they rely on remains adequate). Here, rather than providing the sufficient analysis or evidence required by NEPA to take a "hard look" at its Proposed Action, BLM's findings in the Draft SEIS are based on an unfounded assumption about the number of wells that will be hydraulically fractured.

BLM carries forward its estimate from more than fifteen years ago that up to 4 of the 40 new wells on new leases (or 10 percent) will be hydraulically fractured. Draft SEIS at 25. This estimate entirely ignores the fact that state permits from CalGEM are required for operators to drill or hydraulically fracture wells in California, and hydraulic fracturing was entirely phased out by CalGEM regulations that went into effect on October 1, 2024. Cal. Code Regs. tit. §1780(d). Hydraulic fracturing cannot occur in the Planning Area.

Moreover, even if hydraulic fracturing could occur, BLM has greatly underestimated the number of events that would occur. BLM's assumption that zero to four hydraulic fracturing events will occur on new leases in the Planning Area each year is not backed by any underlying data or analysis, and it is contrary to BLM's own prior estimates. For example, in the 2012 Bakersfield Proposed RMP, BLM acknowledged that 85 percent of the Decision Area (the portion of the Planning Area with public lands managed by BLM) would be "open" to well stimulation technologies such as fracking and estimated that 25 percent of new wells in the Decision Area would be fracked in the future. *Los Padres ForestWatch*, 2016 WL 5172009 at *11 ("the prominent role fracking is expected to play in the future is undisputed in the record"). In addition, BLM has previously stated that about 90 percent of new wells drilled on public lands are hydraulically fractured. 80 Fed. Reg. at 16,190 ("BLM estimates that 90 percent of the wells drilled on Federal and Indian land are hydraulically fractured"). The 2015 California Council on Science and Technology report commissioned by BLM noted that "[h]ydraulic fracturing supports about one quarter of California oil production" and "about 125 to 175 wells of the approximately 300 new oil wells installed per month [41-58%] in California" were fractured.⁴ "Nearly all" hydraulic fracturing occurred in four oil fields in southwestern San Joaquin Valley that are within the Planning Area.⁵ Further, in the May 2019 Final EIS released by BLM's Central Coast Field Office for an amendment to another RMP, BLM noted that "hydraulic fracturing has been used as a production stimulation method in California since the late 1960s and is considered a standard technique for production."⁶ For its analysis in the Central Coast Final EIS, BLM assumed that well stimulation technologies and enhanced oil recovery techniques would "be used on any or all" new oil and gas wells drilled on federal leased land over the next 15 to 20 years.⁷

A district court invalidated a previous BLM environmental assessment ("EA") for the Central Coast region that relied on unfounded assumptions about the frequency of hydraulic fracturing. *See Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 937 F. Supp. 2d 1140, 1148, 1155 (N.D. Cal. 2013). The plaintiffs in that case challenged an EA regarding four oil and gas leases on approximately 2,700 acres in Monterey and Fresno counties. 937 F. Supp. 2d at 1144. Despite the growing use of fracking nationwide, BLM had assumed for purposes of the EA, based on data from 2006, that "no more than one exploratory well would be drilled in total on the land within the leases," and BLM did not discuss fracking beyond noting it was "not relevant to the analysis of impacts . . . because the reasonable foreseeable development scenario anticipates very little (if any) disturbance to the human environment." *Id.* at 1148. The court found that "this projection fails to take into account all 'reasonably foreseeable' possibilities as required by NEPA," as evidenced by the record and the defendants' own acknowledgment "that fracking activity in the United States has increased dramatically in recent years." *Id.* at 1155.

⁴ California Council on Science and Technology, *An Independent scientific Assessment of Well Stimulation in California: Summary Report* ("CCST Summary Report") 11-13 (July 2015).

⁵ *Id.* at 12.

⁶ BLM, *Proposed Resource Management Plan Amendment and Final Environmental Impact Statement for Oil and Gas Leasing and Development, Central Coast Planning Area* 1-1 n.3 (May 2019).

⁷ *Id.* at ES-4, 2-3, 4.17-1, 4.20-2.

Thus, the court concluded that “it was not reasonable for BLM to consider only a single exploratory well scenario based on past data.” *Id.* at 1156.

The court then determined that “[t]his unreasonable lack of consideration of how fracking could impact the development of the disputed parcels went on to unreasonably distort BLM’s assessment of at least three of the ‘intensity’ factors in its FONSI.” *Id.* at 1157. First, “BLM erroneously held that the leases were not highly controversial,” even though “[t]here was clearly a controversy here regarding the nature of the drilling to occur on the leases and the potential impacts drilling would impose on the nearby communities.” *Id.* at 1157-58. “Second, BLM erroneously analyzed the potential effect of the leases on public health and safety” by ignoring the risks posed by fracking. *Id.* at 1158. “Third, BLM erroneously discounted the uncertainty from fracking that may be resolved by further data collection” by “instead opting to summarize general data about fracking (much of it raising substantial concerns about the impact of fracking) before dismissing the issues as outside of its jurisdiction.” *Id.* at 1159.

Similarly, here, BLM’s assumption that only “zero to four” hydraulic fracturing events will occur in the Planning Area each year distorts its consideration of several environmental impacts and significance factors, which in turn compromises the public’s ability to meaningfully participate in the NEPA process. For example, BLM estimates surface impacts from the hydraulic fracturing of up to 4 wells per year for 10 years to be up to 208.6 acres. Draft SEIS at 36. In analyzing the air pollution that will result from the Proposed Action, the calculated emissions are based on the hydraulic fracturing of four wells per year. *Id.* at 43-48. Similarly, with regard to water resources, BLM refers back to the 2019 Final SEIS, *id.* at 60, where it found that this amount of hydraulic fracturing would consume just 8.0 million gallons (25 acre-feet) of water during the 10-year planning period, and that “[t]he risk of impacts to groundwater due to spills of fracturing fluids from the completion of an average of zero to four wells per year would be negligible.” 2019 Final SEIS at 85-87. And because of the small number of anticipated hydraulic fracturing events and related wastewater disposal, BLM summarily concluded that it expected “there would be negligible impacts related to hydraulic fracturing–induced earthquakes.” *Id.* at 92.

Given that BLM’s quantification regarding the number of wells which may be hydraulically fractured is significantly underestimated, there is serious potential that the Proposed Action would result in exceedances of applicable significance thresholds. For example, as quantified in the Draft SEIS, anticipated emissions increases associated with the Proposed Action approach the applicable general conformity *de minimis* thresholds for certain pollutants in the San Joaquin Valley air basin, including 10 tons per year of nitrogen oxides (“NOx”) and 10 tons per year of reactive organic gases (“ROG”), two critical contributors to ozone formation. The Draft SEIS does not present the well development and production emissions associated with hydraulic fracturing, making it impossible to determine if such operations would lead to emissions increases that exceed the thresholds. But the combined tables in the 2019 and 2026 SEISs indicate that the combination of hydraulic fracturing and conventional well development and operations would exceed the thresholds. 2019 Final SEIS at 62 (well development ROG emissions are 6.99 tons per year and NOx emissions are 4.8); 2025 Draft SEIS at 44, 48 (production operation NOx emissions are 67.6 tons per year and VOC/ROG emissions are 102.6

tons per year). The San Joaquin Valley Air Basin is already classified as extreme nonattainment for 8-hour ozone and has not yet attained the 1997 PM_{2.5} National Ambient Air Quality Standard.⁸ If the number of wells that would be hydraulically fractured is even slightly underrepresented, then one or both of these thresholds would likely be exceeded, resulting in significant air quality impacts.

A revised analysis may also show that the Proposed Action's GHG emissions would exceed the 25,000 metric tons of carbon dioxide equivalent ("MTCO₂e") annual threshold for mandatory reporting of GHGs in the U.S. Environmental Protection Agency's ("EPA") mandatory reporting program for GHGs, which the 2019 Supplemental EIS appears to use as a GHG significance threshold (the GHG emissions associated with hydraulic fracturing are not presented in the 2025 Draft SEIS). 2019 Final SEIS at 57. Any revision to the Draft SEIS must accurately quantify and mitigate any significant air quality and GHG impacts.

Finally, BLM's assumption that "zero to four" events will occur does not take into account any hydraulic fracturing of new or existing wells drilled on existing leases. BLM estimates that as many as 360 new wells will be drilled each year on *existing* federal leases in the Planning Area, under the control and guidance of the 2014 RMP. Draft SEIS at 2. BLM did not predict how many of these wells would be hydraulically fractured, even while it acknowledged that hydraulic fracturing in the overall Planning Area occurs on existing leases. BLM anticipated that at least "some" of the 360 new wells that BLM expected on existing leases would be hydraulically fractured. Indeed, it stated that "hydraulic fracturing usually occurs in oil fields on existing leases, many of which have been continuously developed over the last 100 years." 2019 Final SEIS at 7. BLM should have analyzed whether hydraulic fracturing of these new wells or of existing wells would cause cumulative significant environmental impacts in conjunction with hydraulic fracturing of wells on new leases.

In sum, BLM's assumption that hydraulic fracturing will occur at all in the Planning Area is contrary to California law. Even if BLM were correct that hydraulic fracturing could occur, BLM's estimate that up to four hydraulic fracturing events will occur in the Planning Area each year is unsupported by the evidence before the agency. This assumption has resulted in a misleading discussion of environmental impacts in the Draft SEIS, rather than the "hard look" required by NEPA.

II. The Draft SEIS Fails to Properly Consider the Significant Environmental Impacts Related to Hydraulic Fracturing Operations.

To fulfill NEPA's "hard look" requirement, an agency must consider all foreseeable direct, indirect, and cumulative impacts of the action. *See N. Alaska Env'tl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006); *Ctr. For Biological Diversity v. Salazar*, 695 F.3d 893, 916–17 (9th Cir. 2012). An agency must provide sufficient evidence and analysis to support its

⁸ San Joaquin Valley Air Pollution Control District, *Ambient Air Quality Standards & Attainment Status*, <https://www.valleyair.org/air-quality-information/ambient-air-quality-standards-valley-attainment-status/>.

conclusions. As the Ninth Circuit has stated, “general statements about ‘possible effects’ and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998). Here, BLM has failed to consider several environmental impacts related to its Proposed Action, or to support its conclusions with adequate analysis.

A. Water and Other Land Impacts

For example, with regard to impacts to groundwater from the management and disposal of flowback fluids, BLM generally acknowledges that there are “possible risks to groundwater and surface water, particularly amid spill events, aging infrastructure, and cumulative extraction effects.” Draft SEIS at 60. However, BLM insinuates that it cannot perform an analysis to assess disposal impacts more specifically because hydraulic stimulation has not occurred since 2019, *id.*, and the prior 2019 analysis it defers to summarily concludes that “[i]mpacts to groundwater from the completion of an average of zero to four wells in any given year ... would be negligible.” 2019 Final SEIS at 90. BLM never discusses data collected by the State Water Resources Control Board, which produces a report every six months on the regulation of oil field produced water ponds within its regions with oil and gas drilling.⁹ According to the most recent report dated January 31, 2019, the Central Valley region had 561 active ponds, 501 of which were permitted and 60 unpermitted.¹⁰ Moreover, most of the active ponds (530 of 560) were unlined.¹¹ The report also identified additional inactive ponds (507 of which were unlined), and noted that 161 ponds were under active enforcement actions.¹² An updated list of ponds developed in 2021 still shows many active ponds.¹³ Testing of these ponds, as required by the Central Valley Regional Water Quality Control Board, has identified numerous hazardous compounds that could pose a threat to groundwater for municipal and agricultural uses.¹⁴ Compounds used in hydraulic fracturing fluids, including polynuclear aromatic hydrocarbons, affect pulmonary, gastrointestinal, and renal systems in humans, and a few compounds are considered carcinogens.¹⁵ The California Council on Science and Technology (“CCST”) also expressed concern about the regular use of unlined pits for the disposal of produced water,

⁹ State Water Resources Control Board, *Water Quality in Areas of Oil and Gas Production - Produced Water Ponds*, https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/oil_field_produced/produced_water_ponds/index.html.

¹⁰ State Water Resources Control Board, *Produced Water Ponds Status Report: January 31, 2019*, https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/docs/pwpondsreport_january2019.pdf.

¹¹ *Id.*

¹² *Id.*

¹³ Central Valley Regional Water Quality Control Board, *Pond List* (Feb. 2021), https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/20210211_pondlist.pdf.

¹⁴ See, e.g., Central Valley Regional Water Quality Control Board, *Oil Field Pond 13267 Order Responses, Information Requested by 13267 Order, Lost Hills Oil Field* (June 16, 2015), https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/aera_energy/2015_0616_com_lost_hills.pdf.

¹⁵ California Council on Science and Technology, *An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report* 150 (July 2022), <https://www.psehealthyenergy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf>.

finding that such practices could “introduce contaminants into the food web and expose human populations to known and potentially unknown toxic substances.”¹⁶ The EPA has also found that hydraulic fracturing and other well stimulation techniques can adversely impact water resources, including both the supply of drinking water and the quality of the water.¹⁷ Produced water disposal could have serious impacts on water supply given that many of the communities in the Planning Area rely on groundwater as their primary source of drinking water.

Fracking itself also poses a risk to water supply because it occurs at shallower depths—where groundwater occurs—than in other parts of the United States.¹⁸ Fracking in California also tends to occur in oilfields with many existing active and inactive wells that can serve as leakage pathways.¹⁹ The potential for water contamination demands further study. As EPA recommended during the comment period on the last Supplemental EIS for this RMP, BLM should include a map of drinking water sources, aquifer exemptions, and existing and proposed wells so that BLM may develop necessary stipulations. Commenters in the last round already did some of this work for BLM by identifying drinking water sources specifically at risk, including Santa Barbara County’s groundwater aquifers, wells that supply the California Army National Guard, Ojai Valley Basin’s groundwater supply, and the City of Lompoc’s drinking water well field. EPA also specifically suggested that BLM require a stipulation “that identified fresh water zones are to be sampled and analyzed so that pre-fracking background levels of those fresh water zones (drinking water supply) can establish whether any existing contamination exists before fracking has been introduced in the vicinity,” and require operators to prove that the geologic confining zone is sufficient to prevent migration of fracking fluids into usable water.

Similarly, with respect to water supply, BLM acknowledges that “fracturing operations require substantial volumes of water, which can impose stress on local supplies in arid or drought prone regions.” Draft SEIS at 60; *see also id.* at 61 (oil and gas development can lead to a lower baseflow in wetlands and streams, which can impair beneficial uses). However, BLM makes no effort to identify which groundwater basins and surface waters in or near the Planning Area are susceptible to water supply stresses, where they are situated relative to potential hydraulic fracturing operations, and what mitigation measures should be undertaken to address this issue. As CCST has explained, these impacts could be significant to ecosystems supported by small waterways,²⁰ as well as the small communities and domestic users that rely on local groundwater.²¹ Thus, to determine whether water use will cause a significant impact, the

¹⁶ California Council on Science and Technology, *An Independent Scientific Assessment of Well Stimulation in California*, Vol. II (“CCST Report, Vol. II”) 403 (2015), http://ccst.us/projects/hydraulic_fracturing_public/SB4.php.

¹⁷ U.S. Environmental Protection Agency, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary, https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf.

¹⁸ *Id.* at 121, 406.

¹⁹ *Id.* at 122-25.

²⁰ *Id.* at 347,

²¹ *Id.* at 65, 161.

Supplemental EIS must evaluate the impact on the scale of the local communities where drilling and hydraulic fracturing are expected.

In addition, the depletion of groundwater for use in hydraulic fracturing, and the extraction of oil and gas from the ground that hydraulic fracturing enables, both have the potential to cause land subsidence—the gradual caving in or sinking of land—which in turn can damage water delivery infrastructure such as the California Aqueduct and other state water project facilities located in the Planning Area. Surveys provided by the California Department of Water Resources have shown an already alarming increase of land subsidence and other topographic changes in the Central Valley, which can cause significant and costly damage to state water infrastructure.²² Increased oil and gas extraction in water basins within the Central Valley, for example, would foreseeably lead to land subsidence. Indeed, oil and gas production is known to be the primary driver of subsidence in the Lost Hills Oil Field.²³ Yet subsidence impacts are not addressed at all in the Draft SEIS beyond one paragraph noting such effects are “possible” but “difficult to predict.” Draft SEIS at 61.

BLM says it will “consider site specific conditions and data during project level review.” Draft SEIS at 61. But consideration of water contamination, water supply, and subsidence impacts may not be deferred, as that would violate NEPA’s mandate that agencies confront the full extent of environmental impacts from a proposed action at the earliest reasonable time. *Robertson*, 490 U.S. at 349; see *Kern v. BLM*, 284 F.3d 1062, 1072 (9th Cir. 2002). Hydrologic regions and water basins do not obey the boundaries of oil and gas leases, so impacts to them are best analyzed at the level of the Planning Area instead of in a segmented and cabined review later in the development process. Moreover, BLM states that the Draft SEIS is the relevant analysis for seven parcels, betraying its vague promise to conduct additional review at the leasing phase. Draft SEIS at ES-1. The Attorney General and California state agencies’ comments on the deficiencies in the 2020 Environmental Analysis for those seven parcels is attached and incorporated here by reference.²⁴

The Draft SEIS also fails to adequately consider science connecting the underground injection of hydraulic fracturing waste fluids, as well as hydraulic fracturing itself, to increased seismic activity. For example, BLM dismisses the notion that the Proposed Action could result in impacts related to hydraulic fracturing-induced earthquakes, failing to evaluate this issue at all, Draft SEIS at 11, even though it states in the 2019 Supplemental EIS that other industrial activities can induce seismicity and “few” wells that are “hydraulically fractured or are waste water wells result in induced earthquakes.” 2019 Final SEIS at 91-92. Also, recent scientific studies have connected hundreds of earthquakes in Oklahoma, Ohio, and other areas to hydraulic

²² Cal. Dept. of Water Resources, *Comment Letter on BLM’s NOI for Supplemental EIS and Potential RMP Amendment*, Published FR Doc. 2025–11481 (July 23, 2025).

²³ *Id.* at 3-5.

²⁴ State of California and California Air Resources Board, *Comments on DOI-BLM-CA-C060-2020-0120-EA* (Sept. 25, 2020); California Department of Fish and Wildlife, *Comments on DOI-BLM-CA-C060-2020-0120-EA* (Sept. 25, 2020); State of California and California Agency Protest Letter (Nov. 9, 2020).

fracturing events.²⁵ More recent studies have also connected oil and gas disposal wells associated with hydraulic fracturing to induced seismicity.²⁶ Although CCST stated that “hydraulic fracturing as currently carried out in California is not considered to pose a high seismic risk,”²⁷ it also warned that “it can be very difficult to distinguish California’s frequent natural earthquakes from those possibly caused by water injection into the subsurface” and recommended further analysis of this issue.²⁸ This is especially warranted given California’s many active earthquake faults and the fact that over 1,000 wastewater disposal wells are located within 1.5 miles of a mapped active fault in central and southern California.²⁹

B. Air Pollution Impacts

As noted previously, and despite BLM’s statements to the contrary, there is substantial potential that the Proposed Action may significantly increase air pollution. Oil and gas facilities emit significant air pollution, including 30 percent of all sulfur oxides, over 70 percent of hydrogen sulfide, and 8 percent of anthropogenic volatile organic compounds in the San Joaquin Valley, which in turn react with nitrogen oxides to create ozone.³⁰ Oil and gas development is also responsible for the majority of emissions of multiple toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide in the Valley.³¹ Fracking on public lands produces significant air pollution emissions including nitrogen oxides, sulfur dioxide, fine particulate matter, volatile organic compounds, silica dust, and toxic air contaminants like benzene.³² In addition, the ponds that store produced water from hydraulic fracturing operations have the potential to generate significant emissions of toxic air

²⁵ Skoumal, R. J., et al., “Earthquakes induced by hydraulic fracturing are pervasive in Oklahoma,” *Journal of Geophysical Research: Solid Earth* 123:12 (2018), at 10918-35, <https://doi.org/10.1029/2018JB016790>; Skoumal, R.J., et al., “Earthquakes Induced by Hydraulic Fracturing in Poland Township, Ohio,” *Bulletin of the Seismological Society of America* 105:1 (2015), at 189-197, <https://doi.org/10.1785/0120140168>; Xuewei Bao and David W. Eaton, “Fault activation by hydraulic fracturing in western Canada,” *Science* 354:6318 (2016), at 1406-1409, <https://science.sciencemag.org/content/354/6318/1406>.

²⁶ Goebel, T. H. W., et al, “Wastewater disposal and earthquake swarm activity at the southern end of the Central Valley, California,” *Geophys. Res. Lett.* 43 (2016), at 1092–1099, <https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2015GL066948>.

²⁷ CCST Report, Vol. II. at 267.

²⁸ *Id.* at 30-32.

²⁹ *Id.* at 277-293.

³⁰ Brandt, A., Millstein, D., Jin, L., & Englander, J., *Air Quality Impacts from Well Stimulation* 182 (2015), <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

³¹ Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel* 10 (Oct. 2021), <https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf>.

³² Natural Resources Defense Council, *Fracking Fumes* (Dec. 2014), <https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf>.

contaminants.³³ There are more than 1,000 produced water ponds in California, and most are located in the Planning Area.³⁴

BLM attempts to diminish the significance of air pollution impacts from oil and gas production by presenting tables with sources of criteria emissions and hazardous air pollutant emissions in the Planning Area from oil and gas production relative to other sources. Draft SEIS at 21-22. But this presentation is misleading in several respects. First, lumping all criteria and hazardous air pollutants together across all counties in the Planning Area makes it impossible to understand how oil and gas operations contribute to the harmful pollutants most associated with those operations, including sulfur oxides, hydrogen sulfide, and volatile organic compounds. Different pollutants are emitted at different tonnage rates, which explains why the total emissions of “wildfire” dwarf other source categories. For example, when isolating the EPA National Emissions Inventory data for sulfur dioxide from Kern County, oil and gas production is the second highest category, with 20 percent of the emissions (See Table 1 below). Similarly, isolating the data to volatile organic compound emissions from Kern County, oil and gas production is the fourth highest category (See Table 1). One study similarly estimates that VOC emissions from oil and gas extraction in the Central Valley as akin to total transportation emissions in the region.³⁵ Bakersfield in particular attributes 22 percent of all anthropogenic emissions during the spring and summer months to petroleum operations, and 8 percent of all total potential ozone precursors.³⁶ This study and the CCST report noted above suggest that petroleum operations are responsible for significant amounts of relevant criteria pollutant emissions in the San Joaquin Valley. In Kern County, oil and gas development is expected to make up a large share of all air pollution emitted by 2035—40 percent of fine particulate matter emissions, 70 percent of nitrogen oxide emissions, and 97 percent of sulfur dioxide emissions.³⁷ Similarly with hazardous air pollutants, a science advisory panel recently noted that oil and gas development is “responsible for the majority of emissions of multiple toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide” in the already overburdened San Joaquin Valley.³⁸

³³ California Council on Science and Technology, *An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report* 191-92 (July 2022), <https://www.psehealthyenergy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf>.

³⁴ *Id.*

³⁵ Gentner et al., “Emissions of Organic Carbon and Methane from Petroleum and Dairy Operations in California’s San Joaquin Valley,” *Atmos. Chem. Phys.* 14 (2014), at 4971, <https://doi.org/10.5194/acp-14-4955-2014>.

³⁶ *Id.*

³⁷ Kern County Planning & Community Development Department, *Supplemental Recirculated Environmental Impact Report for Revisions to the Kern County Zoning Ordinance*, 4.3-164 (Oct. 2020), https://psbweb.kerncounty.com/UtilityPages/Planning/EIRS/OG_SREIR/aVol1/Oil_Gas_SREIR_Oct%202020_Vol%201_04.03_Air%20Quality.pdf.

³⁸ Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel* 10 (Oct. 2021), <https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf>.

*Table 1: VOC and SO2 emissions in Kern County*³⁹

Source	VOCs (tons)	SO2 (tons)
Agriculture - Livestock Waste	1072	
Biogenics - Vegetation and Soil	43130	
Bulk Gasoline Terminals	37	
Commercial Cooking	47	
Fires - Agricultural Field Burning	647	
Fires - Prescribed Fires	80	
Fires - Wildfires	1747	
Fuel Comb - Comm/Institutional - Biomass	0	1
Fuel Comb - Comm/Institutional - Natural Gas	38	11
Fuel Comb - Comm/Institutional - Oil	40	4
Fuel Comb - Comm/Institutional - Other	1	1
Fuel Comb - Electric Generation - Biomass	1	1
Fuel Comb - Electric Generation - Natural Gas	40	37
Fuel Comb - Electric Generation - Oil	3	1
Fuel Comb - Industrial Boilers, ICEs - Biomass	6	8
Fuel Comb - Industrial Boilers, ICEs - Coal	4	0
Fuel Comb - Industrial Boilers, ICEs - Natural Gas	214	23
Fuel Comb - Industrial Boilers, ICEs - Oil	6	36
Fuel Comb - Industrial Boilers, ICEs - Other	2	0
Fuel Comb - Residential - Natural Gas	26	9
Fuel Comb - Residential - Oil	0	2
Fuel Comb - Residential - Other	3	0
Fuel Comb - Residential - Wood	326	9
Gas Stations	403	0
Industrial Processes - Cement Manuf	39	395
Industrial Processes - Chemical Manuf	143	0
Industrial Processes - Mining	1	0
Industrial Processes - NEC	577	49
Industrial Processes - Non-ferrous Metals	1	1
Industrial Processes - Oil & Gas Production	3157	178
Industrial Processes - Petroleum Refineries	229	19
Industrial Processes - Pulp & Paper	5	
Industrial Processes - Storage and Transfer	529	0
Miscellaneous Non-Industrial NEC	2723	0
Mobile - Aircraft	54	8
Mobile - Locomotives	94	2
Mobile - Non-Road Equipment - Diesel	379	5
Mobile - Non-Road Equipment - Gasoline	2525	1
Mobile - On-Road Diesel Heavy Duty Vehicles	270	20
Mobile - On-Road Diesel Light Duty Vehicles	40	1
Mobile - On-Road non-Diesel Heavy Duty Vehicles	16	1
Mobile - On-Road non-Diesel Light Duty Vehicles	1551	27
Solvent - Consumer & Commercial Solvent Use	4019	
Solvent - Degreasing	357	
Solvent - Dry Cleaning	2	

³⁹ U.S. Environmental Protection Agency, *National Emissions Inventory (NEI) Online 2020 NEI Data Retrieval Tool*, <https://www.epa.gov/air-emissions-inventories/2020-air-emissions-data>.

Solvent - Graphic Arts	410	
Solvent - Industrial Surface Coating & Solvent Use	677	0
Solvent - Non-Industrial Surface Coating	281	
Waste Disposal	4620	27

Second, BLM does not provide the underlying data to help the reader understand its charts. If BLM had, that data would reveal that the EPA inventory is full of catch-all categories like “miscellaneous” and “biogenics,” which make the oil and gas emissions look relatively small. Third, and most importantly, it does not matter what the relative contribution of emissions is from each source category. It matters that oil and gas operations, and hydraulic fracturing in particular, would add pollution in an already overburdened air basin that is not in attainment with regional air quality standards.

C. Cumulative Impacts

In addition to direct air pollution impacts, the Draft SEIS fails to adequately analyze and disclose the cumulative impacts from the Proposed Action. As BLM is well aware, the agency has also prepared a Draft SEIS for Oil and Gas Leasing and Development in the Central Coast Planning Area. That proposal itself involves considerable new well development, including an estimated 37 new wells that would involve hydraulically fracturing. Central Coast Draft SEIS at 2-3. Yet, inexplicably, the Draft SEIS fails to mention that other major BLM planning effort, which would involve the development of new hydraulically fractured wells during the same timeframe as the Proposed Action. Moreover, many of these wells in both Planning Areas are expected to be developed in the San Joaquin Valley, which is within a connected and significantly impacted air basin. *Id.* at 6, 30. Indeed, the regional air basin regulated by the San Joaquin Valley Air Pollution Control District includes portions of four counties covered by the Central Coast Draft SEIS (San Joaquin, Stanislaus, Merced, and Fresno) and five counties covered by the Draft SEIS (Fresno, Kern, Kings, Madera, and Tulare). The San Joaquin Valley is in extreme ozone nonattainment status, and smog is very much a cumulative air pollution concern (NO_x and ROG emissions are both ozone precursors which generate smog by reacting in the atmosphere across the entire air basin). BLM’s refusal to consider the related effects of two major BLM planning efforts raises serious cumulative impact concerns, as does BLM’s failure to look at the total effects of its planning efforts in light of the overall oil and gas development in the area.

NEPA requires an analysis of the cumulative effects of a federal action as part of its mandate that agencies consider the reasonably foreseeable effects of an action “to the fullest extent possible.” 42 U.S.C. § 4332(2)(C). NEPA recognizes that “each ‘limited’ federal project is part of a large mosaic of thousands of similar projects and that cumulative effects can and must be considered on an ongoing basis.” *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975). Courts have also recognized that cumulative impacts analysis is necessary to put a proposed action’s effects into meaningful context and fulfill NEPA’s informed decision-making purpose. *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972). A sufficient cumulative impacts analysis requires an assessment of the actual impact in light of background effects—e.g., how will increased emissions affect air quality in light of existing emissions—not merely a comparison of

the relative increase in emissions against total background emissions. These analyses are required since NEPA reviews “must give a realistic evaluation of the total impacts and cannot isolate a proposed project, viewing it in a vacuum. *Grand Canyon Trust v. FAA*, 290 F.3d 339, 342 (D.C. Cir. 2001).

For example, it is arbitrary for BLM to ignore the environmental impacts of hydraulic fracturing in concert with conventional development as well as other types of well stimulation treatments and enhanced oil recovery techniques in the Planning Area, given their likely utilization in the future. These techniques include acidizing, water flooding, steam flooding, cyclic steam injection, and a dual type that alternates between steam and water flooding. NEPA requires that an agency consider the full scope of activities encompassed by its Proposed Action. See *N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006) (the “hard look” requirement of NEPA includes “considering all foreseeable direct and indirect impacts.”). For the Proposed Action, this should include not only hydraulic fracturing activities, but also other types of well stimulation treatments that will be foreseeably used in the Planning Area. In the former Central Coast Final EIS, BLM assumed that “[w]ell stimulation technologies (e.g., hydraulic fracturing, acid matrix stimulation, acid fracturing) and enhanced oil recovery techniques (e.g., cyclic steam, steam flood, water flood) may be used on any or all” wells drilled on federal mineral estate. See, e.g., Central Coast 2019 Final EIS at 4-17.1. The Draft SEIS contains no analysis of these issues. In addition, as noted above, BLM limited its impacts analysis to the “zero to four” hydraulic fracturing events each year it anticipated would occur on new wells on new leases. BLM therefore ignored the impacts associated with extending the life of existing wells and leases. BLM also entirely ignores how its proposal will interact with other projects in the area, like Kern County’s resumption of oil and gas development permitting.⁴⁰

Finally, hydraulic fracturing is associated with significant GHG emissions, including carbon dioxide, methane, NO_x, VOCs, and black carbon.⁴¹ GHG emissions also result from fuel combustion by the equipment used to prepare oil and gas well pads and drill wells, from fugitive leaks of methane from production equipment, as well as from fuel used to power boilers and steam generators used in enhanced oil recovery operations.⁴² “The impact of GHG emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). Although BLM spends several pages estimating potential GHG emissions from oil and gas development associated with the Reasonably Foreseeable Development Scenario generally, then minimizing those emissions and stating that most emissions should either be studied in more detail later or are out of BLM’s authority and control, Draft SEIS at 57, BLM nowhere evaluates GHG emissions associated with hydraulic fracturing or explores related mitigation measures. BLM also fails to consider the reasonably foreseeable cumulative climate change impacts of the Proposed Action together with other wells on existing federal leases, all

⁴⁰ CalGEM, *Senate Bill 237*, <https://www.conservation.ca.gov/calgem/Pages/SB237.aspx>.

⁴¹ Brandt, A., Millstein, D., Jin, L., & Englander, J., *Air Quality Impacts from Well Stimulation* 185-86 (2015), <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

⁴² Bureau of Land Management, *2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends* (Aug. 2024), <https://www.blm.gov/sites/default/files/docs/2025-04/BLM-2023-Base-GHG-Report.pdf>.

wells in the Bakersfield Planning Area (including on non-BLM land), and other reasonably foreseeable pending projects (like oil and gas development pursuant to the Central Coast RMP Amendment).

III. The Draft SEIS Fails to Consider Environmental and Public Health Impacts to Low-Income Communities and Communities of Color.

The Draft SEIS also fails to consider how the Proposed Action will impact low-income communities and communities of color in the Planning Area, whether resulting from increased air pollution, groundwater contamination, or other impacts. While BLM has historically acknowledged that the Planning Area contains minority populations and low-income populations, *see* 2012 Final EIS at 388, the Draft SEIS fails to consider the disproportionate impacts of the Proposed Action on these populations in any way.

BLM argues it does not need to consider environmental justice impacts under NEPA due to the repeal of executive orders that required agencies to make achieving environmental justice part of their mission. Draft SEIS at 12. But the consideration of environmental justice has long been a part of the required NEPA analysis, *see, e.g., Mid States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 541 (8th Cir. 2003); *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1370 (D.C. Cir. 2017), and the statute itself rather than executive orders drives this requirement. NEPA makes it the federal government’s responsibility to “assure for *all* Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings,” 42 U.S.C. § 4331(b)(2) (emphasis added), and states “that *each person* should enjoy a healthful environment,” *id.* § 4331(c) (emphasis added). Consideration of how a proposed federal action might disproportionately affect *some* Americans more than others is thus a highly relevant consideration under the statute. NEPA’s focus on “the quality of the *human* environment,” *id.* § 4332(c) (emphasis added), is also a concern advanced by analyzing the distribution of environmental burdens in the human environment.

Many federal oil and gas activities in California occur in close proximity to the state’s most vulnerable communities. In particular, the Planning Area is home to many communities that are disproportionately exposed to pollution and who are most vulnerable to pollution and its health effects, called “disadvantaged communities” under California law.⁴³ To designate disadvantaged communities, the California Environmental Protection Agency uses the California Office of Environmental Health Hazard Assessment (“OEHHA”) CalEnviroScreen Tool to rank census tracts in the state using indicators that measure the communities’ exposure to pollution and the communities’ vulnerability to the effects of pollution. Many census tracts in the Planning Area meet the state’s definition of disadvantaged community, most notably in Kern, Tulare,

⁴³ Cal. Health & Safety Code § 39711; *SB 535 Disadvantaged Communities Webpage*, <https://oehha.ca.gov/calenviroscreen/sb535>.

Kings, and Fresno Counties, with other smaller areas in Ventura and Santa Barbara Counties.⁴⁴ This means that communities in these counties already are exposed to significantly more air pollution, water pollution, and other pollution sources that cause significant health risks than other parts of the state, and they are more vulnerable to these exposures.

With regard to air quality, seven of the eight counties (Fresno, Kern, Kings, Madera, San Luis Obispo, Tulare, and Ventura) in the Planning Area already have a non-attainment status for particulate matter, ozone, or both air quality standards. Ozone is among the most widespread and significant air pollution health threats in California, including in the Planning Area.⁴⁵ The Central Valley in particular experiences some of the worst particulate matter pollution in the state.⁴⁶ Ozone can cause and worsen asthma and has additional long-term health effects, including respiratory and cardiovascular diseases, and premature death.⁴⁷ In Kern County, over 70,000 residents (almost eight percent of the population) have asthma.⁴⁸ Any additional emissions of volatile organic compounds, nitrogen oxides, and other air pollutants in these areas from expanded oil and gas production are therefore significant and should be mitigated. Furthermore, the public health risk exposure to toxic air contaminants is greatest near active oil and gas sites.⁴⁹ Since many residents in the Planning Area live near oil and gas activity, any new oil and gas production activity must take into account the health impacts to nearby sensitive receptors.

With regard to drinking water supply and quality, parts of the Planning Area already suffer from some of the worst drinking water contamination problems in the state. According to

⁴⁴ See CalEnviroScreen 3.0, Overall Percentile Score for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 1. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, <https://oehha.ca.gov/calenviroscreen>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. See also OEHHA, *SB 535 Disadvantaged Communities Webpage*, <https://oehha.ca.gov/calenviroscreen/sb535>. Census tracts that are in the top 25 percentile overall in CalEnviroScreen are “disadvantaged communities.” See California Environmental Protection Agency, *Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon)* (April 2017), <https://calepa.ca.gov/wp-content/uploads/sites/6/2017/04/SB-535-Designation-Final.pdf>.

⁴⁵ See CalEnviroScreen 3.0 Ozone Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 2. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Air Quality: Ozone Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/air-quality-ozone>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Ozone causes lung irritation and worsening of chronic health conditions, increases asthma emergency room visits, and can increase mortality. Children are most sensitive to the effects of ozone exposure.

⁴⁶ See CalEnviroScreen 3.0 PM 2.5 Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 3. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Air Quality: PM 2.5 Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/air-quality-pm25>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Particulate matter that is 2.5 micrometers or less in diameter (PM 2.5) causes many serious health effects, including heart and lung disease.

⁴⁷ U.S. EPA, *Health Effects of Ozone in the General Population*, <https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>; Lim, Chris, et al., *Long-Term Exposure to Ozone and Cause-Specific Mortality Risk in the United States* (2019) at 1027, <https://pubmed.ncbi.nlm.nih.gov/31051079/>.

⁴⁸ American Lung Association, *State of the Air 2025*, <https://www.lung.org/research/sota/city-rankings/states/california/kern>.

⁴⁹ CCST Report, Vol. II at 407-412.

CalEnviroScreen 3.0's Drinking Water Indicator, which combines drinking water quality data for public and non-public drinking water systems, residents in the vast majority of the Planning Area already drink water that contains contamination from chemicals or bacteria.⁵⁰ Residents served by the vast majority of public water systems in California rely on groundwater, and more than 25 percent of those systems rely on a contaminated groundwater source.⁵¹ Kern County in particular has the second highest number of community water systems that rely on contaminated groundwater.⁵² Small community water systems, which serve residents in parts of the Planning Area, typically lack the infrastructure and economies of scale of larger water systems to afford necessary treatment or identification of alternative water supplies for a contaminated groundwater source.⁵³ Furthermore, many residents in the Planning Area rely on private, domestic wells for drinking water that are unregulated, and data available for private wells indicates significant contamination issues in the Planning Area.⁵⁴ Given the scope of the existing drinking water contamination in the Planning Area, any additional impacts from hydraulic fracturing should be identified and mitigated.

The Draft SEIS also fails to account for the close proximity of oil and gas activities to residents. More than three million people are known to live within one kilometer (approximately 3,200 feet) of the State's 83,000 active-producing oil and gas wells.⁵⁵ Compared to the overall California population, Hispanic, non-Hispanic Black, and non-Hispanic Asian communities, as well as populations of lower socioeconomic status, are more likely to live within 1 km (3,281 ft) of at least one active well and live in areas with the highest density of oil and gas wells.⁵⁶ In Kern County alone, as of 2014, 35 percent of the county's residents (290,000) lived within a mile of at least one oil or gas well, and nearly 58 percent of those residents living within a mile of a well were people of color.⁵⁷

⁵⁰ See CalEnviroScreen 3.0 Drinking Water Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 4. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Drinking Water Indicator,

<https://oehha.ca.gov/calenviroscreen/indicator/drinking-water-contaminants>. See also OEHHA, *Methodology for a Statewide Drinking Water Contaminant Indicator* (Jan. 2017), <https://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3dwm methodology.pdf>.

⁵¹ State Water Resources Control Board, *Report to the Legislature: Communities That Rely on a Contaminated Groundwater Source for Drinking Water* (Jan. 2013), <https://www.waterboards.ca.gov/gama/ab2222/docs/ab2222.pdf>.

⁵² *Id.* at 33.

⁵³ *Id.*

⁵⁴ See CalEnviroScreen 3.0 Drinking Water Percentile for Bakersfield Hydrologic Fracturing Planning Area. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Drinking Water Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/drinking-water-contaminants>, attached as Exhibit 4. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided.

⁵⁵ Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making ES-5* (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%20240621.pdf).

⁵⁶ *Id.* at ES-2.

⁵⁷ Natural Resources Defense Council, *Drilling in California: Who's at Risk?* 13-15 (Oct. 2014).

Studies increasingly show links between exposure to oil and gas operations and public health impacts, including cancer, adverse birth outcomes, and preterm births.⁵⁸ Residents living near oil and gas operations can experience acute respiratory, neurological, and gastrointestinal symptoms from exposure to the operations, such as headaches, fatigue, burning eyes and throats, nausea, and nosebleeds.⁵⁹ Residents also experience sleep disturbance from noise levels from oil and gas activity.⁶⁰ A state-commissioned public health expert panel that worked with CalGEM, California's oil and gas regulatory agency, recently released a report affirming that proximity to oil and gas production increases the likelihood of adverse health outcomes, and those outcomes get worse where the density of wells is greater.⁶¹ The report concludes with a "high level of certainty" that there is a causal relationship between close proximity to oil and gas development and negative health impacts, particularly adverse perinatal and respiratory outcomes like reduced fetal growth, preterm birth, asthma, and reduced lung function.⁶² It cites research estimating that, in 2025, nearly 100 premature deaths in California will be attributed to oil and gas pollution.⁶³

⁵⁸ See, e.g., Intrinsik Environmental Sciences Inc., Prepared for British Columbia Ministry of Health *Phase 2- Human Health Risk Assessment of Oil and Gas Activity in Northeastern British Columbia: Task 3 – Literature Review* (April 2013); McKenzie, Lisa M., et al., "Childhood Hematologic Cancer and Residential Proximity to Oil and Gas Development," *PLoS ONE* 12(2):e0170423 (2017), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170423>; Balise, et al., "Systematic Review of the Association between Oil and Natural Gas Extraction Processes and Human Reproduction," *Fertility & Sterility* 106:4 (Sept. 2016) at 795-819, <https://www.sciencedirect.com/science/article/pii/S0015028216625293>; McKenzie, Lisa M., et al., "Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado," *Environmental Health Perspectives* 122 (2014) at 412-417, <https://pmc.ncbi.nlm.nih.gov/articles/PMC3984231/>; Casey, et al., "Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania," *Epidemiology* 27 (2016) at 163-172, <https://pubmed.ncbi.nlm.nih.gov/26426945/>; Li, X., et al., "Association between Ambient Fine Particulate Matter and Preterm Birth or Low Birth Weight: An Updated Systematic Review and Meta-Analysis," *Environmental Pollution* 227 (2017) at 596-605, <https://pubmed.ncbi.nlm.nih.gov/28457735/>; Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making* Chapter 3 (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%2020240621.pdf).

⁵⁹ Webb, et al., "Potential Hazards of Air Pollutant Emissions from Unconventional Oil and Natural Gas Operations on the Respiratory Health of Children and Infants," *Reviews on Environmental Health* 31 (2016) at 225-243, <https://pubmed.ncbi.nlm.nih.gov/27171386/>; Tustin, et al., "Associations between Unconventional Natural Gas Development and Nasal and Sinus, Migraine Headache, and Fatigue Symptoms in Pennsylvania," *Environmental Health Perspectives* 125 (2016) at 189-197, <https://pmc.ncbi.nlm.nih.gov/articles/PMC5289909/>; Los Angeles County Department of Public Health, *Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County* (Feb. 2018), http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf; Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making* Chapter 3 (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%2020240621.pdf).

⁶⁰ Hays, et al., "Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development," *Science of the Total Environment* 580 (Feb. 2017) at 448-456.

⁶¹ Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making* ES-2 – ES-14 (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%2020240621.pdf).

⁶² *Id.* at ES-8.

⁶³ *Id.* at 2-3, 4-17.

The increasing evidence of public health effects for residents exposed to oil and gas activity is particularly concerning in the Planning Area, where many residents already experience the highest rates of cardiovascular disease⁶⁴ and low birth weights⁶⁵ in the state, in addition to the existing significant levels of air and water pollution and high poverty levels. BLM must redo its analysis to consider how the Proposed Action will impact low-income communities and communities of color.

IV. The Draft SEIS Fails to Consider Reasonable Alternatives to the Proposed Action.

The Draft SEIS also fails to consider a reasonable range of alternatives to the Proposed Action. NEPA requires project proponents to provide a “detailed statement” regarding the “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii). The requirement to consider reasonable alternatives “lies at the heart of any NEPA analysis.” *California ex rel. Lockyer v. U.S. Dept. of Agric.*, 459 F. Supp. 2d 874, 905 (N.D. Cal. 2006). The alternatives requirement also “ensures that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance.” *Calvert Cliffs Coordinating Committee v. United States Atomic Energy Commission*, 449 F.2d 1109, 1114 (D.C. Cir. 1971). “The existence of a viable but unexamined alternative renders” an EIS inadequate. *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (internal quotations and citations omitted).

In the Draft SEIS, BLM “brings forward” the same alternatives that it previously considered in the 2012 Final EIS, claiming that the district court “upheld the range of alternatives” in that document. Draft SEIS at ES-1, 1. These alternatives include “No Action” (Alternative A), the Proposed Action to open 1,011,470 acres to fluid mineral leasing (Alternative B), as well as three additional alternatives (Alternatives C-E) that are similar to the Proposed Action but differ slightly in terms of their emphasis on conservation, livestock grazing, or the production of natural resources. *Id.* at 15-16. However, given that the stated purpose of the Draft SEIS is to analyze the environmental impacts of hydraulic fracturing, Draft SEIS at 2, BLM must consider additional alternatives that relate to this purpose and which could potentially reduce the significant impacts of such operations.

⁶⁴ See CalEnviroScreen 3.0 Cardiovascular Rate Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 5. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Cardiovascular Disease Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/cardiovascular-disease>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Cardiovascular disease is linked to exposure to pollution, and the effects of pollution may be greater for people with cardiovascular disease or previous heart attack.

⁶⁵ See CalEnviroScreen 3.0 Low Birth Rate Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 6. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Low Birth Weight Infant Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/low-birth-weight-infants>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Low birth weights are linked to exposure to pollution, and low birth weight babies are more likely to die as infants or develop asthma or other chronic diseases later in life when compared to babies who weigh more.

BLM's reliance on the same alternatives that were included in the 2012 Final EIS based on the district court's decision in *Los Padres ForestWatch* misses the mark. In that decision, the district court found that BLM had provided a reasonable justification for excluding "an alternative that would have closed substantially more lands" to oil and gas leasing, given that "nearly all anticipated development is expected to occur on existing leases" and BLM had "properly considered the mix of tools available in its arsenal to balance the competing priorities of developing federal lands and protecting the environment." *Los Padres ForestWatch*, 2016 WL 5172009 at *14.

However, as the district court also stated, "[c]onsideration of reasonable alternatives is necessary to ensure that the Bureau has before it and takes into account all possible approaches to, and potential environmental impacts of, a particular project." *Id.* at *13; *see id.* at *14 (BLM is "obligated to examine reasonable alternatives to mitigate or reduce the overall *environmental impact* and not specifically the overall oil and gas activity on federal lands") (emphasis in original). Given that the court found that BLM must conduct this supplemental EIS to take a "hard look" at the environmental impacts of hydraulic fracturing, simply "bringing forward" the same alternatives from an environmental review that entirely failed to consider such operations precludes BLM from considering approaches that could actually reduce the overall environmental impact of fracking activities, in direct violation of NEPA. In other words, BLM cannot simply "bring[] forward" the same alternatives from a prior, defective review that entirely failed to consider such hydraulic fracturing operations.

Additional alternatives that BLM should consider to mitigate or reduce the environmental impacts of hydraulic fracturing include:

- (1) Clarifying that hydraulic fracturing operations are prohibited in California;
- (2) Limiting the number of hydraulic fracturing operations in a given year;
- (3) Closing more public lands to mineral leasing;
- (4) Placing ecologically sensitive areas off limits to hydraulic fracturing;
- (5) Prohibiting leasing in areas with low or no potential for oil and gas development (this is an alternative that BLM itself evaluated in the Supplemental EIS for the Central Coast Oil and Gas RMP Amendment, *see* Central Coast Draft SEIS at 17-18); and
- (6) Limiting oil and gas development near communities.

Without a consideration of alternatives that are actually related to the environmental consequences of hydraulic fracturing, BLM's alternatives fail to allow for "informed decision-making and informed public participation," in violation of NEPA. *See California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982).

V. BLM Failed to Identify or Discuss Adequate Mitigation Measures

NEPA requires that an agency identify feasible mitigation measures for any adverse environmental impacts resulting from a proposed action and its alternatives. *Robertson*, 490 U.S. at 351-52 ("[O]ne important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences."). Mitigation of environmental impacts must "be

discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *City of Carmel-By-The-Sea v. U.S. Dep’t of Transp.*, 1 123 F.3d 1142, 1154 (9th Cir. 1997) (quoting *Robertson*, 490 U.S. at 353). Moreover, “[a]n essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective.” *S. Fork Band Council of W. Shoshone of Nev. v. U.S. Dep’t of the Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (finding that the EIS violated NEPA by failing to “assess the effectiveness of the mitigation measures relating to groundwater”).

Throughout the Draft SEIS, BLM declines to consider mitigation measures and instead indicates that such measures will be evaluated later in the development process:

- Page 3 – “During this project-specific [APD] review, BLM would finalize project mitigation measures, Best Management Practices (BMPs), and apply appropriate stipulations from the 2014 RMP.”
- Page 28 – “BLM will consider water-quantity risks during APD review . . . Mitigation may be required through design features and enforceable conditions of approval (COA), for example, source-water selection, pumping limits, and metering/monitoring and reporting.”
- Page 29 – “BLM will assess water-quality risks during project-level authorization review . . . Mitigation may be required through design features and enforceable COAs (e.g., produced-water handling and disposal controls, secondary containment, spill prevention/response, and monitoring/reporting).” Coordination with state and federal entities is also deferred to that time.
- Page 57 – “Approval of future development may include the application of BMPs within BLM’s authority, included as COA, to reduce or mitigate GHG emissions. Additional measures proposed at the project development stage may be incorporated as applicant-committed measures by the project proponent or added to necessary air quality permits.”
- Page 58 – Potential impacts to newly proposed for listing or newly listed species “would be mitigated by the CSU stipulations. Site specific review would be conducted at the APD phase, and consultation would be conducted on a case-by-case basis, if needed.”
- Page 58 – “Potential direct and indirect impacts to special status species from hydraulic fracturing activities depend on species occurrence within a potential leasing area and would therefore be further analyzed at the leasing stage and protective measures and lease stipulations would be applied at that stage.”
- Page 60 – “Valley Fever represents a risk to worker safety. However, with the application of appropriate BMPs and adherence to regulatory guidance, the risk is substantially mitigated.”

This deferral of mitigation and best management practices is inappropriate. *S. Fork Band Council*, 588 F.3d at 727; *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998). As the Ninth Circuit has frequently stated in NEPA cases, it is “not appropriate to defer consideration” of impacts to a future date “when meaningful consideration can be given now.” See *Kern v. U.S. BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002). BLM is also in a better position now to evaluate and mitigate impacts that will result from the collective increase

in oil and gas development and hydraulic fracturing enabled by the 2014 RMP than it will be when it considers Approval to Drill (“APD”) applications. For example, air pollution increases that contribute to nonattainment are better assessed holistically rather than when operators seek APDs for one well at a time. Similarly, impacts to special status species from habitat loss cannot be addressed only at the site-specific scale of APDs. Mitigation is especially critical if BLM and operators expect CalGEM to rely on BLM’s Supplemental EIS for approval of oil and gas permits without conducting additional environmental review pursuant to CEQA, as CEQA requires a separate discussion of mitigation measures. *See* Cal. Code Regs., tit. 14, § 15221.

Mitigation Measures Regarding Impacts to Special Status Species and Their Habitats

BLM’s Proposed Action has the potential to adversely impact numerous special-status species and the habitats that support these species. However, the Draft SEIS fails to adequately identify or discuss feasible mitigation measures regarding these adverse impacts. Instead, the Draft SEIS simply refers back to impacts analyzed in the 2012 Final EIS and 2019 Final SEIS and notes that mitigation may be applied during project-specific analyses. *See* Draft SEIS at 58. This treatment of mitigation of species impacts is inadequate.

As CDFW noted in their 2019 comments, “the 2014 RMP does not include mitigation measures, BMPs, or stipulations that are adequate to conserve, protect, and manage” certain special status species and their habitats.⁶⁶ In particular, the mitigation measures included in Appendix 3 of the 2014 RMP (and Appendix L of the 2012 Final EIS) are not specific enough, only cover a small subset of protected species in the Planning Area, and even allow for the take of species that are covered, including the Blunt-nosed Leopard Lizard, San Joaquin Kit Fox, Giant Kangaroo Rat, and San Joaquin Antelope Squirrel. Unauthorized “take” of species is prohibited by state and federal law, and subject to criminal enforcement. *See* Cal. Fish & Game Code §§ 2000, 2080, 12000(a), 12008, 12008.1; *see also* 16 U.S.C. §§ 1532(19), 1538(a).

CDFW in 2019 asked for the inclusion of additional mitigation measures, including: state-recommended survey protocols to avoid the taking of protected species; implementing no-disturbance buffers to minimize ground disturbance; conducting habitat surveys in the Planning Area to proactively protect suitable habitats; ensuring the restoration of normal water flow immediately after disruptive activities to maintain the integrity of streams; and habitat compensation to account for impacts to lands from the Proposed Action. In comments submitted during the Scoping Period in 2025, CDFW identified additional needed mitigation measures, including decreasing impacts of artificial outdoor lighting through installation of only motion sensitive lighting; mounting light fixtures as low as possible to minimize light trespass; use of light fittings that direct and confine the spread of light directly downward; use of long-wavelength light sources; installing lighting only in areas that are not in or near Sensitive Natural Communities and habitats used by special-status species, and avoiding use of the white/blue wavelengths of the light spectrum. BLM’s failure to identify and discuss feasible mitigation

⁶⁶ California Department of Fish and Wildlife, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 6, 2019).

measures in the SEIS regarding sensitive species and their habitat is arbitrary and capricious and contrary to the requirements of NEPA and the APA.

Mitigation Measures Regarding Impacts to Public Health and Safety

BLM has also punted review and mitigation of other issues to the development application stage, despite acknowledging the “potential for [the RMP and subsequent lease sales] to add to a cumulative, disproportionate impact on environmental justice populations.” 2020 Bakersfield Lease Sale Final Environmental Assessment at 71. BLM knows that its Proposed Action will induce more drilling within or near large oil fields in Kern County, for example, that have long established practices and data regarding types of operations, equipment, and other sources of impacts. BLM is also able to determine the exact location of potential lease parcels relative to environmental justice communities. It is therefore appropriate for BLM to analyze and mitigate health and safety impacts on nearby communities now. As discussed, *infra*, BLM should not allow drilling with 3,200 feet of environmental justice communities or any other sensitive locations and should implement relevant safety measures identified in Senate Bill 1137. Relevant measures include leak detection and repair of sites including pipelines, suspension of operations in the event of a leak, vapor venting prevention, water sampling, sound controls, lighting controls, and dust controls. A 2024 public health expert panel report also sets out reasonable mitigation measures even outside of the public health and safety setback zone, including improved air quality monitoring and leak detection that is more specifically tailored to the variety of extraction processes and equipment that produce VOCs, additional setbacks between oil and gas wells and potential sources of drinking water, prohibitions on disposal of produced water into unlined ponds, better access to information about produced water disposal, restriction of chemicals with the greatest health risks, and chemical disclosure requirements.⁶⁷

THE DRAFT SEIS FAILS TO CONSIDER CONFLICTS WITH STATE AND LOCAL POLICIES.

The Draft SEIS fails to properly consider conflicts between the Proposed Action and directly applicable California laws and policies. BLM’s RMPs “shall” be consistent with state and local government resource-related plans, policies, and programs. 43 C.F.R. § 1610.3-2. BLM is “accountable for ensuring consistency if they have [] been notified, in writing, by State and local governments or Indian tribes of an apparent inconsistency” with state policies, plans, and programs. *Id.* To effectuate these requirements, BLM must identify inconsistencies and also provide the Governor the opportunity to identify inconsistencies and provide recommendations. *Id.* BLM must also document how inconsistencies between the proposed plan and state and local plans were “addressed and, if possible, resolved.” *Id.* at § 1610.3-1(f).

BLM has acknowledged that “[a]ll state laws apply on Federal lands, except those that are preempted by Federal law.” 80 Fed. Reg. at 16,179; *see also id.* (the requirement that

⁶⁷ Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making* ES-8 – ES-19, (June 21, 2024), https://www.conservation.ca.gov/calgem/Documents/Public_Health_Panel_Final_Report_20240621.pdf.

operators “comply with all applicable laws,” “includes other Federal and state and local laws, rules, and regulations,” and is “repeated in the existing regulations at sections 3162.1(a) and 3162.5-1(a).”). Specifically with respect to hydraulic fracturing, operators “must comply” with “any applicable state requirements, just as they already must comply with both BLM rules and state rules on a variety of drilling and completion issues.” *Id.*

NEPA also requires that an agency discuss possible conflicts between the proposed action and state plans or policies. *See, e.g., Quechan Tribe of Ft. Yuma Indian Reservation v. U.S. Dep’t of the Interior*, 927 F. Supp. 2d 921, 946 (S.D. Cal. 2013) (finding that BLM did not violate NEPA where “numerous provisions” in EIS and ROD examined the project’s consistency with local laws and regulations and California determined there were no inconsistencies between the Project and state or local laws). In addition, NEPA requires supplementation when there “are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 372 (1989).⁶⁸

BLM entirely fails to acknowledge relevant new information and changes in circumstances related to state and local laws and policies that address environmental concerns related to oil and gas drilling. Most significantly, the Draft SEIS ignores two state policy developments that significantly affect oil and gas activities in the Planning Area: a ban on hydraulic fracturing and a law establishing a 3,200-foot setback between new and reworked oil and gas wells and all sensitive locations. All oil and gas wells located on lands within California (including federal, state, local, and private lands) are permitted, drilled, operated, maintained, and plugged and abandoned under legal requirements and administrative procedures that CalGEM enforces and administers. CalGEM’s permitting authority and process applies to oilfield operations in California on all land administered by BLM whether that land is owned in total by the federal government or is a “split-estate.”⁶⁹

Regulations prohibiting new permits for well stimulation treatments such as hydraulic fracturing and acid matrix stimulation went into effect in October 2024. Cal. Code Regs., tit 14, § 1780(d). The regulations were developed following a 2020 Executive Order from Governor Newsom announcing that the State would cease issuing fracking permits due to health and safety harms to communities and workers.⁷⁰ Although BLM acknowledges that CalGEM has “regulatory authority over hydraulic fracturing in California,” and that California has a ban on the issuance of new hydraulic fracturing permits, Draft SEIS at 18, there is no affirmation that well stimulation is disallowed in the Planning Area.

⁶⁸ Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (Feb. 2026), <https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing>.

⁶⁹ *See* Public Resources Code §§ 3008, 3013, 3106, 3203, and 3204; Cal. Code of Regs., title 14, §§ 1712, 1714; DOGGR Notice to Operators 2017-03.

⁷⁰ Executive Department, State of California, Executive Order N-70-20, Gavin Newsom (Sept. 23, 2020), <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>.

In 2022, California Senate Bill (“SB”) 1137 established 3,200-foot drilling setback requirements (known as health protection zones) and other statutory requirements, including engineering controls for all wells, to protect the health and safety of adjacent communities, including residences and schools.⁷¹ SB 1137 sets forth a variety of new requirements related to health protection zones and to wells and production facilities based on their location relative to a health protection zone. CalGEM is no longer authorized to approve a notice of intention for any well with a wellhead (i.e., a surface location) situated within a health protection zone, unless a specific exception applies. Cal. Pub. Resources Code, §§ 3281, 3281.5. Construction and operation of new production facilities within a health protection zone is also prohibited unless a specific exception applies. *Id.*, § 3280(b). To implement SB 1137, CalGEM adopted emergency regulations establishing the administrative framework for the statutory prohibition of new wells and facilities within a 3,200-foot setback area from certain sensitive locations.⁷² CalGEM is currently undertaking a rulemaking process to permanently adopt those regulations.⁷³ In addition, by January 1, 2027, operators of oil and gas production wells and production facilities within a health protection zone will be required to submit a leak detection and response plan that contains four key components: installation of a continuously operating emission detection system to provide rapid detection of leaks; an effective and reliable alarm system that alerts the operator of leaks when triggered; a response protocol that provides for the rapid identification and repair of leaks; and provisions for notifying local communities when the leak source cannot be identified or fixed within 48 hours.⁷⁴ There is no acknowledgment in the Draft SEIS that this law exists, let alone any attempt to ensure consistency by evaluating a compliant alternative or mitigation that would apply to wells within 3,200 feet of sensitive receptors. This is despite the fact that CalGEM has created a mapping tool that allows users to easily view the health protection safety zone relative to BLM leases and areas where BLM is the surface management agency (See Exhibit 7).

Other recent regulatory updates directly affect oil and gas operations. In 2019, updated underground injection control regulations went into effect that increase testing, monitoring, and disclosure requirements, as well as set automatic triggers that require operators to cease injections to protect groundwater and public safety. Cal. Code Regs., tit. 14, §§ 1724.5-1724.13. Effective in 2019 and updated in 2025, there are also requirements for testing and elimination of idle wells. Pub. Resources Code, § 3206; Cal. Code Regs., tit. 14, §§ 1772-1772.7. BLM must evaluate if its Proposed Action is consistent with these requirements.

⁷¹ SB 1137, 2022 Leg., Reg. Sess. (Cal. 2022).

⁷² SB 1137 First Emergency Implementation Regulations, Cal. Code Regs., tit. 14, § 1765 et seq., <https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf>.

⁷³ SB 1137 Notice of Proposed Action (Aug. 1, 2025), https://conservation.ca.gov/calgem/Documents/SB%201137%20Notice%20of%20Proposed%20Action%20v2_Clean.pdf.

⁷⁴ California Air Resources Board, *Senate Bill 1137: Establishment of Health Protection Zones, Oil and Gas Production Wells and Production Facilities*, <https://ww2.arb.ca.gov/our-work/programs/senate-bill-1137-establishment-health-protection-zones-oil-and-gas-production>.

There are a number of additional state plans and policies that conflict with BLM's Proposed Action. The use of hydraulic fracturing would open up previously unproductive hydrocarbon formations and extend the life of existing formations, with resulting significant impacts. California has a statutory target of reducing GHG emissions by 40 percent below 1990 levels by 2030, Cal. Health & Safety Code § 38566, and net zero GHG emissions by 2045 (Assembly Bill 1279), *id.* § 38562.2; Executive Order B-55-18. CARB's 2022 Scoping Plan for Achieving Carbon Neutrality lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. This path includes reduction of oil and gas extraction by approximately 89 percent in 2045 from 2022 levels.⁷⁵ Each scenario the California Air Resources Board studied incorporated a phaseout of 90 to 100 percent of oil extraction and oil refining by 2045.⁷⁶ Increasing oil and gas operations and opening new lands to leasing is contrary to and inconsistent with these statutory targets and the 2022 Scoping Plan.

California has also enacted several statutes to protect the state's most disadvantaged communities from air and water pollution, and the expansion of oil and gas activity on federal lands would have a significant adverse impact on the state's ability to meet these goals. California State Assembly Bill 617 (2017) created a California Air Resources Board ("CARB") Community Air Protection Program that is focused on reducing exposure in communities most impacted by air pollution.⁷⁷ CARB selected its initial ten communities for focused emissions reduction and air monitoring in 2018, two of which are located in the Planning Area: Shafter and South Central Fresno.⁷⁸ CARB selected Arvin/Lamont as an additional community for focused air emissions reduction in the Planning Area.⁷⁹ The San Joaquin Valley Air Pollution Control District has adopted emissions reduction programs for this community.⁸⁰ The ability of the state to meet emissions reduction program goals in the Planning Area will be inhibited by and is inconsistent with BLM's Proposed Action.

CARB also created a Study of Neighborhood Air near Petroleum Sources ("SNAPS") to better understand air quality in communities near oil and gas operations.⁸¹ This project informs the Community Air Protection Program and state policy around air emissions in these

⁷⁵ California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality* 102 (Nov. 16, 2022), <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>.

⁷⁶ *Id.* at 24, Table 1.

⁷⁷ California Air Resources Board, *Community Air Protection Blueprint* (Oct. 2018), https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf.

⁷⁸ California Air Resources Board, *Community Air Protection Program, 2018 Community Recommendations Staff Report* 7 (Sept. 11, 2018), https://ww2.arb.ca.gov/sites/default/files/2018-09/2018_community_recommendations_staff_report_revised_september_11.pdf.

⁷⁹ California Air Resources Board, *Selected Communities in the Program*, <https://ww2.arb.ca.gov/capp/com/selected-communities-in-the-program>.

⁸⁰ *Arvin/Lamont Community Emissions Reduction Program* (June 16, 2022), https://community.valleyair.org/media/4014/6-final_arvinlamont-cerp_610.pdf (identifying as measures rules for crude oil production sumps and leak detection and repair rules for oil and gas industrial processes).

⁸¹ California Air Resources Board, *Study of Neighborhood Air near Petroleum Sources (SNAPS) Fact Sheet* (Feb. 2019), https://ww2.arb.ca.gov/sites/default/files/2019-02/SNAPS_QA_2-6-19.pdf.

communities. The first community selected by CARB for an intensive air monitoring study, Lost Hills, is in the Planning Area, and monitoring commenced in May 2019.⁸² The final report summarizing the findings of the study noted that “Oil and gas-related sources are also a major source category impacting Lost Hills,” and recommended additional inspections of oil and gas facilities.⁸³ The Draft SEIS and any future BLM decision-making should consider the results from this study.

There are also several state water laws and policies that are largely ignored by the Draft SEIS. In 2012, California enacted Water Code section 106.3, making California the first state in the nation to recognize the human right to water.⁸⁴ Water Code section 106.3 established the state’s policy that every person has the right to safe, clean, affordable, and accessible water adequate for drinking, cooking, and sanitary purposes.⁸⁵ Thus, preventing and addressing discharges that could threaten human health by contributing to contamination of drinking water sources are among the state’s highest priorities. The California Sustainable Groundwater Management Act, enacted in 2014, also requires implementation of groundwater sustainability plans to avoid undesirable groundwater impacts and mitigate overdraft within 20 years. Cal. Water Code § 10720 *et seq.* As discussed above, many of the disadvantaged and marginalized communities residing in the Planning Area do not have access to clean, safe, and affordable water.⁸⁶ In addition, there are potentially significant impacts to groundwater from contamination, overdraft, and land subsidence resulting from the Proposed Action, which would compound the significant water contamination and overdraft issues many communities in the Planning Area are already dealing with. Thus, any risk of additional contamination or reduction in water supplies resulting from hydraulic fracturing on BLM lands is significant and would be inconsistent with the state’s laws and policies.

The Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) is another source of inconsistency. The MBHCP required that many acres of habitat within the Planning Area be protected in perpetuity; these lands were acquired and then transferred to California Department of Fish and Wildlife ownership as permanent compensatory habitat mitigation to offset the impacts of past development activities within the MBHCP planning boundary. *See* Fish & G. Code § 2050 *et seq.*; 14 Cal. Code Regs. §§ 550, 550.5, 630. These MBHCP mitigation lands, and specifically those within Kern County in the California Department of Fish and Wildlife’s Lokern and Semitropic Ecological Reserves (14 Cal. Code Regs. § 630(b)(78), (124)), support species that are critically imperiled and whose range does not extend much beyond the

⁸² California Air Resources Board, *Lost Hills Air Monitoring Plan (SNAPS)* (May 2019), <https://ww2.arb.ca.gov/resources/documents/lost-hills-air-monitoring-plan-snaps>.

⁸³ California Air Resources Board, *SNAPS Lost Hills Summary Report* (Oct. 2025), https://ww2.arb.ca.gov/sites/default/files/2025-10/SNAPS_Lost_Hills_Summary_Report.pdf.

⁸⁴ California State Assembly Bill 685 (2012).

⁸⁵ *California State Water Resources Control Board*, Resolution No. 2016-0010; *California Regional Water Quality Control Board, Central Valley Region*, Resolution R5-2016-0018.

⁸⁶ *See also* University of California, Berkeley School of Law, International Human Rights Law Clinic, *The Human Right to Water Bill in California: An Implementation Framework for State Agencies* (May 2013), https://www.law.berkeley.edu/files/Water_Report_2013_Interactive_FINAL%281%29.pdf.

boundaries of the Southern San Joaquin Valley. The Draft SEIS does not discuss the MBHCP and potential direct and indirect impacts to MBHCP mitigation lands from the Proposed Action.

BLM must revise the Draft SEIS to properly consider conflicts between the Proposed Action and relevant state and local laws and policies.

BLM FAILS TO SUPPLEMENT ITS ANALYSIS TO ACCOUNT FOR NEW CIRCUMSTANCES AND INFORMATION

After nearly a decade and a half, BLM's 2012 EIS needs a refresh that goes beyond addressing the specific deficiencies addressed by the court in *Los Padres ForestWatch v. U.S. Bureau of Land Mgmt.*, 2016 WL 5172009 (C.D. Cal. Sept. 6, 2016). Post-decision supplemental impact statements are not "expressly addressed in NEPA," but the U.S. Supreme Court has held that they are sometimes necessary given the statute's approach to environmental protection and concern with preventing uninformed agency action. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 370-71 (1989). Supplementation is required: "[1] If there remains 'major Federal action' to occur," and [2] if there are significant new circumstances or information relevant to environmental concerns that will "affect the quality of the human environment" in a significant manner or to a significant extent not already considered." *Id.* at 372-74 (quoting 42 U.S.C. § 4332(2)(C))⁸⁷.

BLM claims that its Draft SEIS was prepared to "determine whether changes are needed to the fluid minerals decisions in the 2014 RMP based on new information or changes in circumstance." Draft SEIS at ES-1. However, statements elsewhere confirm that BLM was not open to considering any changes except those related to "analyz[ing] the environmental effects of hydraulic fracturing technology for oil and gas leasing and development of new leases within the Planning Area." Draft SEIS at ES-1. For example, the notice of intent stated that: "Only those portions of the existing plan that need to be updated to respond to the issues and management concerns *identified in the court order and settlement agreement* will be reviewed. 90 Fed. Reg. 26,605, 26,605 (emphasis added).

Given the time that has lapsed since BLM prepared the 2014 RMP, 2012 Final EIS, and 2019 Final SEIS, additional significant new information and circumstances have emerged that will "affect the quality of the human environment" in a significant manner or to a significant extent not already considered.

This significant new information includes unacknowledged data and studies detailed in this comment above. In particular:

⁸⁷ See also Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (2026), <https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing>.

Public Health

- Information presented by the Public Health Rulemaking Scientific Advisory Panel that worked with CalGEM prior to the passage of SB 1137. This information included a response to questions and report detailing that: (1) proximity to oil and gas production increases the likelihood of adverse health outcomes—particularly adverse perinatal and respiratory outcomes like reduced fetal growth, preterm birth, asthma, and reduced lung function—and those outcomes get worse where the density of wells is greater; (2) oil and gas development is responsible for the majority emissions of multiple of toxic air contaminants in the San Joaquin Valley; and (3) science strongly supports the need for health and safety setbacks for communities in close proximity to oil and gas development. The Panel also concluded that there is support for improved air quality monitoring and leak detection that is more specifically tailored to the variety of extraction processes and equipment that produce VOCs, additional setbacks between oil and gas wells and potential sources of drinking water, prohibitions on disposal of produced water into unlined ponds, better access to information about produced water disposal, restriction of chemicals with the greatest health risks, and chemical disclosure requirements.
- Information about where health and safety setbacks are located within the State.

Air Quality and GHG Emissions

- Information about emissions of significant air pollution from oil and gas operations, particularly sulfur oxides, hydrogen sulfide, volatile organic compounds, particulate matter, and toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane, and hydrogen sulfide.
- Information about GHG emissions associated with hydraulic fracturing.
- Information about the significant consequences of climate change, which led the State of California to pass laws setting GHG reduction targets and adopt a Scoping Plan with a path to reduce oil and gas extraction by approximately 90 percent by 2045.

Water Quality and Quantity

- Information about the prevalent use of unlined ponds in the Central Valley to store produced water, and that water in these ponds can contain hazardous chemicals that can threaten water supplies.
- Information about the need to analyze water quality and supply issues on a localized level.
- Information linking injection of hydraulic fracturing waste fluids to subsidence and seismic activity.

Cumulative Impacts

- Information about cumulative impacts from oil and gas operations, including from conventional and enhanced oil recovery operations on BLM lands in the Planning Area, the Central Coast RMP Amendment and Supplemental EIS for Oil and Gas Leasing, and Kern County's resumption of oil and gas development permitting.

Environmental Justice

- o Information about the proximity of areas open for leasing to particular environmental justice communities, and about the increased health burdens from living near oil and gas activity.

Significant new circumstances include changes in state law and changes in oil and gas development in the broader Planning Area. First, with respect to state law, BLM ignores that CalGEM permits are required for operators to drill or hydraulically fracture wells in California. Hydraulic fracturing was entirely phased out by CalGEM regulations that went into effect on October 1, 2024, Cal. Code Regs. tit. §1780(d), and CalGEM may not approve a notice of intention for any well with a wellhead situated within the 3,200-foot health protection zone, Cal. Pub. Resources Code, §§ 3281, 3281.5. BLM does not acknowledge these changes or make any attempt to conform its Proposed Action to comport with them. BLM also ignores California's climate plans and other state laws and policies discussed above.

Second, with respect to changes in oil and gas development in the Planning Area, BLM's analysis fails to account for cumulative air pollutant and GHG emissions from wells on existing leases, private and state land in the planning area, and BLM's nearby Central Coast Field Office RMP Amendment. BLM also fails to consider the use of enhanced oil recovery ("EOR") methods in recent years. These methods present environmental concerns not sufficiently addressed in the Draft SEIS or earlier EISs it is supplementing. The California Energy Commission explained in 2021 that EOR is a process of injecting pressurized steam into oil reservoirs to thin heavy oil and increase the flow and the amount of recoverable crude oil.⁸⁸ Steamflooding uses wells to inject steam that will heat up the oil and allow it to flow to an extraction well. Cyclic steaming injects steam into an oil well, leaves it in place to soak, then pumps the steam out before crude is extracted. Steam is generated using boilers or combined heat and power, which are fueled by natural gas. Steamflooding and cyclic steaming increase the amount of recoverable crude oil from fields with heavy crudes, like those typically found in California. These techniques are needed to extend the life of production wells, particularly given that California has some of the nation's oldest oil wells. According to a 2017 International Energy Agency survey, 96.5 percent of thermal EOR performed in the United States is performed in California and approximately 77 percent of California's oil production comes from fields with steam wells.⁸⁹ In particular, EOR occurs in Fresno, Kern, San Luis Obispo, Santa Barbara, and Ventura Counties. Lost Hills, which is an oil field BLM identified as a "likely place for locating new wells on new federal oil and gas leases" in the Planning Area, Draft SEIS at 6, has the fifth highest number of EOR wells in California.⁹⁰ EOR has the potential to significantly impact water quantity, and also increases the impacts already associated with oil and gas development because EOR extends oil and gas development in areas where it would otherwise cease. Related to water quantity, EOR utilizes significantly more water than well stimulation.⁹¹

⁸⁸ California Energy Commission, *Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery* (Dec. 2021), https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ CCST Summary Report at 18, CCST Report, Vol. II at 61.

In 2013, the total volume of water injected by operators for EOR totaled 443 million cubic meters (360,000 acre-feet).⁹² This compares to about 1 million cubic meters (800 acre-feet) per year for hydraulic fracturing.⁹³ EOR also generates more air pollution and GHG emissions.⁹⁴

The court in *ForestWatch v. United States Bureau of Land Mgmt.*, No. CV154378MWFJEMX, 2016 WL 5172009 (C.D. Cal. Sept. 6, 2016), found that plaintiffs had waived claims that EOR techniques carried potentially harmful environmental impacts that were not considered in the 2012 Final EIS because they had not identified any documents or information about the harms of EOR in the comment period to make BLM aware of the issue. *Id.* at *10. Since 2016, BLM has been made aware of this issue, requiring BLM to supplement its analysis to consider the possible significant environmental harms from EOR.

BLM FAILED TO PROVIDE AN ADEQUATE OPPORTUNITY FOR PUBLIC COMMENT AND IGNORED SCOPING COMMENTS IT RECEIVED

The public is entitled to meaningful opportunities to participate in and comment on the preparation of BLM's planning activities. 43 C.F.R. § 1610.2(e). Accordingly, BLM is required to provide a 90-day public comment period for a draft EIS relating to a RMP, and it is expected to circulate a supplemental EIS in the same fashion as a draft EIS. 43 C.F.R. § 1610.2(e); BLM NEPA Handbook H-1790-1 at 102.

BLM provided the public with 49 days to comment on the Draft SEIS from when the EPA posted the Notice of Availability,⁹⁵ then extended the deadline to 56 days.⁹⁶ Even if counting from the date the notice was posted in the federal register by the Department of Interior,⁹⁷ the comment period was 59 days, not the full 90 days required by BLM's own regulations and NEPA handbook.

BLM also failed to adequately consider comments it received during the scoping period. For example, the Public Scoping Summary Report indicates that many comments submitted during the scoping period addressed "other laws" that BLM should consider for consistency when deciding whether to amend the RMP and how to supplement the EIS. Several of these comments addressed SB 1137, yet the Draft SEIS never mentions SB 1137. Comments from state agencies addressed changes in state laws and policies, requested that impacts to certain

⁹² CCST Report, Vol. II at 59.

⁹³ CCST Summary Report at 18.

⁹⁴ CCST Report, Vol. II at 40; *see also* Milleman, et al, "Enhanced oil recovery: Environmental issues and state regulatory programs," *Environment International* 7:3 (1979) at 165-177, <https://www.sciencedirect.com/science/article/pii/0160412082901039?via%3Dihub>.

⁹⁵ 91 Fed. Reg. 2131, 2131 (Jan. 16, 2026) (start date of January 16, end date of March 6).

⁹⁶ BLM, National NEPA Register, *Bakersfield Office Oil and Gas Leasing and Development Supplemental EIS*, <https://eplanning.blm.gov/Project-Home/?id=270babe9-a7f2-f011-8406-001dd802fdea> (noting comment deadline of March 13); 91 Fed. Reg. 5474, 5474.

⁹⁷ 91 Fed. Reg. 1330, 1331 (Jan. 13, 2026) (noting deadline of 45 days following the date the EPA publishes the Notice of Availability).

special status species and recreational areas be evaluated, and provided information on state water resources. These comments and issues were also not addressed in the Draft SEIS.

BLM'S FAILURE TO CONSULT WITH THE U.S. FISH AND WILDLIFE SERVICE VIOLATES THE ENDANGERED SPECIES ACT

The ESA provides that, “[e]ach federal agency shall ... insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species.” 16 U.S.C. § 1536(a)(2).

Section 7 of the ESA establishes an interagency consultation process to assist federal agencies in complying with their duty to ensure against jeopardy to listed species or destruction or adverse modification of critical habitat. An agency must initiate consultation with the U.S. Fish and Wildlife Service (“FWS”) whenever it takes an action that “may affect” a listed species or its critical habitat. *See* 50 C.F.R. § 402.14(a). Agencies also must consult with FWS “on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under [ESA Section 4] or result in the destruction or adverse modification of critical habitat proposed to be designated for such species.” 16 U.S.C. § 1536(a)(4); *see also* 50 C.F.R. § 402.10.

“The minimum threshold for an agency action to trigger consultation with FWS is low.” *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 496 (9th Cir. 2011). “Section 7(a)(2) consultation is required so long as a federal agency retains ‘some discretion’ to take action for the benefit of a protected species.” *Nat. Res. Def. Council v. Jewell*, 749 F.3d 776, 784 (9th Cir. 2014) (en banc). “Actions that have any chance of affecting listed species or critical habitat—even if it is later determined that the actions are ‘not likely’ to do so—require at least some consultation under the ESA.” *Karuk Tribe v. U.S. Forest Serv.*, 681 F.3d 1006, 1027 (9th Cir. 2012) (en banc). Even effects that are mitigated or “trivial” may meet the ‘may affect’ threshold. *Swan View Coal. v. Weber*, 52 F. Supp. 3d 1133, 1145–47 (D. Mont. 2014).

The amendment of an RMP is an “agency action” to which the obligation to consult applies if the amendment “may affect” listed species. 50 C.F.R. § 402.02; *All. for the Wild Rockies v. United States Dep’t of Agric.*, 772 F.3d 592, 598-99 (9th Cir. 2014); citing *Lane Cty. Audubon Soc’y v. Jamison*, 958 F.2d 290, 293 (9th Cir. 1992) (BLM land use plans that designate areas for particular uses are agency action to which section 7 applies); *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1055 (9th Cir. 1994).

BLM accordingly cannot make a decision unless and until it consults with FWS regarding protected species in the Bakersfield Field Office Planning Area. It is particularly important for BLM to consult with FWS regarding the species listed and provided candidate status since 2019, including the Fisher, Kern Canyon slender salamander, monarch butterfly, Northwestern pond turtle, and Southwestern pond turtle, and their critical habitat. BLM did not evaluate impacts to these five species, dismissing out hand potential impacts because BLM claims that proposed or designated critical habitat does not occur in relevant lease areas or the

supplemental analysis areas, which represent just a fraction of unleased lands in the planning Area. Draft SEIS at 6, 26. BLM's finding of non-occurrence is elsewhere contradicted when BLM states that "monarch butterflies may occur within the lease parcels" due to the prevalence of the milkweed plant. *Id.* at 27.

CONCLUSION

Given the serious deficiencies in the Draft SEIS, BLM should withdraw its current proposal, circulate an RMP amendment or revision, and prepare a new analysis that fully considers the environmental impacts of opening over one million acres of public lands in California to oil and gas leasing.

Sincerely,

A handwritten signature in black ink, appearing to read 'Elizabeth Jones', with a stylized, cursive script.

ELIZABETH JONES
Deputy Attorney General
ABIGAIL BLODGETT
Supervising Deputy Attorney General

For ROB BONTA
 California Attorney General

**Index of Materials Submitted in Support of Comments of the California Attorney General
on the Bureau of Land Management, Bakersfield Field Office Oil and Gas Leasing and
Development Draft Supplemental Environmental Impact Statement
DOI-BLM-CA-C060-2025-0053-RMP-EIS**

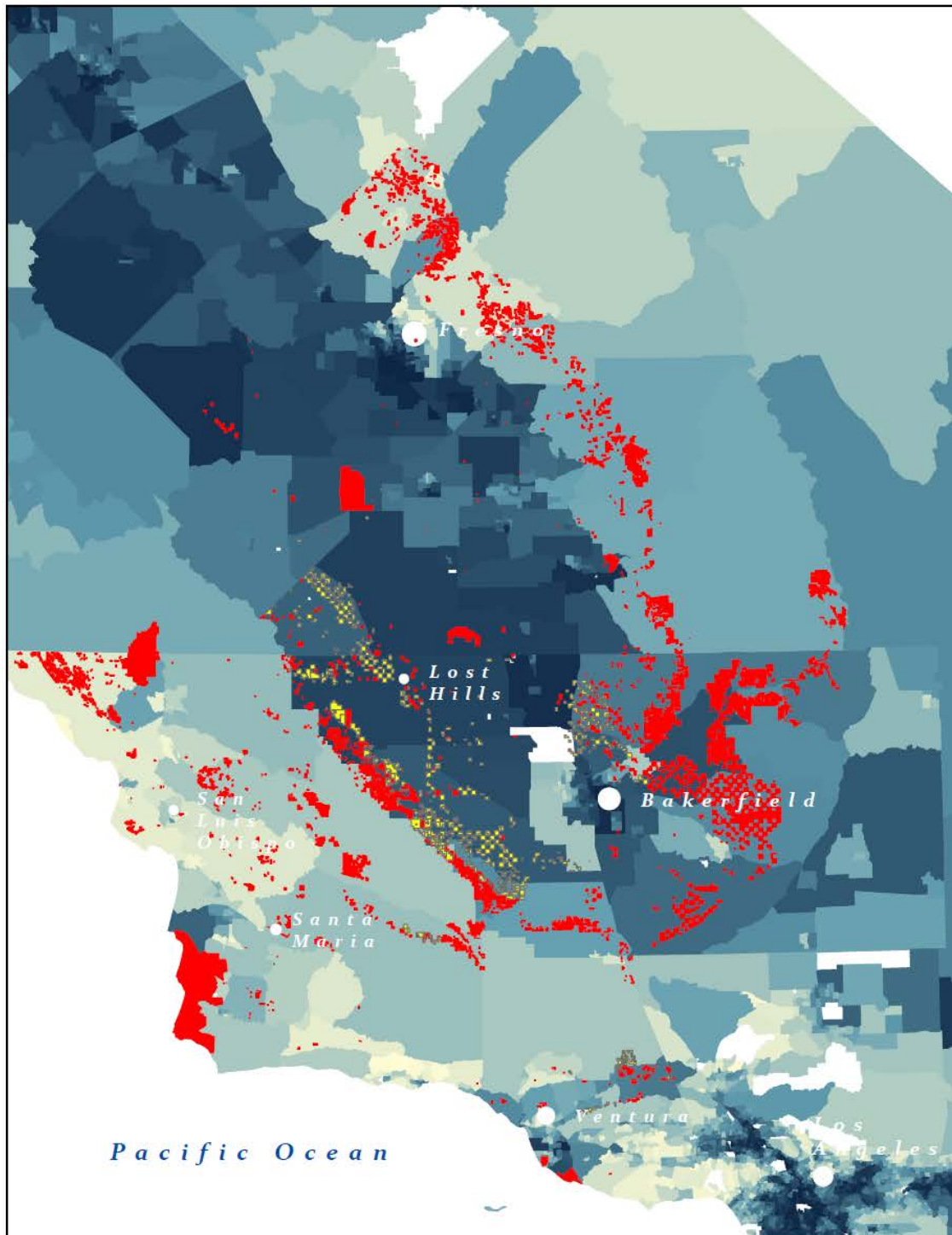
No.	Description
1	California Department of Fish and Wildlife, Comments on DOI-BLM-CA-C060-2018-0082-EIS (June 6, 2019)
2	California Attorney General, Comments on DOI-BLM-CA-C060-2018-0082-EIS (June 10, 2019)
3	California EPA, Comments on DOI-BLM-CA-C060-2018-0082-EIS (June 10, 2019)
4	State of California and California Air Resources Board, Comments on DOI-BLM-CA-C060-2020-0120-EA (Sept. 25, 2020)
5	California Department of Fish and Wildlife, Comments on DOI-BLM-CA-C060-2020-0120-EA (Sept. 25, 2020)
6	State of California and California Agency Protest Letter (Nov. 9, 2020)
7	American Lung Association, State of the Air 2025, https://www.lung.org/research/sota/city-rankings/states/california/kern
8	Arvin/Lamont Community Emissions Reduction Program (June 16, 2022), https://community.valleyair.org/media/4014/6-final_arvinlamont-cerp_610.pdf
9	Balise, et al., “Systematic Review of the Association between Oil and Natural Gas Extraction Processes and Human Reproduction,” <i>Fertility & Sterility</i> 106:4 (Sept. 2016), https://www.sciencedirect.com/science/article/pii/S0015028216625293
10	Xuewei Bao and David W. Eaton, “Fault activation by hydraulic fracturing in western Canada,” <i>Science</i> 354:6318 (2016), https://science.sciencemag.org/content/354/6318/1406
11	BLM, Proposed Resource Management Plan Amendment and Final Environmental Impact Statement for Oil and Gas Leasing and Development, Central Coast Planning Area (May 2019)
12	BLM, 2023 Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends (Aug. 2024), https://www.blm.gov/sites/default/files/docs/2025-04/BLM-2023-Base-GHG-Report.pdf
13	BLM NEPA Handbook H-1790-1
14	Brandt, A., Millstein, D., Jin, L., & Englander, J., Air Quality Impacts from Well Stimulation (2015), https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf
15	California Air Resources Board, Community Air Protection Blueprint (Oct. 2018), https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf
16	California Air Resources Board, Community Air Protection Program, 2018 Community Recommendations Staff Report (Sept. 11, 2018), https://ww2.arb.ca.gov/sites/default/files/2018-09/2018_community_recommendations_staff_report_revised_september_11.pdf
17	California Air Resources Board, Lost Hills Air Monitoring Plan (SNAPS) (May 2019) https://ww2.arb.ca.gov/resources/documents/lost-hills-air-monitoring-plan-snaps
18	California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022), https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf
19	California Air Resources Board, SNAPS Lost Hills Summary Report (Oct. 2025), https://ww2.arb.ca.gov/sites/default/files/2025-10/SNAPS_Lost_Hills_Summary_Report.pdf
20	California Air Resources Board, Selected Communities in the Program, https://ww2.arb.ca.gov/capp/com/selected-communities-in-the-program .
21	California Air Resources Board, Senate Bill 1137: Establishment of Health Protection Zones, Oil and Gas Production Wells and Production Facilities, https://ww2.arb.ca.gov/our-work/programs/senate-bill-1137-establishment-health-protection-zones-oil-and-gas-production

22	California Air Resources Board, Study of Neighborhood Air Near Petroleum Sources (SNAPS) Fact Sheet (Feb. 2019) https://ww2.arb.ca.gov/sites/default/files/2019-02/SNAPS_QA_2-6-19.pdf
23	California Energy Commission, Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery (Dec. 2021), https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf
24	California EPA, Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon) (April 2017), https://calepa.ca.gov/wp-content/uploads/2017/04/SB-535-Designation-Final.pdf
25	Cal. Executive Department, Executive Order N-70-20, Gavin Newsom (Sept. 23, 2020), https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf
26	Cal OEHHA, Methodology for a Statewide Drinking Water Contaminant Indicator (January 2017), https://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3dwm methodology.pdf
27	Cal OEHHA, SB 535 Disadvantaged Communities Webpage, https://oehha.ca.gov/calenviroscreen/sb535
28	Cal. State Water Resources Control Board, Report to the Legislature: Communities That Rely on a Contaminated Groundwater Source for Drinking Water (January 2013), https://www.waterboards.ca.gov/gama/ab2222/docs/ab2222.pdf
29	Cal State Water Resources Control Board, Resolution No. 2016-0010
30	Cal. State Water Resources Control Board, Produced Water Ponds Status Report: January 31, 2019, https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/docs/pwpondsreport_january 2019.pdf .
31	CalGEM Notice to Operators 2017-03.
32	CalGEM, SB 1137 Notice of Proposed Action (Aug. 1, 2025), https://conservation.ca.gov/calgem/Documents/SB%201137%20Notice%20of%20Proposed%20Action %20v2_Clean.pdf
33	CalGEM, Senate Bill 237, https://www.conservation.ca.gov/calgem/Pages/SB237.aspx
34	CalGEM, SB 1137 First Emergency Implementation Regulations, Cal. Code Regs., tit. 14, § 1765 et seq., https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf
35	Casey, et al., “Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania,” <i>Epidemiology</i> 27 (2016), https://pubmed.ncbi.nlm.nih.gov/26426945/
36	California Council on Science and Technology, An Independent scientific Assessment of Well Stimulation in California: Summary Report (July 2015)
37	California Council on Science and Technology, An Independent Scientific Assessment of Well Stimulation in California, Vol. II (2015), http://ccst.us/projects/hydraulic_fracturing_public/SB4.php
38	California Council on Science and Technology, An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report (July 2022), https://www.psehealthyenergy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf
39	Central Valley Regional Water Quality Control Board, Pond List (Feb. 2021), https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/2021 0211_pondlist.pdf
40	Central Valley Regional Water Quality Control Board, Oil Field Pond 13267 Order Responses, Information Requested by 13267 Order, Lost Hills Oil Field (June 16, 2015) https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/aera _energy/2015_0616_com_lost_hills.pdf
41	California Regional Water Quality Control Board, Central Valley Region, Resolution R5-2016-0018

42	Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (2026), https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing
43	EPA, Hydraulic Fracturing for Oil and Gas Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United State, Executive Summary (Dec. 2016), https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf
44	Gentner et al., “Emissions of Organic Carbon and Methane from Petroleum and Dairy Operations in California’s San Joaquin Valley,” <i>Atmos. Chem. Phys.</i> 14 (2014), at 4971, https://doi.org/10.5194/acp-14-4955-2014
45	Goebel, T. H. W., et al, “Wastewater disposal and earthquake swarm activity at the southern end of the Central Valley, California,” <i>Geophys. Res. Lett.</i> 43 (2016), https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2015GL066948
46	Hays, et al., “Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development,” <i>Science of the Total Environment</i> (Feb. 2017).
47	Intrinsik Environmental Sciences Inc., Prepared for British Columbia Ministry of Health Phase 2- Human Health Risk Assessment of Oil and Gas Activity in Northeastern British Columbia: Task 3 – Literature Review (April 2013)
48	Kern County Planning & Community Development Department, Supplemental Recirculated Environmental Impact Report for Revisions to the Kern County Zoning Ordinance, (Oct. 2020) https://psbweb.kerncounty.com/UtilityPages/Planning/EIRS/OG_SREIR/aVol1/Oil_Gas_SREIR_Oct%202020_Vol%201_04.03_Air%20Quality.pdf
49	Los Angeles County Department of Public Health, Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County (Feb. 2018), http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf
50	Li, X., et al., “Association between Ambient Fine Particulate Matter and Preterm Birth or Low Birth Weight: An Updated Systematic Review and Meta-Analysis,” <i>Environmental Pollution</i> 227 (2017), https://pubmed.ncbi.nlm.nih.gov/28457735/
51	Lim, Chris, et al., Long-Term Exposure to Ozone and Cause-Specific Mortality Risk in the United States (2019), at 1027, https://pubmed.ncbi.nlm.nih.gov/31051079/
52	McKenzie, Lisa M., et al., “Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado,” <i>Environmental Health Perspectives</i> 122 (2014), https://pmc.ncbi.nlm.nih.gov/articles/PMC3984231/
53	McKenzie, Lisa M., et al., “Childhood Hematologic Cancer and Residential Proximity to Oil and Gas Development,” <i>PLoS ONE</i> 12(2):e0170423 (2017), https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170423
54	Milleman, et al, “Enhanced oil recovery: Environmental issues and state regulatory programs,” <i>Environment International</i> 7:3 (1979), https://www.sciencedirect.com/science/article/pii/0160412082901039?via%3Dihub
55	Natural Resources Defense Council, Drilling in California: Who’s at Risk? (October 2014)
56	Natural Resources Defense Council, Fracking Fumes (Dec. 2014), https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf
57	SB 1137, 2022 Leg., Reg. Sess. (Cal. 2022).
58	Shonkoff et al., Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel (Oct. 2021), https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf
59	Shonkoff et al, Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making (June 21, 2024), https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report_20240621.pdf

60	San Joaquin Valley Air Pollution Control District, Ambient Air Quality Standards & Attainment Status https://www.valleyair.org/air-quality-information/ambient-air-quality-standards-valley-attainmnet-status/
61	Skoumal, R.J., et al., “Earthquakes Induced by Hydraulic Fracturing in Poland Township, Ohio,” <i>Bulletin of the Seismological Society of America</i> 105:1 (2015), https://doi.org/10.1785/0120140168
62	Skoumal, R. J., et al., “Earthquakes induced by hydraulic fracturing are pervasive in Oklahoma,” <i>Journal of Geophysical Research: SolidEarth</i> 123:12 (2018), https://doi.org/10.1029/2018JB016790
63	Tustin, et al., “Associations between Unconventional Natural Gas Development and Nasal and Sinus, Migraine Headache, and Fatigue Symptoms in Pennsylvania,” <i>Environmental Health Perspectives</i> 125 (2016), https://pmc.ncbi.nlm.nih.gov/articles/PMC5289909/
64	University of California, Berkeley School of Law, International Human Rights Law Clinic, The Human Right to Water Bill in California: An Implementation Framework for State Agencies (May 2013), https://www.law.berkeley.edu/files/Water_Report_2013_Interactive_FINAL%281%29.pdf
65	U.S. Environmental Protection Agency, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary, https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf
66	U.S. Environmental Protection Agency, National Emissions Inventory Online, 2020 NEI Data Retrieval Tool, https://www.epa.gov/air-emissions-inventories/2020-air-emissions-data
67	U.S. EPA, Health Effects of Ozone in the General Population, https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population
68	Webb, et al., “Potential Hazards of Air Pollutant Emissions from Unconventional Oil and Natural Gas Operations on the Respiratory Health of Children and Infants,” <i>Reviews on Environmental Health</i> (2016), https://pubmed.ncbi.nlm.nih.gov/27171386/

Exhibit 1



Legend

Oil and Gas Leases

Open for Leasing

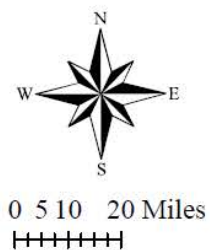
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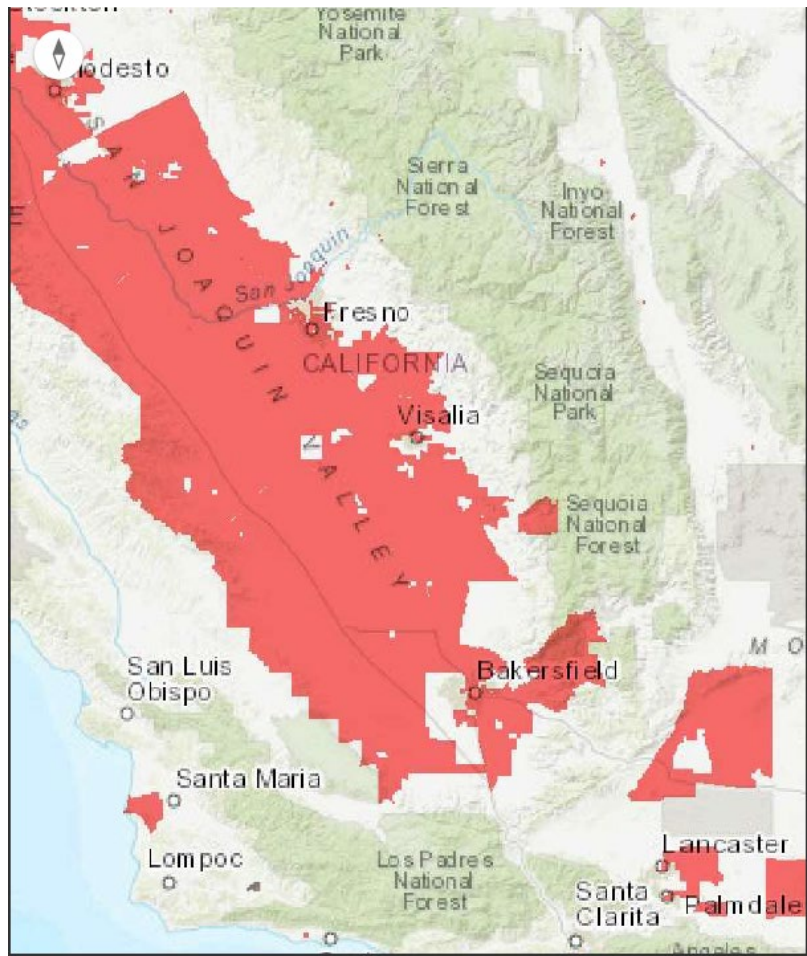
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0 - 100

100

CalEnviroScreen 3.0 Overall Percentile Score for Bakersfield Hydraulic Fracturing Planning Area



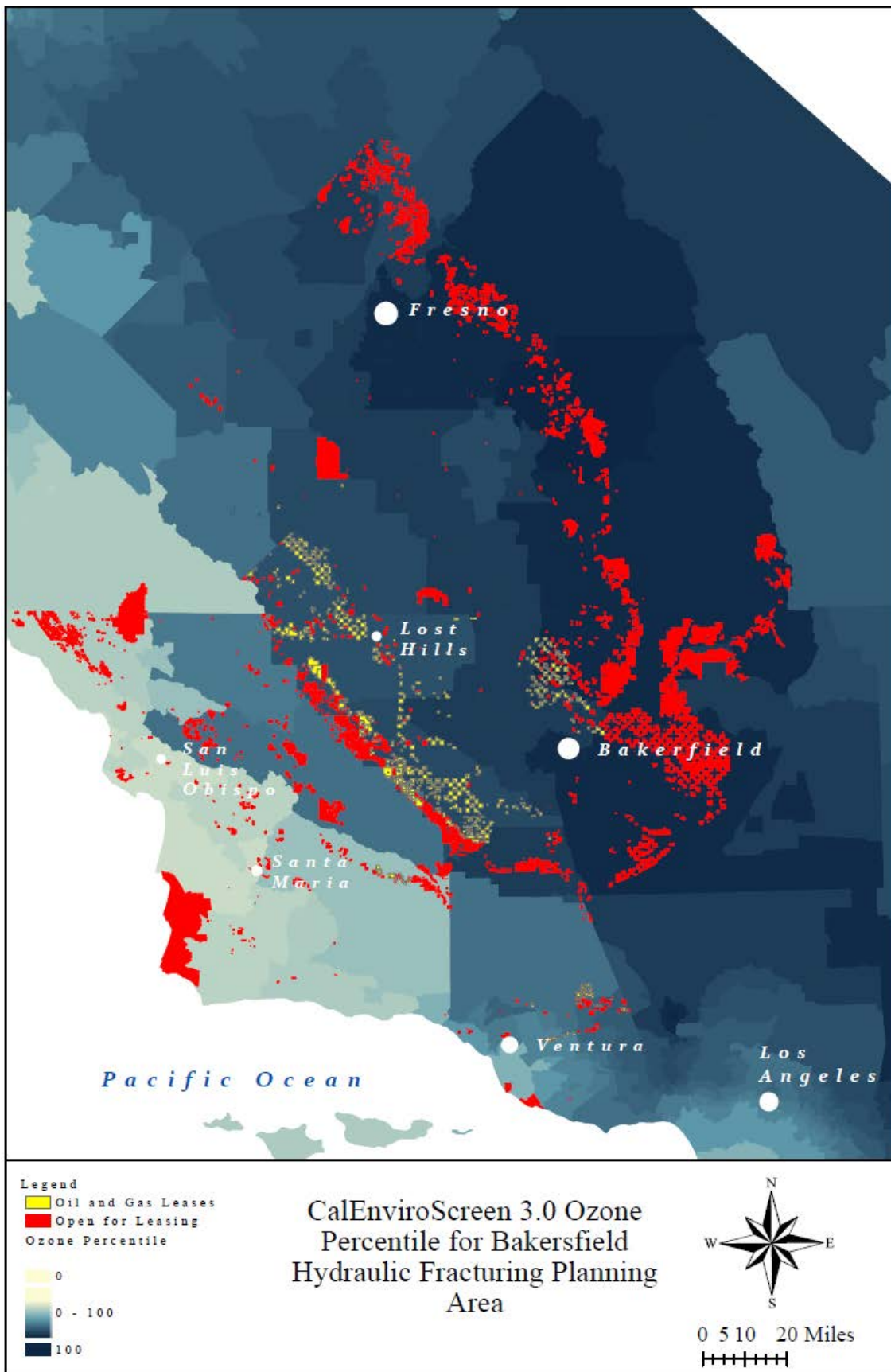


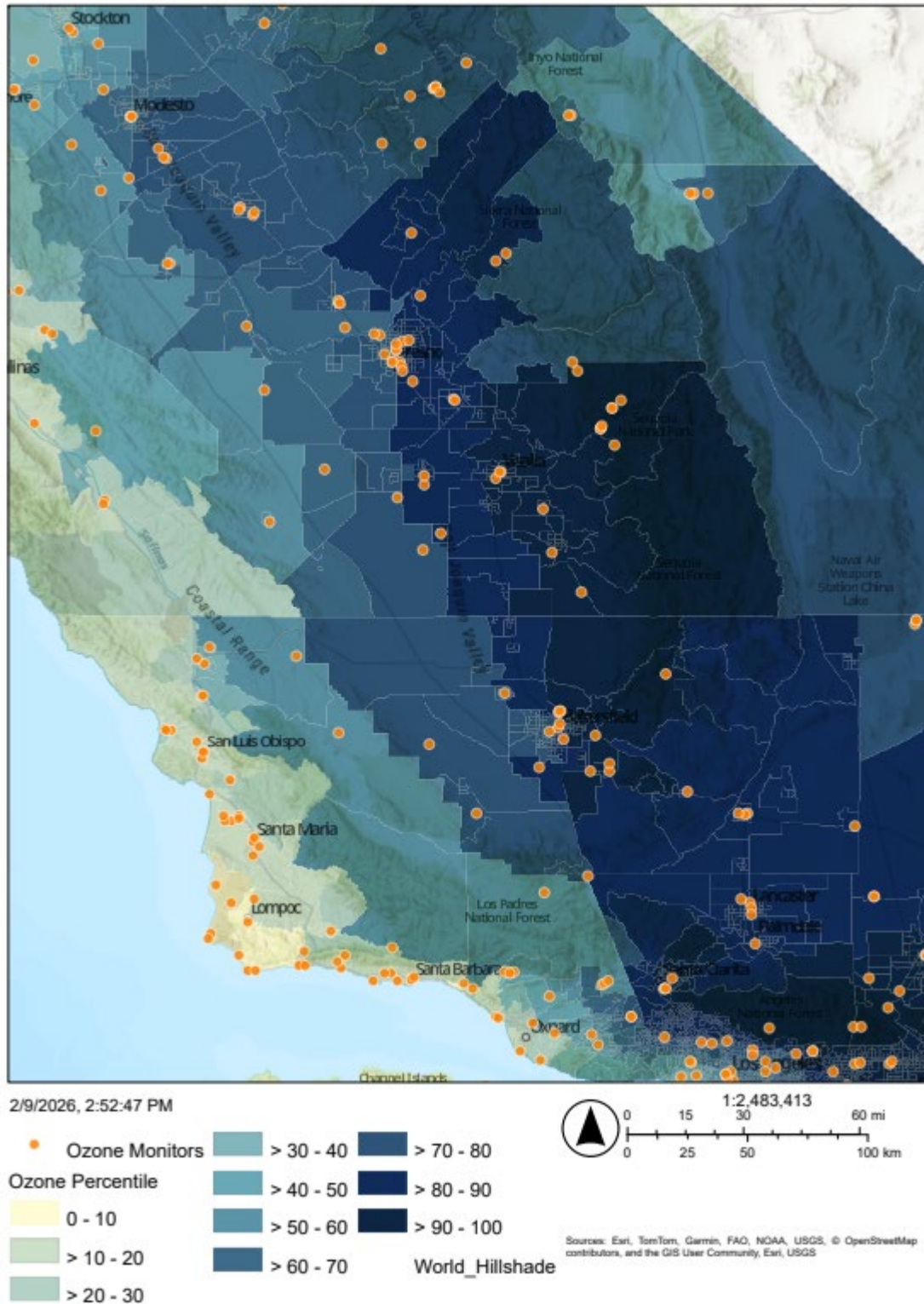
Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS

SB 535 Disadvantaged Communities 2022
SB 535 Disadvantaged Communities 2022 (Census Tracts)



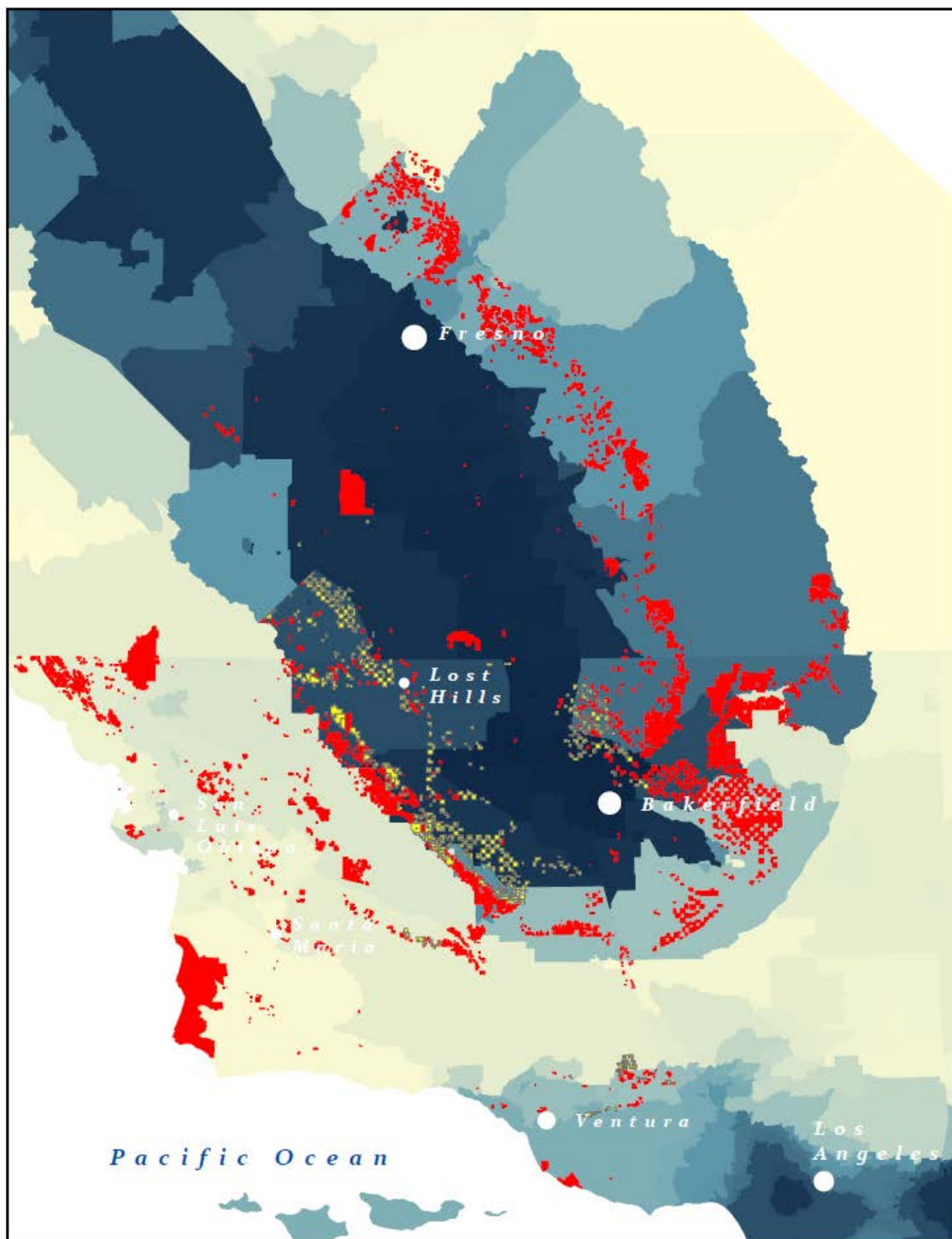
Exhibit 2





CalEnviroScreen 5.0 Draft

Exhibit 3



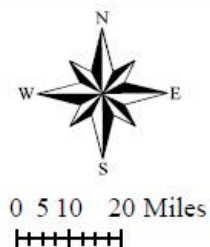
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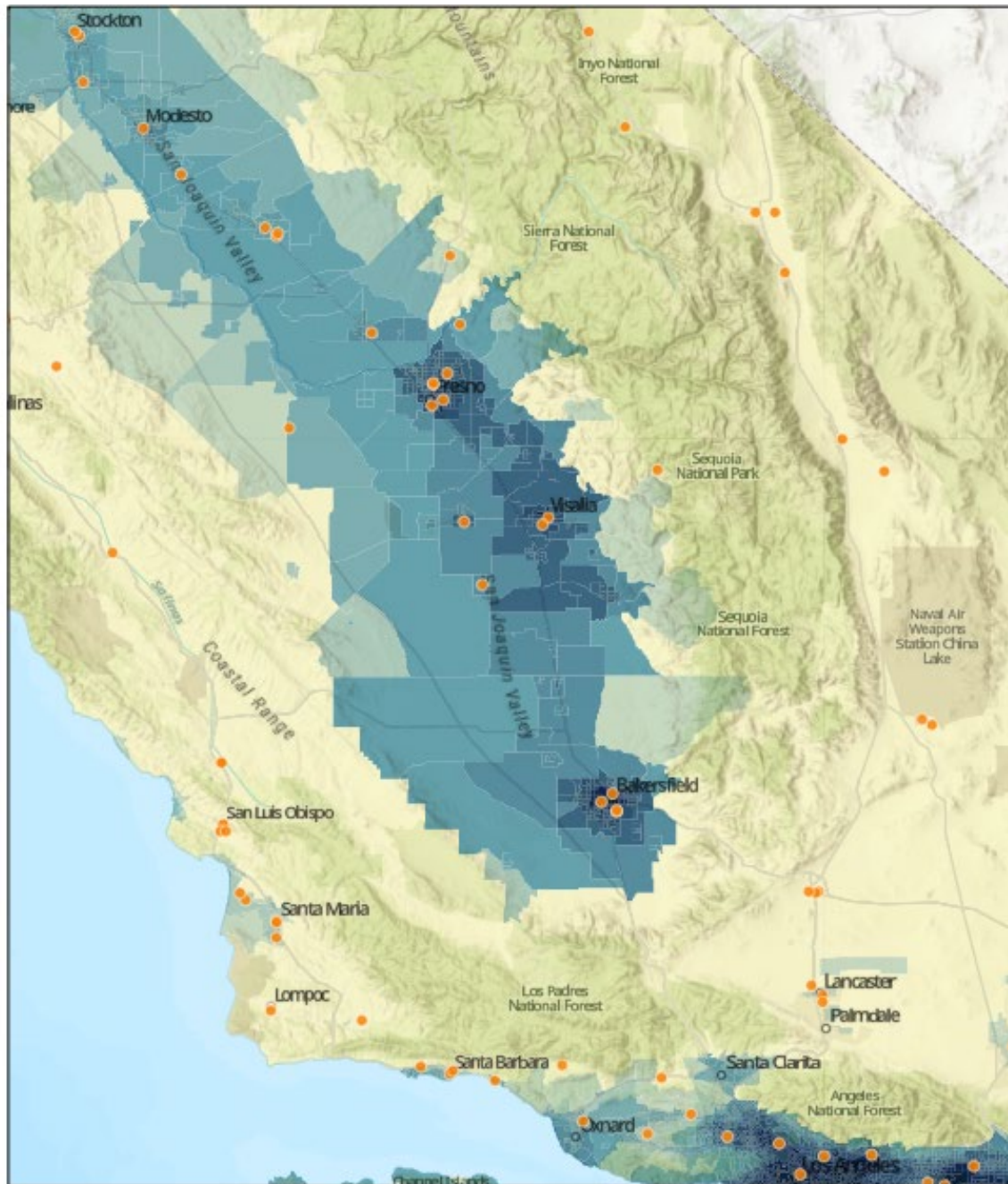
- Oil and Gas Leases
- Open for Leasing

PM 2.5 Percentile

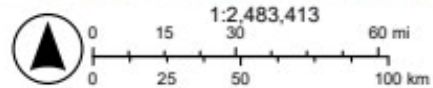
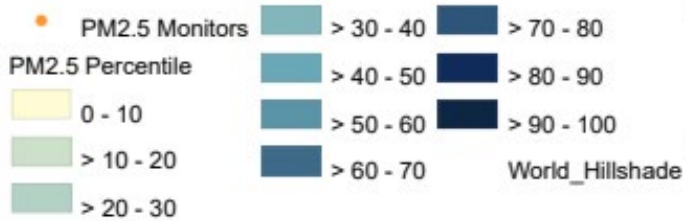
- 0
- 0 - 100
- 100

CalEnviroScreen 3.0 PM 2.5
Percentile for Bakersfield
Hydraulic Fracturing Planning
Area





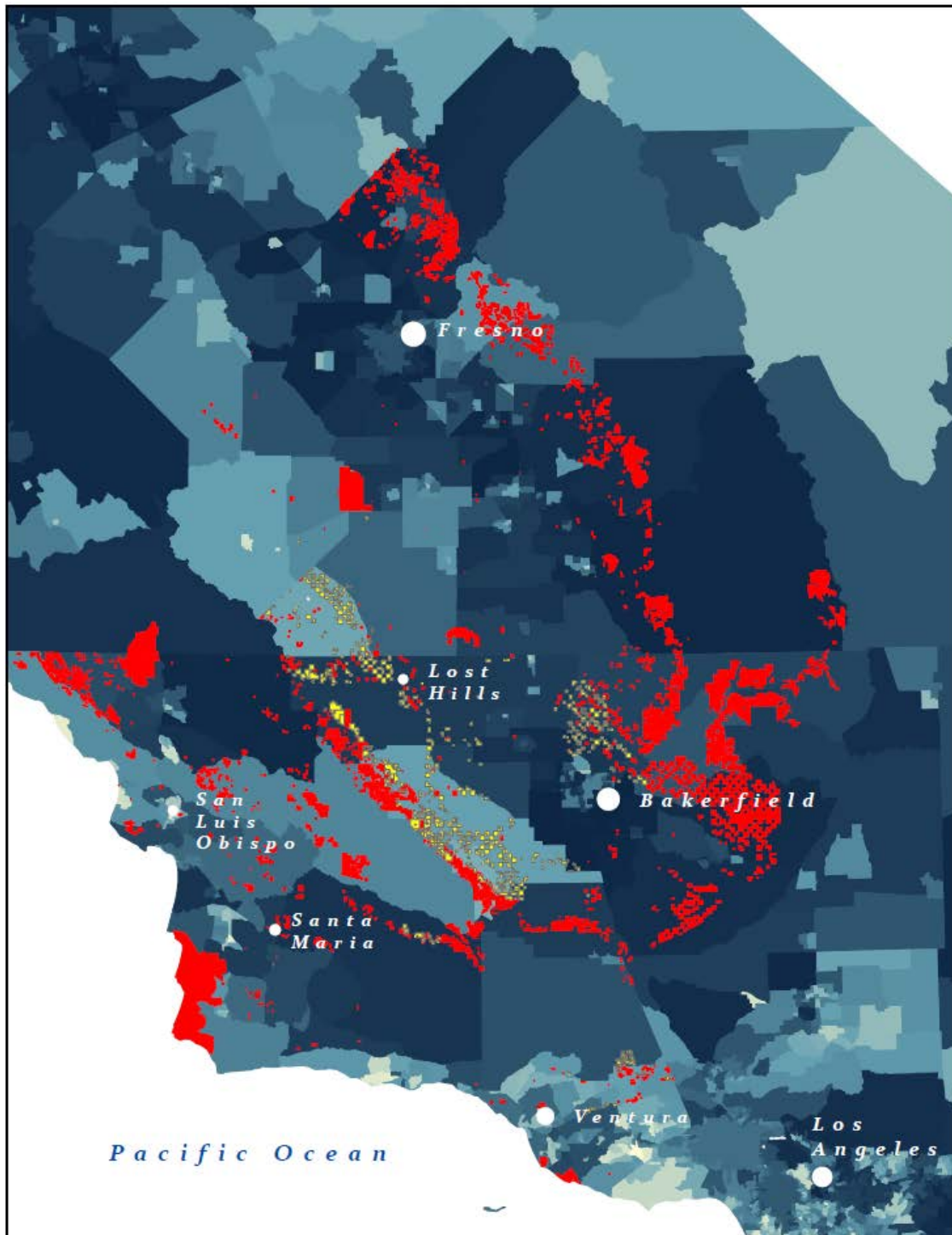
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

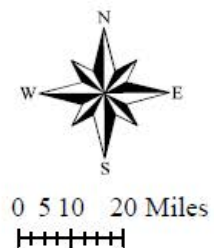
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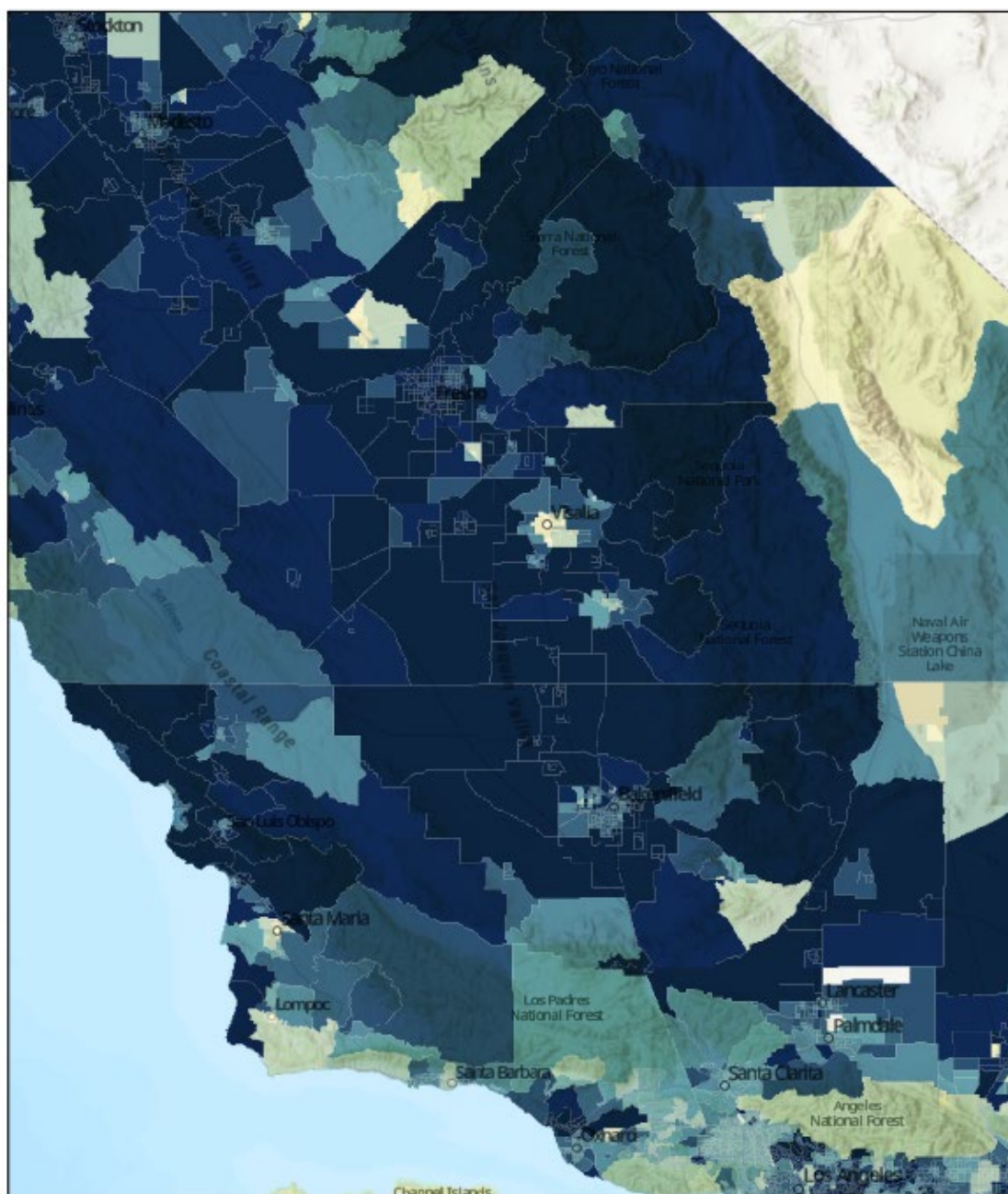
Exhibit 4



Legend
Oil and Gas Leases
Open for Leasing
Drinking Water Percentile
0
0 - 100
100

CalEnviroScreen 3.0 Drinking
Water Percentile for
Bakersfield Hydraulic
Fracturing Planning Area





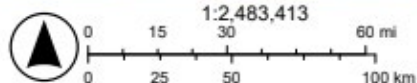
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Drinking Water Contaminants Percentile

- 0 - 10
- > 10 - 20
- > 20 - 30
- > 30 - 40
- > 40 - 50

- > 50 - 60
- > 60 - 70
- > 70 - 80
- > 80 - 90
- > 90 - 100

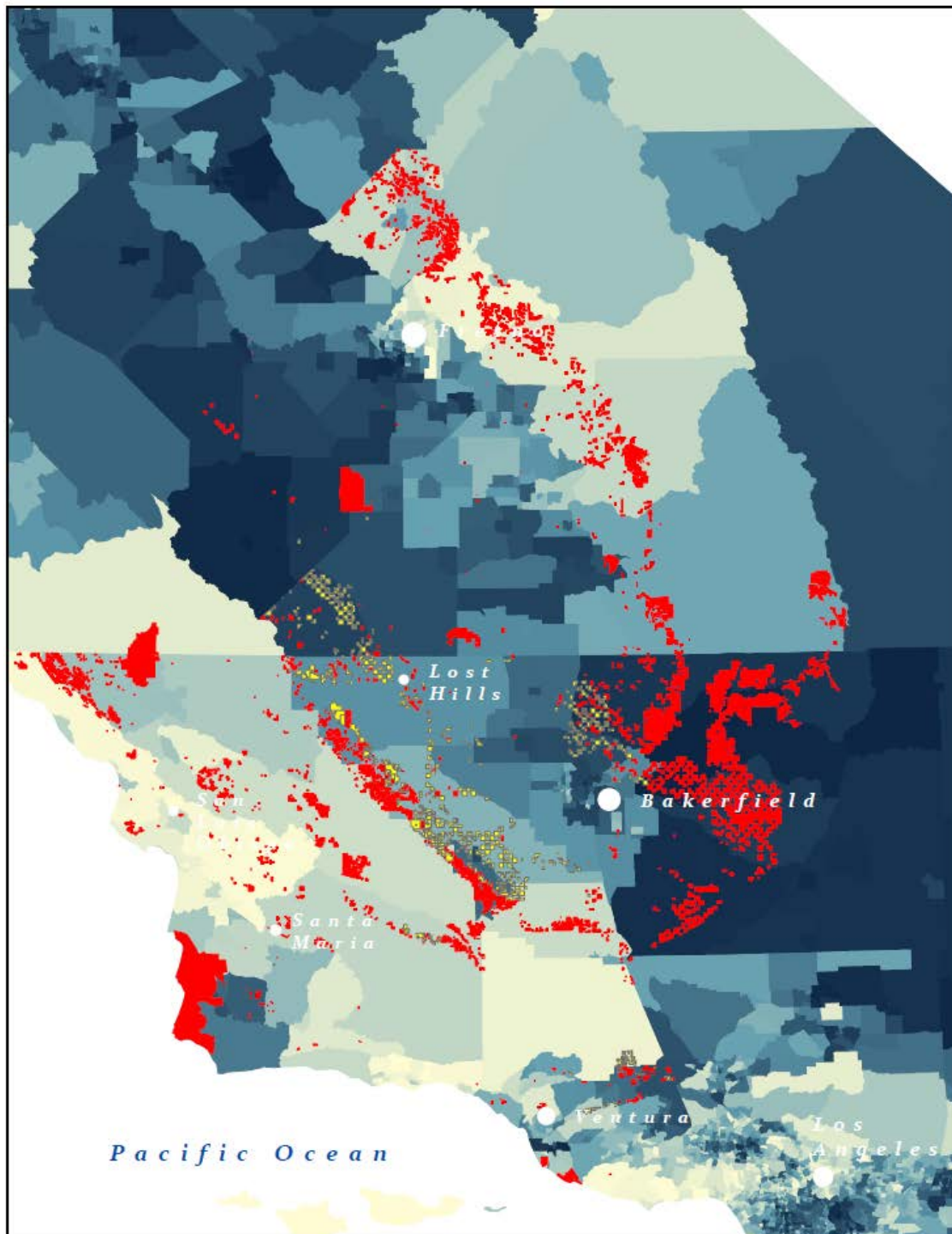
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

CalEnviroScreen 5.0 Draft

Exhibit 5



Legend

Oil and Gas Leases

Open for Leasing

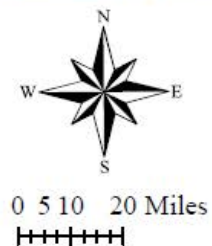
Cardiovascular Rate Percentile

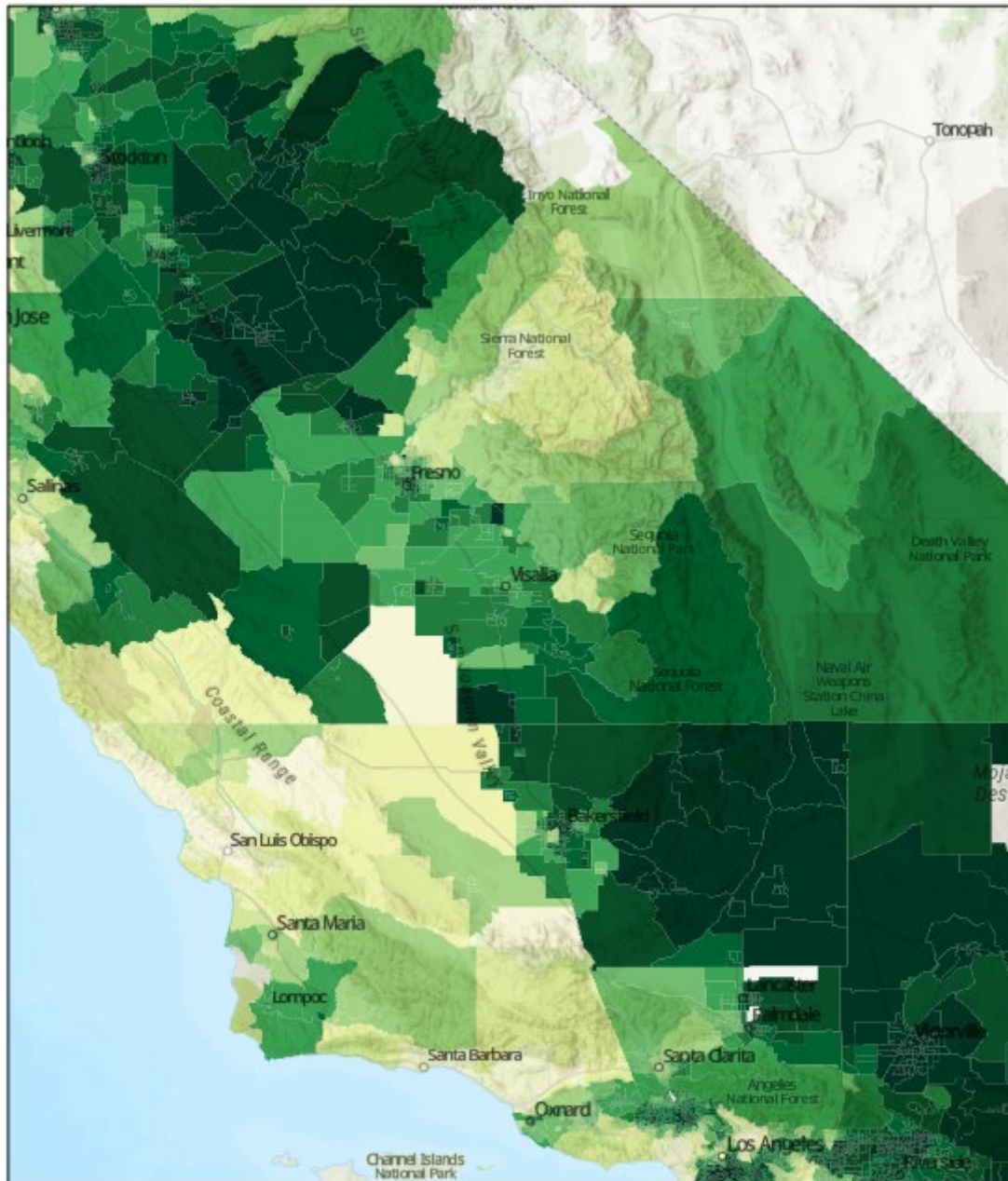
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0 - 100

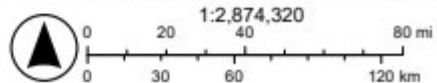
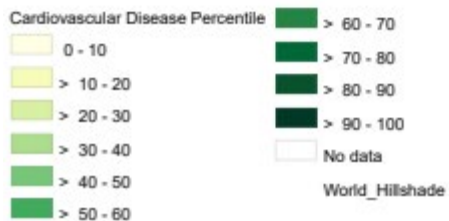
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CalEnviroScreen 3.0
Cardiovascular Rate
Percentile for Bakersfield
Hydraulic Fracturing Planning
Area





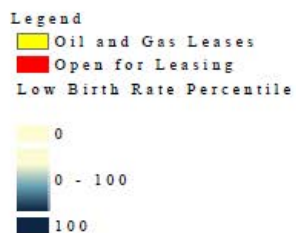
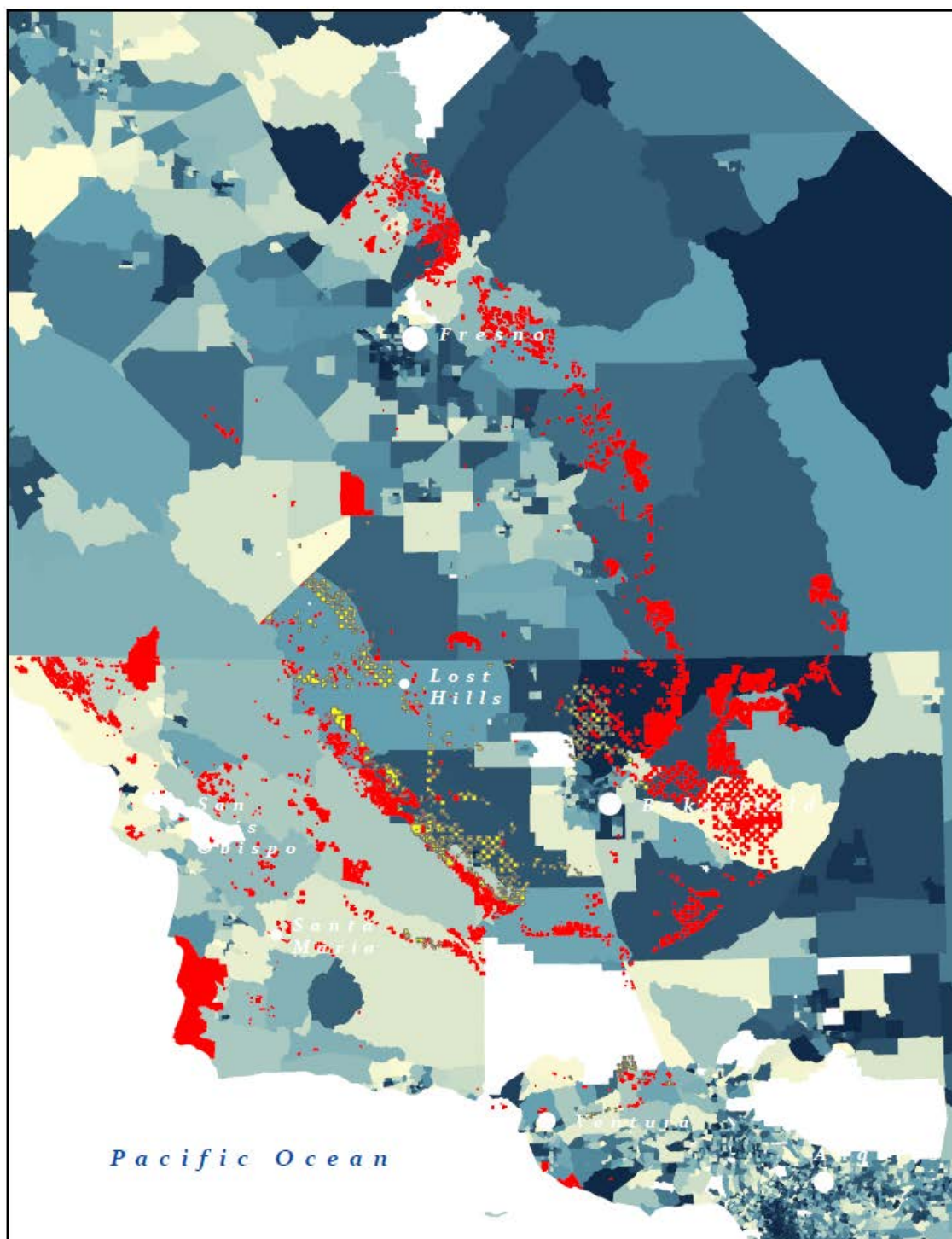
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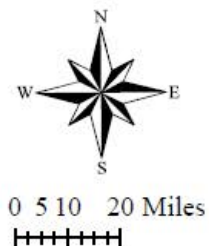
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

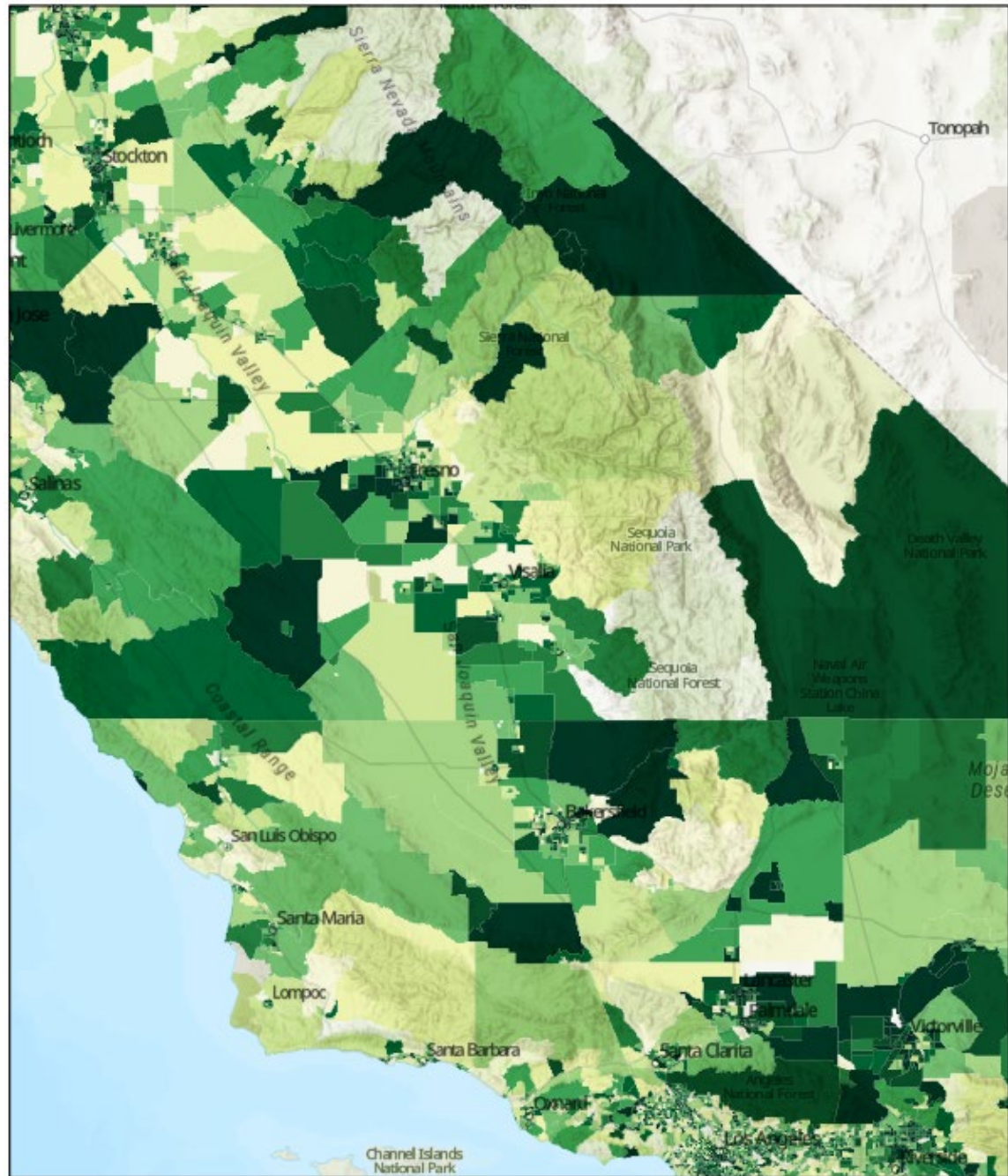
CalEnviroScreen 5.0 Draft

Exhibit 6

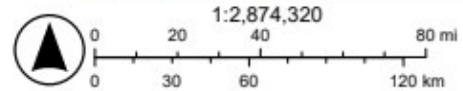


CalEnviroScreen 3.0 Low Birth Rate Percentile for Bakersfield Hydraulic Fracturing Planning Area





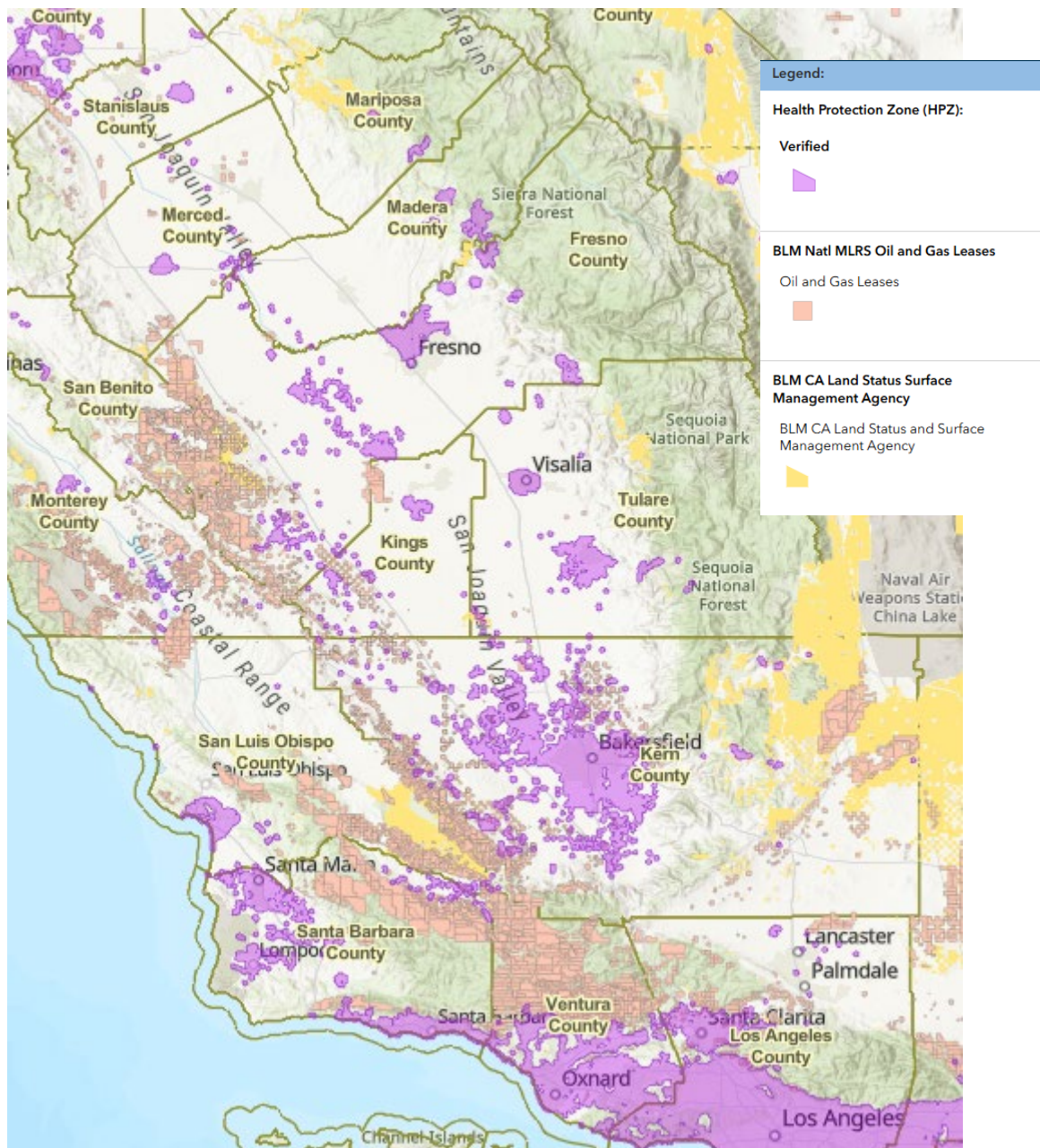
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

CalEnviroScreen 5.0 Draft

Exhibit 7



<https://maps.conservation.ca.gov/calgem/HPZ/>



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March 13, 2026

Via Electronic Submission on ePlanning and to BLM_CA_CCFO_OIL_GAS_SEIS@blm.gov

Sarah Mathews
Project Manager
Bureau of Land Management
940 2nd Avenue
Marina, CA 93933
samathews@blm.gov

RE: Comments on the Bureau of Land Management, Central Coast Field Office Oil and Gas Leasing and Development Draft Supplemental Environmental Impact Statement, DOI-BLM-CA-C090-2025-0017-RMP-EIS

Dear Ms. Matthews:

On behalf the Attorney General of California, Rob Bonta,¹ we submit these comments on the 2025 Draft Supplemental Environmental Impact Statement (“Draft SEIS”) issued by the U.S. Bureau of Land Management’s (“BLM”) Central Coast Field Office (“CCFO”) “to analyze the environmental effects of oil and gas leasing and development within the Planning Area and to determine whether changes are needed to the fluid mineral decisions based on new information or changes in circumstances in the CCFO.” 2025 Draft SEIS at ES-1. The CCFO encompasses approximately 6.8 million acres of federal, state, and private land across 12 counties in Central California, in which BLM manages approximately 284,000 acres of public land and 509,000 acres of split estate, totaling 793,000 acres of federal mineral estate. *Id.* BLM proposes to open the vast majority of that estate—725,500 acres—to oil and gas leasing.

The Draft SEIS was allegedly prepared to respond to a stipulated settlement requiring that BLM “prepare a SEIS and issue a new decision document” to address deficiencies in BLM’s 2019 resource management plan amendment (“RMPA”) and environmental impact statement (“2019 EIS”). *Id.* (citing *Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, No. 3:19-cv-07155-JSC). Pursuant to the settlement, BLM also agreed to “solicit additional alternatives during the public scoping process and [] consider incorporating those alternatives into the

¹ The California Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. *See* Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12612; *D’Amico v. Bd. of Medical Examiners*, 11 Cal.3d 1, 1415 (1974).

analysis.” In addition, BLM committed to “coordinate with local governments and, to the maximum extent consistent with federal law, cooperate with local governments to ensure consistency of federal actions with local land use plans.”

BLM’s Draft SEIS, and the process undertaken to prepare it, fails to meet the requirements of the 2022 stipulated settlement and address the deficiencies in the 2019 EIS that gave rise to it. BLM failed to take a “hard look” at new information and changed circumstances affecting resources in the Planning Area, including those associated with hydraulic fracturing and other well stimulation techniques, public health impacts, listed species, and state and local laws, and provide sufficient evidence to support its conclusions regarding the severity of impacts to those resources. BLM also failed to incorporate additional alternatives solicited during the scoping process into its analysis or address inconsistencies with state law and local land use plans. These failures of analysis and disclosure not only violate the National Environmental Policy Act (“NEPA”), but they in turn also fail to support BLM’s conclusion that it does not need to pursue a new amendment to the 2019 RMPA under the Federal Land Policy and Management Act (“FLPMA”). And last, the Draft SEIS provides no evidence that BLM has consulted with the U.S. Fish and Wildlife Service (“USFWS”) as required by the Endangered Species Act (“ESA”).

For these reasons, Attorney General Bonta recommends that BLM withdraw its Draft SEIS and prepare a new analysis that fully considers the environmental impacts of opening over seven hundred thousand acres of public lands in California to new oil and gas leasing.

STATUTORY BACKGROUND

Pursuant to the FLPMA, 43 U.S.C. § 1701 *et seq.*, BLM develops resource management plans (“RMPs”) to guide the management of public lands within BLM’s jurisdiction. FLPMA requires that BLM “develop, maintain, and when appropriate, revise land use plans” to ensure that land management be conducted “on the basis of multiple use and sustained yield.” 43 U.S.C. §§ 1701(a)(7), 1712(a), 1732. The statute mandates that BLM manage public lands “in accordance with the land use plans developed” under FLPMA. *Id.* § 1732. RMPs establish land areas for specific uses, allowable resource uses and production levels, resource condition goals and objectives, and program constraints and management practices. 43 C.F.R. § 1601.0–5.

FLPMA requires that BLM, in developing and revising RMPs, “provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans;” “coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs” of the “local governments within which the lands are located;” and “provide for meaningful public involvement of State and local government officials, both elected and appointed, in the development of land use programs, land use regulations, and land use decisions for public lands.” 43 U.S.C. § 1712(c)(8)-(9).

FLPMA also requires that BLM manage public lands “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water

resource, and archeological values.” *Id.* § 1701(a)(8). BLM must “by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of [public] lands” under its management. *Id.* § 1732(a).

BLM must prepare an RMP amendment when there is a “need to consider monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.” 43 C.F.R. § 1610.5–5. The amendment process requires “an environmental assessment of the proposed change, or an environmental impact statement, if necessary, public involvement as prescribed in § 1610.2 of this title, interagency coordination and consistency determination as prescribed in § 1610.3 of this title and any other data or analysis that may be appropriate.” 43 C.F.R. § 1610.5–5. RMPs, and their amendments, are subject to environmental review under NEPA. *Cascadia Wildlands v. U.S. Bureau of Land Mgmt.*, 153 F.4th 869, 881 (9th Cir. 2025); *Ctr. for Biological Diversity v. U.S. Dep’t of Interior*, 623 F.3d 633, 647 (9th Cir. 2010) (“Amending a resource management plan ordinarily constitutes “major federal action” requiring NEPA analysis.”).

NEPA has two fundamental purposes: (1) to guarantee that agencies take a “hard look” at the consequences of their actions before the actions occur by ensuring that “the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts,” and (2) to ensure that “the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349-50 (1989).

NEPA requires the preparation of a detailed EIS for any “major federal action significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). In taking a “hard look,” NEPA requires federal agencies to consider the direct, indirect, and cumulative impacts of its proposed action. *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 973 (9th Cir. 2002); *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975); *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972). Moreover, “an agency may not rely on incorrect assumptions or data.” *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 964 (9th Cir. 2005).

BLM must supplement an EIS when it makes substantial changes to a proposed action or “there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its effects.”² Courts review decisions not to prepare supplemental EISs utilizing the “arbitrary and capricious” standard of the Administrative Procedure Act. Courts do not “automatically defer to” to an agency when it decides not to supplement an EIS “without carefully reviewing the record and satisfying themselves that the agency has made a reasoned decision based on its evaluation of the significance—or lack of

² Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6, <https://www.doi.gov/media/document/doi-nepa-handbook>.

significance—of [] new information.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 378 (1989).

FACTUAL BACKGROUND

BLM’s NEPA Review for the Central Coast Resource Management Plan

The BLM Central Coast Field Office manages 284,000 acres of public land and 793,000 acres of federal mineral estate in San Francisco, Contra Costa, San Mateo, Alameda, San Joaquin, Santa Cruz, Santa Clara, Stanislaus, Monterey, San Benito, Merced, and Fresno Counties (the “Planning Area”). In early 2017, BLM published a draft EIS and RMPA. BLM prepared the EIS and RMPA after a court found that BLM’s environmental analysis for several oil and gas lease sales, held pursuant to the existing RMP, failed to comply with NEPA. *Ctr. for Biological Diversity et al. v. Bureau of Land Mgmt.*, 937 F. Supp. 2d 1140 (N.D. Cal. 2013).

The 2017 Draft EIS analyzed five alternatives and selected a preferred alternative (Alternative C) that would open roughly 400,000 acres of land to drilling—368,800 acres with controlled surface use stipulations and 29,800 acres with no surface occupancy stipulations. BLM relied on a 2015 Reasonably Foreseeable Development Scenario (“RFDS”) that projected the exploration, drilling, and production activity that would likely occur in the next 15 to 20 years—roughly 32 to 37 wells and 179 to 206 acres of disturbance. Well stimulation technologies and enhanced oil recovery techniques were “assumed to be used on any or all of these wells.” 2017 Draft EIS at 2-3. The California Coastal Commission and the Division of Oil, Gas, and Geothermal Resources commented on the draft EIS.

In 2019, BLM released a Final EIS (“FEIS”) and proposed RMPA. The FEIS identified an entirely new proposal as the preferred alternative (Alternative F) that would open nearly twice as much public land and mineral estate to oil and gas leasing as was considered in the draft EIS—683,100 acres with controlled surface use stipulations and 42,400 acres with no surface occupancy stipulations.

Alternative F stripped no surface occupancy (“NSO”) stipulations from categories of lands that, under all the other alternatives, were protected by an NSO stipulation or closed to leasing. Under Alternatives A through E, all Recreation and Public Purpose leased lands were either closed to leasing or had NSO stipulations. 2017 Draft EIS at 2-8 – 2-12 and Figures 2-1 – 2-5.³ Alternative F, by contrast, removed NSO stipulations from nearly 12,600 acres, including from public lands within state parks and a regional preserve. Parks affected include the Mount Diablo and Henry W. Coe State Parks. 2019 FEIS at Figure 2-6 (map of Alternative F). The

³ NSO stipulations applied to Recreation & Public Purpose lease lands under Alternatives A and D, and “state and county park lands” under Alternative C. Because Alternative B would close all land beyond a 0.5 mile buffer around existing oil and gas fields, no public lands within, or mineral estate below, state or county parks would be available for lease under this alternative. Also, because Alternative E would apply NSO stipulations applied to mineral estate overlapping certain groundwater resources, NSO stipulations would be incidentally applied to all Recreation & Public Purpose lease lands under this alternative.

FEIS continued to rely on the 2015 RFDS and stated that “[w]ell stimulation technologies and enhanced oil recovery techniques are assumed to be used on any or all of these wells.” 2019 FEIS at ES-4.

Several environmental groups and the Counties of Santa Cruz and Monterey filed a lawsuit (Case No. 3:19-cv-07155-JSC) alleging that, in approving the RMPA and FEIS, BLM violated NEPA, FLPMA, and the Administrative Procedure Act because it failed to: (1) identify and analyze reasonable alternatives; (2) take a hard look at the impacts of oil and gas development, including the use of hydraulic fracturing and enhanced oil recovery techniques, on greenhouse gas (“GHG”) emissions and climate, groundwater, surface water, air quality, seismicity, and wildlife and plant species; (3) prepare and circulate a supplemental EIS (“SEIS”); and (4) discuss possible conflicts with local land use policies and coordinate planning efforts with local governments. The case was stayed in June 2021 before motions for summary judgment were filed. The case settled in 2022. Pending issuance of a final decision, BLM also agreed to defer any oil or gas lease sale in the Planning Area. Under the settlement, BLM agreed to prepare a supplement to the 2019 FEIS pursuant to NEPA, “coordinate with local governments,” and “cooperate with local governments to ensure consistency of federal actions with local land use plans.” Stipulated Settlement Agreement, *Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, No. 3:19-cv-07155-JSC (Nov. 29, 2022).

On June 23, 2025, BLM issued a notice of intent to prepare a Draft SEIS and potential RMP amendment for the Planning Area and requested scoping comments. 90 Fed. Reg. 26,602. BLM solicited comment on its intent to prepare a SEIS and stated that: “Only those portions of the existing plan related to land use decisions for management of Federal fluid minerals resources that need to be updated to respond to the issues and management concerns will be reviewed.” *Id.* at 26,603. Numerous state agencies commented in opposition to the proposal during the scoping period, including the California Department of Conservation, California Department of Fish and Wildlife, California Department of Parks and Recreation, State Water Resources Control Board, California Coastal Commission, and California Department of Water Resources.

The Department of Interior posted a notice in the federal register on January 13, 2026, announcing that the Draft SEIS was available on eplanning and the deadline for comments would be 45 days following the date the U.S. Environmental Protection Agency (“EPA”) published the Notice of Availability. 91 Fed. Reg. 1329, 1329 (Jan. 13, 2026). EPA posted the Notice of Availability on January 16, 2026. 91 Fed. Reg. 2131, 2131. BLM later extended the deadline to March 13, 2026. 91 Fed. Reg. 5474, 5474.

The Draft SEIS carries forward the same six alternatives identified in the 2019 FEIS, and again chooses Alternative F as the preferred alternative. Draft SEIS at ES-1. BLM also relies on the same 2015 RFDS, projecting the same amount of exploration, drilling, and production activity for all alternatives (for the next 15-20 years, 3-5 exploratory wells outside of existing oilfields and 0-32 wells in existing oilfields and up to 206 acres of disturbance). *Id.* at 2, 16. BLM states that “all these potential wells could employ hydraulic fracturing or other well stimulating technology.” *Id.* at 3. BLM identified five resource areas to consider further based on

information or circumstances identified during the scoping period: air quality and GHG emissions, water resources, special status species, and recreation. *Id.* at 7-8. Additional issues identified during the scoping period were not carried forward for further analysis. *Id.* at 8-13. Except for “updated emissions inventories” based on “a review of new data related to air quality,” BLM did not update any of its modeling or analyses from prior EISs. *Id.* at ES-1. And BLM does not address any changes in state, local, or federal policy that have occurred since 2019 or explain how such changes affect oil and gas development in the Planning Area.

Hydraulic Fracturing on Public Lands

In recent years, the United States has experienced a boom in oil and gas production enabled by well stimulation treatments, such as hydraulic fracturing and horizontal drilling used in combination with hydraulic fracturing. 80 Fed. Reg. 16,128, 16,131 (Mar. 26, 2015). Hydraulic fracturing is a process by which oil and gas producers inject water, sand, and certain chemicals at high pressure into rock formations to create fissures and allow oil and gas to escape for collection in a well. While most of the fluid is water, an assortment of chemicals, some of which are known carcinogens or other types of toxins, are added for different purposes such as lubrication of the fracture and minimization of corrosion. Much of the fracturing fluid, along with subsurface fluids, flows back to the surface and can be held in open pits or circulation tanks at the well site prior to disposal. This water is typically disposed of by subsequent injection into underground wells.

A growing body of science connects hydraulic fracturing with water and air pollution, increased seismic activity, and a prolonged dependence on fossil fuels. For example, inadequate well casings that run through groundwater zones can break during hydraulic fracturing operations and allow hydraulic fracturing fluids to infiltrate groundwater. Air pollution can occur due to the handling of the flow back fluids, which contain toxic chemicals that could evaporate through handling and storage. Lastly, some areas of heavy hydraulic fracturing operations have seen a pronounced increase in the frequency of seismic events.

BLM is the agency responsible for overseeing oil and gas development on over 245 million acres of public lands and 700 million acres of subsurface mineral estate across the United States, including 15 million acres of public lands and 47 million acres of subsurface mineral estate in California. Most hydraulic fracturing on federal lands occurs in nine states, and California historically had the fifth or sixth largest number of fracking operations per year. *See* 80 Fed. Reg. at 16,206. In 2015, BLM estimated that ninety percent of new wells drilled on federal lands are now being stimulated using hydraulic fracturing. *Id.* at 16,131, 16,190.

The State of California’s Geologic Energy Management Division (“CalGEM”) has not approved a state permit for hydraulic fracturing since 2021 and has phased out hydraulic fracturing pursuant to regulations that went into effect on October 1, 2024. Cal. Code Regs. tit. 14 § 1780(d). BLM has historically respected state regulation of oil and gas extraction methods on federal land and consistently acknowledged CalGEM’s jurisdiction to regulate hydraulic fracturing operations on federal lands within the state. Draft SEIS at 72-73 (“BLM does not have regulatory authority over hydraulic fracturing in California; that authority rests with the

California Department of Conservation's Geologic Energy Management Division (CalGEM), which oversees all well stimulation activities in the state.”).

BLM'S DECISION NOT TO AMEND THE 2019 RMPA IS ARBITRARY AND CAPRICIOUS

BLM argues that no amendment to the 2019 RMPA is warranted because the SEIS “did not show notable increase in total impacts” and its range of alternatives has not changed since 2019. Draft SEIS at 14. This reasoning is arbitrary and capricious because it is divorced from the criteria for determining whether to revise or amend an RMP. An RMP amendment shall be initiated “by the need to consider monitoring and evaluation findings, new data, new or revised policy, and a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.” 43 C.F.R. § 1610.5-5. Similarly, an RMP “shall be revised as necessary, based on monitoring and evaluation findings, new data, new or revised policy, and changes in circumstances.” 43 C.F.R. § 1610.5-6. Notably, an amendment is initiated “by the need to consider” new information and changes in circumstances, which is certainly the case here where BLM prepared a SEIS pursuant to the 2022 stipulated settlement.

In the time that has passed since the adoption of the 2019 RMPA, there have been significant new developments in the knowledge and evidence of the harms drilling poses to human health, natural resources, and the climate, significant shifts in California policies, and significant changes in the landscape of oil and gas development in the Planning Area (described in detail, *infra*). Given these changes, BLM was required to amend or revise its RMPA.

THE DRAFT SEIS DOES NOT COMPLY WITH NEPA

A. The Draft SEIS Provides Contradictory Statements Concerning Hydraulic Fracturing and other Well Stimulating Technology.

NEPA requires agencies to take a “hard look” at the environmental consequences of proposed agency actions before those actions are undertaken. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004); *see* 42 U.S.C. § 4332. “To take the required ‘hard look’ at a proposed project’s effects, an agency may not rely on incorrect assumptions or data.” *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953, 964 (9th Cir. 2005); *see also* DOI Handbook (June 26, 2025), pp. 17-18, 24 (NEPA requires agencies to ensure that the analysis and assumptions of any existing EIS they rely on remains adequate). Here, rather than providing the sufficient analysis or evidence required by NEPA to take a “hard look” at its Proposed Action, BLM’s findings in the Draft SEIS regarding hydraulic fracturing and other well stimulating technology are internally contradictory, thereby rendering its analysis of the likely impacts associated with these drilling activities unsupported.

In the Draft SEIS, BLM relies on the 2015 RFDS to project the amount of oil and gas exploration, drilling, and production activity in the Planning Area (for the next 15-20 years, 3-5 exploratory wells outside of existing oilfields and 0-32 wells in existing oilfields and up to 206 acres of disturbance). Draft SEIS at 2, 16. BLM states that “all these potential wells could

employ hydraulic fracturing or other well stimulating technology.” *Id.* at 3. And in its 2019 EIS, which BLM continues to rely upon to support the Draft SEIS analysis, BLM assumed that well stimulation technologies and enhanced oil recovery techniques would “be used on any or all” new exploratory and development wells drilled on federal oil and gas leases over the next 15 to 20 years.⁴

However, BLM recognizes elsewhere in the Draft SEIS that California in October 2024 “implemented a ban on the issuance of new hydraulic fracturing permits” Draft SEIS at 30. BLM further states that it “does not have regulatory authority over hydraulic fracturing in California; that authority rests with the California Department of Conservation’s Geologic Energy Management Division (CalGEM), which oversees all well stimulation activities in the state.” *Id.* at 72-73. BLM’s assumption that hydraulic fracturing will occur at all in the Planning Area is thus contrary to California law.

BLM does not acknowledge this internal contradiction regarding hydraulic fracturing anywhere in the Draft SEIS. Agency decisionmakers and the public are thereby left guessing about the assumptions underlying the BLM’s analysis, demonstrating that it has neither “carefully consider[ed] detailed information” concerning the potential impacts of drilling in the Planning Area nor ensured that “the relevant information” is made available to the public, contrary to NEPA’s fundamental purposes. *Robertson*, 490 U.S. at 349-50.

B. The Draft SEIS Fails to Properly Consider the Significant Environmental Impacts Related to Oil and Gas Operations, Including Hydraulic Fracturing and Other Enhanced Recovery and Well Stimulating Technologies.

To fulfill NEPA’s “hard look” requirement, an agency must consider all foreseeable direct, indirect, and cumulative impacts of its proposed action. *See N. Alaska Env’tl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006); *Ctr. For Biological Diversity v. Salazar*, 695 F.3d 893, 916–17 (9th Cir. 2012). An agency must provide sufficient evidence and analysis to support its conclusions. As the Ninth Circuit has stated, “general statements about ‘possible effects’ and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998).

BLM states in the Draft SEIS that all “wells could employ hydraulic fracturing or other well stimulating technology.” Draft SEIS at 3. If BLM continues to maintain this assumption that hydraulic fracturing may be used on all wells in the Planning Area despite California’s ban, it must analyze the impacts that it may create. As discussed below, it has not done so.

Even if there is an absence of hydraulic fracturing in the Planning Area, the Draft SEIS must provide a full analysis of all the potential impacts from all types of production wells. The

⁴ BLM, Proposed Resource Management Plan Amendment and Final Environmental Impact Statement for Oil and Gas Leasing and Development, Central Coast Planning Area (May 2019) at ES-4, 2-3, 4.17-1, 4.20-2.

Draft SEIS continues to rely on the 2015 RFDS and the analysis contained in the 2019 FEIS, which stated that “[w]ell stimulation technologies and enhanced oil recovery techniques are assumed to be used on any or all of these wells.” 2019 FEIS at ES-4. The use of enhanced oil recovery for new wells must be analyzed since it is currently used in the Planning Area, especially in Fresno and Monterey Counties.⁵ BLM must accordingly analyze other enhanced recovery techniques used in California for potential impacts to the environment. These recovery techniques include water flood, steam flood, cyclic steam, and dual type that alternates between steam and water flood. These techniques may in turn increase the need for wastewater treatment, percolation ponds, and injection wells.

1. Air Quality Impacts

Protecting public health is fundamental to NEPA’s purpose. NEPA was enacted in part to “stimulate the health and welfare of man,” 42 U.S.C § 4321, and mandates that agencies consider the degree to which their proposed actions affect public health and safety. NEPA requires federal agencies “to use all practicable means, consistent with other essential considerations of national policy” to “assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surroundings.” *Id.* § 4331(b).

The Proposed Action is likely to significantly increase air pollution. Oil and gas facilities emit significant air pollution, including 30 percent of all sulfur oxides, over 70 percent of hydrogen sulfide, and 80 percent of anthropogenic volatile organic compounds (“VOCs”) in the San Joaquin Valley, which in turn react with nitrogen oxides (“NOx”) to create ozone.⁶ Oil and gas development is also responsible for the majority of emissions of multiple toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide in the Central Valley.⁷ Fracking on public lands produces significant air pollution emissions including nitrogen oxides, sulfur dioxide, fine particulate matter, volatile organic compounds, silica dust, and toxic air contaminants like benzene.⁸ In addition, the ponds that store produced water from hydraulic fracturing operations have the potential to generate significant emissions of toxic air contaminants.⁹

⁵ California Energy Commission, *Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery* (Dec. 2021) available at https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf.

⁶ Brandt, A., Millstein, D., Jin, L., & Englander, J., *Air Quality Impacts from Well Stimulation* at 182 (2015), available at <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

⁷ Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel* at 10 (Oct. 2021), available at https://www.conservation.ca.gov/calgem/Documents/public-health/Public%20Health%20Panel%20Responses_FINAL%20ADA.pdf.

⁸ Natural Resources Defense Council, *Fracking Fumes* (Dec. 2014), available at <https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf>.

⁹ California Council on Science and Technology, *An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report* at 191-92 (July 2022), available at <https://www.psehealthyenergy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf>.

The effects of air pollution resulting from the oil and gas development contemplated in the Draft SEIS, including new information concerning the same, requires further analysis. As noted in EPA's scoping comments for the Draft SEIS, the "air quality analysis for this supplemental Draft EIS is particularly important given the large number of wells, potential use of hydraulic fracturing and the associated emissions proposed in an area where the ambient air quality is already compromised and includes areas in nonattainment for ozone and fine particulate matter." EPA Scoping Comments at 5. BLM recognizes in the Draft SEIS that oil and gas extraction contributes to air pollution in the Planning Area, including particulate matter, hazardous air pollutants, and ozone precursors, but fails to analyze the full scope of impacts from its Proposed Action. Draft SEIS at 59.

Oil and gas operations, including traditional exploration, drilling, and production, produce ozone by way of NO_x and VOCs that react in air and sunlight. Ozone pollution "is a powerful lung irritant," that, when inhaled, "reacts with the delicate lining of the small airways, causing inflammation and other damage that can impact multiple body systems."¹⁰ Ozone exposure can cause a number of health effects including asthma, various respiratory and cardiovascular diseases, and premature death.¹¹ Long-term exposure to ambient ozone is "significantly associated with multiple causes of mortality, including cardiovascular disease, ischemic heart disease, respiratory disease, and [chronic obstructive pulmonary disease]."¹²

The American Lung Association's "State of the Air" 2025 report card marked Alameda County, Santa Clara County, Fresno County, and Merced County with "F" grades based on unhealthy levels of ozone pollution.¹³ At risk groups and rates of lung disease occurrences (including pediatric asthma, adult asthma, chronic obstructive pulmonary disease, and lung cancer) are higher for Central Coast communities than elsewhere in the country.¹⁴ In Alameda County, for example, over 130,000 residents, including over 20,000 children, have asthma.¹⁵ In Santa Clara County, over 155,600 people, including nearly 24,000 children, have asthma.¹⁶

¹⁰ American Lung Association, *State of the Air 2025 Report* (2025) at 28-29, available at <https://www.lung.org/getmedia/5d8035e5-4e86-4205-b408-865550860783/State-of-the-Air-2025.pdf>.

¹¹ Air & Waste Management Assn., *Air Pollution Issues Associated with Natural Gas and Oil Operations* at fn. 3-4 (2012), <https://www.edf.org/sites/default/files/AWMA-EM-airPollutionFromOilAndGas.pdf>; U.S. EPA, Health Effects of Ozone in the General Population, <https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>.

¹² Lim, Chris, et al., *Long-Term Exposure to Ozone and Cause-Specific Mortality Risk in the United States* (2019) at 1027, <https://pubmed.ncbi.nlm.nih.gov/31051079/>.

¹³ American Lung Association, *State of the Air 2025 Report* *supra* n.10 at 58-59.

¹⁴ *Id.*

¹⁵ American Lung Association, *State of the Air 2025 Report Card Alameda County*, available at <https://www.lung.org/research/sota/city-rankings/states/california/alameda>.

¹⁶ American Lung Association, *State of the Air 2025 Report Card Santa Clara County*, available at <https://www.lung.org/research/sota/city-rankings/states/california/santa-clara>.

Given that ozone is thus among the most widespread and significant air pollution health threats in the Planning Area, which includes populations already at higher risk of lung disease, any additional emissions of VOCs, NO_x, and other air pollutants in these areas from expanded oil and gas production are therefore significant and should be mitigated.

Oil and gas activities also emit multiple types of hazardous air pollutants. These pollutants have the potential to cause cancer or other serious health effects, such as reproductive or developmental effects, along with adverse environmental impacts. For this reason, EPA recommended that the Draft SEIS evaluate the potential for exceedances of relevant health-based risk thresholds for hazardous air pollutants including acetaldehyde, benzene, ethyl benzene, ethylene glycol, formaldehyde, methanol, n-hexane, toluene, xylene (mixture), and any other compounds that the BLM identifies as potential hazardous air pollutants in the Planning Area. EPA also suggested that BLM discuss the potential reasonably foreseeable impacts of any exceedances on human health. It did neither, and this failure to analyze hazardous air pollutants and their public health impacts renders the discussion of air quality impacts inadequate.

In addition, the California Air Resources Board (“CARB”) has initiated an ongoing study on air quality in neighborhoods near oil production, referred to as the Study of Neighborhood Air Near Petroleum Sources (“SNAPS”). California also passed a law in 2017, Assembly Bill (“AB”) 617, that created a program to monitor and reduce air pollution at a local level.¹⁷ The Draft SEIS should include a conservative consideration of potential toxic air contaminant emissions and the impact on nearby communities, including results from CARB’s SNAPS and a discussion of any AB 617 communities in the Planning Area.

The Draft SEIS also fails to account for the air quality-related public health impacts from living near oil and gas activities in the Planning Area. Studies have found that the health risk exposure for toxic air contaminants is greatest near active oil and gas sites.¹⁸ One study conducted in California found significant concentrations of VOCs and other toxic pollutants near oil and gas operations.¹⁹ Another study published in California assessed data from the EPA Air Quality System from 2006 to 2019, and documented higher concentrations of air pollutants including particulate matter 2.5, nitrogen dioxide, VOCs, and ozone as far away as four kilometers (13,123 feet) from well sites.²⁰ Another study indicates that populations residing in

¹⁷ Assembly Bill 617 (C. Garcia, Chapter 136, Statutes of 2017), adding Cal. Health & Safety Code §§ 39607.1, 42705.5, 44391.2.

¹⁸ California Council on Science and Technology, *An Independent Scientific Assessment of Well Stimulation in California*, Vol. II (2015) at 407-412, available at http://ccst.us/projects/hydraulic_fracturing_public/SB4.php.

¹⁹ J. Arbelaez & B. Baizel, *Californians at Risk: An Analysis of Health Threats from Oil and Gas Pollution in Two Communities* (2015), available at <https://www.cleanwaterfund.org/sites/default/files/docs/publications/CaliforniansAtRiskFINAL.pdf>.

²⁰ D.J. Gonzalez et al., *Upstream Oil and Gas Production and Ambient Air Pollution in California*, SCIENCE OF THE TOTAL ENVIRONMENT 806 (2022) 150298, available at <https://doi.org/10.1016/j.scitotenv.2021.150298>.

close proximity to oil and gas activity have almost four times the risk of asthma exacerbation than those that do not.²¹

The potential harm to the public health posed by nearby oil and gas drilling prompted EPA to recommend in their scoping comments that the Draft SEIS include an updated map to show the locations of residences and production wells to assist in determining the potential for exposure to air pollutants, and implement an oil and gas surface occupancy buffer from occupied structures such as homes, schools, and office buildings sufficient to minimize the potential for public health impacts associated with exposure to near-field criteria pollutants, hazardous air pollutants, and any other potential toxic emissions such as hydrogen sulfide releases, and potential emissions associated with well blowouts or other explosive events. The Draft SEIS should give special consideration to the effects of the proposed activities on sensitive receptors such as residences, worksites, schools, daycare centers, playgrounds, and medical facilities. See Pub. Res. Code §§ 3280(c), 3281(b).

2. Water Quality Impacts

BLM has failed to take a hard look at the impacts to water quality in the Draft SEIS. Hydraulic fracturing and other well stimulation techniques can adversely impact drinking water resources, including private residential water wells, as well as agricultural water sources, via a number of different pathways.²² BLM recognizes that “[s]ince the release of the 2019 FEIS, both national and California-specific studies have highlighted the potential impacts of hydraulic fracturing on water resources” and that “oil and gas development, including hydraulic fracturing, remains a dynamic water resources concern.” Draft SEIS at 72-73. BLM goes on to say that “updates are provided here in the consideration of new, best information.” *Id.* at 73. However, BLM does not discuss whether the “updates” provide new information or demonstrate changed circumstances that could cause different or more severe impacts than those included in BLM’s analysis of impacts to water resources in the 2019 FEIS. Instead, BLM provides the excuse that because “no hydraulic stimulation has occurred on federal lands in California since the 2019 FEIS, limited opportunity exists in performing new impact analyses” and that “[s]ignificant scientific uncertainty, however, persists regarding the frequency and severity of impacts.” *Id.* at 72-73. But under NEPA, scientific uncertainty is not an excuse for failing to analyze potential impacts. *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1079 (9th Cir. 2011). Having identified new information, BLM must go beyond a mere summary of what the cited sources say to analyze whether their findings change the agency’s analysis of impacts.

The Draft SEIS also fails to consider additional new information providing data regarding the likelihood and severity of these impacts. For example, data collected by the State Water Resources Control Board, which produces a report every six months on the regulation of oil field

²¹ S.G. Rasmussen et al., *Association Between Unconventional Natural Gas Development in the Marcellus Shale and Asthma Exacerbations* (2016) JAMA INTERN MED. 2016 September 01; 176(9): 1334–1343, <https://pubmed.ncbi.nlm.nih.gov/27428612/>.

²² U.S. Environmental Protection Agency, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary*, available at https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf.

produced water ponds within each region, illustrates the potential impacts ignored by BLM. According to the most recent report dated January 31, 2019, the Central Valley region had 561 active ponds, 501 of which were permitted and 60 unpermitted.²³ Moreover, most of the active ponds (530 of 560) were unlined.²⁴ The report also identified additional inactive ponds (507 of which were unlined), and noted that 161 ponds were under active enforcement actions.²⁵ An updated list of ponds developed in 2021 still shows many active ponds.²⁶ Testing of these ponds, as required by the Central Valley Regional Water Quality Control Board, has identified numerous hazardous compounds that could pose a threat to groundwater for municipal and agricultural uses and domestic water wells.²⁷ Compounds used in hydraulic fracturing fluids, including polynuclear aromatic hydrocarbons, affect pulmonary, gastrointestinal, and renal systems in humans, and a few compounds are considered carcinogens.²⁸ The California Council on Science and Technology (“CCST”) also expressed concern about the regular use of unlined pits for the disposal of produced water, finding that such practices could “introduce contaminants into the food web and expose human populations to known and potentially unknown toxic substances.”²⁹

In addition, BLM arbitrarily ignores the environmental impacts of other types of well stimulation treatments and enhanced oil recovery techniques in the Planning Area given their likely utilization in the future. These techniques include acidizing, water flooding, steam flooding, cyclic steam injection, and a dual type that alternates between steam and water flooding. NEPA requires that an agency consider the full scope of activities encompassed by its Proposed Action. *See N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006) (the “hard look” requirement of NEPA includes “considering all foreseeable direct and indirect impacts.”). For the Proposed Action, this should include not only hydraulic fracturing activities, but also other types of well stimulation treatments and enhanced oil recovery techniques that will be foreseeably used in the Planning Area. BLM assumes that “[w]ell stimulation technologies (e.g., hydraulic fracturing, acid matrix stimulation, acid fracturing) and enhanced oil recovery techniques (e.g., cyclic steam, steam flood, water flood) may be used on “any or all” wells drilled on federal mineral estate. FEIS at 4-17.1. But the Draft SEIS contains no analysis of the impacts from using these techniques, as it is required to do.

BLM also fails to consider that hydraulic fracturing, other well stimulation technologies, and enhanced recovery techniques are commonly used to extend the life of existing oil wells with declining production and related infrastructure, resulting in additional significant impacts

²³ State Water Resources Control Board, Produced Water Ponds Status Report: January 31, 2019, *available at* https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/docs/pwpondsreport_january2019.pdf.

²⁴ *Id.*

²⁵ *Id.*

²⁶ Central Valley Regional Water Quality Control Board, Pond List (Feb. 2021), *available at* https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/20210211_pondlist.pdf.

²⁷ *See, e.g.*, Central Valley Regional Water Quality Control Board, Oil Field Pond 13267 Order Responses, Information Requested by 13267 Order, Lost Hills Oil Field.

²⁸ *See supra* n. 9 at 153-156.

²⁹ *See supra* n. 18 at 403.

from the continued production of fossil fuels in these areas. As BLM itself states in the Draft SEIS for the Bakersfield Planning Area, “hydraulic fracturing usually occurs in oil fields on existing leases, many of which have been continuously developed over the last 100 years.” Bakersfield Field Office Oil and Gas Leasing and Development Draft Supplemental Environmental Impact Statement, DOI-BLM-CA-C060-2025-0053-RMP-EIS at 6. Yet nowhere does BLM consider the environmental impacts of using hydraulic fracturing and other well stimulation treatments on *existing* wells within the Central Coast Planning Area.

It is imperative that BLM comply with its legal obligations to complete a full and accurate analysis of water quality impacts from the Proposed Action because many parts of the Planning Area already suffer from drinking water contamination problems. Of the 15 counties in California with the greatest number of water systems known to rely on contaminated groundwater sources for drinking water, three are in the Central Coast Planning Area: Fresno, San Joaquin, and Monterey.³⁰ The vast majority of public water systems in California rely on groundwater, and more than 25 percent of those systems have to provide drinking water from a contaminated groundwater source.³¹ Small community water systems, which serve residents in parts of the Planning Area, typically lack the infrastructure and economies of scale of larger water systems to afford the necessary treatment or identification of alternative water supplies to replace a contaminated groundwater source.³²

Additional oil and gas production is likely to cause further contamination of both surface water and groundwater in and near the Planning Area. Studies show that oil and gas operations contaminate groundwater through the common practice of disposing wastewater in unlined pits, which are prone to leaking.³³ The contaminants, which include arsenic, uranium, and other naturally occurring toxic elements, make their way into water used for human consumption and agricultural crop irrigation and are potentially carcinogenic chemicals.³⁴ BLM must consider how oil and gas development may impact already degraded water supplies near agricultural land in the Planning Area and the possible carcinogenic effects of oil and gas contaminants mixed with agricultural contaminants. BLM must also consider whether oil and gas development near agriculture could provide new pathways for agricultural toxic byproducts to enter water tables.

In its scoping comments, EPA advises that to ensure that public drinking water supply sources (e.g., surface water sources, including groundwater under the direct influence of surface

³⁰ Cal. State Water Resources Control Board, *Report to the Legislature: Communities that Rely on a Contaminated Groundwater Source for Drinking Water* (2013) at 11-12, available at <https://www.waterboards.ca.gov/gama/ab2222/docs/ab2222.pdf>.

³¹ *Id.*

³² *Id.*

³³ EPA, *Hydraulic Fracturing for Oil and Gas*, *supra* n. 22; Graham, *Unlined Waste Disposal Pits Endanger Groundwater in San Joaquin Valley* (2021), available at <https://www.digitaljournal.com/techscience/unlined-waste-disposal-pits-endanger-groundwater-in-san-joaquin-valley/article>.

³⁴ S.B.C. Shonkoff et al., *Hazard Assessment of Chemical Additives Used in Oil Fields that Reuse Produced Water for Agricultural Irrigation, Livestock Watering, and Groundwater Recharge in the San Joaquin Valley of California: Preliminary Results* at 9 (2016), available at https://www.psehealthenergy.org/wp-content/uploads/2022/11/Preliminary_Results_13267_Disclosures_FINAL-1.pdf.

water sources, and groundwater sources) are protected from potential impacts associated with BLM-authorized activities in the Planning Area, it is important to identify where these sources are located. For that reason, EPA recommended that the Draft SEIS include an updated map that identifies source water protection areas for public water supply wells and surface water intakes (streams, rivers, and reservoirs) as well as reservoirs that are drinking water sources. After identifying the water resources, BLM should include an analysis of the potential impacts to those drinking water sources and consider NSO lease stipulations to ensure public drinking water supply sources are fully protected from potential impacts associated with oil and gas leasing.

In addition, EPA notes that the Planning Area may include important areas of alluvial aquifer recharge that are more susceptible to contamination. To ensure that future BLM-authorized activities are protective of groundwater resources, the agency should accordingly identify and characterize both the existing and potential groundwater drinking water resources in the Planning Area by including: a description of all aquifers in the planning area, noting which aquifers are underground sources of drinking water; water quality and water yield information for each aquifer, if available; maps depicting the location of sensitive groundwater resources such as municipal watersheds, source water protection zones, sensitive aquifers, and recharge areas; descriptions and locations of groundwater use (e.g., public water supply wells, domestic wells, springs, and agricultural and stock wells; and a map and analysis of proposed oil and gas wells, existing producing wells, and nonproducing wells in the area including their status (e.g., idle, shut-in, plugged, and abandoned). BLM should prepare this information and include it in the final EIS to support an analysis of groundwater impacts.

3. Groundwater Quantity Impacts

The Draft SEIS's consideration of impacts to groundwater quantity is similarly deficient. EPA put BLM on notice in its scoping comments that water demand associated with oil and gas development can be substantial and has the potential to impact environmental resources. For that reason, it recommended that the SEIS include a discussion of: a range of estimated water demand per well developed in the Planning Area (based on reasonably foreseeable development, predicted well depths, formation characteristics, and well designs, as well as hydraulic fracturing operations, if used); possible sources of water for oil and gas development; and potential impacts of the water withdrawals (e.g., drawdown of aquifer water levels, reductions in stream flow, impacts to groundwater dependent ecosystems, impacts on aquatic life, wetlands, springs and other aquatic resources). EPA also recommended that BLM consider measures to encourage operators to use recycled produced water in well drilling and stimulation and for produced water management and disposal facilities, thereby decreasing the need for water withdrawals and minimizing the associated impacts. However, BLM included none of this analysis in the Draft SEIS.

An analysis of water quantity impacts is necessary to comply with NEPA. As the CCST has explained, water use from fracking and other well stimulation techniques is significant: the authors "estimate that well stimulation in California uses 850,000 to 1,200,000 cubic meters

(690–980 acre-feet) of water per year.”³⁵ Most of this water is sourced from a nearby irrigation district: “Operators obtained the water needed for well stimulation from nearby irrigation districts (68 percent), produced water (13 percent), operators’ own wells (13 percent), a nearby municipal water supplier (4 percent), or a private landowner (1 percent).”³⁶ Around 90 percent of the total water volume used for oil and gas extraction in California would otherwise be suitable for irrigation or domestic use.³⁷ In places where fracking has occurred in California, like in the San Joaquin Valley, water extractions have stressed an already receding water table and caused an 8-meter drop in the land surface.³⁸

Like fracking and other well stimulation treatments, enhanced oil recovery methods such as steam injection, water flooding, and steam flooding involve the injection of large volumes of water underground to increase the flow of oil or gas to the surface. The CCST notes that cyclic steam injection for enhanced oil recovery uses between 2-15 times as much freshwater as well stimulation operations.³⁹ These methods are increasingly used both to expand the productivity of existing wells in California and to maximize production from new wells.⁴⁰

There are unique concerns about water quantity across all of the basins and subbasins in the Central Coast Planning Area. For example, in San Benito County, a portion of its water management areas rely on imported water from the Central Valley Project.⁴¹ BLM must coordinate with local water districts like the San Benito County Water District to ensure it has the best and most up-to-date data available on water levels. As another example, in Monterey County, the vast majority (95 percent) of water used is drawn from underground aquifers.⁴² The total amount of water pumped per year is approximately 500,000 acre-feet, of which 450,000 acre-feet are used for agriculture.⁴³ Excessive water pumping can lead to seawater intrusion in certain areas, an issue felt particularly in the Salinas Valley of Monterey County.⁴⁴

BLM must meaningfully consider these unique issues and whether oil and gas development paired with extensive agricultural development will overdraw already strained water tables in the Central Coast Planning Area.

³⁵ See *supra* n. 18 at 65.

³⁶ *Id.* at 57.

³⁷ *Id.*

³⁸ *Id.* at 65.

³⁹ *Id.* at 61.

⁴⁰ California Energy Commission, *Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery* (Dec. 2021), https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf.

⁴¹ San Benito County Water District, *Annual Groundwater Report* (Water Year 2023), <https://sbcwd.ca.gov/wp-content/uploads/2024/04/SGMA-Annual-Report-WY23-FINAL-03252024.pdf>.

⁴² Monterey County Water Resources Agency, *Groundwater Level Monitoring*, available at <https://www.countyofmonterey.gov/government-links/water-resources-agency/programs/groundwater-level-monitoring/overview>.

⁴³ *Id.*

⁴⁴ *Id.*

4. Subsidence

In addition, the depletion of groundwater for use in well stimulation techniques and enhanced oil recovery, and the extraction of oil and gas from the ground that those technologies enable, both have the potential to cause land subsidence, the gradual caving in or sinking of land. BLM recognizes that such subsidence “can permanently reduce the amount of storage available in a groundwater aquifer,” further reducing groundwater levels. Draft SEIS at 74. It also notes that the “principal aquifers of the Central Valley portion of the Planning Area are in general described as being in chronic groundwater overdraft.” But despite saying that the SEIS “includes updated ... land subsidence analysis,” BLM fails to provide any analysis of subsidence, noting only that it is “difficult to analyze and predict.” *Id.* This deficiency must be resolved in the SEIS.

5. Deferral of Analysis

BLM says it will “consider site specific conditions and data during project level review.” Draft SEIS at 72. But consideration of impacts may not be deferred, as that would violate NEPA’s mandate that agencies confront the full extent of environmental impacts from a proposed action at the earliest reasonable time. *Robertson*, 490 U.S. at 349. As the Ninth Circuit has frequently stated, it is “not appropriate to defer consideration” of impacts to a future date “when meaningful consideration can be given now.” *Kern v. U.S. BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002). Hydrologic regions and water basins do not obey the boundaries of oil and gas leases, so impacts to them are best analyzed at the Planning Area level instead of in a segmented and cabined review later. Moreover, BLM states that the SEIS is the relevant analysis document for two suspended leases issued in 2011 and 2012. Draft SEIS at ES-1. Its failure to do what it said it would do for these leases, namely “consider site specific conditions and data,” belies the agency’s assurances that it will conduct further analysis before offering leases in the future.

C. The Draft SEIS Fails to Consider Environmental and Public Health Impacts to Low-Income Communities and Communities of Color.

The Draft SEIS fails to consider how the Proposed Action will impact low-income communities and communities of color in the Planning Area, whether resulting from increased air pollution, groundwater contamination, or other impacts.

BLM argues it does not need to consider environmental justice impacts under NEPA due to the repeal of executive orders that required agencies to make achieving environmental justice part of their mission. Draft SEIS at 12. But the consideration of environmental justice has long been a part of the required NEPA analysis, *see, e.g., Mid States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d. 520, 541 (8th Cir. 2003); *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1370 (D.C. Cir. 2017), and the statute itself rather than executive orders drives this requirement. NEPA makes it the federal government’s responsibility to “assure for *all* Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings,” 42 U.S.C. § 4331(b)(2) (emphasis added), and states “that *each person* should enjoy a healthful environment,” *id.* § 4331(c) (emphasis added). Consideration of how a proposed federal action might disproportionately affect *some* Americans more than others is thus a highly relevant

consideration under the statute. NEPA’s focus on “the quality of the *human* environment,” *id.* § 4332(c) (emphasis added), is also a concern advanced by analyzing the distribution of environmental burdens in the human environment.

Many federal oil and gas activities in California occur in close proximity to the state’s most vulnerable communities. The Planning Area is home to several communities that are disproportionately exposed to pollution and who are most vulnerable to pollution and its health effects, called “disadvantaged communities” under California law.⁴⁵ To designate disadvantaged communities, the California Environmental Protection Agency uses the California Office of Environmental Health Hazard Assessment’s (“OEHHA”) CalEnviroScreen Tool to rank census tracts in the state using indicators that measure the communities’ exposure to pollution and the communities’ vulnerability to the effects of pollution. Many census tracts in the Planning Area meet the state’s definition for a disadvantaged community, but disadvantaged communities in Contra Costa, Fresno, Santa Clara, and Stanislaus Counties are most likely to be impacted by the expanded oil and gas drilling contemplated in the Proposed Action.⁴⁶ This means that these communities are already exposed to significantly more air pollution, water pollution, and other pollution sources that cause significant health risks than other parts of the state, and they are more vulnerable to these exposures. For example, residents in Fresno County’s City of Coalinga already experience more pollution from oil and gas wells than 96 percent of census tracts in the state and more drinking water contamination than 89 percent of census tracts in the state.⁴⁷ These residents are also more vulnerable to pollution burdens than 80 percent of census tracts in the state due to factors like socioeconomic status and chronic disease prevalence.⁴⁸

Furthermore, much of the Planning Area is located in agricultural areas of the state, where farmworkers labor long hours outside and will be exposed to air pollution from oil and gas drilling. In Monterey County, known as the salad bowl of the world, around 30,000 individuals work in crop production.⁴⁹ And farmworkers in several Monterey County census tracts are already exposed to more air toxics from oil and gas wells than more than 90 percent of census tracts in the state.⁵⁰ Because farmworkers spend their days outside, they have no protections from air pollution. In addition, farmworkers are also more likely to live in substandard housing

⁴⁵ Cal. Health & Safety Code § 39711; SB 535 Disadvantaged Communities Webpage, <https://oehha.ca.gov/calenviroscreen/sb535>.

⁴⁶ See Cal OEHHA, SB 535 Disadvantaged Communities Webpage, <https://oehha.ca.gov/calenviroscreen/sb535>. Census tracts that are in the top 25 percentile overall in CalEnviroScreen are “disadvantaged communities.” See California Environmental Protection Agency, Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon), April 2017. See also CalEnviroScreen 5.0 Draft, attached as Exhibit 1 and available at <https://oehha.ca.gov/calenviroscreen/report/draft-calenviroscreen-50>.

⁴⁷ See CalEnviroScreen 5.0 Draft, Drinking Water Contaminants Percentile, attached as Exhibit 2 and Small Air Toxics Site Percentile, attached as Exhibit 3.

⁴⁸ See CalEnviroScreen 5.0 Draft, Population Characteristics, attached as Exhibit 4.

⁴⁹ County of Monterey Agricultural Commissioner’s Office, Economic Contributions of Monterey County Agriculture (Nov. 2025) at 7, available at <https://montereycfb.com/wp-content/uploads/2025/11/Economic-Contributions-of-MoCo-Ag-2025.pdf>.

⁵⁰ See CalEnviroScreen 5.0 Draft, Small Air Toxic Sites Indicator, attached as Exhibit 5.

with poor ventilation and water quality.⁵¹ Thus, even once they return home, they are more likely to be exposed to the air and water quality impacts from oil and gas production.

Studies increasingly show links between exposure to oil and gas operations and other public health impacts,⁵² including cancer,⁵³ adverse birth outcomes,⁵⁴ and preterm births.⁵⁵ Residents living near oil and gas operations can experience acute respiratory, neurological, and gastrointestinal symptoms from exposure to the operations, such as headaches, fatigue, burning eyes and throats, nausea, and nosebleeds.⁵⁶ Residents also experience sleep disturbance from noise levels from oil and gas activity.⁵⁷ Further, a state-commissioned public health expert panel that worked with CalGEM, the state's oil and gas regulatory agency, recently released a report affirming that proximity to oil and gas production increases the likelihood of adverse health outcomes, and that those outcomes get worse where the density of wells is greater.⁵⁸ The report concludes with a "high level of certainty" that there is a causal relationship between close proximity to oil and gas development and negative health impacts, particularly adverse perinatal

⁵¹ University of California, Merced, *Farmworker Health in California: Health in a Time of Contagion, Drought, and Climate Change* (2022) at 24, 27, available at https://clc.ucmerced.edu/sites/g/files/ufvvjh626/f/page/documents/fwhs_report_2.2.2383.pdf.

⁵² Intrinsik Environmental Sciences Inc., *Phase 2- Human Health Risk Assessment of Oil and Gas Activity in Northeastern British Columbia: Task 3 – Literature Review*. Prepared for British Columbia Ministry of Health, April 2013.

⁵³ See, e.g., McKenzie, Lisa M., et al., *Childhood Hematologic Cancer and Residential Proximity to Oil and Gas Development*, PLoS ONE 12(2): e0170423 (2017), available at <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170423>.

⁵⁴ Balise, et al., *Systematic Review of the Association between Oil and Natural Gas Extraction Processes and Human Reproduction*, 106 FERTILITY & STERILITY 4, 795-819 (September 2016), available at <https://www.sciencedirect.com/science/article/pii/S0015028216625293>; McKenzie, Lisa M., et al., *Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado*, 122 ENVIRONMENTAL HEALTH PERSPECTIVES 412-417 (2014), available at <https://pubmed.ncbi.nlm.nih.gov/20923742/>; Lupo, P.J., et al., *Maternal Exposure to Ambient Levels of Benzene and Neural Tube Defects Among Offspring: Texas, 1999–2004*, 119 ENVIRONMENTAL HEALTH PERSPECTIVES 397-402 (2011), available at <https://pubmed.ncbi.nlm.nih.gov/20923742/>.

⁵⁵ Casey, et al., *Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania*, 27 EPIDEMIOLOGY 163-172 (2016), available at <https://www.sciencedirect.com/science/article/pii/S0015028216625293>; Li, X., et al., *Association between Ambient Fine Particulate Matter and Preterm Birth or Low Birth Weight: An Updated Systematic Review and Meta-Analysis*, 227 ENVIRONMENTAL POLLUTION 596-605 (2017), available at <https://pubmed.ncbi.nlm.nih.gov/28457735/>.

⁵⁶ Webb, et al., *Potential Hazards of Air Pollutant Emissions from Unconventional Oil and Natural Gas Operations on the Respiratory Health of Children and Infants*, 31 REVIEWS ON ENVIRONMENTAL HEALTH 225-243 (2016), available at <https://pubmed.ncbi.nlm.nih.gov/27171386/>; Tustin, et al., *Associations between Unconventional Natural Gas Development and Nasal and Sinus, Migraine Headache, and Fatigue Symptoms in Pennsylvania*, 125 ENVIRONMENTAL HEALTH PERSPECTIVES 189-197 (2016), available at <https://pmc.ncbi.nlm.nih.gov/articles/PMC5289909/>; Liberty Hill Foundation, *Drilling Down: The Community Consequences of Expanded Oil Development in L.A.* (2015) available at https://libertyhill-assets-2.s3-us-west-2.amazonaws.com/media/documents/Drilling_Down_Report_-_Full.pdf; Los Angeles County Department of Public Health, *Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County*, February 2018, available at http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf.

⁵⁷ Hays, et al., *Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development*, 580 SCIENCE OF THE TOTAL ENVIRONMENT 448-456 (2017).

⁵⁸ Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California* (June 21, 2024), available at https://www.conservation.ca.gov/calgem/Documents/Public_Health_Panel_Final_Report_20240621.pdf.

and respiratory outcomes like reduced fetal growth, preterm birth, asthma, and reduced lung function. It cites research estimating that in 2025, nearly 100 premature deaths in California will be attributed to oil and gas pollution.

The increasing evidence of public health effects for residents exposed to oil and gas activity is particularly concerning in the Planning Area given the existing pollution burdens and vulnerabilities. BLM thus must revise its analysis to include a consideration of how the Proposed Action will impact low-income communities and communities of color.

D. The Draft SEIS Fails to Consider Cumulative Impacts.

The Draft SEIS fails to adequately analyze and disclose the cumulative impacts from the Proposed Action. NEPA requires an analysis of the cumulative effects of a federal action as part of its mandate that agencies consider the reasonably foreseeable effects of an action “to the fullest extent possible.” 42 U.S.C. §§ 4332, 4332(2)(C). This requirement stems from NEPA’s recognition that “each ‘limited’ federal project is part of a large mosaic of thousands of similar projects and that cumulative effects can and must be considered on an ongoing basis.” *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975). Courts have also recognized that cumulative impacts analysis is necessary to put a proposed action’s effects into meaningful context and fulfill NEPA’s informed decision-making purpose. *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972). Cumulative impacts analysis requires an assessment of the actual impact in light of background effects—e.g., how increased emissions affect air quality in light of existing emissions—not merely a comparison of the relative increase in emissions against total background emissions. NEPA reviews “must give a realistic evaluation of the total impacts and cannot isolate a proposed project, viewing it in a vacuum.” *Grand Canyon Trust v. FAA*, 290 F.3d 339, 342 (D.C. Cir. 2001).

As BLM is well aware, the agency is also currently proposing a RMP Amendment and Draft SEIS for Oil and Gas Leasing and Development in the neighboring Bakersfield Planning Area. That proposal involves considerable new well development. Yet, inexplicably, the Central Coast Draft SEIS fails to mention that other major BLM planning effort, which would ostensibly involve the development of new wells, including new hydraulically-fractured wells, during the same timeframe as the Proposed Action.

This raises serious cumulative impact concerns. Cumulative impacts result from the incremental impact of an action combined with past, present, and reasonably foreseeable future actions. The San Joaquin Valley is in extreme ozone nonattainment status, and smog is very much a cumulative air pollution concern (NO_x and reactive organic gas (“ROG”) emissions are both ozone precursors which generate smog by reacting in the atmosphere across the entire air basin). Despite these facts, BLM fails to consider the cumulative NO_x and ROG related effects of two major planning efforts—both undertaken by BLM at the same time, and both of which involve approving new hydraulic fracturing and other well development activities which would occur during the same timeframe and in the same extreme nonattainment air basin.

Finally, hydraulic fracturing is associated with significant GHG emissions, including carbon dioxide, methane, NO_x, VOCs, and black carbon.⁵⁹ GHG emissions also result from fuel combustion by the equipment used to prepare oil and gas well pads and drill wells, from fugitive leaks of methane from production equipment, as well as from fuel used to power boilers and steam generators used in enhanced oil recovery operations.⁶⁰ “The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008).

E. The Draft SEIS Fails to Consider Impacts to Listed Species.

BLM must take a hard look at the impacts of oil and gas development, including those from hydraulic fracturing and other drilling techniques, on sensitive species and habitats in the Planning Area. New species have been listed, and their critical habitat designated, within the Planning Area since the 2019 FEIS that implicate both existing oil and gas leases and unleased oil and gas areas. BLM’s SEIS must take into account these newly-protected species and consider the impacts of oil and gas activities on them and their habitats.

These include the following actions under the federal Endangered Species Act (“ESA”):

- The Central Coast Distinct Population Segment (“DPS”) and South Coast DPS foothill yellow-legged frogs were listed as threatened and endangered, respectively, on September 28, 2023. On January 14, 2025, the U.S. Fish and Wildlife Service (“FWS”) proposed a final rule designating 249,942 acres of critical habitat for the Central Coast DPS and 10,077 acres of critical habitat for the South Coast DPS;
- The FWS proposed to list the northwestern pond turtle and the southwestern pond turtle as threatened on October 3, 2023;
- The FWS proposed to list the Northern DPS western spadefoot as threatened on December 5, 2023; and
- The FWS proposed to list the monarch butterfly and designate 4,395 acres of critical habitat on December 12, 2024.

Under the California Endangered Species Act (“CESA”):

- The Central Coast DPS and South Coast DPS foothill yellow-legged frogs were listed as endangered on March 20, 2020;
- The Temblor legless lizard was given endangered candidate status on July 1, 2022; and
- The burrowing owl was given candidate status on October 10, 2024.

⁵⁹ Brandt, A., Millstein, D., Jin, L., & Englander, J., *Air Quality Impacts from Well Stimulation* at 185-86 (2015), available at <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

⁶⁰ Bureau of Land Management, 2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends (Aug. 2024), available at <https://www.blm.gov/sites/default/files/docs/2025-04/BLM-2023-Base-GHG-Report.pdf>.

- On February 12, 2026, the Fish and Game Commission voted to list the Southern California/Central Coast Evolutionarily Significant Unit (ESU) of Mountain Lion. The actual listing date is pending adoption of regulation. Key protected regions and subpopulations are located in the Planning Area.

The Draft SEIS fails to assess potential impacts to federally listed and candidate species. First, BLM has not evaluated impacts to all species that have been either proposed for listing or formally listed under the ESA and CESA since 2019. In particular, BLM ignores impacts to monarch butterflies, despite finding in its Draft SEIS for the Bakersfield Planning Area that “monarch butterflies may occur within the lease parcels” due to the prevalence of the milkweed plant, which is also present in the Central Coast Planning Area. Bakersfield Draft SEIS at 27.

Second, BLM arbitrarily discounts the possibility of impacts to the other species. It recognizes that keeping the Clear Creek Serpentine Area of Critical Environmental Concern (ACEC) closed to oil and gas leasing under all alternatives considered in this SEIS would prevent any potential impacts to foothill yellow-legged frog habitat on those lands. But BLM dismisses the possibility of impacts to the foothill yellow-legged frog and other species and their critical habitats outside the ACEC because their habitats “are outside of areas where the RFDS suggests oil and gas development would occur.” Draft SEIS at 75. This ignores the fact that the agency’s preferred alternative would open critical habitat for these species to oil and gas drilling in the Planning Area.

The Draft SEIS contains no discussion of the Temblor legless lizard or the burrowing owl. In considering impacts to these species, BLM should discuss studies prepared by state agencies and other relevant stakeholders. These include a 2019 conservation assessment prepared for the California Department of Fish and Wildlife (“CDFW”) in which scientists recommended federal and state ESA protection for the Temblor legless lizard.⁶¹ In its candidate review, CDFW noted that the Temblor legless lizard has a “very small range, making its continued existence especially vulnerable to threats.”⁶² CDFW found sufficient evidence that oil and gas development “result[s] in habitat loss, degradation and fragmentation and can restrict the species’ ability to carry out essential functions such as feeding, burrowing, and reproduction.”⁶³ Further, given the threats and small range of the species, along with its specialized habitat requirements, these factors “could be immediately threatening to the species’ continued survival and reproduction.”⁶⁴ BLM should also consider that a CDFW staff report on burrowing owl mitigation says that the potential displacement of burrowing owls poses a serious concern for the

⁶¹ Parham, J.F. et al., *Conservation Assessment of the California Legless Lizard (Anniella)*, prepared for California Department of Fish and Wildlife (2019), available at https://meridian.allenpress.com/jfwm/article-supplement/501241/pdf/refs1_parham_et_al_2019/.

⁶² California Dept. of Fish and Wildlife, *Evaluation of the Petition From the Center For Biological Diversity to List the Temblor Legless Lizard (Anniella Alexanderae) As Threatened or Endangered Under the California Endangered Species Act* (March 25, 2022) at 1, available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=201997&inline>.

⁶³ *Id.* at 18.

⁶⁴ *Id.*

survival of the species.⁶⁵ Further, burrowing owls are often observed foraging along roads, and sometimes nest near them, making them especially vulnerable to vehicle collisions.⁶⁶

BLM must also consider new information concerning already listed species in the Planning Area that has been published after the 2019 FEIS. For example, the U.S. Fish and Wildlife Service in 2020 published a study concerning the San Joaquin kit fox that found: “Permanent modification to habitat due to oil and gas activities can reduce the species’ ability to disperse and find new habitat. As more land is affected by extraction of natural resources, there could be population level responses associated with habitat degradation and habitat modification.”⁶⁷

F. The Draft SEIS Fails to Consider Reasonable Alternatives to the Proposed Action.

The Draft SEIS also fails to consider a reasonable range of alternatives to the Proposed Action. NEPA requires project proponents to provide a “detailed statement” regarding the “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii). The requirement to consider reasonable alternatives “lies at the heart of any NEPA analysis.” *California ex rel. Lockyer v. U.S. Dept. of Agric.*, 459 F. Supp. 2d 874, 905 (N.D. Cal. 2006). The alternatives requirement also “ensures that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance.” *Calvert Cliffs Coordinating Committee v. United States Atomic Energy Commission*, 449 F.2d 1109, 1114 (D.C. Cir. 1971). “The existence of a viable but unexamined alternative renders” an EIS inadequate. *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (internal quotations and citations omitted).

In the stipulated settlement that required BLM to prepare its SEIS, BLM committed to “solicit additional alternatives during the public scoping process and [] consider incorporating those alternatives into the analysis.” But in the Draft SEIS, BLM “carries forward” the same alternatives that it previously considered in the 2019 FEIS. Draft SEIS at 16. In so doing, its analysis suffers from the same flaws as the 2019 FEIS.

The 2017 draft EIS considered five alternatives, “A” through “E,” each of which proposed opening different acreages for oil and gas leasing and development. BLM in that draft identified its preferred alternative as “Alternative C,” which would open a total of 398,600 acres

⁶⁵ California Department of Fish and Game, *Staff Report on Burrowing Owl Mitigation* (March 7, 2012), available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843>.

⁶⁶ Scobie, Corey et al, *Influence of petroleum development on burrowing owl ecology*, Univ. Alta. Dep’t of Biological Scis., (July 2013) 1, 16, available at https://www.researchgate.net/publication/309310446_Influence_of_petroileum_development_on_burrowing_owl_ecology.

⁶⁷ United States Fish and Wildlife Service, *Species Status Assessment Report for the San Joaquin Kit Fox* (2020) at 32, 35, available at <https://iris.fws.gov/APPS/ServCat/DownloadFile/185116>.

of federal mineral estate for oil and gas development. Under Alternative C, federal mineral estate underlying core population habitat areas for the giant kangaroo rat and California's coastal zone would be closed to oil and gas development, and no surface occupancy would be allowed on land designated by the U.S. Fish and Wildlife Service as critical habitat for threatened or endangered species. Further, all federal mineral estate in Alameda, Contra Costa, Santa Clara, Santa Cruz and San Mateo Counties would be closed to oil and gas leasing and development.

However, the 2019 FEIS introduced a wholly new alternative that was not included or analyzed in the Draft EIS, "Alternative F," and selected it as the agency's preferred alternative. Alternative F opens for oil and gas development a total of 725,500 acres of federal mineral estate, more than 91 percent of all land and mineral estate in the Planning Area under BLM's control, and nearly double the estate open under the previous preferred alternative. Unlike Alternative C, Alternative F opens federal mineral estate in Alameda, Contra Costa, Santa Cruz, Santa Clara and San Mateo Counties for oil and gas development. It also opens for oil and gas development, including surface occupancy, mineral estate underlying designated critical habitat for threatened and endangered species, and within California's coastal zone. Even more, Alternative F opens for oil and gas development mineral estate overlying portions of all 20 groundwater basins in the Planning Area, and opens for oil and gas leasing, including surface occupancy, federal lands within portions of Panoche-Coalinga ACEC and federal lands subject to Recreation and Public Purpose leases. There are Recreation and Public Purpose lease lands in the Mount Diablo State Park and Henry W. Coe State Park that would be open for oil and gas leasing with surface occupancy under this alternative.

Introduction in a final EIS of a new alternative that is outside "the range of alternatives the public could have reasonably anticipated," and to which the "public's comments on the draft EIS alternatives" do not include "the chosen alternative [to] inform [the agency] meaningfully of the public's attitudes toward the chosen alternative" is sufficient rationale to require a supplemental EIS. *California v. Block*, 690 F.2d 753, 772 (9th Cir. 1982). BLM in 2019 adopted an alternative presented for the first time in its FEIS that was outside the range of the alternatives the public could reasonably have anticipated that BLM was considering. Comments from the public were therefore insufficient to inform BLM of the public's view of the chosen alternative and its impacts since they did not address the chosen alternative. *Id.*

The present Draft SEIS does not remedy BLM's failure to seek public comment on Alternative F. BLM's failure to prepare and circulate a supplemental EIS that provides for public comment on the entirety of Alternative F does not satisfy NEPA's public participation requirements. Put another way, BLM cannot simply carry forward the same alternatives from a prior defective review that entirely prevented public comment on its preferred alternative.

This flaw is compounded by the fact that the present Draft SEIS only analyzed a small subset of potential impacts to the Planning Area. For example, it provided little in the way of analysis to recreation issues, providing only a statement that "[i]mpacts on recreation can be inferred based on the potential for oil and gas activities within the vicinity of the recreation areas and BLM-managed [Special Recreation Management Areas (SRMAs)] described in Section 3.6 of this SEIS." Draft SEIS at 75. There is no map illustrating the areas open to leasing and the

SRMAs together, and no acknowledgment of how recreation impacts changed in Alternative F relative to the other alternatives, including opening California State Park lands to leasing.

In addition, BLM has failed to abide by its commitment in the stipulated settlement to “consider incorporating [] alternatives into the analysis” that were raised during scoping. It instead lumped these alternatives together into a brief discussion and provided unsupported and conclusory statements as to why they were not considered in the Draft SEIS.

For example, despite noting that “[n]umerous scoping comments urged the BLM to consider an alternative that would ban the use of well stimulation technologies on Federal mineral estate,” it failed to consider that alternative. The explanation provided is that BLM does not regulate hydraulic fracturing in California, but this fails to support the agency’s decision for a number of reasons. First, it contradicts what BLM says elsewhere in the Draft SEIS, that it “carries forward” the alternatives considered in the 2019 EIS, which all assume that all wells “could employ hydraulic fracturing or other well stimulating technology.” Draft SEIS at 3. Second, BLM has recognized elsewhere in the Draft SEIS that California has banned hydraulic fracturing. *Id.* at 28. It defies reason to refuse to analyze an alternative to consider new information and changed circumstances that the agency itself has acknowledged. Third, BLM could choose to respect state law and implement its requirements with respect to hydraulic fracturing. And last, hydraulic fracturing is only one of several well stimulation techniques and enhanced recovery methods used in California. BLM’s statement that it does not regulate hydraulic fracturing accordingly does not provide a basis for refusing to consider an alternative that precludes other well stimulation and enhanced recovery technologies. As discussed above, these pose risks to resources, particularly public health, and their elimination from the analysis would accordingly “alter the environmental impact and the cost-benefit balance.” *Calvert Cliffs*, 449 F.2d at 1114.

BLM also refused to consider alternatives that would require NSO stipulations on new leases or not leasing in habitats for listed species. The rationale BLM provides is that the 2019 EIS already considered alternatives that address the closure of listed species habitat. The agency cites alternatives that would “close all split estate lands to oil and gas leasing and development,” or lease “only federal minerals in an existing oil and gas field (plus half-mile buffer),” or restrict leasing on “state parks, county parks, conservation easements, and other split estate lands.” Draft SEIS at 20. BLM, however, provides no analysis of how the lands that would be closed to leasing under these other alternatives overlaps with listed species habitats. And as discussed above, with new species having been listed since 2019, the alternatives mentioned could not have been developed or analyzed with those species’ habitats in mind.

Last, BLM rejected consideration of an alternative that would prevent development in setback zones to protect public health and safety. *Id.* at 20-21. BLM recognizes that “California Senate Bill 1137 established a 3,200-foot physical setback area between new and reworked oil and gas wells and sensitive receptors,” but states it cannot analyze an alternative implementing that setback in detail because it “does not have authority to enforce State laws and regulations (i.e. legal and policy considerations).” *Id.* This rationale fails to provide a basis for rejecting the alternative. BLM could choose to respect state law and implement its requirements, and it could

adopt an alternative based on the public health considerations that led to Senate Bill (“SB”) 1137 in the first place. As discussed below, the physical setback area was established based on substantial data and study regarding the impacts of oil and gas development on public health. In addition, EPA recommended that BLM consider setbacks in the Draft SEIS to protect public health. By analyzing an alternative that incorporates setbacks, BLM could provide an analysis that would show a marked difference in public health impacts from its proposed action.

Without a logically and factually sound consideration of the reasonable alternatives solicited during scoping, BLM’s alternatives fail to allow for “informed decision-making and informed public participation,” in violation of NEPA. *See California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982). BLM should therefore consider these reasonable alternatives.

G. BLM Failed to Identify or Discuss Adequate Mitigation Measures.

NEPA requires that an agency identify feasible mitigation measures for any adverse environmental impacts resulting from a proposed action and its alternatives. *Robertson*, 490 U.S. at 351-52 (“[O]ne important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences.”). Mitigation of environmental impacts must “be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *City of Carmel-By-The-Sea v. U.S. Dep’t of Transp.*, 112 F.3d 1142, 1154 (9th Cir. 1997) (quoting *Robertson*, 490 U.S. at 353). Moreover, “[a]n essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective.” *S. Fork Band Council of W. Shoshone of Nev. v. U.S. Dep’t of the Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (finding that the EIS violated NEPA by failing to “assess the effectiveness of the mitigation measures relating to groundwater”).

NEPA does not allow BLM to simply ignore consideration of mitigation measures now by listing steps that might be taken in the future. *See S. Fork Band Council*, 588 F.3d at 727 (“[T]hat these individual harms are somewhat uncertain due to BLM’s limited understanding of the hydrologic features of the area does not relieve BLM of the responsibility under NEPA to discuss mitigation of reasonably likely impacts at the outset.”); *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998) (finding a “mere listing of mitigation measures” is not enough to satisfy NEPA); *Nat’l Parks & Conservation Ass’n v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001) (“A perfunctory description, or mere listing of mitigation measures, without supporting analytical data, is insufficient to support a finding of no significant impact.”) (internal quotations and citations omitted). As the Ninth Circuit has frequently stated in NEPA cases, it is “not appropriate to defer consideration” of impacts to a future date “when meaningful consideration can be given now.” *See Kern v. U.S. BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002).

Throughout the Draft SEIS, BLM declines to consider mitigation measures and instead indicates that such measures will be evaluated later in the development process:

- Page 4 – “During this project-specific [APD] review, BLM will finalize project conditions or approval, monitoring, and/or mitigation.”
- Page 38 – “In exercising its permitting authority - including review of Applications for Permit to Drill and related authorizations - the BLM ... may require design features or conditions of approval to avoid or minimize impacts to surface water and groundwater.”
- Page 38 – “BLM will consider water-quantity risks during APD review . . . Mitigation may be required through design features and enforceable conditions of approval-for example, source-water selection, pumping limits, and metering/monitoring and reporting- and by requiring operators to obtain and comply with all applicable federal and state authorizations and regulations and, where applicable, local requirements.”
- Page 72 – “BLM concludes that the SJVAPCD requirement to quantify GHG emissions and to implement SJVAPCD Best Performance Standards to reduce GHG emissions would occur at the APD or Sundry stage, to be analyzed in a site-specific NEPA analysis.”
- Page 74 – “These potential impacts [to surface and groundwater] would be avoided or minimized through site-specific monitoring standards and regulations and application of best management practices (BMPs), as required by applicable federal, state, and local regulations, once sufficiently detailed location information is available.”

This deferral of mitigation and best management practices is inappropriate. BLM is in a better position now to evaluate and mitigate impacts that will result from the collective increase in oil and gas development than it will be when it considers Applications for Permits to Drill (“APDs”). For example, air pollution increases that contribute to nonattainment are better assessed holistically rather than when operators seek APDs for one well at a time. Similarly, impacts to aquifers cannot be addressed only at the site-specific scale of APDs. Mitigation is especially critical if BLM and operators expect CalGEM to rely on BLM’s SEIS for approval of oil and gas permits without conducting additional environmental review pursuant to CEQA, as CEQA requires a separate discussion of mitigation measures. *See* Cal. Code Regs., tit. 14, § 15221.

As discussed, *infra*, BLM should not allow drilling with 3,200 feet of sensitive locations and should implement relevant safety measures identified in SB 1137. Relevant measures include leak detection and repair of sites including pipelines, suspension of operations in the event of a leak, vapor venting prevention, water sampling, sound controls, lighting controls, and dust controls. These measures should be considered as mitigation measures in the SEIS. A 2024 public health expert panel report, discussed below, sets out further reasonable mitigation measures that BLM should analyze and implement, including improved air quality monitoring and leak detection that is more specifically tailored to the variety of extraction processes and equipment that produce VOCs, additional setbacks between oil and gas wells and potential sources of drinking water, prohibitions on disposal of produced water into unlined ponds, better

access to information about produced water disposal, restriction of chemicals with the greatest health risks, and chemical disclosure requirements.⁶⁸

EPA noted that buffers can be effective health protection tools because they provide an opportunity for air pollutants to disperse before entering an area where they could affect human health, as well as provide extra time to warn residents of any unintended releases or emissions. EPA also recommended that BLM consider other risk reduction mitigation, including: requiring closed-loop drilling and completion; prohibiting reserve pits or produced water ponds; using lower emitting engine technology; capturing emissions from tanks, separators, and glycol dehydrators; and implementing stringent fugitive vapor controls.

BLM's failure to identify and discuss feasible mitigation measures in the SEIS regarding public health or sensitive species and their habitat is arbitrary and capricious and contrary to the requirements of NEPA and the Administrative Procedure Act.

H. The Draft SEIS Fails to Consider Conflicts with State and Local Laws and Policies.

The Draft SEIS fails to properly consider conflicts between the Proposed Action and directly applicable California laws and policies. BLM's RMPs "shall" be consistent with state and local government resource related plans, policies, and programs. 43 C.F.R. § 1610.3-2. BLM is "accountable for ensuring consistency if they have [] been notified, in writing, by State and local governments or Indian tribes of an apparent inconsistency" with state policies, plans, and programs. *Id.* To effectuate these requirements, BLM must identify inconsistencies and also provide the Governor the opportunity to identify inconsistencies and provide recommendations. *Id.* BLM must also document how inconsistencies between the proposed plan and state and local plans were "addressed and, if possible, resolved." *Id.* at § 1610.3-1(f).

BLM has acknowledged that "[a]ll state laws apply on Federal lands, except those that are preempted by Federal law." 80 Fed. Reg. at 16,179; *see also id.* (the requirement that operators "comply with all applicable laws," "includes other Federal and state and local laws, rules, and regulations," and is "repeated in the existing regulations at sections 3162.1(a) and 3162.5-1(a)."). Specifically with respect to hydraulic fracturing, operators "must comply" with "any applicable state requirements, just as they already must comply with both BLM rules and state rules on a variety of drilling and completion issues." *Id.*

NEPA also requires that an agency discuss possible conflicts between the proposed action and state plans or policies. *See, e.g., Quechan Tribe of Ft. Yuma Indian Reservation v. U.S. Dep't of the Interior*, 927 F. Supp. 2d 921, 946 (S.D. Cal. 2013) (finding that BLM did not violate NEPA where "numerous provisions" in EIS and ROD examined the project's consistency with local laws and regulations and California determined there were no inconsistencies between the

⁶⁸ Shonkoff, et al., *Public Health Dimensions of Upstream Oil and Gas Development in California* (June 21, 2024), available at https://www.conservation.ca.gov/calgem/Documents/Public_Health_Panel_Final_Report_20240621.pdf.

Project and state or local laws). In addition, NEPA requires supplementation when there “are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 372 (1989); Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6, <https://www.doi.gov/media/document/doi-nepa-handbook>.

BLM claims that the Draft SEIS was prepared to “determine whether changes are needed to the fluid minerals decisions in the 2014 RMP based on new information or changes in circumstance.” Draft SEIS at ES-1. However, BLM entirely fails to acknowledge relevant new information and changes in circumstances related to state and local laws and policies that address environmental concerns. Most significantly, the Draft SEIS ignores two state policy developments that significantly affect oil and gas activities in the Planning Area: a ban on hydraulic fracturing and a law establishing a 3,200-foot setback between new and reworked oil and gas wells and all sensitive locations. All oil and gas wells located on lands within California (including federal, state, local, and private lands) are permitted, drilled, operated, maintained, and plugged and abandoned under legal requirements and administrative procedures that CalGEM enforces and administers. CalGEM’s permitting authority and process applies to oilfield operations in California on all land administered by BLM whether that land is owned in total by the federal government or is a “split-estate.”⁶⁹

Regulations prohibiting new permits for well stimulation treatments such as hydraulic fracturing and acid matrix stimulation went into effect in October 2024. Cal. Code Regs., tit 14, § 1780(d). The regulations were developed following a 2020 Executive Order from Governor Newsom announcing that the State would cease issuing fracking permits due to health and safety harms to communities and workers.⁷⁰ Although BLM acknowledges the CalGEM has “regulatory authority over hydraulic fracturing in California,” and that California has a ban on the issuance of new hydraulic fracturing permits, BLM provides no affirmation that well stimulation is disallowed in the Planning Area.

In 2022, California’s SB 1137 established 3,200-foot drilling setback requirements and other statutory requirements, including engineering controls for all wells, to protect the health and safety of adjacent communities, including residences and schools.⁷¹ SB 1137 sets forth a variety of new requirements related to health protection zones and to wells and production facilities based on their location relative to a health protection zone. CalGEM is no longer authorized to approve a notice of intention for any well with a wellhead (i.e., a surface location) situated within a health protection zone, unless a specific exception applies. Cal. Pub. Resources Code, §§ 3281, 3281.5. Construction and operation of new production facilities within a health protection zone is also prohibited unless a specific exception applies. *Id.*, § 3280(b). To implement SB 1137, CalGEM adopted emergency regulations establishing administrative

⁶⁹ See Public Resources Code §§ 3008, 3013, 3106, 3203, and 3204; Cal. Code of Regs., title 14, §§ 1712, 1714; CalGEM Notice to Operators 2017-03.

⁷⁰ Executive Department, State of California, Executive Order N-70-20, Gavin Newsom (Sept. 23, 2020), available at <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>.

⁷¹ SB 1137, 2022 Leg., Reg. Sess. (Cal. 2022).

framework for the statutory prohibition of new wells and facilities within a 3,200-foot setback area from certain sensitive locations, and requiring pollution controls for existing wells and facilities.⁷² The agency is currently undertaking a rulemaking process to adopt permanently those regulations.⁷³ The Draft SEIS does not ensure consistency with this law by evaluating a compliant alternative or mitigation that would apply to wells within 3,200-feet of sensitive receptors.

Other recent regulatory updates directly affect oil and gas operations. In 2019, updated underground injection control regulations went into effect that increase testing, monitoring, and disclosure requirements, as well as set automatic triggers that require operators to cease injections to protect groundwater and public safety. Cal. Code Regs., tit 14, §§ 1724.5-1724.13. Effective in 2019 and updated in 2025, there are also requirements for testing and elimination of idle wells. Pub. Resources Code, § 3206; Cal. Code Regs., tit. 14, §§ 1772-1772.7. BLM must evaluate if its Proposed Action is consistent with these requirements.

There are several additional state plans and policies that conflict with BLM's Proposed Action. The use of hydraulic fracturing would open up previously unproductive hydrocarbon formations and extend the life of existing formations, with resulting significant impacts. California has a statutory target of reducing GHG emissions by 40 percent below 1990 levels by 2030, Cal. Health & Safety Code § 38566, and reaching net zero GHG emissions by 2045 (Assembly Bill 1279). *Id.* § 38562.2; Executive Order B-55-18. CARB's 2022 Scoping Plan for Achieving Carbon Neutrality lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. This path includes reduction of oil and gas extraction by approximately 89 percent in 2045 from 2022 levels.⁷⁴ Each scenario the California Air Resources Board studied incorporated a phaseout of 90 to 100 percent of oil extraction and oil refining by 2045.⁷⁵ Increasing oil and gas operations and opening new lands to leasing is contrary to and inconsistent with these statutory targets and the 2022 Scoping Plan.

There are also several state water laws and policies that are largely ignored by the Draft SEIS. In 2012, California enacted Water Code section 106.3, making California the first state in the nation to recognize the human right to water.⁷⁶ Water Code section 106.3 established the state's policy that every person has the right to safe, clean, affordable, and accessible water

⁷² CalGEM, SB 1137 First Emergency Implementation Regulations, Cal. Code Regs., tit. 14, § 1765 et seq., available at <https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf>.

⁷³ CalGEM, SB 1137 Notice of Proposed Action (Aug. 1, 2025), available at https://conservation.ca.gov/calgem/Documents/SB%201137%20Notice%20of%20Proposed%20Action%20v2_Clean.pdf.

⁷⁴ California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022) at 102, available at <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>.

⁷⁵ *Id.* at 24, Table 1.

⁷⁶ California State Assembly Bill 685 (2012).

adequate for drinking, cooking, and sanitary purposes.⁷⁷ Thus, preventing and addressing discharges that could threaten human health by contributing to contamination of drinking water sources are among the state's highest priorities. The California Sustainable Groundwater Management Act, enacted in 2014, also requires implementation of groundwater sustainability plans to avoid undesirable groundwater impacts and mitigate overdraft within 20 years. Cal. Water Code § 10720 *et seq.*

As discussed above, many of the disadvantaged and marginalized communities residing in the Planning Area do not have access to clean, safe, and affordable water.⁷⁸ In addition, there are potentially significant impacts to groundwater from contamination, overdraft, and land subsidence resulting from the Proposed Action, which would compound the significant water contamination and overdraft issues many communities in the Planning Area are already dealing with. Thus, any risk of additional contamination or reduction in water supplies resulting from hydraulic fracturing on BLM lands is significant and would be inconsistent with the state's laws and policies.

The state's Natural Community Conservation Planning Program ("NCCP") is another source of inconsistency. Specifically, within the Central Coast planning area, are the East Contra Costa County NCCP, the Santa Clara Valley Habitat Plan NCCP, and the in-process San Benito NCCP. The NCCPs are broad-based plans to protect and conserve the state's wildlife and natural resources, while continuing to allow for development and growth. Fish & G. Code, § 2801, subd. (b). The NCCPs in the Central Coast planning area cover more than 1.5 million acres, conserving habitat for multiple special-status species and natural communities. The SEIS fails to evaluate the Proposed Action's potential impacts and conflicts with these NCCPs.

The Proposed Action also conflicts with local laws and policies. Pursuant to the stipulated settlement Agreement in *Center for Biological Diversity v. BLM*, Case No. 3:19-cv-07155-JSC, BLM was required to "cooperate with local governments to ensure consistency of federal actions with local land use plans." For instance, Santa Cruz County prohibits all oil and gas development within the county's unincorporated areas. (Santa Cruz County, Cal. General Plan, Public Safety Element (2020) 6.8.4(b).) Alameda County prohibits "high-intensity oil and gas operations," including well stimulation, enhanced recovery, and hydraulic fracturing, within the unincorporated area of the county. (Alameda County, Cal. Code of Ordinances, ch. 17 §§ 17.06.100-17.06.140 (Aug. 2, 2016).) The Draft SEIS ignores these local laws.

⁷⁷ California State Water Resources Control Board, Resolution No. 2016-0010; California Regional Water Quality Control Board, Central Valley Region, Resolution R5-20161-0018.

⁷⁸ University of California, Berkeley School of Law, International Human Rights Law Clinic, *The Human Right to Water Bill in California: An Implementation Framework for State Agencies* (2013), <https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf>.

I. BLM Failed to Provide an Adequate Opportunity for Public Comment.

The public is entitled to meaningful opportunities to participate in and comment on the preparation of BLM's planning activities. 43 C.F.R. § 1610.2(e). Accordingly, BLM is required to provide a 90-day public comment period for a draft EIS relating to a RMP, and it is expected to circulate a supplemental EIS in the same fashion as a draft EIS. 43 C.F.R. § 1610.2(e); BLM NEPA Handbook H-1790-1 at 102. Despite this mandate, BLM provided the public with only 60 days to comment on the Draft SEIS.⁷⁹ This is a full month less than the 90 days required by BLM's own regulations and NEPA handbook.

BLM'S FAILURE TO CONSULT WITH THE U.S. FISH AND WILDLIFE SERVICE VIOLATES THE ENDANGERED SPECIES ACT

The ESA provides that, "[e]ach federal agency shall ... insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species." 16 U.S.C. § 1536(a)(2). Section 7 of the ESA establishes an interagency consultation process to assist federal agencies in complying with their duty to ensure against jeopardy to listed species or destruction or adverse modification of critical habitat. An agency must initiate consultation with the U.S. Fish and Wildlife Service (FWS) whenever it takes an action that "may affect" a listed species or its critical habitat. *See* 50 C.F.R. § 402.14(a). Agencies also must consult with FWS "on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under [ESA Section 4] or result in the destruction or adverse modification of critical habitat proposed to be designated for such species." 16 U.S.C. § 1536(a)(4); *see also* 50 C.F.R. § 402.10.

"The minimum threshold for an agency action to trigger consultation with FWS is low." *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 496 (9th Cir. 2011). "Section 7(a)(2) consultation is required so long as a federal agency retains 'some discretion' to take action for the benefit of a protected species." *Nat. Res. Def. Council v. Jewell*, 749 F.3d 776, 784 (9th Cir. 2014) (en banc). "Actions that have any chance of affecting listed species or critical habitat—even if it is later determined that the actions are 'not likely' to do so—require at least some consultation under the ESA." *Karuk Tribe v. U.S. Forest Serv.*, 681 F.3d 1006, 1027 (9th Cir. 2012) (en banc). Even effects that are mitigated or "trivial" may meet the 'may affect' threshold. *Swan View Coal. v. Weber*, 52 F. Supp. 3d 1133, 1145–47 (D. Mont. 2014).

The amendment of an RMP is an "agency action" to which the obligation to consult applies if the amendment "may affect" listed species. 50 C.F.R. § 402.02; *All. for the Wild Rockies v. United States Dep't of Agric.*, 772 F.3d 592, 598–99 (9th Cir. 2014); citing *Lane Cty. Audubon Soc'y v. Jamison*, 958 F.2d 290, 293 (9th Cir. 1992) (BLM land use plans that designate

⁷⁹ 91 Fed. Reg. 1329 (Jan. 13, 2026); 91 Fed. Reg. 5474 (Feb. 6, 2026) ("extending the Comment Period from 03/06/2026 to 03/13/ 2026").

areas for particular uses are agency action to which section 7 applies); *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1055 (9th Cir. 1994).

BLM accordingly cannot make a decision unless and until it consults with FWS regarding protected species in the Central Coast Field Office Planning Area. It is particularly important for BLM to consult with FWS regarding the species listed and provided candidate status since 2019, including the Central Coast DPS and South Coast DPS of foothill yellow-legged frogs that were listed as threatened and endangered, respectively, on September 28, 2023, and their critical habitat.

CONCLUSION

Given the serious deficiencies in the Draft SEIS, BLM should withdraw its current proposal, circulate an RMP amendment or revision, and prepare a new analysis that fully considers the environmental impacts of opening over 700,000 acres of public lands in California to oil and gas leasing.

Sincerely,



KEITH BAUERLE

Deputy Attorney General

MONICA HEGER

Deputy Attorney General

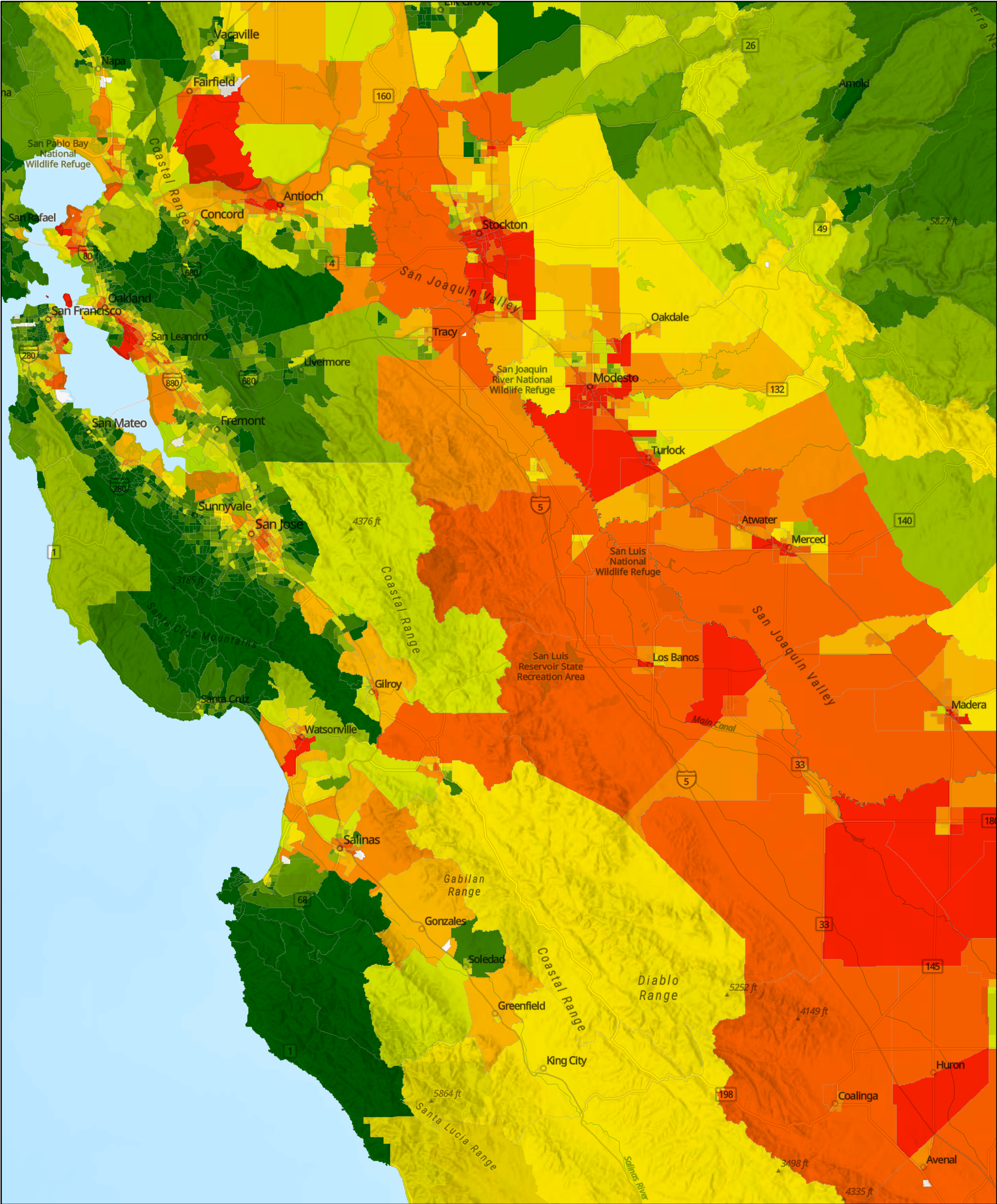
ABIGAIL BLODGETT

Supervising Deputy Attorney General

For ROB BONTA
California Attorney General

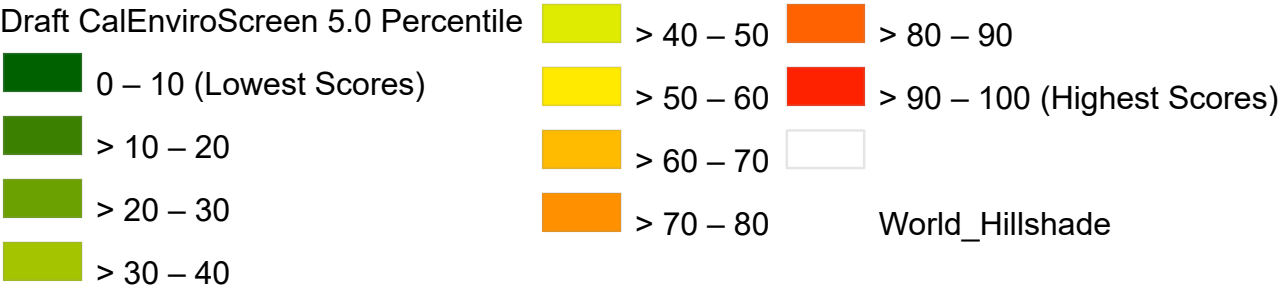
EXHIBIT 1

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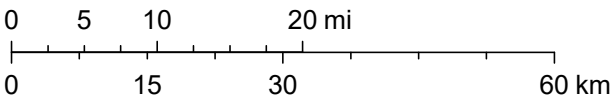
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Draft CalEnviroScreen 5.0 Percentile



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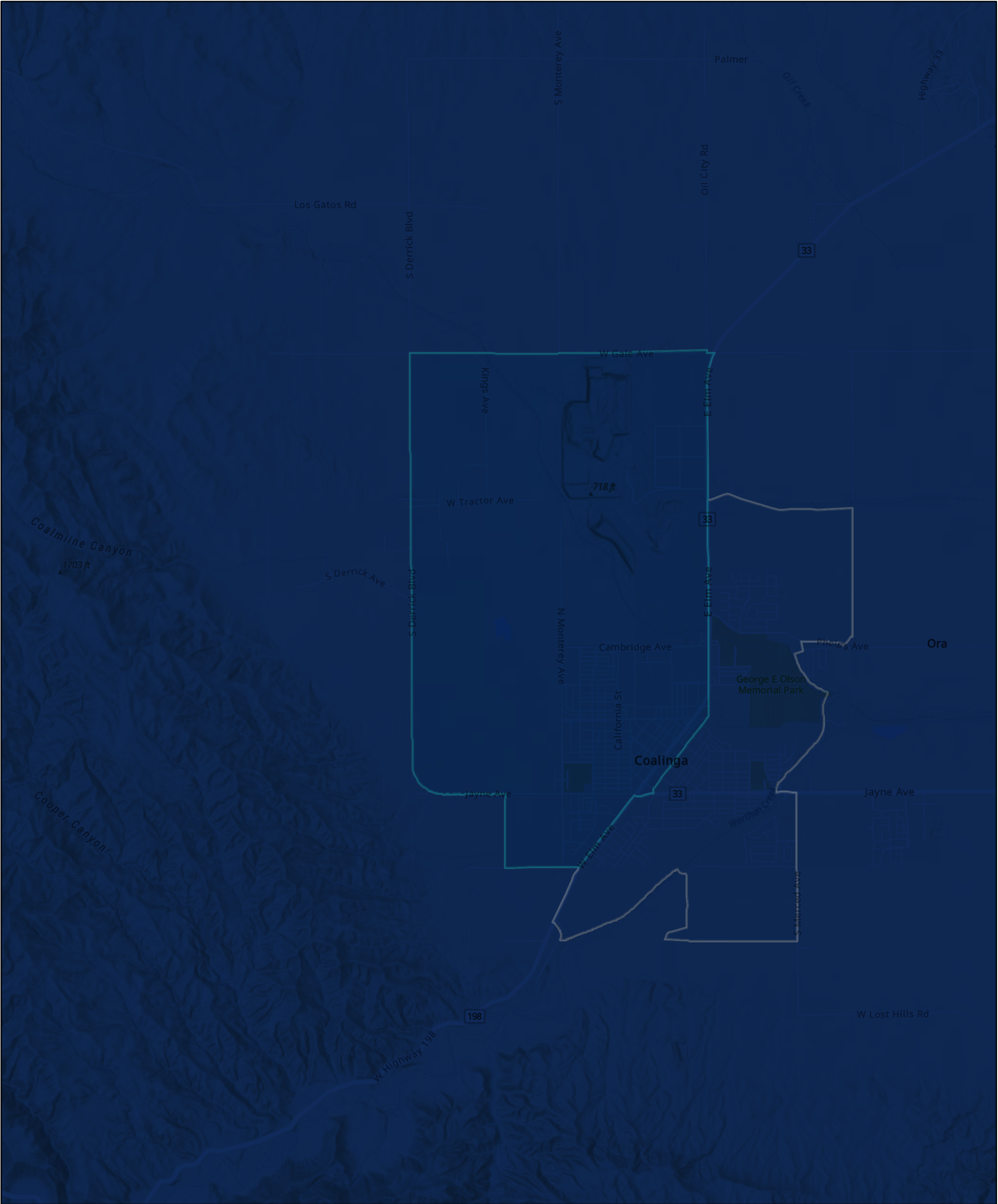
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, CGIAR, USGS

EXHIBIT 2

ArcGIS Web Map



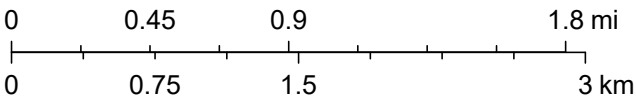
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Drinking Water Contaminants Percentile

 > 80 - 90

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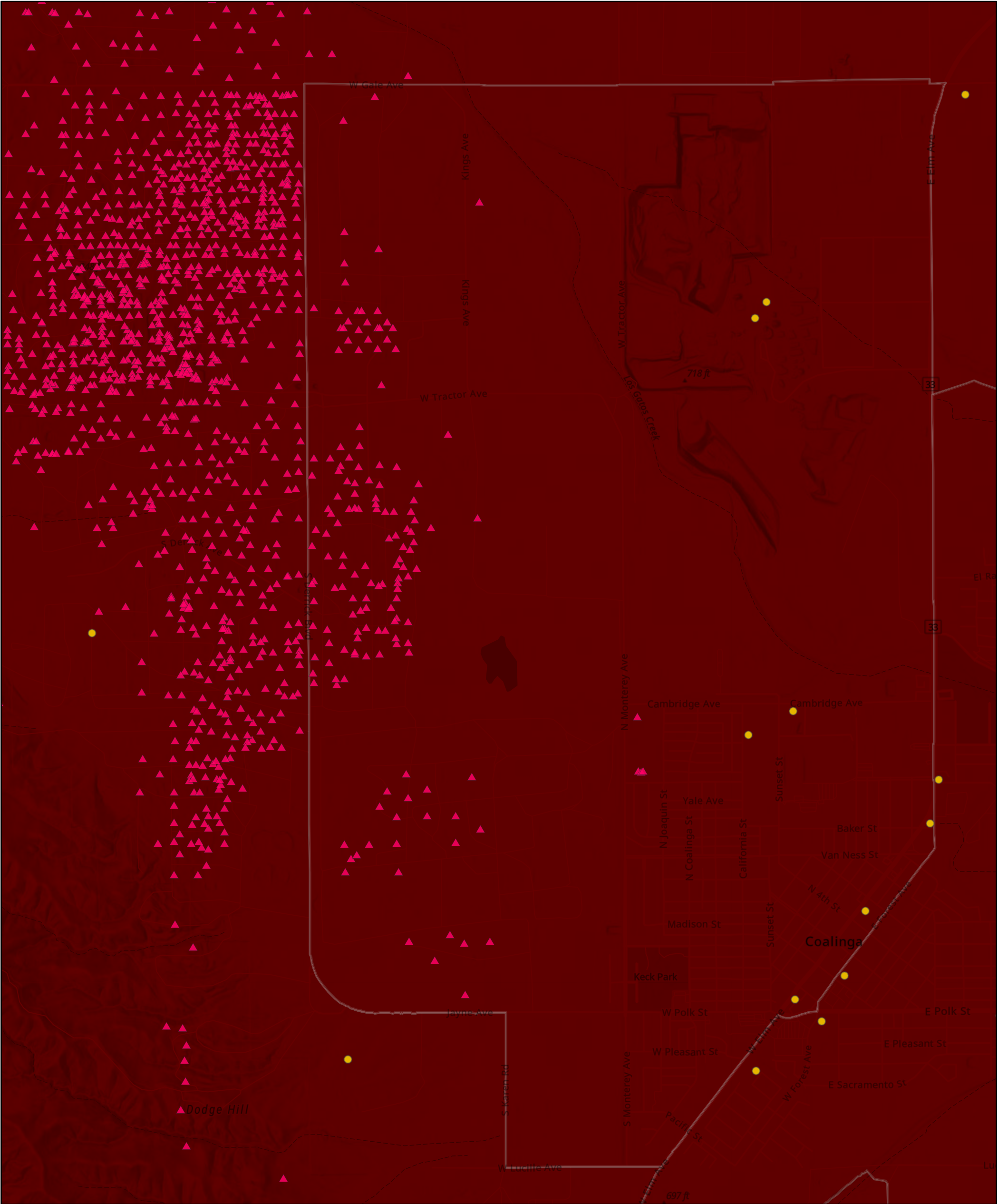
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

EXHIBIT 3

ArcGIS Web Map



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-  Oil and Natural Gas Wells
-  Other Point Sources
- Small Air Toxic Sites Percentile
 -  > 90 – 100
- World_Hillshade

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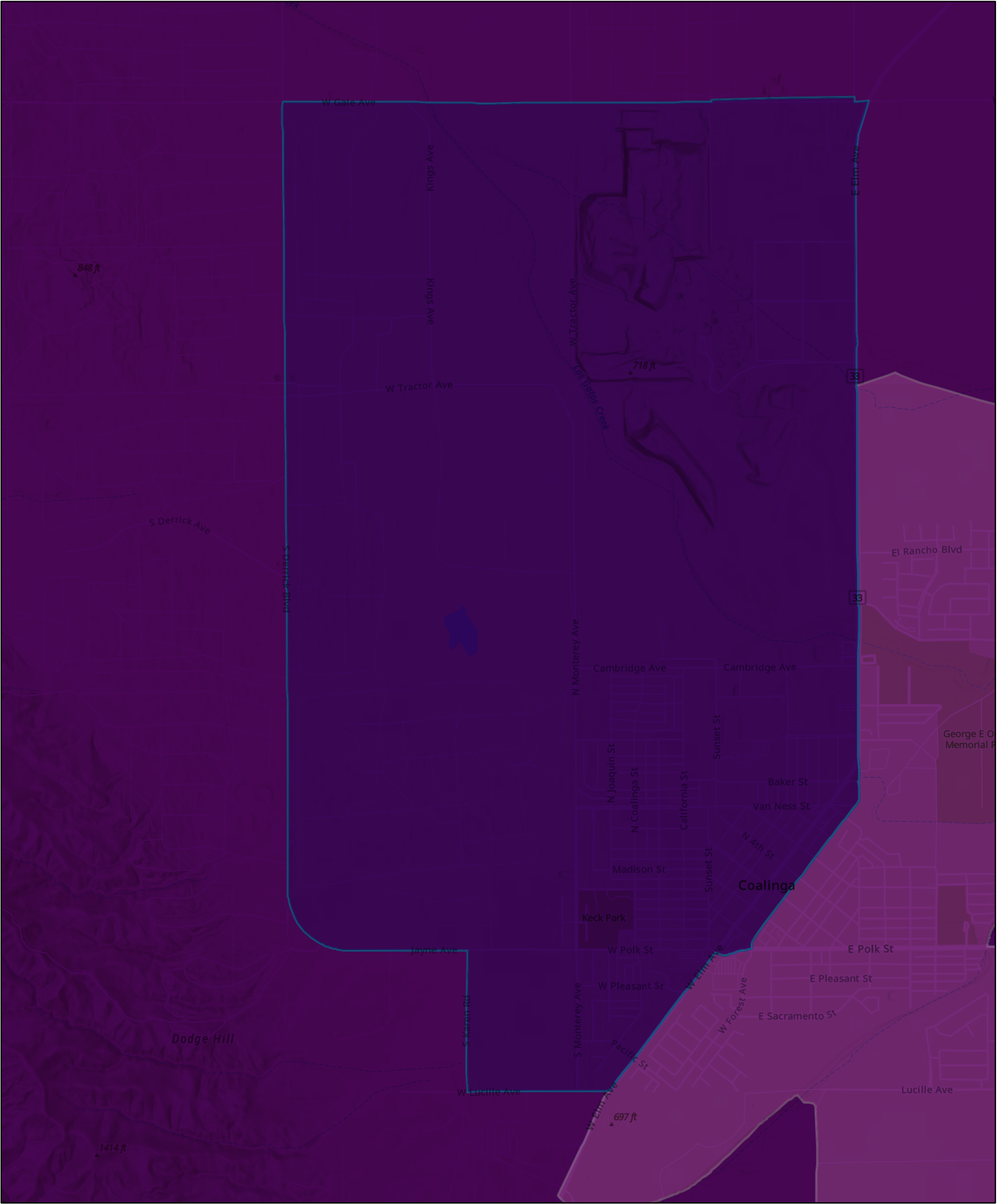
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

EXHIBIT 4

ArcGIS Web Map



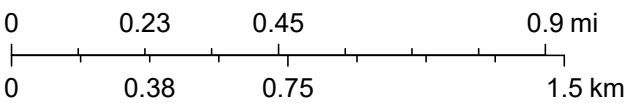
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Population Characteristics Percentile

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- > 80 - 90

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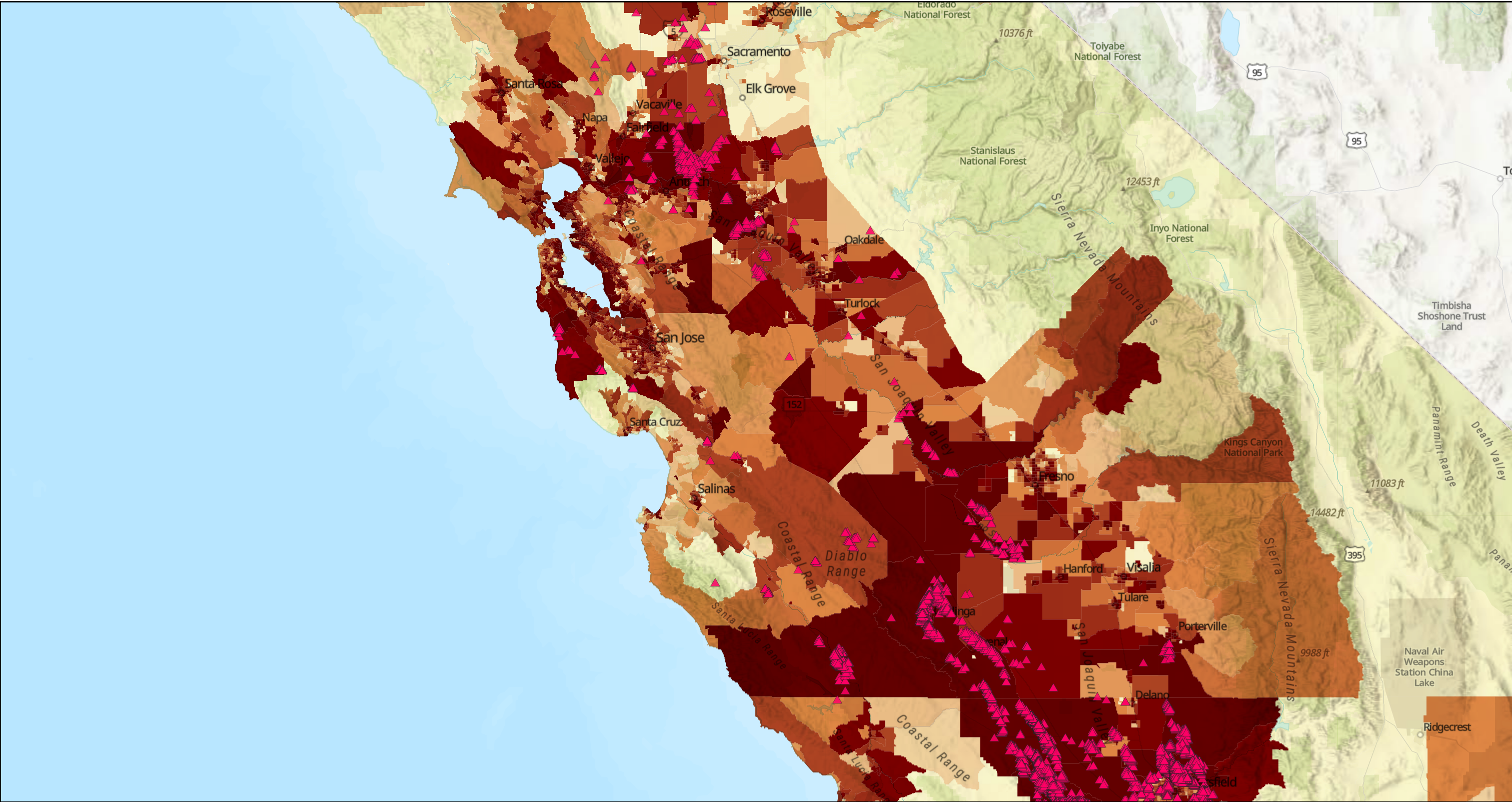
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

EXHIBIT 5

ArcGIS Web Map



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▲ Oil and Natural Gas Wells

Small Air Toxic Sites Percentile

0 – 10

> 10 – 20

> 20 – 30

> 30 – 40

> 40 – 50

> 50 – 60

> 60 – 70

> 70 – 80

> 80 – 90

> 90 – 100

World_Hillshade

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0204080 mi

03570140 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

Number	Index re Comments on the Bureau of Land Management, Central Coast Field Office Oil and Gas Leasing and Development Draft Supplemental Environmental Impact Statement, DOI-BLM-CA-C090-2025-0017-RMP-EIS
1	Air & Waste Management Assn., Air Pollution Issues Associated with Natural Gas and Oil Operations (2012), https://www.edf.org/sites/default/files/AWMA-EM-airPollutionFromOilAndGas.pdf
2	American Lung Association, State of the Air 2025 Report (2025), https://www.lung.org/getmedia/5d8035e5-4e86-4205-b408-865550860783/State-of-the-Air-2025.pdf
3	American Lung Association, State of the Air 2025 Report Card Alameda County, https://www.lung.org/research/sota/city-rankings/states/california/alameda .
4	American Lung Association, State of the Air 2025 Report Card Santa Clara County, https://www.lung.org/research/sota/city-rankings/states/california/santa-clara .
5	Arbelaez & Baizel, Californians at Risk: An Analysis of Health Threats from Oil and Gas Pollution in Two Communities (2015), https://www.cleanwaterfund.org/sites/default/files/docs/publications/CaliforniansAtRiskFINAL.pdf .
6	Balise, et al., Systematic Review of the Association between Oil and Natural Gas Extraction Processes and Human Reproduction, 106 Fertility & Sterility 4, 795-819 (September 2016), https://www.sciencedirect.com/science/article/pii/S0015028216625293
7	Brandt, A., Millstein, D., Jin, L., & Englander, J., Air Quality Impacts from Well Stimulation (2015), https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf .
8	Bureau of Land Management, 2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends (Aug. 2024), https://www.blm.gov/sites/default/files/docs/2025-04/BLM-2023-Base-GHG-Report.pdf .
9	Bureau of Land Management, Proposed Resource Management Plan Amendment and Final Environmental Impact Statement for Oil and Gas Leasing and Development, Central Coast Planning Area (May 2019)
10	Cal OEHHA, SB 535 Disadvantaged Communities Webpage, https://oehha.ca.gov/calenviroscreen/sb535 .
11	CalGEM Notice to Operators 2017-03. CalGEM, SB 1137 First Emergency Implementation Regulations, Cal. Code Regs., tit. 14, § 1765 et seq., https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf .
12	CalGEM, SB 1137 Notice of Proposed Action (Aug. 1, 2025), https://conservation.ca.gov/calgem/Documents/SB%201137%20Notice%20of%20Proposed%20Action%20v2_Clean.pdf .
13	California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022), https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf .
14	California Council on Science and Technology, An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report (July 2022), https://www.psehealthyeconomy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf .
15	California Council on Science and Technology, An Independent Scientific Assessment of Well Stimulation in California, Vol. II (2015) http://ccst.us/projects/hydraulic_fracturing_public/SB4.php at 403.
16	California Department of Fish and Game, Staff Report on Burrowing Owl Mitigation (March 7, 2012), https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843
17	California Division of Fish and Wildlife, Evaluation of the Petition from the Center for Biological Diversity to List the Temblor Legless Lizard (<i>Anniella alexanderae</i>) As Threatened or Endangered Under the California Endangered Species Act (March 25, 2022), https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=201997&inline .
18	California Energy Commission, Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery (Dec. 2021), https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf .
19	California Environmental Protection Agency, Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon), April 2017, https://calepa.ca.gov/wp-content/uploads/sites/6/2017/04/SB-535-Designation-Final.pdf .
20	California Regional Water Quality Control Board, Central Valley Region, Resolution R5-2016-0018
21	California State Water Resources Control Board, Resolution No. 2016-0010
22	Casey, et al., Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania, 27 Epidemiology 163-172 (2016), https://pubmed.ncbi.nlm.nih.gov/26426945/
23	Central Valley Regional Water Quality Control Board, Oil Field Pond 13267 Order Responses, Information Requested by 13267 Order, Lost Hills Oil Field.
24	
25	Central Valley Regional Water Quality Control Board, Pond List (Feb. 2021), https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/20210211_pondlist.pdf .
26	County of Monterey Agricultural Commissioner's Office, Economic Contributions of Monterey County Agriculture (Nov. 2025), https://montereycfb.com/wp-content/uploads/2025/11/Economic-Contributions-of-MoCo-Ag-2025.pdf .
27	Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (2026), https://www.doi.gov/media/document/doi-nepa-handbook .
28	Executive Department, State of California, Executive Order N-70-20, Gavin Newsom (Sept. 23, 2020), https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf .
29	Gonzalez et al., Upstream Oil and Gas Production and Ambient Air Pollution in California, Science of The Total Environment, 806, 150298 (2022), https://doi.org/10.1016/j.scitotenv.2021.150298
30	Graham, Unlined Waste Disposal Pits Endanger Groundwater in San Joaquin Valley (2021), https://www.digitaljournal.com/techscience/unlined-waste-disposal-pits-endanger-groundwater-in-san-joaquin-valley/article .
31	Hays, et al., Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development, 580 Science of the Total Environment 448-456 (2017).
32	Intrinsic Environmental Sciences Inc. Phase 2- Human Health Risk Assessment of Oil and Gas Activity in Northeastern British Columbia: Task 3 – Literature Review. Prepared for British Columbia Ministry of Health, April 2013.
33	Li, et al., Association between Ambient Fine Particulate Matter and Preterm Birth or Low Birth Weight: An Updated Systematic Review and Meta-Analysis, 227 Environmental Pollution 596-605 (2017), https://pubmed.ncbi.nlm.nih.gov/28457735/

Liberty Hill Foundation, Drilling Down: The Community Consequences of Expanded Oil Development in L.A. (2015), https://libertyhill-assets-2.s3-us-west-2.amazonaws.com/media/documents/Drilling_Down_Report_-_Full.pdf

Lim, et al., Long-Term Exposure to Ozone and Cause-Specific Mortality Risk in the United States (2019), <https://pubmed.ncbi.nlm.nih.gov/31051079/>

Los Angeles County Department of Public Health, Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County, February 2018, http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf.

Lupo, et al. Maternal Exposure to Ambient Levels of Benzene and Neural Tube Defects Among Offspring: Texas, 1999–2004, 119 Environmental Health Perspectives 397-402 (2011), <https://pubmed.ncbi.nlm.nih.gov/20923742/>

McKenzie, et al., Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado, 122 Environmental Health Perspectives 412-417 (2014), <https://pmc.ncbi.nlm.nih.gov/articles/PMC3984231/>

McKenzie, et al., Childhood Hematologic Cancer and Residential Proximity to Oil and Gas Development, PLoS ONE 12(2): e0170423 (2017), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170423>

Monterey County Water Resources Agency, Groundwater Level Monitoring, <https://www.countyofmonterey.gov/government/government-links/water-resources-agency/programs/groundwater-level-monitoring/overview>.

Natural Resources Defense Council, Fracking Fumes (Dec. 2014), <https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf>.

Parham, et al., Conservation Assessment of the California Legless Lizard (Anniella), prepared for California Department of Fish and Wildlife (2019), https://meridian.allenpress.com/jfw/article-supplement/501241/pdf/refs1_parham_et_al_2019/

Rasmussen et al., Association Between Unconventional Natural Gas Development in the Marcellus Shale and Asthma Exacerbations (2016), <https://pubmed.ncbi.nlm.nih.gov/27428612/>

San Benito County Water District, Annual Groundwater Report (Water Year 2023), <https://sbcd.ca.gov/wp-content/uploads/2024/04/SGMA-Annual-Report-WY23-FINAL-03252024.pdf>

Scobie, et al, Influence of petroleum development on burrowing owl ecology, Univ. Alta. Dep't of Biological Scis., (July 2013), https://www.researchgate.net/publication/309310446_Influence_of_petroleum_development_on_burrowing_owl_ecology

Senate Bill (S.B.) 1137, 2022 Leg., Reg. Sess. (Cal. 2022).

Shonkoff et al., Hazard Assessment of Chemical Additives Used in Oil Fields that Reuse Produced Water for Agricultural Irrigation, Livestock Watering, and Groundwater Recharge in the San Joaquin Valley of California: Preliminary Results at 9 (2016), https://www.psehealthenergy.org/wp-content/uploads/2022/11/Preliminary_Results_13267_Disclosures_FINAL-1.pdf

Shonkoff et al., Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel (Oct. 2021), https://www.conservation.ca.gov/calgem/Documents/public-health/Public%20Health%20Panel%20Responses_FINAL%20ADA.pdf.

Shonkoff et al, Public Health Dimensions of Upstream Oil and Gas Development in California (June 21, 2024), https://www.conservation.ca.gov/calgem/Documents/Public_Health_Panel_Final_Report_20240621.pdf.

State Water Resources Control Board, Produced Water Ponds Status Report: January 31, 2019, https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/docs/pwpondsreport_january2019.pdf.

State Water Resources Control Board, Report to the Legislature: Communities that Rely on a Contaminated Groundwater Source for Drinking Water (2013), <https://www.waterboards.ca.gov/gama/ab2222/docs/ab2222.pdf>.

Tustin, et al., Associations between Unconventional Natural Gas Development and Nasal and Sinus, Migraine Headache, and Fatigue Symptoms in Pennsylvania, 125 Environmental Health Perspectives 189-197 (2016), <https://pmc.ncbi.nlm.nih.gov/articles/PMC5289909/>

U.S. EPA, Health Effects of Ozone in the General Population, <https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>

U.S. Fish and Wildlife Service, Species Status Assessment Report for the San Joaquin kit fox (2020), <https://iris.fws.gov/APPS/ServCat/DownloadFile/185116>

University of California, Berkeley School of Law, International Human Rights Law Clinic, The Human Right to Water Bill in California: An Implementation Framework for State Agencies, May 2013, https://www.law.berkeley.edu/files/Water_Report_2013_Interactive_FINAL%281%29.pdf

University of California, Merced, Farmworker Health in California: Health in a Time of Contagion, Drought, and Climate Change (2022) https://clc.ucmerced.edu/sites/g/files/ufvvh626/f/page/documents/fwhs_report_2.2.2383.pdf

US EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary (EPA-600-R-16-236ES), https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf

Webb, et al., Potential Hazards of Air Pollutant Emissions from Unconventional Oil and Natural Gas Operations on the Respiratory Health of Children and Infants, 31 Reviews on Environmental Health 225-243 (2016), <https://pubmed.ncbi.nlm.nih.gov/27171386/>



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July 31, 2026

Via Electronic Submission on ePlanning

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RE: Scoping Comments on the U.S. Bureau of Land Management Bakersfield Field Office's Preliminary Parcel List for December 2026 Lease Sale, DOI-BLM-CA-C060-2026-0090-EA

Dear Mr. Thomas:

On behalf of the Attorney General of California, Rob Bonta,¹ we submit these comments in response to the U.S. Bureau of Land Management's (BLM) preliminary parcel list for a proposed December 2026 lease sale (2026 lease sale). The preliminary parcel list includes 49 parcels in the Bakersfield Planning Area and 1 parcel in the Central Coast Planning Area. The 2026 lease sale follows the publication of Final Supplemental Environmental Impact Statements (SEISs) in May 2026 for the Resource Management Plans (RMPs) for the Bakersfield and Central Coast Planning Areas and Records of Decision for those RMPs in June 2026.

The Attorney General submitted comment letters on both the Bakersfield and Central Coast Draft SEISs pointing out the need for BLM to consider changes in California state law related to oil and gas drilling, the need to supplement the environmental analysis with updated scientific information (especially on the public health impacts of oil and gas development), and the need to sufficiently analyze and mitigate the environmental impacts of oil and gas development at the planning stage.² BLM declined all our recommendations and did not supplement its analysis in response to our comments in either the Bakersfield or Central Coast

¹ The California Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. See Cal. Const., art. V, § 13; Cal. Gov't Code §§ 12511, 12600–12612; *D'Amico v. Bd. of Med. Examiners*, 11 Cal.3d 1, 14 (1974).

² California Attorney General's Office, *Comments on DOI-BLM-CA-C060-2025-0053-EIS* (Mar. 13, 2026) [hereinafter "AG Comments Bakersfield Draft SEIS"]; California Attorney General's Office, *Comments on DOI-BLM-CA-C090-2025-0017-EIS* (Mar. 13, 2026) [hereinafter "AG Comments Central Coast Draft SEIS"].

Final SEIS. As such, all of the comments we made on the Draft SEISs are relevant to the upcoming lease sale, and we have attached, as Exhibits A and B, and incorporate by reference those comments here. We also request in these scoping comments that BLM fully consider the public health impacts of oil and gas drilling near communities for its parcel list, especially since at least 19 of the 50 parcels proposed for leasing are within 3,200 feet of residences, schools, hospitals, or other sensitive receptors. In addition, we urge BLM to analyze all of the potentially significant impacts of this 50-parcel lease sale in an Environmental Impact Statement (EIS), as required by the National Environmental Policy Act (NEPA), and provide an extended public comment period for the EIS, especially given that this will be the largest lease sale BLM has held in this region in more than a decade.

I. BLM Should Consider the Public Health Impacts of Oil and Gas Drilling Near Communities to Form its Parcel List

In determining which parcels BLM will make available for leasing and the stipulations and mitigation that will apply to such parcels, BLM should take into account the documented adverse impacts of oil and gas drilling on public health, including updated scientific studies—an issue BLM has not adequately addressed in any programmatic EIS for the Bakersfield or Central Coast RMPs.

A. Public Health Impacts of Living Near Oil and Gas Development

There is abundant research confirming that living near oil and gas operations has severe health consequences. For example, a report from a Public Health Rulemaking Scientific Advisory Panel that worked with the Department of Conservation, California Geologic Energy Management Division (CalGEM), a state agency that regulates oil and gas development in California, found that proximity to oil and gas operations increases the likelihood of adverse health outcomes—particularly adverse perinatal and respiratory outcomes like reduced fetal growth, preterm birth, asthma, and reduced lung function. These outcomes worsen where the density of wells is greater. Specifically, the Panel concluded “with a high level of certainty that the epidemiologic evidence indicates that close residential proximity to [oil and gas development] is associated with adverse perinatal and respiratory outcomes....”³ Further, scientific studies “consistently demonstrate evidence of harm at distances less than 1 km, and some studies also show evidence of harm linked to [oil and gas development] activity at distances greater than 1 km.”⁴

Consistent with these public health findings, in 2022, California passed Senate Bill (SB) 1137, which established 3,200-foot (1-km) drilling setback requirements and other statutory requirements to protect the health and safety of adjacent communities, including residences and

³ Seth Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel*, at 1 (Oct. 2021), <https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf>.

⁴ *Id.*; see also David Gonzalez et al., *Upstream Oil and Gas Production and Ambient Air Pollution in California*, 806 SCI. OF THE TOTAL ENV'T 150298 (2022), <https://www.sciencedirect.com/science/article/pii/S0048969721053754> (finding elevated levels of particulate matter, nitrogen oxides, volatile organic compounds, ozone, and carbon monoxide up to 4-km from preproduction and production wells).

schools.⁵ SB 1137 sets forth a variety of new requirements related to “health protection zones” and to wells and production facilities based on their location relative to these zones with sensitive receptors. CalGEM is no longer authorized to approve a notice of intention for any well with a wellhead (i.e., a surface location) situated within a health protection zone, unless a specific exception applies. Cal. Pub. Res. Code §§ 3281, 3281.5. Construction and operation of new production facilities within a health protection zone is also prohibited, unless a specific exception applies. *Id.* § 3280(b). To implement SB 1137, CalGEM adopted statewide regulations implementing the statutory prohibitions and requirements for wells and facilities within a 3,200-foot setback area from certain sensitive locations. The final regulations were adopted in April 2026 and took effect on July 1, 2026. Cal. Code Regs. tit. 14, §§ 1765-1765.11 (2026). By July 1, 2028, operators of oil and gas production wells and production facilities within a health protection zone are required to submit a leak detection and response plan to be fully implemented by July 1, 2030, that contains four key components: installation of a continuously operating emission detection system to provide rapid detection of leaks; an effective and reliable alarm system that alerts the operator of leaks when triggered; a response protocol that provides for the rapid identification and repair of leaks; and provisions for notifying local communities when the leak source cannot be identified or fixed within 48 hours. Cal. Pub. Res. Code § 3283.

B. BLM Has a Mandate to Protect Public Health

As BLM acknowledged in the 2012 Final EIS for the Bakersfield RMP, BLM has a “mandate to address known health and safety hazards occurring on public lands” and is responsible for “reducing health and safety risks to employees and the public.”⁶ When known hazards, such as the well-documented health risks of living near oil and gas wells, “can be minimized or prevented, land use planning decisions can proactively aid in the protection of public health and safety.”⁷ This mandate is aligned with NEPA’s goals of ensuring “for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings” and attaining “the widest range of beneficial uses of the environment without . . . risk to health or safety. . . .” 43 U.S.C. § 4331(b). BLM’s own mission statement articulates that BLM exists “to sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations,” and BLM has stated that its “vision” is “to enhance the quality of life for all citizens through the balanced stewardship of America’s public lands and resources,” informed by the “guiding principle” that BLM will “cultivate community-based conservation, citizen-centered stewardship, and partnership through consultation, cooperation, and communication.”⁸

According to the map that BLM provided of its preliminary parcel list, it appears that 19 parcels are within 3,200 feet of known sensitive receptors, such as homes, schools, and hospitals. See Exhibits C, D, E, F, G. For example, BLM has included in its preliminary parcel list CA-

⁵ S.B. 1137, 2021–2022 Leg., Reg. Sess. (Cal. 2022); Ch. 365, 2022 Cal. Stat. 3491.

⁶ BLM, *Proposed Resource Management Plan & Final EIS for the Bakersfield Field Office*, DOI-BLM-CA-C060-2014-0001-RMP-EIS (Aug. 2012), at 582 [hereinafter “2012 Final EIS”], <https://eplanning.blm.gov/Documents/?id=77b9ea95-a7f2-f011-8406-001dd802fdea&spid=dd12ca4d-a8f2-f011-8407-001dd80db62a#>.

⁷ *Id.*

⁸ BLM, *Our Mission*, <https://www.blm.gov/about/our-mission>.

2099-01-0123, a 2,080-acre parcel that overlaps with the Maricopa Unified School District, including the Maricopa elementary, middle, and high schools. Ex. E. According to CalEnviroScreen, a tool developed by California's Office of Environmental Health Hazard Assessment, residents in this census tract already experience more pollution from small air toxic sites, such as oil and gas wells, than 99.98 percent of census tracts in California. Parcel CA-2099-01-0135 is a 160-acre parcel near sensitive receptors just east of Maricopa. Similarly, 139-acre CAP10682077, the single parcel within the Central Coast Planning Area, is located near sensitive receptors just outside of Coalinga which experiences more air pollution from small air toxics than 99.34 percent of communities in California. Multiple proposed parcels are near communities outside of Bakersfield and Oildale, see Ex. A, a region that already bears a disproportionate amount of pollution from oil and gas operations and that has failing grades for air quality, where according to the American Lung Association, simply breathing the air may put residents' health at risk.⁹

BLM must address the known public health hazards of oil and gas operations near communities in the 2026 lease sale. For instance, BLM could choose to not lease parcels within 3,200 feet of sensitive receptors or could include no-surface occupancy (NSO) stipulations on those parcels. NSO stipulations prevent operators from being physically present on the surface of a parcel but still allow for the directional drilling of that parcel's mineral resources as long as such drilling is conducted without any occupying of the surface of the parcel. At the very least, BLM should ensure in advance of holding a lease sale that the public and potential lessees are aware of California state law that restricts drilling within 3,200 feet of sensitive receptors and know which parcels are subject to that law.

Including a stipulation that restricts drilling operations within 3,200 feet of sensitive receptors is consistent with the 2012 Final EIS, which affirms that state law addressing public health and safety "will be recognized and enforced on public land."¹⁰ Responding to comments on the 2026 Bakersfield Draft SEIS, BLM acknowledged that SB 1137 "establishes a 3,200-foot setback between oil and gas operations and homes, schools, and healthcare facilities," despite not accounting for it in the SEIS itself.¹¹

Likewise, including a stipulation that restricts drilling operations within 3,200 feet of sensitive receptors is consistent with the Bakersfield Field Office RMP,¹² which includes a stipulation that prohibits oil and gas development closer to any development, such as a home, than allowed by statute or regulation, and acknowledges that stipulations "may be applied to all new leases in conjunction with the lease sale."¹³ Although BLM contradicted itself in an errata published after the 2026 Final SEIS, in which it stated that it "must offer for lease" upon an

⁹ Am. Lung Assoc., *State of the Air 2026*, <https://www.lung.org/research/sota/city-rankings/states/california/kern>.

¹⁰ 2012 Final EIS, at 582.

¹¹ BLM, *Final SEIS for the Bakersfield Field Office*, DOI-BLM-CA-C060-2025-0053-EIS, at A-14 (May 2026) [hereinafter Bakersfield 2026 Final SEIS], <https://eplanning.blm.gov/Documents/?id=270BABE9-A7F2-F011-8406-001DD802FDEA&spid=45b90693-a8f2-f011-8407-001dd803d067#>.

¹² BLM, *Bakersfield Field Office Record of Decision & Approved Resource Management Plan*, DOI-BLM-CA-C060-2014-0001-RMP-EIS (Dec. 2014) [hereinafter RMP], <https://eplanning.blm.gov/Documents/?id=77b9ea95-a7f2-f011-8406-001dd802fdea&spid=dd12ca4d-a8f2-f011-8407-001dd80db62a>.

¹³ RMP, at 76, 87-88.

expression of interest any parcels open for leasing and that it “may not apply to a lease issued as a result of an expression of interest any stipulations or mitigation requirements not included” in the RMP.¹⁴ the provisions of the 2025 Budget Reconciliation Bill (also known as OBBBA)¹⁵ that amended the Mineral Leasing Act do not constrain BLM’s discretion in this way. As one court recently held, the “statutory text of OBBBA does not effectively eliminate BLM’s discretion so broadly as to mandate the sale and issuance of leases without oversight.” *Montana Wildlife Fed’n v. Burgum*, No. CV-18-69-GF-BMM, 2026 WL 1707576, at *5 (D. Mont. June 12, 2026). Furthermore, BLM has obligations under the Federal Land Policy and Management Act to manage public lands “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values” and to “take any action necessary to prevent unnecessary or undue degradation of the lands.” 43 U.S.C. §§ 1701(a)(8), 1732(b). “FLPMA’s requirements . . . remain in force under OBBBA.” *Montana Wildlife Fed’n*, 2026 WL 1707576, at *5.

II. BLM Must Prepare an EIS for the Proposed 2026 Lease Sale

Regardless of which parcels BLM determines to include in its 2026 lease sale, BLM is required to prepare an EIS for the lease sale because the lease sale is likely to have significant environmental impacts that are not adequately addressed in existing environmental review documents. This EIS should address the unique, geographically specific environmental impacts for each parcel included in the lease sale. Evaluating impacts in an EIS is particularly important for parcels that will be leased without NSO stipulations since non-NSO leases represent an irreversible and irretrievable commitment of resources. *Conner v. Burford*, 848 F.2d 1441, 1451 (9th Cir. 1988). And, as BLM repeatedly stated throughout the SEISs for the Bakersfield and Central Coast RMPs, BLM did not consider site specific conditions and data in those programmatic EISs, so it must now do so in an EIS for the 2026 lease sale.¹⁶

A. NEPA Requires an EIS When Federal Action Will Have Significant Impacts on the Environment

NEPA requires federal agencies to conduct an EIS before undertaking “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). By contrast, an environmental assessment (EA) is a less comprehensive form of environmental review and is only appropriate when it seems unlikely that a proposed action will have a significant effect on the environment.

¹⁴ BLM, *Bakersfield Field Office Final SEIS Comment Errata* (June 4, 2026), <https://eplanning.blm.gov/Documents/?id=270babe9-a7f2-f011-8406-001dd802fdea&spid=45b90693-a8f2-f011-8407-001dd803d067#>.

¹⁵ H.R. 1, 119th Cong. (2025–2026), known colloquially as the One Big Beautiful Bill Act (OBBBA).

¹⁶ See, e.g., BLM, *Draft SEIS for the Bakersfield Field Office*, DOI-BLM-CA-C060-2025-0053-RMP-EIS (Dec. 2025) at 61, <https://eplanning.blm.gov/Documents/?id=270BABA9-A7F2-F011-8406-001DD802FDEA&spid=45b90693-a8f2-f011-8407-001dd803d067#>.

If the action involves “significant” impacts on the environment, the environmental review document must take the form of an EIS, which is a detailed statement by the responsible federal agency addressing:

- (i) reasonably foreseeable environmental effects of the proposed agency action;
- (ii) any reasonably foreseeable adverse environmental effects which cannot be avoided should the proposal be implemented;
- (iii) a reasonable range of alternatives to the proposed agency action, including an analysis of any negative environmental impacts of not implementing the proposed agency action in the case of a no action alternative, that are technically and economically feasible, and meet the purpose and need of the proposal;
- (iv) the relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity; and
- (v) any irreversible and irretrievable commitments of Federal resources which would be involved in the proposed agency action should it be implemented.

42 U.S.C. § 4332(C)(i–v).

An EIS is necessary when a project raises substantial questions as to whether it will have significant environmental impacts. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998). Further, an EIS is necessary for the sale of any lease that will not have a NSO stipulation because the sale of a non-NSO lease is an irreversible and irretrievable commitment of resources requiring an EIS. *Conner*, 848 F.2d at 1451; *Center for Biological Diversity*, 937 F. Supp. 2d 1140, 1153 (N.D. Cal. 2013).

NEPA requires agencies conducting an EIS to take a “hard look” at the environmental consequences of proposed agency actions before those actions are undertaken. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004); *see* 42 U.S.C. § 4332. This “hard look” analysis requires agencies to consider all foreseeable direct, indirect, and cumulative impacts of the project. *Ctr. For Biological Diversity v. Salazar*, 695 F.3d 893, 916–17 (9th Cir. 2012); *N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006). “General statements about ‘possible effects’ and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Blue Mountains Biodiversity Project*, 161 F.3d at 1213 (quoting *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998)). When conducting the hard look analysis of a proposed project’s effects, “an agency may not rely on incorrect assumptions or data.” *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 964 (9th Cir. 2005).

BLM has an obligation to prepare an EIS for the 2026 lease sale because the hard look analysis required by NEPA cannot be met by relying solely on the related existing environmental review documents. As the Ninth Circuit has consistently reaffirmed, although relying on a programmatic EIS for later decisions, i.e. tiering, is permissible, the mere existence of a programmatic EIS (such as the RMP EISs here), does not necessarily obviate the need for any

future project-specific EIS. *N. Alaska Envtl. Ctr. v. U.S. Department of the Interior*, 983 F.3d 1077, 1092 (9th Cir. 2020); *Klamath-Siskiyou Wildlands Ctr.*, 387 F.3d at 997; *Ctr. for Biological Diversity*, 937 F. Supp. 2d at p. 1157; see also Dept. of Interior (DOI) NEPA Handbook¹⁷ at pp. 16–17, 23, 35. NEPA requires agencies to ensure that the analysis and assumptions of any relied upon EIS remains accurate and “sufficiently analyzed site-specific effects.” *Id.* Tiering to a programmatic EIS is not appropriate where the programmatic EIS is “missing . . . specific information” about the environmental impacts of the proposed action. *Klamath-Siskiyou Wildlands Ctr.*, 387 F.3d at 997.

B. The Lease Sale Will Likely Have Significant Impacts on the Environment Not Sufficiently Analyzed in the RMP EISs

The 2026 lease sale will likely have significant impacts on the environment that were not fully analyzed in either the Bakersfield or Central Coast RMP EISs. Thus, BLM must conduct a full assessment of environmental impacts from the lease sale in an EIS.

In determining whether an impact is significant, BLM should consider the following five factors: (1) short and long-term effects, (2) beneficial and adverse effects, (3) effects on public health and safety, (4) economic effects, and (5) effects on quality of life. DOI NEPA Handbook, p. 4. As our March 13, 2026 comment letters pointed out, oil and gas operations in the Bakersfield and Central Coast Planning Areas have numerous significant impacts, including impacts to air quality, water quality and quantity, land subsidence, wildlife and habitat, recreation use, and public health and safety.¹⁸

For example, oil and gas development-related impacts on air quality are likely to be significant. As we pointed out in our March 13, 2026 comment letter, oil and gas facilities emit significant air pollution, including 30 percent of all sulfur oxides, over 70 percent of hydrogen sulfide, and 8 percent of anthropogenic volatile organic compounds in the San Joaquin Valley, which in turn react with nitrogen oxides to create ozone.¹⁹ Oil and gas development is also responsible for the majority of emissions of multiple toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide in the Valley.²⁰ The current list of 50 parcels are located in four counties—Fresno, Kern, Kings, and San Luis Obispo—all of which are in non-attainment status for either particulate matter, ozone, or both.²¹ Air pollution can cause both health-related and economic costs that range from workers missing shifts due to acute respiratory illness to children needing more health care services due to chronic illnesses

¹⁷ DOI, 516 DM 1 NEPA Handbook (Feb. 2026), <https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing>.

¹⁸ Exhibit A (AG Comments on Bakersfield Draft SEIS), pp. 11–24, 34–35; Exhibit B (AG Comments on Central Coast Draft SEIS), pp. 8–23, 25–26.

¹⁹ AG Comments on Bakersfield Draft SEIS, pp. 15, 21, 23, 34; Adam Brandt, et al., *Air Quality Impacts from Well Stimulation, An Independent Scientific Assessment of Well Stimulation in California* 182 (2015), <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

²⁰ Shonkoff et al., *supra* note 24, at 10.

²¹ U.S. EPA, *California Nonattainment / Maintenance Status for Each County by Year for All Criteria Pollutants* (June 30, 2026), https://www3.epa.gov/airquality/greenbook/anayo_ca.html.

like asthma and reduced lung function.²² For instance, researchers concluded that fine particulate matter, ozone, and nitrogen dioxide pollution can cost San Joaquin Valley residents more than \$700 million dollars per year in medical expenses, school absences and lost productivity annually.²³

Similarly, impacts to wildlife, habitat, and recreational uses are also likely to be significant. For instance, more than 10 proposed parcels are located in the sensitive ecoregion of the Temblor Range, adjacent to Carrizo Plain National Monument. Ex. E. Listed species such as the California condor, San Joaquin antelope ground squirrel, giant kangaroo rat, and San Joaquin kit fox can be found living, foraging, or traveling through in this region, which also serves as an important habitat linkage between kit fox populations in the Carrizo Plain and the San Joaquin Valley.²⁴ As we pointed out in our March 2026 comments, impacts of oil and gas development on these species have never been sufficiently analyzed.²⁵

Furthermore, BLM states numerous times throughout the Final SEISs that site-specific impacts will be analyzed later, including impacts to greenhouse gas emissions, water resources, surface water quality and supply, biological resources, air toxics, and more.²⁶ BLM not only deferred site-specific impact analysis, but also any consideration of mitigation. As we pointed out in our March 2026 comments,²⁷ BLM repeatedly states that mitigation will be deferred.²⁸

BLM should conduct an EIS for the lease sale because BLM has not conducted any site-specific analysis for the 50 parcels it is proposing to auction. Conducting an EIS for the lease sale would provide an up-to-date, geographically specific, and comprehensive environmental review document that would ensure that BLM complies with its statutory obligations under NEPA to fully consider the impacts of its oil and gas leasing activities on federal lands.

III. BLM Should Allow for Sufficient Public Comment

The proposed 2026 lease sale will be the first lease sale BLM has held in Central California since the 2020 lease sale in the Bakersfield Field Office, which was subsequently stayed following litigation, and the largest since BLM canceled a proposed 35,000-acre lease

²² The Medical Society Consortium on Climate & Health, et al., *The Costs of Inaction: The Economic Burden of Fossil Fuels and Climate Change on Health in the United State* (May 20, 2021), <https://www.nrdc.org/sites/default/files/costs-inaction-burden-health-report.pdf>.

²³ Gilda Zarate-Gonzalez et al., *Costs of Air Pollution in California's San Joaquin Valley: A Societal Perspective of the Burden of Asthma on Emergency Departments and Inpatient Care*, 17 J. Asthma & Allergy 369–382, 370 (2024), <https://pmc.ncbi.nlm.nih.gov/articles/PMC11032670/>

²⁴ BLM, *Carrizo Plain National Monument Approved Resource Management Plan and Record of Decision* (Apr. 2010), <https://archive.org/details/recordofdecisionc00bake>.

²⁵ See also Cal. Dep't of Fish and Wildlife, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 10, 2019), <https://oag.ca.gov/system/files/attachments/press-docs/2019.06.10-bakersfield-sdeis-comments-final.pdf>.

²⁶ E.g., Bakersfield 2026 Final SEIS at pp. 50, 60–62.

²⁷ Exhibit A, p. 26; see also Exhibit B, p. 27.

²⁸ E.g., Bakersfield 2026 Final SEIS at pp. 3, 28–29, 57–60.

sale in 2009 in the Central Coast Field Office.²⁹ Therefore, BLM should not rush through the process and should provide the public with adequate opportunity to comment.

BLM should provide at least 30 days for public comment on the environmental document for the lease sale, but preferably 60 days. As this will be the largest lease sale BLM has held in California in over a decade, the public needs sufficient time to review and understand the environmental impacts. Particularly here, where so many of the proposed parcels are close to communities, it will be important that communities have a sufficient opportunity to weigh in on this important proposed action.

IV. Conclusion

Thank you for considering our scoping comments on BLM's proposed 2026 lease sale. In sum, we urge BLM to consider the serious public health impacts of the proposed lease sale, conduct an EIS for the lease sale given the significant impacts that oil and gas leasing will have on the environment—including as identified in our March 13, 2026 comment letters—and ensure sufficient time for public review and input.

Sincerely,

Monica Heger

MONICA HEGER
BRENNON MENDEZ
Deputy Attorneys General
ABIGAIL BLODGETT
Supervising Deputy Attorney General

For ROB BONTA
Attorney General

²⁹ *BLM Postpones Gas and Oil Drilling Leases*, SAN DIEGO UNION-TRIBUNE (June 11, 2009), <https://www.sandiegouniontribune.com/2009/06/11/blm-postpones-gas-and-oil-drilling-leases/>.

Index of Materials Submitted in Support of Comments of the California Attorney General on the Bureau of Land Management, Central California District Oil and Gas Lease Sale, DOI-BLM-CA-C060-2026-0090-EA

No.	Description
1	American Lung Association, State of the Air 2026 Report, https://www.lung.org/research/sota/city-rankings/states/california/kern
2	Bureau of Land Management, Bakersfield Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (2012)
3	Bureau of Land Management, Bakersfield Field Office Record of Decision and Approved Resource Management Plan (2014)
4	Bureau of Land Management, Bakersfield Field Office Final Supplement Impact Statement for RMP (May 2026)
5	Bureau of Land Management, Errata for Bakersfield Field Office (June 2026)
6	Bureau of Land Management, Carrizo Plain National Monument Record of Decision and Approved RMP (April 2010)
7	Bureau of Land Management, Our Mission, https://www.blm.gov/about/our-mission
8	Brandt, et al., Air Quality Impacts from Well Stimulation, An Independent Scientific Assessment of Well Stimulation in California 182 (2015), https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf
9	California Department of Fish & Wildlife, Comments on DOI-BLM-CA-C060-2018-0082-EIS (June 10, 2019), https://oag.ca.gov/system/files/attachments/press-docs/2019.06.10-bakersfield-sdeis-comments-final.pdf
10	Department of Interior, 516 DM 1 NEPA Handbook (2026), https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing
11	Gonzalez et al., Upstream Oil and Gas Production and Ambient Air Pollution in California, 806 Sci. of the Total Env't 150298 (2022), https://www.sciencedirect.com/science/article/pii/S0048969721053754
12	House Resolution 1, 119th Cong. (2025–2026)
13	San Diego-Union Tribune, BLM Postpones Gas and Oil Drilling Leases, (June 11, 2009), https://www.sandiegouniontribune.com/2009/06/11/blm-postpones-gas-and-oil-drilling-leases/
14	Senate Bill 1137 2021–2022 Leg., Reg. Sess. (Cal. 2022); Ch. 365, 2022 Cal. Stat. 3491
15	Shonkoff et al., Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel, at 1 (Oct. 2021), https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf .
16	The Medical Society Consortium on Climate & Health, et al., The Costs of Inaction: The Economic Burden of Fossil Fuels and Climate Change on Health in the United State (May 20, 2021), https://www.nrdc.org/sites/default/files/costs-inaction-burden-health-report.pdf
17	Zarate-Gonzalez et al., Costs of Air Pollution in California’s San Joaquin Valley: A Societal Perspective of the Burden of Asthma on Emergency Departments and Inpatient Care, 17 J. Asthma & Allergy 369–382, 370 (2024), https://pmc.ncbi.nlm.nih.gov/articles/PMC11032670/

EXHIBIT A

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March 13, 2026

Via Electronic Submission on ePlanning and to BLM_CA_BKFO_OIL_GAS_SEIS@blm.gov

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RE: Comments on the Bureau of Land Management, Bakersfield Field Office Oil and Gas Leasing and Development Draft Supplemental Environmental Impact Statement, DOI-BLM-CA-C060-2025-0053-RMP-EIS

Dear Ms. Mathews:

On behalf the Attorney General of California, Rob Bonta,¹ we submit these comments on the 2025 Draft Supplemental Environmental Impact Statement (“Draft SEIS”) issued by the U.S. Bureau of Land Management’s (“BLM”) Bakersfield Field Office to “analyze the environmental effects of hydraulic fracturing technology for oil and gas leasing and development of new leases within the Planning Area,” which consists of 400,000 acres of public lands and 1.2 million acres of federal mineral estate in eight central California counties. Draft SEIS at ES-1.

The Draft SEIS was allegedly prepared to address the deficiencies a federal district court found in BLM’s 2014 plan to open lands to oil and gas drilling without addressing impacts related to hydraulic fracturing, as well as to respond to a 2022 stipulated settlement requiring additional analysis. However, BLM also committed in the 2022 settlement to “consider whether to amend the 2014 [resource management plan],” yet the Draft SEIS evinces no real consideration of an amendment. Given the increased knowledge and documentation of the harms drilling poses to human health, natural resources, and the climate over the last decade, the significant shifts in California’s oil and gas drilling policies, and the changes to the scope and

¹ The California Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. *See* Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12612; *D’Amico v. Bd. of Medical Examiners*, 11 Cal.3d 1, 14 (1974).

methods of oil and gas development in the Planning Area, BLM should have revised or amended its resource management plan (“RMP”). Further, there is no legitimate justification for limiting the Draft SEIS to impacts related only to hydraulic fracturing.

Even if it were appropriate to limit the supplemental analysis to consideration of impacts from hydraulic fracturing, BLM’s analysis fails to take a “hard look” at many of the significant impacts associated with hydraulic fracturing, or provide sufficient evidence regarding its conclusions, in violation of the National Environmental Policy Act (“NEPA”). In particular, the Draft SEIS relies on the unfounded assumption that up to 4 of the 40 new wells that BLM anticipates will be drilled on new leases per year will be hydraulically fractured. Hydraulic fracturing should not occur at all in the Planning Area due to state law changes. And, even if BLM were correct that hydraulic fracturing could occur, BLM’s estimates are unsupported and contradicted by prior statements that about 90 percent of new wells drilled on public lands are hydraulically fractured. BLM’s unsupported assumption distorts its consideration of environmental impacts and findings of significance. Furthermore, the Draft SEIS fails to properly consider many issues, including potential contamination from hydraulic fracturing fluids, increased subsidence, and the use of hydraulic fracturing to extend the life of wells with declining production. BLM’s analysis of impacts to disadvantaged communities living near federal oil and gas operations, including impacts to water supply and air pollution, is particularly deficient. The Draft SEIS also fails to consider reasonable alternatives, including those that could limit or mitigate the adverse impacts of hydraulic fracturing on the environment and nearby communities.

BLM also failed to consider conflicts with state plans and policies in the Draft SEIS, including efforts by California to protect communities living near oil and gas operations and to reduce greenhouse gas (“GHG”) emissions and fossil fuel consumption to mitigate the devastating consequences of global climate change. In addition, BLM failed to supplement its analysis to address new information that oil and gas development will lead to significant harms that were not previously considered in prior environmental review documents.

Finally, BLM failed to consider impacts to species proposed for listing or formally listed under the Endangered Species Act since 2019 and it failed to consult with the U.S. Fish and Wildlife Service in violation of the Endangered Species Act.

For these reasons, Attorney General Bonta recommends that BLM withdraw its Draft SEIS and prepare a new analysis that fully considers the environmental impacts of opening over one million acres of public lands in California to new oil and gas leasing.

STATUTORY BACKGROUND

NEPA has two fundamental purposes: (1) to guarantee that agencies take a “hard look” at the consequences of their actions before the actions occur by ensuring that “the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts,” and (2) to ensure that “the relevant information will be made available to the larger audience that may also play a role in both the

decisionmaking process and the implementation of that decision.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349-50 (1989).

NEPA requires the preparation of a detailed environmental impact statement (“EIS”) for any “major federal action significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). In taking a “hard look,” NEPA requires federal agencies to consider the direct, indirect, and cumulative impacts of its proposed action. *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 973 (9th Cir. 2002); *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975); *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972). Moreover, “an agency may not rely on incorrect assumptions or data.” *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 964 (9th Cir. 2005). Supplemental EISs are required when BLM makes substantial changes to a proposed action or “there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its effects.”² Courts review decisions not to prepare supplemental EISs utilizing the “arbitrary and capricious” standard of the Administrative Procedure Act and do not automatically defer to an agency when it decides to not supplement an EIS. Instead, this analysis entails “carefully reviewing the record and satisfying themselves that the agency has made a reasoned decision based on its evaluation of the significance—or lack of significance—of [] new information.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 378 (1989).

Pursuant to the Federal Land Policy and Management Act (“FLPMA”), 43 U.S.C. § 1701 *et seq.*, BLM develops RMPs to guide the management of public lands within BLM’s jurisdiction. In particular, FLPMA requires that BLM “develop, maintain, and when appropriate, revise land use plans” to ensure that land management be conducted “on the basis of multiple use and sustained yield.” 43 U.S.C. §§ 1701(a)(7), 1712(a), 1732. FLPMA also requires that public lands be managed “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.” *Id.* § 1701(a)(8). BLM must, “by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of [public] lands” under its management. *Id.* § 1732(a). RMPs are revised or amended based on “monitoring and evaluation findings, new data, new or revised policy, and changes in circumstances,” and are subject to environmental review under NEPA. 43 C.F.R. §§ 1610.5-5, 1610.5-6.

FLPMA requires that BLM, in developing and revising RMPs, “provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans;” “coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs” of the “local governments within which the lands are located;” and “provide for meaningful public involvement of State and local government officials, both elected and appointed, in the development of land use programs, land use regulations, and land use decisions for public lands.” 43 U.S.C. § 1712(c)(8)-(9).

² Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (2026), <https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing>.

FACTUAL BACKGROUND

BLM's NEPA Review for the Bakersfield Resource Management Plan

The BLM Bakersfield Field Office manages 400,000 acres of public lands and an additional 1.2 million acres of federal mineral estate in Fresno, Kern, Kings, Madera, San Luis Obispo, Santa Barbara, Tulare, and Ventura Counties (the “Planning Area”). In 2012, BLM issued a Final EIS purporting to evaluate the environmental impacts of its proposed RMP for the Planning Area. This planning effort sought to update two existing plans that were finalized in 1984 and 1997. Under the preferred alternative (Alternative B), 1,011,470 acres of federal mineral estate, or about 85 percent of the Planning Area, would be open to oil and gas leasing. BLM also completed a Reasonably Foreseeable Development Scenario that projected the exploration, drilling, and production activity that would likely occur in the next 10 years. This activity was estimated to be 100-400 wells drilled on federal mineral estate each year, including 90-360 wells on existing leases and 10-40 wells on new leases. BLM estimated that 25 percent of these wells would be hydraulically fractured. BLM approved the RMP in 2014.

In 2015, the Center for Biological Diversity and Los Padres ForestWatch challenged this final approval in the U.S. District Court for the Central District of California. On September 6, 2016, the District Court ruled on the parties’ cross-motions for summary judgment, finding that BLM violated NEPA by failing to analyze the impacts of hydraulic fracturing in the Planning Area and required BLM to supplement its analysis. *Los Padres ForestWatch v. U.S. Bureau of Land Mgmt.*, 2016 WL 5172009, *10-13 (C.D. Cal. Sept. 6, 2016). On May 3, 2017, the District Court approved a settlement agreement in which BLM agreed to prepare appropriate NEPA documentation to address the deficiencies identified by the District Court, and issue a new decision document that would amend or supersede the 2014 RMP, if appropriate.

On August 8, 2018, BLM issued a notice of intent to prepare a Draft SEIS and potential RMP amendment for the Planning Area and requested scoping comments. 83 Fed. Reg. 39,116. Among other commenters, six California state agencies—the Department of Conservation, Department of Fish and Wildlife, Department of Water Resources, Department of Parks and Recreation, Air Resources Board, and State Water Resources Control Board—submitted a joint letter expressing concerns with the potential significant adverse effects of this activity and its impact on the state’s ability to meet its fossil fuel and GHG emissions reduction goals. In a cover letter, then-Governor Jerry Brown wrote that BLM “should abandon this effort and not pursue opening any new areas for oil and gas leases in this state,” given that such an approach is “contrary to the course California has set to combat climate change and to meet its share of the goals outlined in the Paris Agreement.”

On April 26, 2019, BLM issued a Draft SEIS. 84 Fed. Reg. 17,885. The purpose of that Draft SEIS, as described by BLM, was “to analyze the environmental effects of the use of hydraulic fracturing technology in oil and gas development on new leases within the Planning Area and to determine whether changes are needed to the fluid minerals decisions in the 2014 RMP.” 2019 Draft SEIS at 2. Based on the District Court’s ruling on alternatives, BLM “carried-

forward” the prior alternatives into its Draft SEIS, including Alternative B, which would open 1,011,470 acres of federal mineral estate to oil and gas leasing (the “Proposed Action”). 2019 Draft SEIS at 13-15. For its updated analysis, BLM assumed that 40 wells on new leases would be drilled each year, and that “zero to four” of these wells would be hydraulically fractured. 2019 Draft SEIS at 44. Given this low estimate, BLM concluded that no significant impacts would result, including impacts related to GHG emissions, air quality, water resources, biological resources, and induced seismic events. 2019 Draft SEIS at Chapter 4. Because BLM did not find any “notable increase in total impacts” resulting from the Proposed Action, it also determined that an amendment to the 2014 RMP was “unnecessary.” 2019 Draft SEIS at 15. The California Attorney General and several state agencies filed comments documenting the deficiencies in the 2019 Draft SEIS, which are attached and incorporated here by reference.³

The State of California as well as the Center for Biological Diversity, Central California Environmental Justice Network, Los Padres ForestWatch, National Parks Conservation Association, Natural Resources Defense Council, Patagonia Works, Sierra Club, and The Wilderness Society filed a complaint for declaratory and injunctive relief against BLM challenging the 2019 Record of Decision because the 2019 Supplemental EIS did not take a hard look at environmental impacts, consider reasonable alternatives, discuss feasible mitigation measures for impacts on special status species, or consider conflicts with state policies, and was issued without an adequate opportunity for public comment in violation of NEPA. Following summary judgment filings, the parties entered into a settlement. Under the settlement, BLM agreed to prepare a supplement to the 2019 Supplemental EIS pursuant to NEPA and consider whether to amend the 2014 RMP. As part of the public notice and comment process, BLM agreed to hold at least one meeting for the public to provide input with Spanish translation and transcription if requested, prepare certain documentation in Spanish, and translate the new decision into Spanish.

On June 23, 2025, BLM issued a notice of intent to prepare a Draft SEIS and potential RMP amendment for the Planning Area and requested scoping comments. 90 Fed. Reg. 26,605. Although BLM solicited comment on its intent to prepare a supplemental EIS, the notice also set forth the agency’s cabined view of what the Supplemental EIS would address. Specifically, BLM stated that: “Only those portions of the existing plan that need to be updated to respond to the issues and management concerns *identified in the court order and settlement agreement* will be reviewed. Other portions of the plan will be brought forward from the existing Bakersfield RMP approved on December 22, 2014, and the supplemental EIS for hydraulic fracturing approved on December 12, 2019.” *Id.* at 26,605 (emphasis added). Several state agencies commented in opposition to the proposal during the scoping period, including the California Department of Conservation, California Department of Fish and Wildlife, California Department of Parks and Recreation, State Water Resources Control Board, California Coastal Commission, and California Department of Water Resources.

³ California Attorney General, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 10, 2019); California EPA, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 10, 2019); California Department of Fish and Wildlife, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 6, 2019).

The Department of Interior posted a notice in the federal register on January 13, 2026, announcing that the Draft SEIS was available and the deadline for comments would be 45 days following the date the Environmental Protection Agency (“EPA”) published the Notice of Availability. 91 Fed. Reg. 1330, 1331 (Jan. 13, 2026). EPA posted the Notice of Availability on January 16, 2026. 91 Fed. Reg. 2131, 2131. The deadline was later extended to March 13, 2026. 91 Fed. Reg. 5474, 5474.

The Draft SEIS carries forward the same five alternatives identified in the 2012 Final EIS. Draft SEIS at ES-1. BLM also relies on the same Reasonably Foreseeable Development Scenario as was used in the 2012 Final EIS, projecting the same amount of exploration, drilling, and production activity (for the next ten years, 100-400 wells drilled on federal mineral estate each year, including 90-360 wells on existing leases and 10-40 wells on new leases). *Id.* at 2. BLM does not disclose projections of the number of wells that will likely be hydraulically fractured on existing leases, but notes that the Reasonably Foreseeable Development Scenario anticipates that “(up to) four (10 percent) of” the “(up to) 40 new wells on new leases per year” will be hydraulically fractured. *Id.* at 25, 35. BLM states that it identified five resource areas to consider further based on information or circumstances identified during the scoping period: air and atmospheric values, biological resources, soil resources, and water resources. *Id.* at 9-10. Additional issues identified during the scoping period were not carried forward for further analysis. *Id.* at 10-12. Except for “updated emissions inventories” based on “a review of new data related to air quality,” BLM did not update any of its modeling or analyses from prior EISs. *Id.* at ES-1. BLM also did not address any changes in state, local, or federal policy that have occurred since 2012 or explain how such changes affect oil and gas development in the Planning Area.

Hydraulic Fracturing on Public Lands

In recent years, the United States has experienced a boom in oil and gas production through the use of well stimulation treatments such as hydraulic fracturing and horizontal drilling. 80 Fed. Reg. 16,128, 16,131 (Mar. 26, 2015). Hydraulic fracturing is a process by which oil and gas producers inject water, sand, and certain chemicals at high pressure into rock formations to create fissures and allow oil and gas to escape for collection in a well. While most of the fluid is water, an assortment of chemicals, some of which are known carcinogens or other types of toxins, are added for different purposes such as lubrication of the fracture and minimization of corrosion. Much of the fracturing fluid, along with subsurface fluids, flows back to the surface and can be held in open pits or circulation tanks at the well site prior to disposal. This water is typically disposed of by subsequent injection into underground wells.

A growing body of science connects hydraulic fracturing with water and air pollution, increased seismic activity, and a prolonged dependence on fossil fuels. For example, inadequate well casings that run through groundwater zones can break during hydraulic fracturing operations and allow hydraulic fracturing fluids to infiltrate groundwater. Air pollution can occur due to the handling of the flowback fluids, which contain toxic chemicals that could evaporate

through handling and storage. Lastly, some areas of heavy hydraulic fracturing operations have seen a pronounced increase in the frequency of seismic events.

BLM is the agency responsible for overseeing oil and gas development on over 245 million acres of public lands and 700 million acres of subsurface mineral estate across the United States, including 15 million acres of public lands and 47 million acres of subsurface mineral estate in California. Most hydraulic fracturing on federal lands occurs in nine states, and California historically had the fifth or sixth largest number of fracking operations per year. *See* 80 Fed. Reg. at 16,206. In 2015, BLM estimated that ninety percent of new wells drilled on federal lands are now being stimulated using hydraulic fracturing. *Id.* at 16,131, 16,190.

One relevant development is that the California Geologic Energy Management Division (“CalGEM”) has not approved a state permit for hydraulic fracturing since 2021, and hydraulic fracturing was entirely phased out by CalGEM regulations that went into effect on October 1, 2024. Cal. Code Regs. tit. §1780(d). BLM has historically respected state regulation of oil and gas extraction methods on federal land and consistently acknowledged CalGEM’s jurisdiction to regulate hydraulic fracturing operations on federal lands within the state. Draft SEIS at 18 (“BLM does not have regulatory authority over hydraulic fracturing in California; that authority rests with the California Department of Conservation’s Geologic Energy Management Division (CalGEM), which oversees all well stimulation activities in the state.”) Other state law changes to protect human health and the environment have occurred and are discussed in detail below, but are not addressed by BLM in the Draft SEIS.

BLM’S DECISION NOT TO REVISE OR AMEND THE 2014 RMP WAS ARBITRARY AND CAPRICIOUS

BLM argues that no amendment to the 2014 RMP is warranted because its consideration of hydraulic fracturing “did not show notable increase in total impacts” and its range of alternatives has not changed since 2012. Draft SEIS at 13-14. This reasoning is arbitrary and capricious because it is divorced from the criteria for determining whether to revise or amend an RMP. BLM was required to consider whether to amend the 2014 RMP by the 2022 settlement, and the amendment must be prepared if there is a “need to consider monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.” 43 C.F.R. § 1610.5-5. Similarly, an RMP “shall be revised as necessary, based on monitoring and evaluation findings, new data, new or revised policy and changes in circumstances.” *Id.* § 1610.5-6. Notably, an amendment is initiated “by the need to consider” new information and changes in circumstances, which is certainly the case here. BLM “need[ed] to consider” new information and changes in circumstances as a court in 2016 found it had “failed to analyze the environmental concerns unique to fracking,” and thus needed to analyze information specific to hydraulic fracturing to comply with NEPA. *ForestWatch v. United States Bureau of Land Mgmt.*, No. CV154378MWFJEMX, 2016 WL 5172009, at *13 (C.D. Cal. Sept. 6, 2016). This need to consider new information and changes in circumstances

continued to the current SEIS because BLM agreed in a 2022 settlement to supplement its prior environmental review.

A decade has elapsed since the 2016 court decision. During this time, there have been significant new developments in the knowledge and evidence of the harms caused by drilling to human health, natural resources, and the climate, significant shifts in California policies, and significant changes to the oil and gas development in the Planning Area (described in detail, *infra*). Given these changes, BLM was required to amend or revise its 2014 RMP and prepare a supplemental EIS to account for issues that go beyond hydraulic fracturing. In particular, the recent prohibition of hydraulic fracturing in California renders BLM's decision to focus on potential impacts of hydraulic fracturing nonsensical. It also makes BLM's reasoning for failing to prepare an RMP amendment arbitrary and capricious. BLM cannot limit its analysis to consideration of hydraulic fracturing, despite the fact that hydraulic fracturing should no longer occur, to claim that there will be no "notable increase in total impacts" in the Planning Area.

THE DRAFT SEIS FAILS TO TAKE A HARD LOOK AT THE IMPACTS OF HYDRAULIC FRACTURING IN THE PLANNING AREA

Even if it were appropriate for BLM to limit its supplemental analysis to consideration of hydraulic fracturing, BLM's analysis fails to take a "hard look" at many of the significant impacts associated with hydraulic fracturing, or provide sufficient evidence to support its conclusions.

I. The Draft SEIS Relies Upon an Incorrect Assumption Regarding the Number of Hydraulic Fracturing Operations.

NEPA requires agencies to take a "hard look" at the environmental consequences of proposed agency actions before those actions are undertaken. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004); *see* 42 U.S.C. § 4332. "To take the required 'hard look' at a proposed project's effects, an agency may not rely on incorrect assumptions or data." *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953, 964 (9th Cir. 2005); *see also* DOI Handbook (Feb. 2026), pp. 16-17, 23 (NEPA requires agencies to ensure that the analysis and assumptions of any existing EIS they rely on remains adequate). Here, rather than providing the sufficient analysis or evidence required by NEPA to take a "hard look" at its Proposed Action, BLM's findings in the Draft SEIS are based on an unfounded assumption about the number of wells that will be hydraulically fractured.

BLM carries forward its estimate from more than fifteen years ago that up to 4 of the 40 new wells on new leases (or 10 percent) will be hydraulically fractured. Draft SEIS at 25. This estimate entirely ignores the fact that state permits from CalGEM are required for operators to drill or hydraulically fracture wells in California, and hydraulic fracturing was entirely phased out by CalGEM regulations that went into effect on October 1, 2024. Cal. Code Regs. tit. §1780(d). Hydraulic fracturing cannot occur in the Planning Area.

Moreover, even if hydraulic fracturing could occur, BLM has greatly underestimated the number of events that would occur. BLM's assumption that zero to four hydraulic fracturing events will occur on new leases in the Planning Area each year is not backed by any underlying data or analysis, and it is contrary to BLM's own prior estimates. For example, in the 2012 Bakersfield Proposed RMP, BLM acknowledged that 85 percent of the Decision Area (the portion of the Planning Area with public lands managed by BLM) would be "open" to well stimulation technologies such as fracking and estimated that 25 percent of new wells in the Decision Area would be fracked in the future. *Los Padres ForestWatch*, 2016 WL 5172009 at *11 ("the prominent role fracking is expected to play in the future is undisputed in the record"). In addition, BLM has previously stated that about 90 percent of new wells drilled on public lands are hydraulically fractured. 80 Fed. Reg. at 16,190 ("BLM estimates that 90 percent of the wells drilled on Federal and Indian land are hydraulically fractured"). The 2015 California Council on Science and Technology report commissioned by BLM noted that "[h]ydraulic fracturing supports about one quarter of California oil production" and "about 125 to 175 wells of the approximately 300 new oil wells installed per month [41-58%] in California" were fractured.⁴ "Nearly all" hydraulic fracturing occurred in four oil fields in southwestern San Joaquin Valley that are within the Planning Area.⁵ Further, in the May 2019 Final EIS released by BLM's Central Coast Field Office for an amendment to another RMP, BLM noted that "hydraulic fracturing has been used as a production stimulation method in California since the late 1960s and is considered a standard technique for production."⁶ For its analysis in the Central Coast Final EIS, BLM assumed that well stimulation technologies and enhanced oil recovery techniques would "be used on any or all" new oil and gas wells drilled on federal leased land over the next 15 to 20 years.⁷

A district court invalidated a previous BLM environmental assessment ("EA") for the Central Coast region that relied on unfounded assumptions about the frequency of hydraulic fracturing. *See Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 937 F. Supp. 2d 1140, 1148, 1155 (N.D. Cal. 2013). The plaintiffs in that case challenged an EA regarding four oil and gas leases on approximately 2,700 acres in Monterey and Fresno counties. 937 F. Supp. 2d at 1144. Despite the growing use of fracking nationwide, BLM had assumed for purposes of the EA, based on data from 2006, that "no more than one exploratory well would be drilled in total on the land within the leases," and BLM did not discuss fracking beyond noting it was "not relevant to the analysis of impacts . . . because the reasonable foreseeable development scenario anticipates very little (if any) disturbance to the human environment." *Id.* at 1148. The court found that "this projection fails to take into account all 'reasonably foreseeable' possibilities as required by NEPA," as evidenced by the record and the defendants' own acknowledgment "that fracking activity in the United States has increased dramatically in recent years." *Id.* at 1155.

⁴ California Council on Science and Technology, *An Independent scientific Assessment of Well Stimulation in California: Summary Report* ("CCST Summary Report") 11-13 (July 2015).

⁵ *Id.* at 12.

⁶ BLM, *Proposed Resource Management Plan Amendment and Final Environmental Impact Statement for Oil and Gas Leasing and Development, Central Coast Planning Area* 1-1 n.3 (May 2019).

⁷ *Id.* at ES-4, 2-3, 4.17-1, 4.20-2.

Thus, the court concluded that “it was not reasonable for BLM to consider only a single exploratory well scenario based on past data.” *Id.* at 1156.

The court then determined that “[t]his unreasonable lack of consideration of how fracking could impact the development of the disputed parcels went on to unreasonably distort BLM’s assessment of at least three of the ‘intensity’ factors in its FONSI.” *Id.* at 1157. First, “BLM erroneously held that the leases were not highly controversial,” even though “[t]here was clearly a controversy here regarding the nature of the drilling to occur on the leases and the potential impacts drilling would impose on the nearby communities.” *Id.* at 1157-58. “Second, BLM erroneously analyzed the potential effect of the leases on public health and safety” by ignoring the risks posed by fracking. *Id.* at 1158. “Third, BLM erroneously discounted the uncertainty from fracking that may be resolved by further data collection” by “instead opting to summarize general data about fracking (much of it raising substantial concerns about the impact of fracking) before dismissing the issues as outside of its jurisdiction.” *Id.* at 1159.

Similarly, here, BLM’s assumption that only “zero to four” hydraulic fracturing events will occur in the Planning Area each year distorts its consideration of several environmental impacts and significance factors, which in turn compromises the public’s ability to meaningfully participate in the NEPA process. For example, BLM estimates surface impacts from the hydraulic fracturing of up to 4 wells per year for 10 years to be up to 208.6 acres. Draft SEIS at 36. In analyzing the air pollution that will result from the Proposed Action, the calculated emissions are based on the hydraulic fracturing of four wells per year. *Id.* at 43-48. Similarly, with regard to water resources, BLM refers back to the 2019 Final SEIS, *id.* at 60, where it found that this amount of hydraulic fracturing would consume just 8.0 million gallons (25 acre-feet) of water during the 10-year planning period, and that “[t]he risk of impacts to groundwater due to spills of fracturing fluids from the completion of an average of zero to four wells per year would be negligible.” 2019 Final SEIS at 85-87. And because of the small number of anticipated hydraulic fracturing events and related wastewater disposal, BLM summarily concluded that it expected “there would be negligible impacts related to hydraulic fracturing–induced earthquakes.” *Id.* at 92.

Given that BLM’s quantification regarding the number of wells which may be hydraulically fractured is significantly underestimated, there is serious potential that the Proposed Action would result in exceedances of applicable significance thresholds. For example, as quantified in the Draft SEIS, anticipated emissions increases associated with the Proposed Action approach the applicable general conformity *de minimis* thresholds for certain pollutants in the San Joaquin Valley air basin, including 10 tons per year of nitrogen oxides (“NOx”) and 10 tons per year of reactive organic gases (“ROG”), two critical contributors to ozone formation. The Draft SEIS does not present the well development and production emissions associated with hydraulic fracturing, making it impossible to determine if such operations would lead to emissions increases that exceed the thresholds. But the combined tables in the 2019 and 2026 SEISs indicate that the combination of hydraulic fracturing and conventional well development and operations would exceed the thresholds. 2019 Final SEIS at 62 (well development ROG emissions are 6.99 tons per year and NOx emissions are 4.8); 2025 Draft SEIS at 44, 48 (production operation NOx emissions are 67.6 tons per year and VOC/ROG emissions are 102.6

tons per year). The San Joaquin Valley Air Basin is already classified as extreme nonattainment for 8-hour ozone and has not yet attained the 1997 PM_{2.5} National Ambient Air Quality Standard.⁸ If the number of wells that would be hydraulically fractured is even slightly underrepresented, then one or both of these thresholds would likely be exceeded, resulting in significant air quality impacts.

A revised analysis may also show that the Proposed Action's GHG emissions would exceed the 25,000 metric tons of carbon dioxide equivalent ("MTCO₂e") annual threshold for mandatory reporting of GHGs in the U.S. Environmental Protection Agency's ("EPA") mandatory reporting program for GHGs, which the 2019 Supplemental EIS appears to use as a GHG significance threshold (the GHG emissions associated with hydraulic fracturing are not presented in the 2025 Draft SEIS). 2019 Final SEIS at 57. Any revision to the Draft SEIS must accurately quantify and mitigate any significant air quality and GHG impacts.

Finally, BLM's assumption that "zero to four" events will occur does not take into account any hydraulic fracturing of new or existing wells drilled on existing leases. BLM estimates that as many as 360 new wells will be drilled each year on *existing* federal leases in the Planning Area, under the control and guidance of the 2014 RMP. Draft SEIS at 2. BLM did not predict how many of these wells would be hydraulically fractured, even while it acknowledged that hydraulic fracturing in the overall Planning Area occurs on existing leases. BLM anticipated that at least "some" of the 360 new wells that BLM expected on existing leases would be hydraulically fractured. Indeed, it stated that "hydraulic fracturing usually occurs in oil fields on existing leases, many of which have been continuously developed over the last 100 years." 2019 Final SEIS at 7. BLM should have analyzed whether hydraulic fracturing of these new wells or of existing wells would cause cumulative significant environmental impacts in conjunction with hydraulic fracturing of wells on new leases.

In sum, BLM's assumption that hydraulic fracturing will occur at all in the Planning Area is contrary to California law. Even if BLM were correct that hydraulic fracturing could occur, BLM's estimate that up to four hydraulic fracturing events will occur in the Planning Area each year is unsupported by the evidence before the agency. This assumption has resulted in a misleading discussion of environmental impacts in the Draft SEIS, rather than the "hard look" required by NEPA.

II. The Draft SEIS Fails to Properly Consider the Significant Environmental Impacts Related to Hydraulic Fracturing Operations.

To fulfill NEPA's "hard look" requirement, an agency must consider all foreseeable direct, indirect, and cumulative impacts of the action. *See N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006); *Ctr. For Biological Diversity v. Salazar*, 695 F.3d 893, 916–17 (9th Cir. 2012). An agency must provide sufficient evidence and analysis to support its

⁸ San Joaquin Valley Air Pollution Control District, *Ambient Air Quality Standards & Attainment Status*, <https://www.valleyair.org/air-quality-information/ambient-air-quality-standards-valley-attainment-status/>.

conclusions. As the Ninth Circuit has stated, “general statements about ‘possible effects’ and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998). Here, BLM has failed to consider several environmental impacts related to its Proposed Action, or to support its conclusions with adequate analysis.

A. Water and Other Land Impacts

For example, with regard to impacts to groundwater from the management and disposal of flowback fluids, BLM generally acknowledges that there are “possible risks to groundwater and surface water, particularly amid spill events, aging infrastructure, and cumulative extraction effects.” Draft SEIS at 60. However, BLM insinuates that it cannot perform an analysis to assess disposal impacts more specifically because hydraulic stimulation has not occurred since 2019, *id.*, and the prior 2019 analysis it defers to summarily concludes that “[i]mpacts to groundwater from the completion of an average of zero to four wells in any given year ... would be negligible.” 2019 Final SEIS at 90. BLM never discusses data collected by the State Water Resources Control Board, which produces a report every six months on the regulation of oil field produced water ponds within its regions with oil and gas drilling.⁹ According to the most recent report dated January 31, 2019, the Central Valley region had 561 active ponds, 501 of which were permitted and 60 unpermitted.¹⁰ Moreover, most of the active ponds (530 of 560) were unlined.¹¹ The report also identified additional inactive ponds (507 of which were unlined), and noted that 161 ponds were under active enforcement actions.¹² An updated list of ponds developed in 2021 still shows many active ponds.¹³ Testing of these ponds, as required by the Central Valley Regional Water Quality Control Board, has identified numerous hazardous compounds that could pose a threat to groundwater for municipal and agricultural uses.¹⁴ Compounds used in hydraulic fracturing fluids, including polynuclear aromatic hydrocarbons, affect pulmonary, gastrointestinal, and renal systems in humans, and a few compounds are considered carcinogens.¹⁵ The California Council on Science and Technology (“CCST”) also expressed concern about the regular use of unlined pits for the disposal of produced water,

⁹ State Water Resources Control Board, *Water Quality in Areas of Oil and Gas Production - Produced Water Ponds*, https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/oil_field_produced/produced_water_ponds/index.html.

¹⁰ State Water Resources Control Board, *Produced Water Ponds Status Report: January 31, 2019*, https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/docs/pwpondsreport_january2019.pdf.

¹¹ *Id.*

¹² *Id.*

¹³ Central Valley Regional Water Quality Control Board, *Pond List* (Feb. 2021), https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/20210211_pondlist.pdf.

¹⁴ See, e.g., Central Valley Regional Water Quality Control Board, *Oil Field Pond 13267 Order Responses, Information Requested by 13267 Order, Lost Hills Oil Field* (June 16, 2015), https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/aera_energy/2015_0616_com_lost_hills.pdf.

¹⁵ California Council on Science and Technology, *An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report* 150 (July 2022), <https://www.psehealthyenergy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf>.

finding that such practices could “introduce contaminants into the food web and expose human populations to known and potentially unknown toxic substances.”¹⁶ The EPA has also found that hydraulic fracturing and other well stimulation techniques can adversely impact water resources, including both the supply of drinking water and the quality of the water.¹⁷ Produced water disposal could have serious impacts on water supply given that many of the communities in the Planning Area rely on groundwater as their primary source of drinking water.

Fracking itself also poses a risk to water supply because it occurs at shallower depths—where groundwater occurs—than in other parts of the United States.¹⁸ Fracking in California also tends to occur in oilfields with many existing active and inactive wells that can serve as leakage pathways.¹⁹ The potential for water contamination demands further study. As EPA recommended during the comment period on the last Supplemental EIS for this RMP, BLM should include a map of drinking water sources, aquifer exemptions, and existing and proposed wells so that BLM may develop necessary stipulations. Commenters in the last round already did some of this work for BLM by identifying drinking water sources specifically at risk, including Santa Barbara County’s groundwater aquifers, wells that supply the California Army National Guard, Ojai Valley Basin’s groundwater supply, and the City of Lompoc’s drinking water well field. EPA also specifically suggested that BLM require a stipulation “that identified fresh water zones are to be sampled and analyzed so that pre-fracking background levels of those fresh water zones (drinking water supply) can establish whether any existing contamination exists before fracking has been introduced in the vicinity,” and require operators to prove that the geologic confining zone is sufficient to prevent migration of fracking fluids into usable water.

Similarly, with respect to water supply, BLM acknowledges that “fracturing operations require substantial volumes of water, which can impose stress on local supplies in arid or drought prone regions.” Draft SEIS at 60; *see also id.* at 61 (oil and gas development can lead to a lower baseflow in wetlands and streams, which can impair beneficial uses). However, BLM makes no effort to identify which groundwater basins and surface waters in or near the Planning Area are susceptible to water supply stresses, where they are situated relative to potential hydraulic fracturing operations, and what mitigation measures should be undertaken to address this issue. As CCST has explained, these impacts could be significant to ecosystems supported by small waterways,²⁰ as well as the small communities and domestic users that rely on local groundwater.²¹ Thus, to determine whether water use will cause a significant impact, the

¹⁶ California Council on Science and Technology, *An Independent Scientific Assessment of Well Stimulation in California*, Vol. II (“CCST Report, Vol. II”) 403 (2015), http://ccst.us/projects/hydraulic_fracturing_public/SB4.php.

¹⁷ U.S. Environmental Protection Agency, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary, https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf.

¹⁸ *Id.* at 121, 406.

¹⁹ *Id.* at 122-25.

²⁰ *Id.* at 347,

²¹ *Id.* at 65, 161.

Supplemental EIS must evaluate the impact on the scale of the local communities where drilling and hydraulic fracturing are expected.

In addition, the depletion of groundwater for use in hydraulic fracturing, and the extraction of oil and gas from the ground that hydraulic fracturing enables, both have the potential to cause land subsidence—the gradual caving in or sinking of land—which in turn can damage water delivery infrastructure such as the California Aqueduct and other state water project facilities located in the Planning Area. Surveys provided by the California Department of Water Resources have shown an already alarming increase of land subsidence and other topographic changes in the Central Valley, which can cause significant and costly damage to state water infrastructure.²² Increased oil and gas extraction in water basins within the Central Valley, for example, would foreseeably lead to land subsidence. Indeed, oil and gas production is known to be the primary driver of subsidence in the Lost Hills Oil Field.²³ Yet subsidence impacts are not addressed at all in the Draft SEIS beyond one paragraph noting such effects are “possible” but “difficult to predict.” Draft SEIS at 61.

BLM says it will “consider site specific conditions and data during project level review.” Draft SEIS at 61. But consideration of water contamination, water supply, and subsidence impacts may not be deferred, as that would violate NEPA’s mandate that agencies confront the full extent of environmental impacts from a proposed action at the earliest reasonable time. *Robertson*, 490 U.S. at 349; see *Kern v. BLM*, 284 F.3d 1062, 1072 (9th Cir. 2002). Hydrologic regions and water basins do not obey the boundaries of oil and gas leases, so impacts to them are best analyzed at the level of the Planning Area instead of in a segmented and cabined review later in the development process. Moreover, BLM states that the Draft SEIS is the relevant analysis for seven parcels, betraying its vague promise to conduct additional review at the leasing phase. Draft SEIS at ES-1. The Attorney General and California state agencies’ comments on the deficiencies in the 2020 Environmental Analysis for those seven parcels is attached and incorporated here by reference.²⁴

The Draft SEIS also fails to adequately consider science connecting the underground injection of hydraulic fracturing waste fluids, as well as hydraulic fracturing itself, to increased seismic activity. For example, BLM dismisses the notion that the Proposed Action could result in impacts related to hydraulic fracturing-induced earthquakes, failing to evaluate this issue at all, Draft SEIS at 11, even though it states in the 2019 Supplemental EIS that other industrial activities can induce seismicity and “few” wells that are “hydraulically fractured or are waste water wells result in induced earthquakes.” 2019 Final SEIS at 91-92. Also, recent scientific studies have connected hundreds of earthquakes in Oklahoma, Ohio, and other areas to hydraulic

²² Cal. Dept. of Water Resources, *Comment Letter on BLM’s NOI for Supplemental EIS and Potential RMP Amendment*, Published FR Doc. 2025–11481 (July 23, 2025).

²³ *Id.* at 3-5.

²⁴ State of California and California Air Resources Board, *Comments on DOI-BLM-CA-C060-2020-0120-EA* (Sept. 25, 2020); California Department of Fish and Wildlife, *Comments on DOI-BLM-CA-C060-2020-0120-EA* (Sept. 25, 2020); State of California and California Agency Protest Letter (Nov. 9, 2020).

fracturing events.²⁵ More recent studies have also connected oil and gas disposal wells associated with hydraulic fracturing to induced seismicity.²⁶ Although CCST stated that “hydraulic fracturing as currently carried out in California is not considered to pose a high seismic risk,”²⁷ it also warned that “it can be very difficult to distinguish California’s frequent natural earthquakes from those possibly caused by water injection into the subsurface” and recommended further analysis of this issue.²⁸ This is especially warranted given California’s many active earthquake faults and the fact that over 1,000 wastewater disposal wells are located within 1.5 miles of a mapped active fault in central and southern California.²⁹

B. Air Pollution Impacts

As noted previously, and despite BLM’s statements to the contrary, there is substantial potential that the Proposed Action may significantly increase air pollution. Oil and gas facilities emit significant air pollution, including 30 percent of all sulfur oxides, over 70 percent of hydrogen sulfide, and 8 percent of anthropogenic volatile organic compounds in the San Joaquin Valley, which in turn react with nitrogen oxides to create ozone.³⁰ Oil and gas development is also responsible for the majority of emissions of multiple toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide in the Valley.³¹ Fracking on public lands produces significant air pollution emissions including nitrogen oxides, sulfur dioxide, fine particulate matter, volatile organic compounds, silica dust, and toxic air contaminants like benzene.³² In addition, the ponds that store produced water from hydraulic fracturing operations have the potential to generate significant emissions of toxic air

²⁵ Skoumal, R. J., et al., “Earthquakes induced by hydraulic fracturing are pervasive in Oklahoma,” *Journal of Geophysical Research: Solid Earth* 123:12 (2018), at 10918-35, <https://doi.org/10.1029/2018JB016790>; Skoumal, R.J., et al., “Earthquakes Induced by Hydraulic Fracturing in Poland Township, Ohio,” *Bulletin of the Seismological Society of America* 105:1 (2015), at 189-197, <https://doi.org/10.1785/0120140168>; Xuewei Bao and David W. Eaton, “Fault activation by hydraulic fracturing in western Canada,” *Science* 354:6318 (2016), at 1406-1409, <https://science.sciencemag.org/content/354/6318/1406>.

²⁶ Goebel, T. H. W., et al, “Wastewater disposal and earthquake swarm activity at the southern end of the Central Valley, California,” *Geophys. Res. Lett.* 43 (2016), at 1092–1099, <https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2015GL066948>.

²⁷ CCST Report, Vol. II. at 267.

²⁸ *Id.* at 30-32.

²⁹ *Id.* at 277-293.

³⁰ Brandt, A., Millstein, D., Jin, L., & Englander, J., *Air Quality Impacts from Well Stimulation* 182 (2015), <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

³¹ Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel* 10 (Oct. 2021), <https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf>.

³² Natural Resources Defense Council, *Fracking Fumes* (Dec. 2014), <https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf>.

contaminants.³³ There are more than 1,000 produced water ponds in California, and most are located in the Planning Area.³⁴

BLM attempts to diminish the significance of air pollution impacts from oil and gas production by presenting tables with sources of criteria emissions and hazardous air pollutant emissions in the Planning Area from oil and gas production relative to other sources. Draft SEIS at 21-22. But this presentation is misleading in several respects. First, lumping all criteria and hazardous air pollutants together across all counties in the Planning Area makes it impossible to understand how oil and gas operations contribute to the harmful pollutants most associated with those operations, including sulfur oxides, hydrogen sulfide, and volatile organic compounds. Different pollutants are emitted at different tonnage rates, which explains why the total emissions of “wildfire” dwarf other source categories. For example, when isolating the EPA National Emissions Inventory data for sulfur dioxide from Kern County, oil and gas production is the second highest category, with 20 percent of the emissions (See Table 1 below). Similarly, isolating the data to volatile organic compound emissions from Kern County, oil and gas production is the fourth highest category (See Table 1). One study similarly estimates that VOC emissions from oil and gas extraction in the Central Valley as akin to total transportation emissions in the region.³⁵ Bakersfield in particular attributes 22 percent of all anthropogenic emissions during the spring and summer months to petroleum operations, and 8 percent of all total potential ozone precursors.³⁶ This study and the CCST report noted above suggest that petroleum operations are responsible for significant amounts of relevant criteria pollutant emissions in the San Joaquin Valley. In Kern County, oil and gas development is expected to make up a large share of all air pollution emitted by 2035—40 percent of fine particulate matter emissions, 70 percent of nitrogen oxide emissions, and 97 percent of sulfur dioxide emissions.³⁷ Similarly with hazardous air pollutants, a science advisory panel recently noted that oil and gas development is “responsible for the majority of emissions of multiple toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide” in the already overburdened San Joaquin Valley.³⁸

³³ California Council on Science and Technology, *An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report* 191-92 (July 2022), <https://www.psehealthyenergy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf>.

³⁴ *Id.*

³⁵ Gentner et al., “Emissions of Organic Carbon and Methane from Petroleum and Dairy Operations in California’s San Joaquin Valley,” *Atmos. Chem. Phys.* 14 (2014), at 4971, <https://doi.org/10.5194/acp-14-4955-2014>.

³⁶ *Id.*

³⁷ Kern County Planning & Community Development Department, *Supplemental Recirculated Environmental Impact Report for Revisions to the Kern County Zoning Ordinance*, 4.3-164 (Oct. 2020), https://psbweb.kerncounty.com/UtilityPages/Planning/EIRS/OG_SREIR/aVol1/Oil_Gas_SREIR_Oct%202020_Vol%201_04.03_Air%20Quality.pdf.

³⁸ Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel* 10 (Oct. 2021), <https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf>.

*Table 1: VOC and SO2 emissions in Kern County*³⁹

Source	VOCs (tons)	SO2 (tons)
Agriculture - Livestock Waste	1072	
Biogenics - Vegetation and Soil	43130	
Bulk Gasoline Terminals	37	
Commercial Cooking	47	
Fires - Agricultural Field Burning	647	
Fires - Prescribed Fires	80	
Fires - Wildfires	1747	
Fuel Comb - Comm/Institutional - Biomass	0	1
Fuel Comb - Comm/Institutional - Natural Gas	38	11
Fuel Comb - Comm/Institutional - Oil	40	4
Fuel Comb - Comm/Institutional - Other	1	1
Fuel Comb - Electric Generation - Biomass	1	1
Fuel Comb - Electric Generation - Natural Gas	40	37
Fuel Comb - Electric Generation - Oil	3	1
Fuel Comb - Industrial Boilers, ICEs - Biomass	6	8
Fuel Comb - Industrial Boilers, ICEs - Coal	4	0
Fuel Comb - Industrial Boilers, ICEs - Natural Gas	214	23
Fuel Comb - Industrial Boilers, ICEs - Oil	6	36
Fuel Comb - Industrial Boilers, ICEs - Other	2	0
Fuel Comb - Residential - Natural Gas	26	9
Fuel Comb - Residential - Oil	0	2
Fuel Comb - Residential - Other	3	0
Fuel Comb - Residential - Wood	326	9
Gas Stations	403	0
Industrial Processes - Cement Manuf	39	395
Industrial Processes - Chemical Manuf	143	0
Industrial Processes - Mining	1	0
Industrial Processes - NEC	577	49
Industrial Processes - Non-ferrous Metals	1	1
Industrial Processes - Oil & Gas Production	3157	178
Industrial Processes - Petroleum Refineries	229	19
Industrial Processes - Pulp & Paper	5	
Industrial Processes - Storage and Transfer	529	0
Miscellaneous Non-Industrial NEC	2723	0
Mobile - Aircraft	54	8
Mobile - Locomotives	94	2
Mobile - Non-Road Equipment - Diesel	379	5
Mobile - Non-Road Equipment - Gasoline	2525	1
Mobile - On-Road Diesel Heavy Duty Vehicles	270	20
Mobile - On-Road Diesel Light Duty Vehicles	40	1
Mobile - On-Road non-Diesel Heavy Duty Vehicles	16	1
Mobile - On-Road non-Diesel Light Duty Vehicles	1551	27
Solvent - Consumer & Commercial Solvent Use	4019	
Solvent - Degreasing	357	
Solvent - Dry Cleaning	2	

³⁹ U.S. Environmental Protection Agency, *National Emissions Inventory (NEI) Online 2020 NEI Data Retrieval Tool*, <https://www.epa.gov/air-emissions-inventories/2020-air-emissions-data>.

Solvent - Graphic Arts	410	
Solvent - Industrial Surface Coating & Solvent Use	677	0
Solvent - Non-Industrial Surface Coating	281	
Waste Disposal	4620	27

Second, BLM does not provide the underlying data to help the reader understand its charts. If BLM had, that data would reveal that the EPA inventory is full of catch-all categories like “miscellaneous” and “biogenics,” which make the oil and gas emissions look relatively small. Third, and most importantly, it does not matter what the relative contribution of emissions is from each source category. It matters that oil and gas operations, and hydraulic fracturing in particular, would add pollution in an already overburdened air basin that is not in attainment with regional air quality standards.

C. Cumulative Impacts

In addition to direct air pollution impacts, the Draft SEIS fails to adequately analyze and disclose the cumulative impacts from the Proposed Action. As BLM is well aware, the agency has also prepared a Draft SEIS for Oil and Gas Leasing and Development in the Central Coast Planning Area. That proposal itself involves considerable new well development, including an estimated 37 new wells that would involve hydraulically fracturing. Central Coast Draft SEIS at 2-3. Yet, inexplicably, the Draft SEIS fails to mention that other major BLM planning effort, which would involve the development of new hydraulically fractured wells during the same timeframe as the Proposed Action. Moreover, many of these wells in both Planning Areas are expected to be developed in the San Joaquin Valley, which is within a connected and significantly impacted air basin. *Id.* at 6, 30. Indeed, the regional air basin regulated by the San Joaquin Valley Air Pollution Control District includes portions of four counties covered by the Central Coast Draft SEIS (San Joaquin, Stanislaus, Merced, and Fresno) and five counties covered by the Draft SEIS (Fresno, Kern, Kings, Madera, and Tulare). The San Joaquin Valley is in extreme ozone nonattainment status, and smog is very much a cumulative air pollution concern (NO_x and ROG emissions are both ozone precursors which generate smog by reacting in the atmosphere across the entire air basin). BLM’s refusal to consider the related effects of two major BLM planning efforts raises serious cumulative impact concerns, as does BLM’s failure to look at the total effects of its planning efforts in light of the overall oil and gas development in the area.

NEPA requires an analysis of the cumulative effects of a federal action as part of its mandate that agencies consider the reasonably foreseeable effects of an action “to the fullest extent possible.” 42 U.S.C. § 4332(2)(C). NEPA recognizes that “each ‘limited’ federal project is part of a large mosaic of thousands of similar projects and that cumulative effects can and must be considered on an ongoing basis.” *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975). Courts have also recognized that cumulative impacts analysis is necessary to put a proposed action’s effects into meaningful context and fulfill NEPA’s informed decision-making purpose. *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972). A sufficient cumulative impacts analysis requires an assessment of the actual impact in light of background effects—e.g., how will increased emissions affect air quality in light of existing emissions—not merely a comparison of

the relative increase in emissions against total background emissions. These analyses are required since NEPA reviews “must give a realistic evaluation of the total impacts and cannot isolate a proposed project, viewing it in a vacuum. *Grand Canyon Trust v. FAA*, 290 F.3d 339, 342 (D.C. Cir. 2001).

For example, it is arbitrary for BLM to ignore the environmental impacts of hydraulic fracturing in concert with conventional development as well as other types of well stimulation treatments and enhanced oil recovery techniques in the Planning Area, given their likely utilization in the future. These techniques include acidizing, water flooding, steam flooding, cyclic steam injection, and a dual type that alternates between steam and water flooding. NEPA requires that an agency consider the full scope of activities encompassed by its Proposed Action. See *N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006) (the “hard look” requirement of NEPA includes “considering all foreseeable direct and indirect impacts.”). For the Proposed Action, this should include not only hydraulic fracturing activities, but also other types of well stimulation treatments that will be foreseeably used in the Planning Area. In the former Central Coast Final EIS, BLM assumed that “[w]ell stimulation technologies (e.g., hydraulic fracturing, acid matrix stimulation, acid fracturing) and enhanced oil recovery techniques (e.g., cyclic steam, steam flood, water flood) may be used on any or all” wells drilled on federal mineral estate. See, e.g., Central Coast 2019 Final EIS at 4-17.1. The Draft SEIS contains no analysis of these issues. In addition, as noted above, BLM limited its impacts analysis to the “zero to four” hydraulic fracturing events each year it anticipated would occur on new wells on new leases. BLM therefore ignored the impacts associated with extending the life of existing wells and leases. BLM also entirely ignores how its proposal will interact with other projects in the area, like Kern County’s resumption of oil and gas development permitting.⁴⁰

Finally, hydraulic fracturing is associated with significant GHG emissions, including carbon dioxide, methane, NO_x, VOCs, and black carbon.⁴¹ GHG emissions also result from fuel combustion by the equipment used to prepare oil and gas well pads and drill wells, from fugitive leaks of methane from production equipment, as well as from fuel used to power boilers and steam generators used in enhanced oil recovery operations.⁴² “The impact of GHG emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). Although BLM spends several pages estimating potential GHG emissions from oil and gas development associated with the Reasonably Foreseeable Development Scenario generally, then minimizing those emissions and stating that most emissions should either be studied in more detail later or are out of BLM’s authority and control, Draft SEIS at 57, BLM nowhere evaluates GHG emissions associated with hydraulic fracturing or explores related mitigation measures. BLM also fails to consider the reasonably foreseeable cumulative climate change impacts of the Proposed Action together with other wells on existing federal leases, all

⁴⁰ CalGEM, *Senate Bill 237*, <https://www.conservation.ca.gov/calgem/Pages/SB237.aspx>.

⁴¹ Brandt, A., Millstein, D., Jin, L., & Englander, J., *Air Quality Impacts from Well Stimulation* 185-86 (2015), <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

⁴² Bureau of Land Management, *2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends* (Aug. 2024), <https://www.blm.gov/sites/default/files/docs/2025-04/BLM-2023-Base-GHG-Report.pdf>.

wells in the Bakersfield Planning Area (including on non-BLM land), and other reasonably foreseeable pending projects (like oil and gas development pursuant to the Central Coast RMP Amendment).

III. The Draft SEIS Fails to Consider Environmental and Public Health Impacts to Low-Income Communities and Communities of Color.

The Draft SEIS also fails to consider how the Proposed Action will impact low-income communities and communities of color in the Planning Area, whether resulting from increased air pollution, groundwater contamination, or other impacts. While BLM has historically acknowledged that the Planning Area contains minority populations and low-income populations, *see* 2012 Final EIS at 388, the Draft SEIS fails to consider the disproportionate impacts of the Proposed Action on these populations in any way.

BLM argues it does not need to consider environmental justice impacts under NEPA due to the repeal of executive orders that required agencies to make achieving environmental justice part of their mission. Draft SEIS at 12. But the consideration of environmental justice has long been a part of the required NEPA analysis, *see, e.g., Mid States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 541 (8th Cir. 2003); *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1370 (D.C. Cir. 2017), and the statute itself rather than executive orders drives this requirement. NEPA makes it the federal government’s responsibility to “assure for *all* Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings,” 42 U.S.C. § 4331(b)(2) (emphasis added), and states “that *each person* should enjoy a healthful environment,” *id.* § 4331(c) (emphasis added). Consideration of how a proposed federal action might disproportionately affect *some* Americans more than others is thus a highly relevant consideration under the statute. NEPA’s focus on “the quality of the *human* environment,” *id.* § 4332(c) (emphasis added), is also a concern advanced by analyzing the distribution of environmental burdens in the human environment.

Many federal oil and gas activities in California occur in close proximity to the state’s most vulnerable communities. In particular, the Planning Area is home to many communities that are disproportionately exposed to pollution and who are most vulnerable to pollution and its health effects, called “disadvantaged communities” under California law.⁴³ To designate disadvantaged communities, the California Environmental Protection Agency uses the California Office of Environmental Health Hazard Assessment (“OEHHA”) CalEnviroScreen Tool to rank census tracts in the state using indicators that measure the communities’ exposure to pollution and the communities’ vulnerability to the effects of pollution. Many census tracts in the Planning Area meet the state’s definition of disadvantaged community, most notably in Kern, Tulare,

⁴³ Cal. Health & Safety Code § 39711; *SB 535 Disadvantaged Communities Webpage*, <https://oehha.ca.gov/calenviroscreen/sb535>.

Kings, and Fresno Counties, with other smaller areas in Ventura and Santa Barbara Counties.⁴⁴ This means that communities in these counties already are exposed to significantly more air pollution, water pollution, and other pollution sources that cause significant health risks than other parts of the state, and they are more vulnerable to these exposures.

With regard to air quality, seven of the eight counties (Fresno, Kern, Kings, Madera, San Luis Obispo, Tulare, and Ventura) in the Planning Area already have a non-attainment status for particulate matter, ozone, or both air quality standards. Ozone is among the most widespread and significant air pollution health threats in California, including in the Planning Area.⁴⁵ The Central Valley in particular experiences some of the worst particulate matter pollution in the state.⁴⁶ Ozone can cause and worsen asthma and has additional long-term health effects, including respiratory and cardiovascular diseases, and premature death.⁴⁷ In Kern County, over 70,000 residents (almost eight percent of the population) have asthma.⁴⁸ Any additional emissions of volatile organic compounds, nitrogen oxides, and other air pollutants in these areas from expanded oil and gas production are therefore significant and should be mitigated. Furthermore, the public health risk exposure to toxic air contaminants is greatest near active oil and gas sites.⁴⁹ Since many residents in the Planning Area live near oil and gas activity, any new oil and gas production activity must take into account the health impacts to nearby sensitive receptors.

With regard to drinking water supply and quality, parts of the Planning Area already suffer from some of the worst drinking water contamination problems in the state. According to

⁴⁴ See CalEnviroScreen 3.0, Overall Percentile Score for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 1. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, <https://oehha.ca.gov/calenviroscreen>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. See also OEHHA, *SB 535 Disadvantaged Communities Webpage*, <https://oehha.ca.gov/calenviroscreen/sb535>. Census tracts that are in the top 25 percentile overall in CalEnviroScreen are “disadvantaged communities.” See California Environmental Protection Agency, *Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon)* (April 2017), <https://calepa.ca.gov/wp-content/uploads/sites/6/2017/04/SB-535-Designation-Final.pdf>.

⁴⁵ See CalEnviroScreen 3.0 Ozone Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 2. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Air Quality: Ozone Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/air-quality-ozone>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Ozone causes lung irritation and worsening of chronic health conditions, increases asthma emergency room visits, and can increase mortality. Children are most sensitive to the effects of ozone exposure.

⁴⁶ See CalEnviroScreen 3.0 PM 2.5 Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 3. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Air Quality: PM 2.5 Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/air-quality-pm25>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Particulate matter that is 2.5 micrometers or less in diameter (PM 2.5) causes many serious health effects, including heart and lung disease.

⁴⁷ U.S. EPA, Health Effects of Ozone in the General Population, <https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>; Lim, Chris, et al., *Long-Term Exposure to Ozone and Cause-Specific Mortality Risk in the United States* (2019) at 1027, <https://pubmed.ncbi.nlm.nih.gov/31051079/>.

⁴⁸ American Lung Association, *State of the Air 2025*, <https://www.lung.org/research/sota/city-rankings/states/california/kern>.

⁴⁹ CCST Report, Vol. II at 407-412.

CalEnviroScreen 3.0's Drinking Water Indicator, which combines drinking water quality data for public and non-public drinking water systems, residents in the vast majority of the Planning Area already drink water that contains contamination from chemicals or bacteria.⁵⁰ Residents served by the vast majority of public water systems in California rely on groundwater, and more than 25 percent of those systems rely on a contaminated groundwater source.⁵¹ Kern County in particular has the second highest number of community water systems that rely on contaminated groundwater.⁵² Small community water systems, which serve residents in parts of the Planning Area, typically lack the infrastructure and economies of scale of larger water systems to afford necessary treatment or identification of alternative water supplies for a contaminated groundwater source.⁵³ Furthermore, many residents in the Planning Area rely on private, domestic wells for drinking water that are unregulated, and data available for private wells indicates significant contamination issues in the Planning Area.⁵⁴ Given the scope of the existing drinking water contamination in the Planning Area, any additional impacts from hydraulic fracturing should be identified and mitigated.

The Draft SEIS also fails to account for the close proximity of oil and gas activities to residents. More than three million people are known to live within one kilometer (approximately 3,200 feet) of the State's 83,000 active-producing oil and gas wells.⁵⁵ Compared to the overall California population, Hispanic, non-Hispanic Black, and non-Hispanic Asian communities, as well as populations of lower socioeconomic status, are more likely to live within 1 km (3,281 ft) of at least one active well and live in areas with the highest density of oil and gas wells.⁵⁶ In Kern County alone, as of 2014, 35 percent of the county's residents (290,000) lived within a mile of at least one oil or gas well, and nearly 58 percent of those residents living within a mile of a well were people of color.⁵⁷

⁵⁰ See CalEnviroScreen 3.0 Drinking Water Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 4. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Drinking Water Indicator,

<https://oehha.ca.gov/calenviroscreen/indicator/drinking-water-contaminants>. See also OEHHA, *Methodology for a Statewide Drinking Water Contaminant Indicator* (Jan. 2017), <https://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3dwm methodology.pdf>.

⁵¹ State Water Resources Control Board, *Report to the Legislature: Communities That Rely on a Contaminated Groundwater Source for Drinking Water* (Jan. 2013), <https://www.waterboards.ca.gov/gama/ab2222/docs/ab2222.pdf>.

⁵² *Id.* at 33.

⁵³ *Id.*

⁵⁴ See CalEnviroScreen 3.0 Drinking Water Percentile for Bakersfield Hydrologic Fracturing Planning Area. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Drinking Water Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/drinking-water-contaminants>, attached as Exhibit 4. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided.

⁵⁵ Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making ES-5* (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%20240621.pdf).

⁵⁶ *Id.* at ES-2.

⁵⁷ Natural Resources Defense Council, *Drilling in California: Who's at Risk?* 13-15 (Oct. 2014).

Studies increasingly show links between exposure to oil and gas operations and public health impacts, including cancer, adverse birth outcomes, and preterm births.⁵⁸ Residents living near oil and gas operations can experience acute respiratory, neurological, and gastrointestinal symptoms from exposure to the operations, such as headaches, fatigue, burning eyes and throats, nausea, and nosebleeds.⁵⁹ Residents also experience sleep disturbance from noise levels from oil and gas activity.⁶⁰ A state-commissioned public health expert panel that worked with CalGEM, California's oil and gas regulatory agency, recently released a report affirming that proximity to oil and gas production increases the likelihood of adverse health outcomes, and those outcomes get worse where the density of wells is greater.⁶¹ The report concludes with a "high level of certainty" that there is a causal relationship between close proximity to oil and gas development and negative health impacts, particularly adverse perinatal and respiratory outcomes like reduced fetal growth, preterm birth, asthma, and reduced lung function.⁶² It cites research estimating that, in 2025, nearly 100 premature deaths in California will be attributed to oil and gas pollution.⁶³

⁵⁸ See, e.g., Intrinsik Environmental Sciences Inc., Prepared for British Columbia Ministry of Health *Phase 2- Human Health Risk Assessment of Oil and Gas Activity in Northeastern British Columbia: Task 3 – Literature Review* (April 2013); McKenzie, Lisa M., et al., "Childhood Hematologic Cancer and Residential Proximity to Oil and Gas Development," *PLoS ONE* 12(2):e0170423 (2017), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170423>; Balise, et al., "Systematic Review of the Association between Oil and Natural Gas Extraction Processes and Human Reproduction," *Fertility & Sterility* 106:4 (Sept. 2016) at 795-819, <https://www.sciencedirect.com/science/article/pii/S0015028216625293>; McKenzie, Lisa M., et al., "Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado," *Environmental Health Perspectives* 122 (2014) at 412-417, <https://pmc.ncbi.nlm.nih.gov/articles/PMC3984231/>; Casey, et al., "Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania," *Epidemiology* 27 (2016) at 163-172, <https://pubmed.ncbi.nlm.nih.gov/26426945/>; Li, X., et al., "Association between Ambient Fine Particulate Matter and Preterm Birth or Low Birth Weight: An Updated Systematic Review and Meta-Analysis," *Environmental Pollution* 227 (2017) at 596-605, <https://pubmed.ncbi.nlm.nih.gov/28457735/>; Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making* Chapter 3 (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%2020240621.pdf).

⁵⁹ Webb, et al., "Potential Hazards of Air Pollutant Emissions from Unconventional Oil and Natural Gas Operations on the Respiratory Health of Children and Infants," *Reviews on Environmental Health* 31 (2016) at 225-243, <https://pubmed.ncbi.nlm.nih.gov/27171386/>; Tustin, et al., "Associations between Unconventional Natural Gas Development and Nasal and Sinus, Migraine Headache, and Fatigue Symptoms in Pennsylvania," *Environmental Health Perspectives* 125 (2016) at 189-197, <https://pmc.ncbi.nlm.nih.gov/articles/PMC5289909/>; Los Angeles County Department of Public Health, *Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County* (Feb. 2018), http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf; Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making* Chapter 3 (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%2020240621.pdf).

⁶⁰ Hays, et al., "Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development," *Science of the Total Environment* 580 (Feb. 2017) at 448-456.

⁶¹ Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making* ES-2 – ES-14 (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%2020240621.pdf).

⁶² *Id.* at ES-8.

⁶³ *Id.* at 2-3, 4-17.

The increasing evidence of public health effects for residents exposed to oil and gas activity is particularly concerning in the Planning Area, where many residents already experience the highest rates of cardiovascular disease⁶⁴ and low birth weights⁶⁵ in the state, in addition to the existing significant levels of air and water pollution and high poverty levels. BLM must redo its analysis to consider how the Proposed Action will impact low-income communities and communities of color.

IV. The Draft SEIS Fails to Consider Reasonable Alternatives to the Proposed Action.

The Draft SEIS also fails to consider a reasonable range of alternatives to the Proposed Action. NEPA requires project proponents to provide a “detailed statement” regarding the “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii). The requirement to consider reasonable alternatives “lies at the heart of any NEPA analysis.” *California ex rel. Lockyer v. U.S. Dept. of Agric.*, 459 F. Supp. 2d 874, 905 (N.D. Cal. 2006). The alternatives requirement also “ensures that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance.” *Calvert Cliffs Coordinating Committee v. United States Atomic Energy Commission*, 449 F.2d 1109, 1114 (D.C. Cir. 1971). “The existence of a viable but unexamined alternative renders” an EIS inadequate. *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (internal quotations and citations omitted).

In the Draft SEIS, BLM “brings forward” the same alternatives that it previously considered in the 2012 Final EIS, claiming that the district court “upheld the range of alternatives” in that document. Draft SEIS at ES-1, 1. These alternatives include “No Action” (Alternative A), the Proposed Action to open 1,011,470 acres to fluid mineral leasing (Alternative B), as well as three additional alternatives (Alternatives C-E) that are similar to the Proposed Action but differ slightly in terms of their emphasis on conservation, livestock grazing, or the production of natural resources. *Id.* at 15-16. However, given that the stated purpose of the Draft SEIS is to analyze the environmental impacts of hydraulic fracturing, Draft SEIS at 2, BLM must consider additional alternatives that relate to this purpose and which could potentially reduce the significant impacts of such operations.

⁶⁴ See CalEnviroScreen 3.0 Cardiovascular Rate Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 5. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Cardiovascular Disease Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/cardiovascular-disease>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Cardiovascular disease is linked to exposure to pollution, and the effects of pollution may be greater for people with cardiovascular disease or previous heart attack.

⁶⁵ See CalEnviroScreen 3.0 Low Birth Rate Percentile for Bakersfield Hydraulic Fracturing Planning Area, attached as Exhibit 6. Source data for this map is from the OEHHA CalEnviroScreen 3.0 Tool, Low Birth Weight Infant Indicator, <https://oehha.ca.gov/calenviroscreen/indicator/low-birth-weight-infants>. Updated maps using CalEnviroScreen 5.0 Draft (updated in 2026) are also provided. Low birth weights are linked to exposure to pollution, and low birth weight babies are more likely to die as infants or develop asthma or other chronic diseases later in life when compared to babies who weigh more.

BLM's reliance on the same alternatives that were included in the 2012 Final EIS based on the district court's decision in *Los Padres ForestWatch* misses the mark. In that decision, the district court found that BLM had provided a reasonable justification for excluding "an alternative that would have closed substantially more lands" to oil and gas leasing, given that "nearly all anticipated development is expected to occur on existing leases" and BLM had "properly considered the mix of tools available in its arsenal to balance the competing priorities of developing federal lands and protecting the environment." *Los Padres ForestWatch*, 2016 WL 5172009 at *14.

However, as the district court also stated, "[c]onsideration of reasonable alternatives is necessary to ensure that the Bureau has before it and takes into account all possible approaches to, and potential environmental impacts of, a particular project." *Id.* at *13; *see id.* at *14 (BLM is "obligated to examine reasonable alternatives to mitigate or reduce the overall *environmental impact* and not specifically the overall oil and gas activity on federal lands") (emphasis in original). Given that the court found that BLM must conduct this supplemental EIS to take a "hard look" at the environmental impacts of hydraulic fracturing, simply "bringing forward" the same alternatives from an environmental review that entirely failed to consider such operations precludes BLM from considering approaches that could actually reduce the overall environmental impact of fracking activities, in direct violation of NEPA. In other words, BLM cannot simply "bring[] forward" the same alternatives from a prior, defective review that entirely failed to consider such hydraulic fracturing operations.

Additional alternatives that BLM should consider to mitigate or reduce the environmental impacts of hydraulic fracturing include:

- (1) Clarifying that hydraulic fracturing operations are prohibited in California;
- (2) Limiting the number of hydraulic fracturing operations in a given year;
- (3) Closing more public lands to mineral leasing;
- (4) Placing ecologically sensitive areas off limits to hydraulic fracturing;
- (5) Prohibiting leasing in areas with low or no potential for oil and gas development (this is an alternative that BLM itself evaluated in the Supplemental EIS for the Central Coast Oil and Gas RMP Amendment, *see* Central Coast Draft SEIS at 17-18); and
- (6) Limiting oil and gas development near communities.

Without a consideration of alternatives that are actually related to the environmental consequences of hydraulic fracturing, BLM's alternatives fail to allow for "informed decision-making and informed public participation," in violation of NEPA. *See California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982).

V. BLM Failed to Identify or Discuss Adequate Mitigation Measures

NEPA requires that an agency identify feasible mitigation measures for any adverse environmental impacts resulting from a proposed action and its alternatives. *Robertson*, 490 U.S. at 351-52 ("[O]ne important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences."). Mitigation of environmental impacts must "be

discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *City of Carmel-By-The-Sea v. U.S. Dep’t of Transp.*, 1 123 F.3d 1142, 1154 (9th Cir. 1997) (quoting *Robertson*, 490 U.S. at 353). Moreover, “[a]n essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective.” *S. Fork Band Council of W. Shoshone of Nev. v. U.S. Dep’t of the Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (finding that the EIS violated NEPA by failing to “assess the effectiveness of the mitigation measures relating to groundwater”).

Throughout the Draft SEIS, BLM declines to consider mitigation measures and instead indicates that such measures will be evaluated later in the development process:

- Page 3 – “During this project-specific [APD] review, BLM would finalize project mitigation measures, Best Management Practices (BMPs), and apply appropriate stipulations from the 2014 RMP.”
- Page 28 – “BLM will consider water-quantity risks during APD review . . . Mitigation may be required through design features and enforceable conditions of approval (COA), for example, source-water selection, pumping limits, and metering/monitoring and reporting.”
- Page 29 – “BLM will assess water-quality risks during project-level authorization review . . . Mitigation may be required through design features and enforceable COAs (e.g., produced-water handling and disposal controls, secondary containment, spill prevention/response, and monitoring/reporting).” Coordination with state and federal entities is also deferred to that time.
- Page 57 – “Approval of future development may include the application of BMPs within BLM’s authority, included as COA, to reduce or mitigate GHG emissions. Additional measures proposed at the project development stage may be incorporated as applicant-committed measures by the project proponent or added to necessary air quality permits.”
- Page 58 – Potential impacts to newly proposed for listing or newly listed species “would be mitigated by the CSU stipulations. Site specific review would be conducted at the APD phase, and consultation would be conducted on a case-by-case basis, if needed.”
- Page 58 – “Potential direct and indirect impacts to special status species from hydraulic fracturing activities depend on species occurrence within a potential leasing area and would therefore be further analyzed at the leasing stage and protective measures and lease stipulations would be applied at that stage.”
- Page 60 – “Valley Fever represents a risk to worker safety. However, with the application of appropriate BMPs and adherence to regulatory guidance, the risk is substantially mitigated.”

This deferral of mitigation and best management practices is inappropriate. *S. Fork Band Council*, 588 F.3d at 727; *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998). As the Ninth Circuit has frequently stated in NEPA cases, it is “not appropriate to defer consideration” of impacts to a future date “when meaningful consideration can be given now.” See *Kern v. U.S. BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002). BLM is also in a better position now to evaluate and mitigate impacts that will result from the collective increase

in oil and gas development and hydraulic fracturing enabled by the 2014 RMP than it will be when it considers Approval to Drill (“APD”) applications. For example, air pollution increases that contribute to nonattainment are better assessed holistically rather than when operators seek APDs for one well at a time. Similarly, impacts to special status species from habitat loss cannot be addressed only at the site-specific scale of APDs. Mitigation is especially critical if BLM and operators expect CalGEM to rely on BLM’s Supplemental EIS for approval of oil and gas permits without conducting additional environmental review pursuant to CEQA, as CEQA requires a separate discussion of mitigation measures. *See* Cal. Code Regs., tit. 14, § 15221.

Mitigation Measures Regarding Impacts to Special Status Species and Their Habitats

BLM’s Proposed Action has the potential to adversely impact numerous special-status species and the habitats that support these species. However, the Draft SEIS fails to adequately identify or discuss feasible mitigation measures regarding these adverse impacts. Instead, the Draft SEIS simply refers back to impacts analyzed in the 2012 Final EIS and 2019 Final SEIS and notes that mitigation may be applied during project-specific analyses. *See* Draft SEIS at 58. This treatment of mitigation of species impacts is inadequate.

As CDFW noted in their 2019 comments, “the 2014 RMP does not include mitigation measures, BMPs, or stipulations that are adequate to conserve, protect, and manage” certain special status species and their habitats.⁶⁶ In particular, the mitigation measures included in Appendix 3 of the 2014 RMP (and Appendix L of the 2012 Final EIS) are not specific enough, only cover a small subset of protected species in the Planning Area, and even allow for the take of species that are covered, including the Blunt-nosed Leopard Lizard, San Joaquin Kit Fox, Giant Kangaroo Rat, and San Joaquin Antelope Squirrel. Unauthorized “take” of species is prohibited by state and federal law, and subject to criminal enforcement. *See* Cal. Fish & Game Code §§ 2000, 2080, 12000(a), 12008, 12008.1; *see also* 16 U.S.C. §§ 1532(19), 1538(a).

CDFW in 2019 asked for the inclusion of additional mitigation measures, including: state-recommended survey protocols to avoid the taking of protected species; implementing no-disturbance buffers to minimize ground disturbance; conducting habitat surveys in the Planning Area to proactively protect suitable habitats; ensuring the restoration of normal water flow immediately after disruptive activities to maintain the integrity of streams; and habitat compensation to account for impacts to lands from the Proposed Action. In comments submitted during the Scoping Period in 2025, CDFW identified additional needed mitigation measures, including decreasing impacts of artificial outdoor lighting through installation of only motion sensitive lighting; mounting light fixtures as low as possible to minimize light trespass; use of light fittings that direct and confine the spread of light directly downward; use of long-wavelength light sources; installing lighting only in areas that are not in or near Sensitive Natural Communities and habitats used by special-status species, and avoiding use of the white/blue wavelengths of the light spectrum. BLM’s failure to identify and discuss feasible mitigation

⁶⁶ California Department of Fish and Wildlife, *Comments on DOI-BLM-CA-C060-2018-0082-EIS* (June 6, 2019).

measures in the SEIS regarding sensitive species and their habitat is arbitrary and capricious and contrary to the requirements of NEPA and the APA.

Mitigation Measures Regarding Impacts to Public Health and Safety

BLM has also punted review and mitigation of other issues to the development application stage, despite acknowledging the “potential for [the RMP and subsequent lease sales] to add to a cumulative, disproportionate impact on environmental justice populations.” 2020 Bakersfield Lease Sale Final Environmental Assessment at 71. BLM knows that its Proposed Action will induce more drilling within or near large oil fields in Kern County, for example, that have long established practices and data regarding types of operations, equipment, and other sources of impacts. BLM is also able to determine the exact location of potential lease parcels relative to environmental justice communities. It is therefore appropriate for BLM to analyze and mitigate health and safety impacts on nearby communities now. As discussed, *infra*, BLM should not allow drilling with 3,200 feet of environmental justice communities or any other sensitive locations and should implement relevant safety measures identified in Senate Bill 1137. Relevant measures include leak detection and repair of sites including pipelines, suspension of operations in the event of a leak, vapor venting prevention, water sampling, sound controls, lighting controls, and dust controls. A 2024 public health expert panel report also sets out reasonable mitigation measures even outside of the public health and safety setback zone, including improved air quality monitoring and leak detection that is more specifically tailored to the variety of extraction processes and equipment that produce VOCs, additional setbacks between oil and gas wells and potential sources of drinking water, prohibitions on disposal of produced water into unlined ponds, better access to information about produced water disposal, restriction of chemicals with the greatest health risks, and chemical disclosure requirements.⁶⁷

THE DRAFT SEIS FAILS TO CONSIDER CONFLICTS WITH STATE AND LOCAL POLICIES.

The Draft SEIS fails to properly consider conflicts between the Proposed Action and directly applicable California laws and policies. BLM’s RMPs “shall” be consistent with state and local government resource-related plans, policies, and programs. 43 C.F.R. § 1610.3-2. BLM is “accountable for ensuring consistency if they have [] been notified, in writing, by State and local governments or Indian tribes of an apparent inconsistency” with state policies, plans, and programs. *Id.* To effectuate these requirements, BLM must identify inconsistencies and also provide the Governor the opportunity to identify inconsistencies and provide recommendations. *Id.* BLM must also document how inconsistencies between the proposed plan and state and local plans were “addressed and, if possible, resolved.” *Id.* at § 1610.3-1(f).

BLM has acknowledged that “[a]ll state laws apply on Federal lands, except those that are preempted by Federal law.” 80 Fed. Reg. at 16,179; *see also id.* (the requirement that

⁶⁷ Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making* ES-8 – ES-19, (June 21, 2024), [https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report 20240621.pdf](https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report%2020240621.pdf).

operators “comply with all applicable laws,” “includes other Federal and state and local laws, rules, and regulations,” and is “repeated in the existing regulations at sections 3162.1(a) and 3162.5-1(a).”). Specifically with respect to hydraulic fracturing, operators “must comply” with “any applicable state requirements, just as they already must comply with both BLM rules and state rules on a variety of drilling and completion issues.” *Id.*

NEPA also requires that an agency discuss possible conflicts between the proposed action and state plans or policies. *See, e.g., Quechan Tribe of Ft. Yuma Indian Reservation v. U.S. Dep’t of the Interior*, 927 F. Supp. 2d 921, 946 (S.D. Cal. 2013) (finding that BLM did not violate NEPA where “numerous provisions” in EIS and ROD examined the project’s consistency with local laws and regulations and California determined there were no inconsistencies between the Project and state or local laws). In addition, NEPA requires supplementation when there “are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 372 (1989).⁶⁸

BLM entirely fails to acknowledge relevant new information and changes in circumstances related to state and local laws and policies that address environmental concerns related to oil and gas drilling. Most significantly, the Draft SEIS ignores two state policy developments that significantly affect oil and gas activities in the Planning Area: a ban on hydraulic fracturing and a law establishing a 3,200-foot setback between new and reworked oil and gas wells and all sensitive locations. All oil and gas wells located on lands within California (including federal, state, local, and private lands) are permitted, drilled, operated, maintained, and plugged and abandoned under legal requirements and administrative procedures that CalGEM enforces and administers. CalGEM’s permitting authority and process applies to oilfield operations in California on all land administered by BLM whether that land is owned in total by the federal government or is a “split-estate.”⁶⁹

Regulations prohibiting new permits for well stimulation treatments such as hydraulic fracturing and acid matrix stimulation went into effect in October 2024. Cal. Code Regs., tit 14, § 1780(d). The regulations were developed following a 2020 Executive Order from Governor Newsom announcing that the State would cease issuing fracking permits due to health and safety harms to communities and workers.⁷⁰ Although BLM acknowledges that CalGEM has “regulatory authority over hydraulic fracturing in California,” and that California has a ban on the issuance of new hydraulic fracturing permits, Draft SEIS at 18, there is no affirmation that well stimulation is disallowed in the Planning Area.

⁶⁸ Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (Feb. 2026), <https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing>.

⁶⁹ *See* Public Resources Code §§ 3008, 3013, 3106, 3203, and 3204; Cal. Code of Regs., title 14, §§ 1712, 1714; DOGGR Notice to Operators 2017-03.

⁷⁰ Executive Department, State of California, Executive Order N-70-20, Gavin Newsom (Sept. 23, 2020), <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>.

In 2022, California Senate Bill (“SB”) 1137 established 3,200-foot drilling setback requirements (known as health protection zones) and other statutory requirements, including engineering controls for all wells, to protect the health and safety of adjacent communities, including residences and schools.⁷¹ SB 1137 sets forth a variety of new requirements related to health protection zones and to wells and production facilities based on their location relative to a health protection zone. CalGEM is no longer authorized to approve a notice of intention for any well with a wellhead (i.e., a surface location) situated within a health protection zone, unless a specific exception applies. Cal. Pub. Resources Code, §§ 3281, 3281.5. Construction and operation of new production facilities within a health protection zone is also prohibited unless a specific exception applies. *Id.*, § 3280(b). To implement SB 1137, CalGEM adopted emergency regulations establishing the administrative framework for the statutory prohibition of new wells and facilities within a 3,200-foot setback area from certain sensitive locations.⁷² CalGEM is currently undertaking a rulemaking process to permanently adopt those regulations.⁷³ In addition, by January 1, 2027, operators of oil and gas production wells and production facilities within a health protection zone will be required to submit a leak detection and response plan that contains four key components: installation of a continuously operating emission detection system to provide rapid detection of leaks; an effective and reliable alarm system that alerts the operator of leaks when triggered; a response protocol that provides for the rapid identification and repair of leaks; and provisions for notifying local communities when the leak source cannot be identified or fixed within 48 hours.⁷⁴ There is no acknowledgment in the Draft SEIS that this law exists, let alone any attempt to ensure consistency by evaluating a compliant alternative or mitigation that would apply to wells within 3,200 feet of sensitive receptors. This is despite the fact that CalGEM has created a mapping tool that allows users to easily view the health protection safety zone relative to BLM leases and areas where BLM is the surface management agency (See Exhibit 7).

Other recent regulatory updates directly affect oil and gas operations. In 2019, updated underground injection control regulations went into effect that increase testing, monitoring, and disclosure requirements, as well as set automatic triggers that require operators to cease injections to protect groundwater and public safety. Cal. Code Regs., tit. 14, §§ 1724.5-1724.13. Effective in 2019 and updated in 2025, there are also requirements for testing and elimination of idle wells. Pub. Resources Code, § 3206; Cal. Code Regs., tit. 14, §§ 1772-1772.7. BLM must evaluate if its Proposed Action is consistent with these requirements.

⁷¹ SB 1137, 2022 Leg., Reg. Sess. (Cal. 2022).

⁷² SB 1137 First Emergency Implementation Regulations, Cal. Code Regs., tit. 14, § 1765 et seq., <https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf>.

⁷³ SB 1137 Notice of Proposed Action (Aug. 1, 2025), https://conservation.ca.gov/calgem/Documents/SB%201137%20Notice%20of%20Proposed%20Action%20v2_Clean.pdf.

⁷⁴ California Air Resources Board, *Senate Bill 1137: Establishment of Health Protection Zones, Oil and Gas Production Wells and Production Facilities*, <https://ww2.arb.ca.gov/our-work/programs/senate-bill-1137-establishment-health-protection-zones-oil-and-gas-production>.

There are a number of additional state plans and policies that conflict with BLM's Proposed Action. The use of hydraulic fracturing would open up previously unproductive hydrocarbon formations and extend the life of existing formations, with resulting significant impacts. California has a statutory target of reducing GHG emissions by 40 percent below 1990 levels by 2030, Cal. Health & Safety Code § 38566, and net zero GHG emissions by 2045 (Assembly Bill 1279), *id.* § 38562.2; Executive Order B-55-18. CARB's 2022 Scoping Plan for Achieving Carbon Neutrality lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. This path includes reduction of oil and gas extraction by approximately 89 percent in 2045 from 2022 levels.⁷⁵ Each scenario the California Air Resources Board studied incorporated a phaseout of 90 to 100 percent of oil extraction and oil refining by 2045.⁷⁶ Increasing oil and gas operations and opening new lands to leasing is contrary to and inconsistent with these statutory targets and the 2022 Scoping Plan.

California has also enacted several statutes to protect the state's most disadvantaged communities from air and water pollution, and the expansion of oil and gas activity on federal lands would have a significant adverse impact on the state's ability to meet these goals. California State Assembly Bill 617 (2017) created a California Air Resources Board ("CARB") Community Air Protection Program that is focused on reducing exposure in communities most impacted by air pollution.⁷⁷ CARB selected its initial ten communities for focused emissions reduction and air monitoring in 2018, two of which are located in the Planning Area: Shafter and South Central Fresno.⁷⁸ CARB selected Arvin/Lamont as an additional community for focused air emissions reduction in the Planning Area.⁷⁹ The San Joaquin Valley Air Pollution Control District has adopted emissions reduction programs for this community.⁸⁰ The ability of the state to meet emissions reduction program goals in the Planning Area will be inhibited by and is inconsistent with BLM's Proposed Action.

CARB also created a Study of Neighborhood Air near Petroleum Sources ("SNAPS") to better understand air quality in communities near oil and gas operations.⁸¹ This project informs the Community Air Protection Program and state policy around air emissions in these

⁷⁵ California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality* 102 (Nov. 16, 2022), <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>.

⁷⁶ *Id.* at 24, Table 1.

⁷⁷ California Air Resources Board, *Community Air Protection Blueprint* (Oct. 2018), https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf.

⁷⁸ California Air Resources Board, *Community Air Protection Program, 2018 Community Recommendations Staff Report* 7 (Sept. 11, 2018), https://ww2.arb.ca.gov/sites/default/files/2018-09/2018_community_recommendations_staff_report_revised_september_11.pdf.

⁷⁹ California Air Resources Board, *Selected Communities in the Program*, <https://ww2.arb.ca.gov/capp/com/selected-communities-in-the-program>.

⁸⁰ *Arvin/Lamont Community Emissions Reduction Program* (June 16, 2022), https://community.valleyair.org/media/4014/6-final_arvinlamont-cerp_610.pdf (identifying as measures rules for crude oil production sumps and leak detection and repair rules for oil and gas industrial processes).

⁸¹ California Air Resources Board, *Study of Neighborhood Air near Petroleum Sources (SNAPS) Fact Sheet* (Feb. 2019), https://ww2.arb.ca.gov/sites/default/files/2019-02/SNAPS_QA_2-6-19.pdf.

communities. The first community selected by CARB for an intensive air monitoring study, Lost Hills, is in the Planning Area, and monitoring commenced in May 2019.⁸² The final report summarizing the findings of the study noted that “Oil and gas-related sources are also a major source category impacting Lost Hills,” and recommended additional inspections of oil and gas facilities.⁸³ The Draft SEIS and any future BLM decision-making should consider the results from this study.

There are also several state water laws and policies that are largely ignored by the Draft SEIS. In 2012, California enacted Water Code section 106.3, making California the first state in the nation to recognize the human right to water.⁸⁴ Water Code section 106.3 established the state’s policy that every person has the right to safe, clean, affordable, and accessible water adequate for drinking, cooking, and sanitary purposes.⁸⁵ Thus, preventing and addressing discharges that could threaten human health by contributing to contamination of drinking water sources are among the state’s highest priorities. The California Sustainable Groundwater Management Act, enacted in 2014, also requires implementation of groundwater sustainability plans to avoid undesirable groundwater impacts and mitigate overdraft within 20 years. Cal. Water Code § 10720 *et seq.* As discussed above, many of the disadvantaged and marginalized communities residing in the Planning Area do not have access to clean, safe, and affordable water.⁸⁶ In addition, there are potentially significant impacts to groundwater from contamination, overdraft, and land subsidence resulting from the Proposed Action, which would compound the significant water contamination and overdraft issues many communities in the Planning Area are already dealing with. Thus, any risk of additional contamination or reduction in water supplies resulting from hydraulic fracturing on BLM lands is significant and would be inconsistent with the state’s laws and policies.

The Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) is another source of inconsistency. The MBHCP required that many acres of habitat within the Planning Area be protected in perpetuity; these lands were acquired and then transferred to California Department of Fish and Wildlife ownership as permanent compensatory habitat mitigation to offset the impacts of past development activities within the MBHCP planning boundary. *See* Fish & G. Code § 2050 *et seq.*; 14 Cal. Code Regs. §§ 550, 550.5, 630. These MBHCP mitigation lands, and specifically those within Kern County in the California Department of Fish and Wildlife’s Lokern and Semitropic Ecological Reserves (14 Cal. Code Regs. § 630(b)(78), (124)), support species that are critically imperiled and whose range does not extend much beyond the

⁸² California Air Resources Board, *Lost Hills Air Monitoring Plan (SNAPS)* (May 2019), <https://ww2.arb.ca.gov/resources/documents/lost-hills-air-monitoring-plan-snaps>.

⁸³ California Air Resources Board, *SNAPS Lost Hills Summary Report* (Oct. 2025), https://ww2.arb.ca.gov/sites/default/files/2025-10/SNAPS_Lost_Hills_Summary_Report.pdf.

⁸⁴ California State Assembly Bill 685 (2012).

⁸⁵ *California State Water Resources Control Board*, Resolution No. 2016-0010; *California Regional Water Quality Control Board, Central Valley Region*, Resolution R5-2016-0018.

⁸⁶ *See also* University of California, Berkeley School of Law, International Human Rights Law Clinic, *The Human Right to Water Bill in California: An Implementation Framework for State Agencies* (May 2013), https://www.law.berkeley.edu/files/Water_Report_2013_Interactive_FINAL%281%29.pdf.

boundaries of the Southern San Joaquin Valley. The Draft SEIS does not discuss the MBHCP and potential direct and indirect impacts to MBHCP mitigation lands from the Proposed Action.

BLM must revise the Draft SEIS to properly consider conflicts between the Proposed Action and relevant state and local laws and policies.

BLM FAILS TO SUPPLEMENT ITS ANALYSIS TO ACCOUNT FOR NEW CIRCUMSTANCES AND INFORMATION

After nearly a decade and a half, BLM's 2012 EIS needs a refresh that goes beyond addressing the specific deficiencies addressed by the court in *Los Padres ForestWatch v. U.S. Bureau of Land Mgmt.*, 2016 WL 5172009 (C.D. Cal. Sept. 6, 2016). Post-decision supplemental impact statements are not "expressly addressed in NEPA," but the U.S. Supreme Court has held that they are sometimes necessary given the statute's approach to environmental protection and concern with preventing uninformed agency action. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 370-71 (1989). Supplementation is required: "[1] If there remains 'major Federal action' to occur," and [2] if there are significant new circumstances or information relevant to environmental concerns that will "affect the quality of the human environment" in a significant manner or to a significant extent not already considered." *Id.* at 372-74 (quoting 42 U.S.C. § 4332(2)(C))⁸⁷.

BLM claims that its Draft SEIS was prepared to "determine whether changes are needed to the fluid minerals decisions in the 2014 RMP based on new information or changes in circumstance." Draft SEIS at ES-1. However, statements elsewhere confirm that BLM was not open to considering any changes except those related to "analyz[ing] the environmental effects of hydraulic fracturing technology for oil and gas leasing and development of new leases within the Planning Area." Draft SEIS at ES-1. For example, the notice of intent stated that: "Only those portions of the existing plan that need to be updated to respond to the issues and management concerns *identified in the court order and settlement agreement* will be reviewed. 90 Fed. Reg. 26,605, 26,605 (emphasis added).

Given the time that has lapsed since BLM prepared the 2014 RMP, 2012 Final EIS, and 2019 Final SEIS, additional significant new information and circumstances have emerged that will "affect the quality of the human environment" in a significant manner or to a significant extent not already considered.

This significant new information includes unacknowledged data and studies detailed in this comment above. In particular:

⁸⁷ See also Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (2026), <https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing>.

Public Health

- Information presented by the Public Health Rulemaking Scientific Advisory Panel that worked with CalGEM prior to the passage of SB 1137. This information included a response to questions and report detailing that: (1) proximity to oil and gas production increases the likelihood of adverse health outcomes—particularly adverse perinatal and respiratory outcomes like reduced fetal growth, preterm birth, asthma, and reduced lung function—and those outcomes get worse where the density of wells is greater; (2) oil and gas development is responsible for the majority emissions of multiple of toxic air contaminants in the San Joaquin Valley; and (3) science strongly supports the need for health and safety setbacks for communities in close proximity to oil and gas development. The Panel also concluded that there is support for improved air quality monitoring and leak detection that is more specifically tailored to the variety of extraction processes and equipment that produce VOCs, additional setbacks between oil and gas wells and potential sources of drinking water, prohibitions on disposal of produced water into unlined ponds, better access to information about produced water disposal, restriction of chemicals with the greatest health risks, and chemical disclosure requirements.
- Information about where health and safety setbacks are located within the State.

Air Quality and GHG Emissions

- Information about emissions of significant air pollution from oil and gas operations, particularly sulfur oxides, hydrogen sulfide, volatile organic compounds, particulate matter, and toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane, and hydrogen sulfide.
- Information about GHG emissions associated with hydraulic fracturing.
- Information about the significant consequences of climate change, which led the State of California to pass laws setting GHG reduction targets and adopt a Scoping Plan with a path to reduce oil and gas extraction by approximately 90 percent by 2045.

Water Quality and Quantity

- Information about the prevalent use of unlined ponds in the Central Valley to store produced water, and that water in these ponds can contain hazardous chemicals that can threaten water supplies.
- Information about the need to analyze water quality and supply issues on a localized level.
- Information linking injection of hydraulic fracturing waste fluids to subsidence and seismic activity.

Cumulative Impacts

- Information about cumulative impacts from oil and gas operations, including from conventional and enhanced oil recovery operations on BLM lands in the Planning Area, the Central Coast RMP Amendment and Supplemental EIS for Oil and Gas Leasing, and Kern County's resumption of oil and gas development permitting.

Environmental Justice

- o Information about the proximity of areas open for leasing to particular environmental justice communities, and about the increased health burdens from living near oil and gas activity.

Significant new circumstances include changes in state law and changes in oil and gas development in the broader Planning Area. First, with respect to state law, BLM ignores that CalGEM permits are required for operators to drill or hydraulically fracture wells in California. Hydraulic fracturing was entirely phased out by CalGEM regulations that went into effect on October 1, 2024, Cal. Code Regs. tit. §1780(d), and CalGEM may not approve a notice of intention for any well with a wellhead situated within the 3,200-foot health protection zone, Cal. Pub. Resources Code, §§ 3281, 3281.5. BLM does not acknowledge these changes or make any attempt to conform its Proposed Action to comport with them. BLM also ignores California's climate plans and other state laws and policies discussed above.

Second, with respect to changes in oil and gas development in the Planning Area, BLM's analysis fails to account for cumulative air pollutant and GHG emissions from wells on existing leases, private and state land in the planning area, and BLM's nearby Central Coast Field Office RMP Amendment. BLM also fails to consider the use of enhanced oil recovery ("EOR") methods in recent years. These methods present environmental concerns not sufficiently addressed in the Draft SEIS or earlier EISs it is supplementing. The California Energy Commission explained in 2021 that EOR is a process of injecting pressurized steam into oil reservoirs to thin heavy oil and increase the flow and the amount of recoverable crude oil.⁸⁸ Steamflooding uses wells to inject steam that will heat up the oil and allow it to flow to an extraction well. Cyclic steaming injects steam into an oil well, leaves it in place to soak, then pumps the steam out before crude is extracted. Steam is generated using boilers or combined heat and power, which are fueled by natural gas. Steamflooding and cyclic steaming increase the amount of recoverable crude oil from fields with heavy crudes, like those typically found in California. These techniques are needed to extend the life of production wells, particularly given that California has some of the nation's oldest oil wells. According to a 2017 International Energy Agency survey, 96.5 percent of thermal EOR performed in the United States is performed in California and approximately 77 percent of California's oil production comes from fields with steam wells.⁸⁹ In particular, EOR occurs in Fresno, Kern, San Luis Obispo, Santa Barbara, and Ventura Counties. Lost Hills, which is an oil field BLM identified as a "likely place for locating new wells on new federal oil and gas leases" in the Planning Area, Draft SEIS at 6, has the fifth highest number of EOR wells in California.⁹⁰ EOR has the potential to significantly impact water quantity, and also increases the impacts already associated with oil and gas development because EOR extends oil and gas development in areas where it would otherwise cease. Related to water quantity, EOR utilizes significantly more water than well stimulation.⁹¹

⁸⁸ California Energy Commission, *Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery* (Dec. 2021), https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ CCST Summary Report at 18, CCST Report, Vol. II at 61.

In 2013, the total volume of water injected by operators for EOR totaled 443 million cubic meters (360,000 acre-feet).⁹² This compares to about 1 million cubic meters (800 acre-feet) per year for hydraulic fracturing.⁹³ EOR also generates more air pollution and GHG emissions.⁹⁴

The court in *ForestWatch v. United States Bureau of Land Mgmt.*, No. CV154378MWFJEMX, 2016 WL 5172009 (C.D. Cal. Sept. 6, 2016), found that plaintiffs had waived claims that EOR techniques carried potentially harmful environmental impacts that were not considered in the 2012 Final EIS because they had not identified any documents or information about the harms of EOR in the comment period to make BLM aware of the issue. *Id.* at *10. Since 2016, BLM has been made aware of this issue, requiring BLM to supplement its analysis to consider the possible significant environmental harms from EOR.

BLM FAILED TO PROVIDE AN ADEQUATE OPPORTUNITY FOR PUBLIC COMMENT AND IGNORED SCOPING COMMENTS IT RECEIVED

The public is entitled to meaningful opportunities to participate in and comment on the preparation of BLM's planning activities. 43 C.F.R. § 1610.2(e). Accordingly, BLM is required to provide a 90-day public comment period for a draft EIS relating to a RMP, and it is expected to circulate a supplemental EIS in the same fashion as a draft EIS. 43 C.F.R. § 1610.2(e); BLM NEPA Handbook H-1790-1 at 102.

BLM provided the public with 49 days to comment on the Draft SEIS from when the EPA posted the Notice of Availability,⁹⁵ then extended the deadline to 56 days.⁹⁶ Even if counting from the date the notice was posted in the federal register by the Department of Interior,⁹⁷ the comment period was 59 days, not the full 90 days required by BLM's own regulations and NEPA handbook.

BLM also failed to adequately consider comments it received during the scoping period. For example, the Public Scoping Summary Report indicates that many comments submitted during the scoping period addressed "other laws" that BLM should consider for consistency when deciding whether to amend the RMP and how to supplement the EIS. Several of these comments addressed SB 1137, yet the Draft SEIS never mentions SB 1137. Comments from state agencies addressed changes in state laws and policies, requested that impacts to certain

⁹² CCST Report, Vol. II at 59.

⁹³ CCST Summary Report at 18.

⁹⁴ CCST Report, Vol. II at 40; *see also* Millemann, et al, "Enhanced oil recovery: Environmental issues and state regulatory programs," *Environment International* 7:3 (1979) at 165-177, <https://www.sciencedirect.com/science/article/pii/0160412082901039?via%3Dihub>.

⁹⁵ 91 Fed. Reg. 2131, 2131 (Jan. 16, 2026) (start date of January 16, end date of March 6).

⁹⁶ BLM, National NEPA Register, *Bakersfield Office Oil and Gas Leasing and Development Supplemental EIS*, <https://eplanning.blm.gov/Project-Home/?id=270babe9-a7f2-f011-8406-001dd802fdea> (noting comment deadline of March 13); 91 Fed. Reg. 5474, 5474.

⁹⁷ 91 Fed. Reg. 1330, 1331 (Jan. 13, 2026) (noting deadline of 45 days following the date the EPA publishes the Notice of Availability).

special status species and recreational areas be evaluated, and provided information on state water resources. These comments and issues were also not addressed in the Draft SEIS.

BLM'S FAILURE TO CONSULT WITH THE U.S. FISH AND WILDLIFE SERVICE VIOLATES THE ENDANGERED SPECIES ACT

The ESA provides that, “[e]ach federal agency shall ... insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species.” 16 U.S.C. § 1536(a)(2).

Section 7 of the ESA establishes an interagency consultation process to assist federal agencies in complying with their duty to ensure against jeopardy to listed species or destruction or adverse modification of critical habitat. An agency must initiate consultation with the U.S. Fish and Wildlife Service (“FWS”) whenever it takes an action that “may affect” a listed species or its critical habitat. *See* 50 C.F.R. § 402.14(a). Agencies also must consult with FWS “on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under [ESA Section 4] or result in the destruction or adverse modification of critical habitat proposed to be designated for such species.” 16 U.S.C. § 1536(a)(4); *see also* 50 C.F.R. § 402.10.

“The minimum threshold for an agency action to trigger consultation with FWS is low.” *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 496 (9th Cir. 2011). “Section 7(a)(2) consultation is required so long as a federal agency retains ‘some discretion’ to take action for the benefit of a protected species.” *Nat. Res. Def. Council v. Jewell*, 749 F.3d 776, 784 (9th Cir. 2014) (en banc). “Actions that have any chance of affecting listed species or critical habitat—even if it is later determined that the actions are ‘not likely’ to do so—require at least some consultation under the ESA.” *Karuk Tribe v. U.S. Forest Serv.*, 681 F.3d 1006, 1027 (9th Cir. 2012) (en banc). Even effects that are mitigated or “trivial” may meet the ‘may affect’ threshold. *Swan View Coal. v. Weber*, 52 F. Supp. 3d 1133, 1145–47 (D. Mont. 2014).

The amendment of an RMP is an “agency action” to which the obligation to consult applies if the amendment “may affect” listed species. 50 C.F.R. § 402.02; *All. for the Wild Rockies v. United States Dep’t of Agric.*, 772 F.3d 592, 598-99 (9th Cir. 2014); citing *Lane Cty. Audubon Soc’y v. Jamison*, 958 F.2d 290, 293 (9th Cir. 1992) (BLM land use plans that designate areas for particular uses are agency action to which section 7 applies); *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1055 (9th Cir. 1994).

BLM accordingly cannot make a decision unless and until it consults with FWS regarding protected species in the Bakersfield Field Office Planning Area. It is particularly important for BLM to consult with FWS regarding the species listed and provided candidate status since 2019, including the Fisher, Kern Canyon slender salamander, monarch butterfly, Northwestern pond turtle, and Southwestern pond turtle, and their critical habitat. BLM did not evaluate impacts to these five species, dismissing out hand potential impacts because BLM claims that proposed or designated critical habitat does not occur in relevant lease areas or the

supplemental analysis areas, which represent just a fraction of unleased lands in the planning Area. Draft SEIS at 6, 26. BLM's finding of non-occurrence is elsewhere contradicted when BLM states that "monarch butterflies may occur within the lease parcels" due to the prevalence of the milkweed plant. *Id.* at 27.

CONCLUSION

Given the serious deficiencies in the Draft SEIS, BLM should withdraw its current proposal, circulate an RMP amendment or revision, and prepare a new analysis that fully considers the environmental impacts of opening over one million acres of public lands in California to oil and gas leasing.

Sincerely,

A handwritten signature in black ink, appearing to read "Elizabeth Jones", with a stylized, cursive script.

ELIZABETH JONES
Deputy Attorney General
ABIGAIL BLODGETT
Supervising Deputy Attorney General

For ROB BONTA
 California Attorney General

**Index of Materials Submitted in Support of Comments of the California Attorney General
on the Bureau of Land Management, Bakersfield Field Office Oil and Gas Leasing and
Development Draft Supplemental Environmental Impact Statement
DOI-BLM-CA-C060-2025-0053-RMP-EIS**

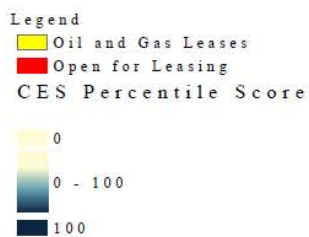
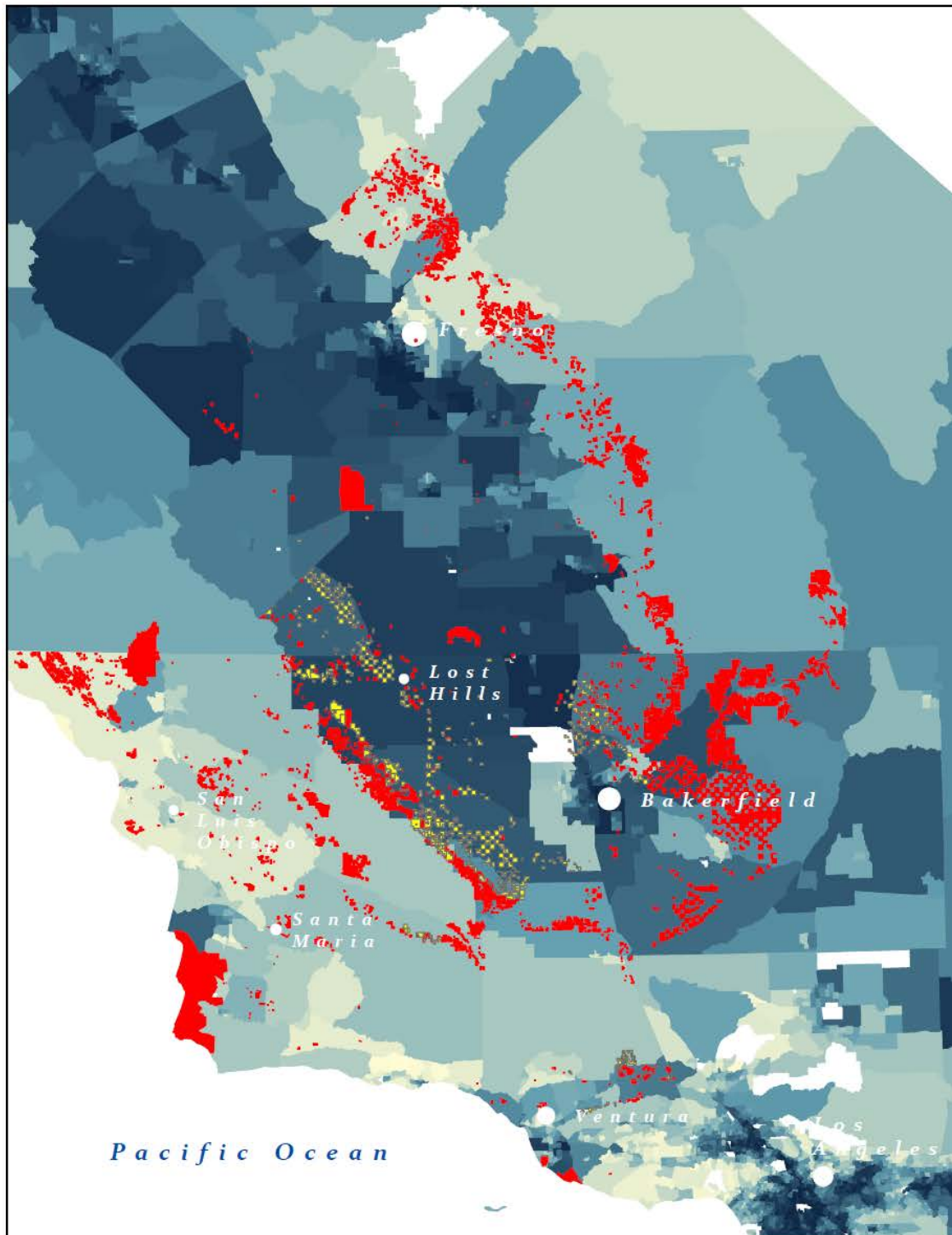
No.	Description
1	California Department of Fish and Wildlife, Comments on DOI-BLM-CA-C060-2018-0082-EIS (June 6, 2019)
2	California Attorney General, Comments on DOI-BLM-CA-C060-2018-0082-EIS (June 10, 2019)
3	California EPA, Comments on DOI-BLM-CA-C060-2018-0082-EIS (June 10, 2019)
4	State of California and California Air Resources Board, Comments on DOI-BLM-CA-C060-2020-0120-EA (Sept. 25, 2020)
5	California Department of Fish and Wildlife, Comments on DOI-BLM-CA-C060-2020-0120-EA (Sept. 25, 2020)
6	State of California and California Agency Protest Letter (Nov. 9, 2020)
7	American Lung Association, State of the Air 2025, https://www.lung.org/research/sota/city-rankings/states/california/kern
8	Arvin/Lamont Community Emissions Reduction Program (June 16, 2022), https://community.valleyair.org/media/4014/6-final_arvinlamont-cerp_610.pdf
9	Balise, et al., “Systematic Review of the Association between Oil and Natural Gas Extraction Processes and Human Reproduction,” <i>Fertility & Sterility</i> 106:4 (Sept. 2016), https://www.sciencedirect.com/science/article/pii/S0015028216625293
10	Xuewei Bao and David W. Eaton, “Fault activation by hydraulic fracturing in western Canada,” <i>Science</i> 354:6318 (2016), https://science.sciencemag.org/content/354/6318/1406
11	BLM, Proposed Resource Management Plan Amendment and Final Environmental Impact Statement for Oil and Gas Leasing and Development, Central Coast Planning Area (May 2019)
12	BLM, 2023 Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends (Aug. 2024), https://www.blm.gov/sites/default/files/docs/2025-04/BLM-2023-Base-GHG-Report.pdf
13	BLM NEPA Handbook H-1790-1
14	Brandt, A., Millstein, D., Jin, L., & Englander, J., Air Quality Impacts from Well Stimulation (2015), https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf
15	California Air Resources Board, Community Air Protection Blueprint (Oct. 2018), https://ww2.arb.ca.gov/sites/default/files/2018-10/final_community_air_protection_blueprint_october_2018.pdf
16	California Air Resources Board, Community Air Protection Program, 2018 Community Recommendations Staff Report (Sept. 11, 2018), https://ww2.arb.ca.gov/sites/default/files/2018-09/2018_community_recommendations_staff_report_revised_september_11.pdf
17	California Air Resources Board, Lost Hills Air Monitoring Plan (SNAPS) (May 2019) https://ww2.arb.ca.gov/resources/documents/lost-hills-air-monitoring-plan-snaps
18	California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022), https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf
19	California Air Resources Board, SNAPS Lost Hills Summary Report (Oct. 2025), https://ww2.arb.ca.gov/sites/default/files/2025-10/SNAPS_Lost_Hills_Summary_Report.pdf
20	California Air Resources Board, Selected Communities in the Program, https://ww2.arb.ca.gov/capp/com/selected-communities-in-the-program .
21	California Air Resources Board, Senate Bill 1137: Establishment of Health Protection Zones, Oil and Gas Production Wells and Production Facilities, https://ww2.arb.ca.gov/our-work/programs/senate-bill-1137-establishment-health-protection-zones-oil-and-gas-production

22	California Air Resources Board, Study of Neighborhood Air Near Petroleum Sources (SNAPS) Fact Sheet (Feb. 2019) https://ww2.arb.ca.gov/sites/default/files/2019-02/SNAPS_QA_2-6-19.pdf
23	California Energy Commission, Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery (Dec. 2021), https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf
24	California EPA, Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon) (April 2017), https://calepa.ca.gov/wp-content/uploads/2017/04/SB-535-Designation-Final.pdf
25	Cal. Executive Department, Executive Order N-70-20, Gavin Newsom (Sept. 23, 2020), https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf
26	Cal OEHHA, Methodology for a Statewide Drinking Water Contaminant Indicator (January 2017), https://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3dwm methodology.pdf
27	Cal OEHHA, SB 535 Disadvantaged Communities Webpage, https://oehha.ca.gov/calenviroscreen/sb535
28	Cal. State Water Resources Control Board, Report to the Legislature: Communities That Rely on a Contaminated Groundwater Source for Drinking Water (January 2013), https://www.waterboards.ca.gov/gama/ab2222/docs/ab2222.pdf
29	Cal State Water Resources Control Board, Resolution No. 2016-0010
30	Cal. State Water Resources Control Board, Produced Water Ponds Status Report: January 31, 2019, https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/docs/pwpondsreport_january 2019.pdf .
31	CalGEM Notice to Operators 2017-03.
32	CalGEM, SB 1137 Notice of Proposed Action (Aug. 1, 2025), https://conservation.ca.gov/calgem/Documents/SB%201137%20Notice%20of%20Proposed%20Action%20v2_Clean.pdf
33	CalGEM, Senate Bill 237, https://www.conservation.ca.gov/calgem/Pages/SB237.aspx
34	CalGEM, SB 1137 First Emergency Implementation Regulations, Cal. Code Regs., tit. 14, § 1765 et seq., https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf
35	Casey, et al., “Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania,” <i>Epidemiology</i> 27 (2016), https://pubmed.ncbi.nlm.nih.gov/26426945/
36	California Council on Science and Technology, An Independent scientific Assessment of Well Stimulation in California: Summary Report (July 2015)
37	California Council on Science and Technology, An Independent Scientific Assessment of Well Stimulation in California, Vol. II (2015), http://ccst.us/projects/hydraulic_fracturing_public/SB4.php
38	California Council on Science and Technology, An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report (July 2022), https://www.psehealthyenergy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf
39	Central Valley Regional Water Quality Control Board, Pond List (Feb. 2021), https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/2021_0211_pondlist.pdf
40	Central Valley Regional Water Quality Control Board, Oil Field Pond 13267 Order Responses, Information Requested by 13267 Order, Lost Hills Oil Field (June 16, 2015) https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/aera_energy/2015_0616_com_lost_hills.pdf
41	California Regional Water Quality Control Board, Central Valley Region, Resolution R5-2016-0018

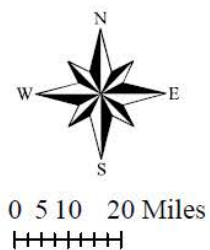
42	Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (2026), https://www.doi.gov/document-library/handbook/516-dm-1-handbook-national-environmental-policy-act-implementing
43	EPA, Hydraulic Fracturing for Oil and Gas Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United State, Executive Summary (Dec. 2016), https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf
44	Gentner et al., “Emissions of Organic Carbon and Methane from Petroleum and Dairy Operations in California’s San Joaquin Valley,” <i>Atmos. Chem. Phys.</i> 14 (2014), at 4971, https://doi.org/10.5194/acp-14-4955-2014
45	Goebel, T. H. W., et al, “Wastewater disposal and earthquake swarm activity at the southern end of the Central Valley, California,” <i>Geophys. Res. Lett.</i> 43 (2016), https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1002/2015GL066948
46	Hays, et al., “Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development,” <i>Science of the Total Environment</i> (Feb. 2017).
47	Intrinsik Environmental Sciences Inc., Prepared for British Columbia Ministry of Health Phase 2- Human Health Risk Assessment of Oil and Gas Activity in Northeastern British Columbia: Task 3 – Literature Review (April 2013)
48	Kern County Planning & Community Development Department, Supplemental Recirculated Environmental Impact Report for Revisions to the Kern County Zoning Ordinance, (Oct. 2020) https://psbweb.kerncounty.com/UtilityPages/Planning/EIRS/OG_SREIR/aVol1/Oil_Gas_SREIR_Oct%202020_Vol%201_04.03_Air%20Quality.pdf
49	Los Angeles County Department of Public Health, Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County (Feb. 2018), http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf
50	Li, X., et al., “Association between Ambient Fine Particulate Matter and Preterm Birth or Low Birth Weight: An Updated Systematic Review and Meta-Analysis,” <i>Environmental Pollution</i> 227 (2017), https://pubmed.ncbi.nlm.nih.gov/28457735/
51	Lim, Chris, et al., Long-Term Exposure to Ozone and Cause-Specific Mortality Risk in the United States (2019), at 1027, https://pubmed.ncbi.nlm.nih.gov/31051079/
52	McKenzie, Lisa M., et al., “Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado,” <i>Environmental Health Perspectives</i> 122 (2014), https://pmc.ncbi.nlm.nih.gov/articles/PMC3984231/
53	McKenzie, Lisa M., et al., “Childhood Hematologic Cancer and Residential Proximity to Oil and Gas Development,” <i>PLoS ONE</i> 12(2):e0170423 (2017), https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170423
54	Milleman, et al, “Enhanced oil recovery: Environmental issues and state regulatory programs,” <i>Environment International</i> 7:3 (1979), https://www.sciencedirect.com/science/article/pii/0160412082901039?via%3Dihub
55	Natural Resources Defense Council, Drilling in California: Who’s at Risk? (October 2014)
56	Natural Resources Defense Council, Fracking Fumes (Dec. 2014), https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf
57	SB 1137, 2022 Leg., Reg. Sess. (Cal. 2022).
58	Shonkoff et al., Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel (Oct. 2021), https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf
59	Shonkoff et al, Public Health Dimensions of Upstream Oil and Gas Development in California and Synthesis to Inform Science-Policy Decision Making (June 21, 2024), https://www.conservation.ca.gov/calgem/Documents/Public Health Panel Final Report_20240621.pdf

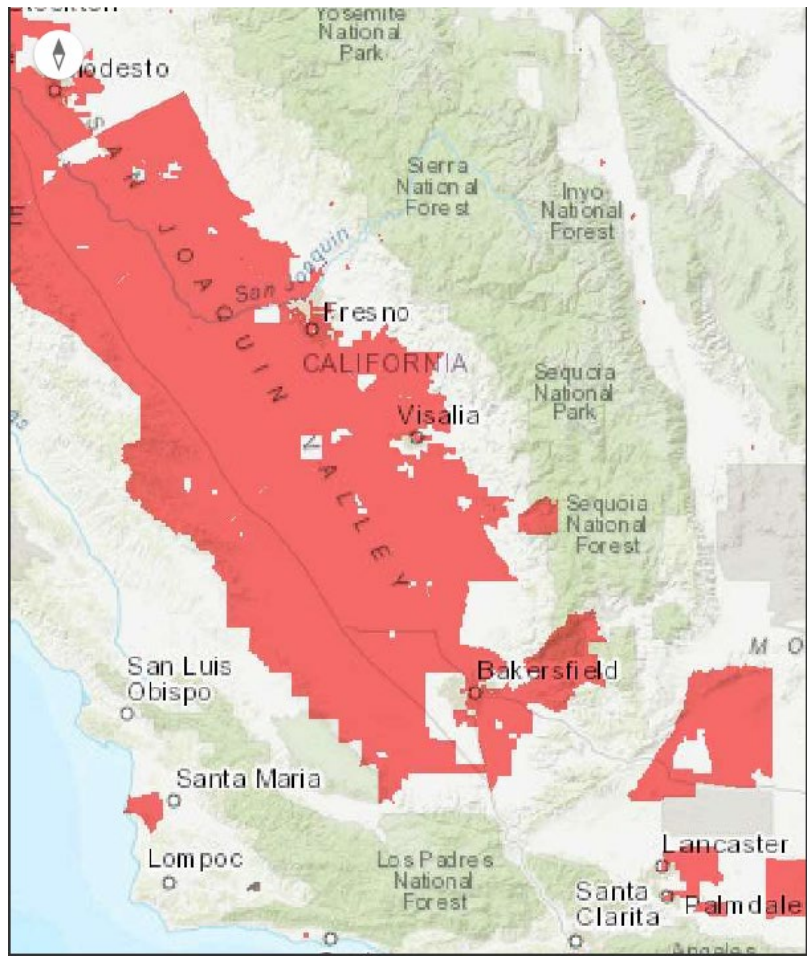
60	San Joaquin Valley Air Pollution Control District, Ambient Air Quality Standards & Attainment Status https://www.valleyair.org/air-quality-information/ambient-air-quality-standards-valley-attainmnet-status/
61	Skoumal, R.J., et al., “Earthquakes Induced by Hydraulic Fracturing in Poland Township, Ohio,” <i>Bulletin of the Seismological Society of America</i> 105:1 (2015), https://doi.org/10.1785/0120140168
62	Skoumal, R. J., et al., “Earthquakes induced by hydraulic fracturing are pervasive in Oklahoma,” <i>Journal of Geophysical Research: SolidEarth</i> 123:12 (2018), https://doi.org/10.1029/2018JB016790
63	Tustin, et al., “Associations between Unconventional Natural Gas Development and Nasal and Sinus, Migraine Headache, and Fatigue Symptoms in Pennsylvania,” <i>Environmental Health Perspectives</i> 125 (2016), https://pmc.ncbi.nlm.nih.gov/articles/PMC5289909/
64	University of California, Berkeley School of Law, International Human Rights Law Clinic, The Human Right to Water Bill in California: An Implementation Framework for State Agencies (May 2013), https://www.law.berkeley.edu/files/Water_Report_2013_Interactive_FINAL%281%29.pdf
65	U.S. Environmental Protection Agency, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary, https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf
66	U.S. Environmental Protection Agency, National Emissions Inventory Online, 2020 NEI Data Retrieval Tool, https://www.epa.gov/air-emissions-inventories/2020-air-emissions-data
67	U.S. EPA, Health Effects of Ozone in the General Population, https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population
68	Webb, et al., “Potential Hazards of Air Pollutant Emissions from Unconventional Oil and Natural Gas Operations on the Respiratory Health of Children and Infants,” <i>Reviews on Environmental Health</i> (2016), https://pubmed.ncbi.nlm.nih.gov/27171386/

Exhibit 1



CalEnviroScreen 3.0 Overall Percentile Score for Bakersfield Hydraulic Fracturing Planning Area



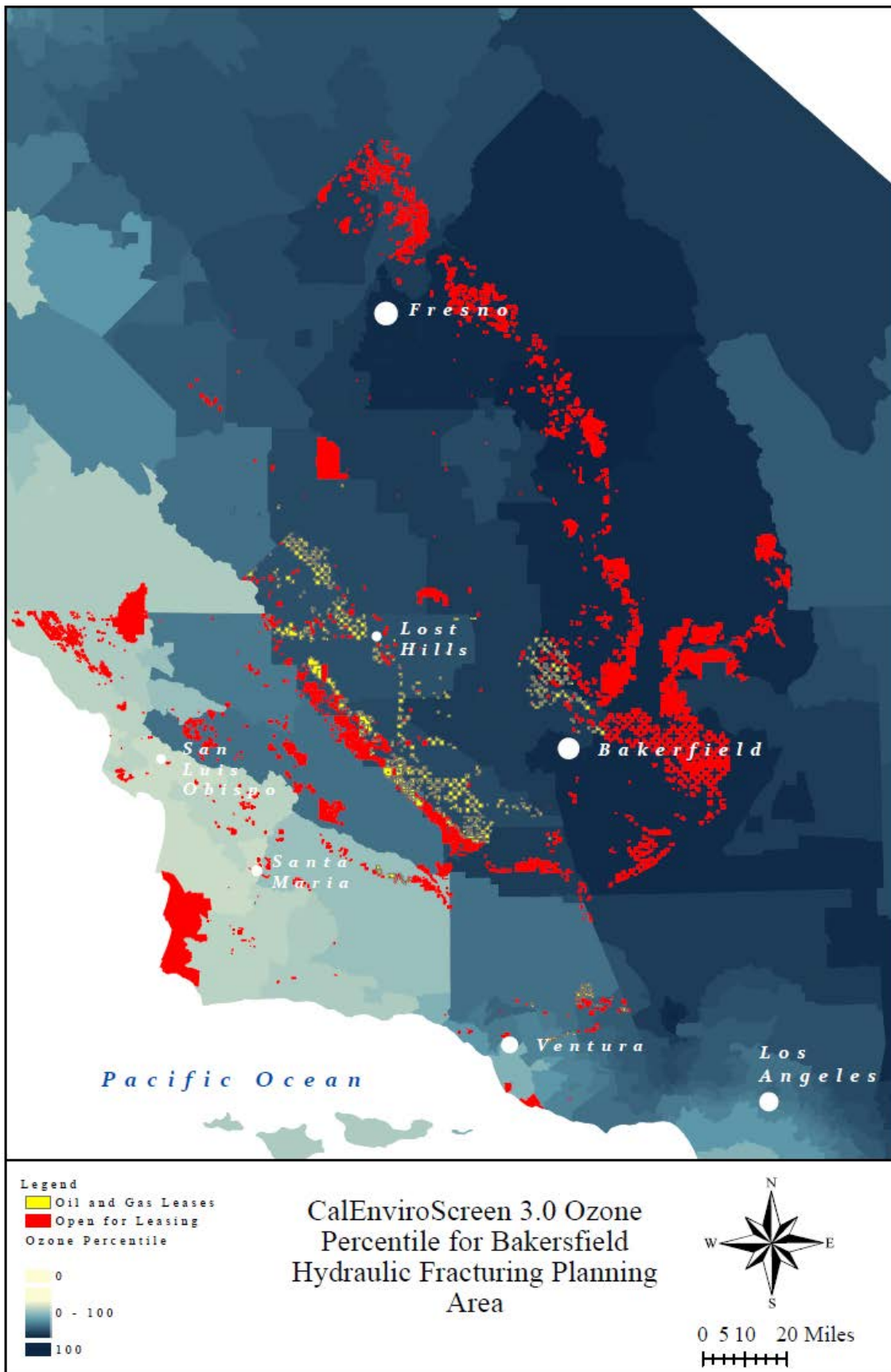


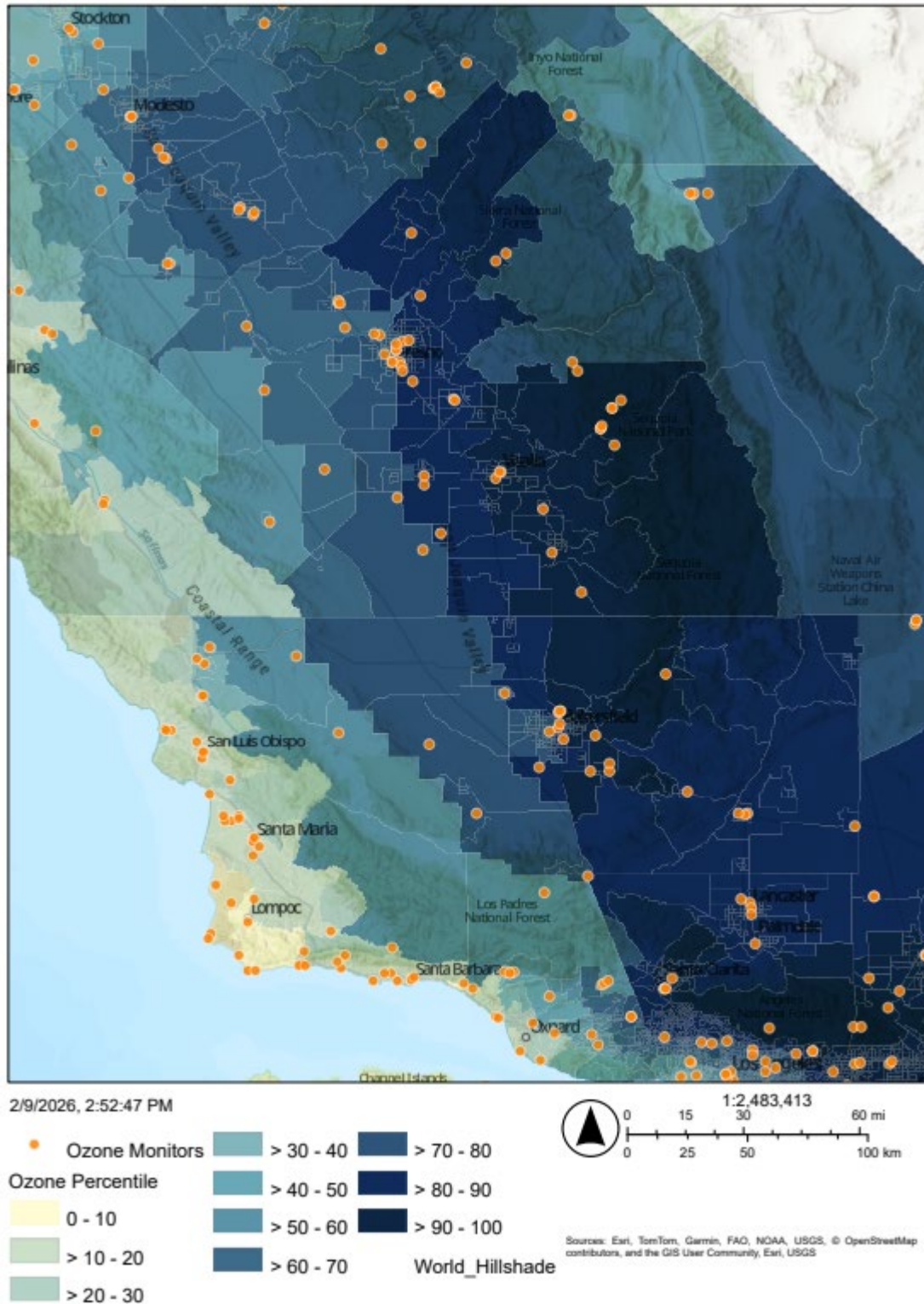
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SB 535 Disadvantaged Communities 2022
SB 535 Disadvantaged Communities 2022 (Census Tracts)



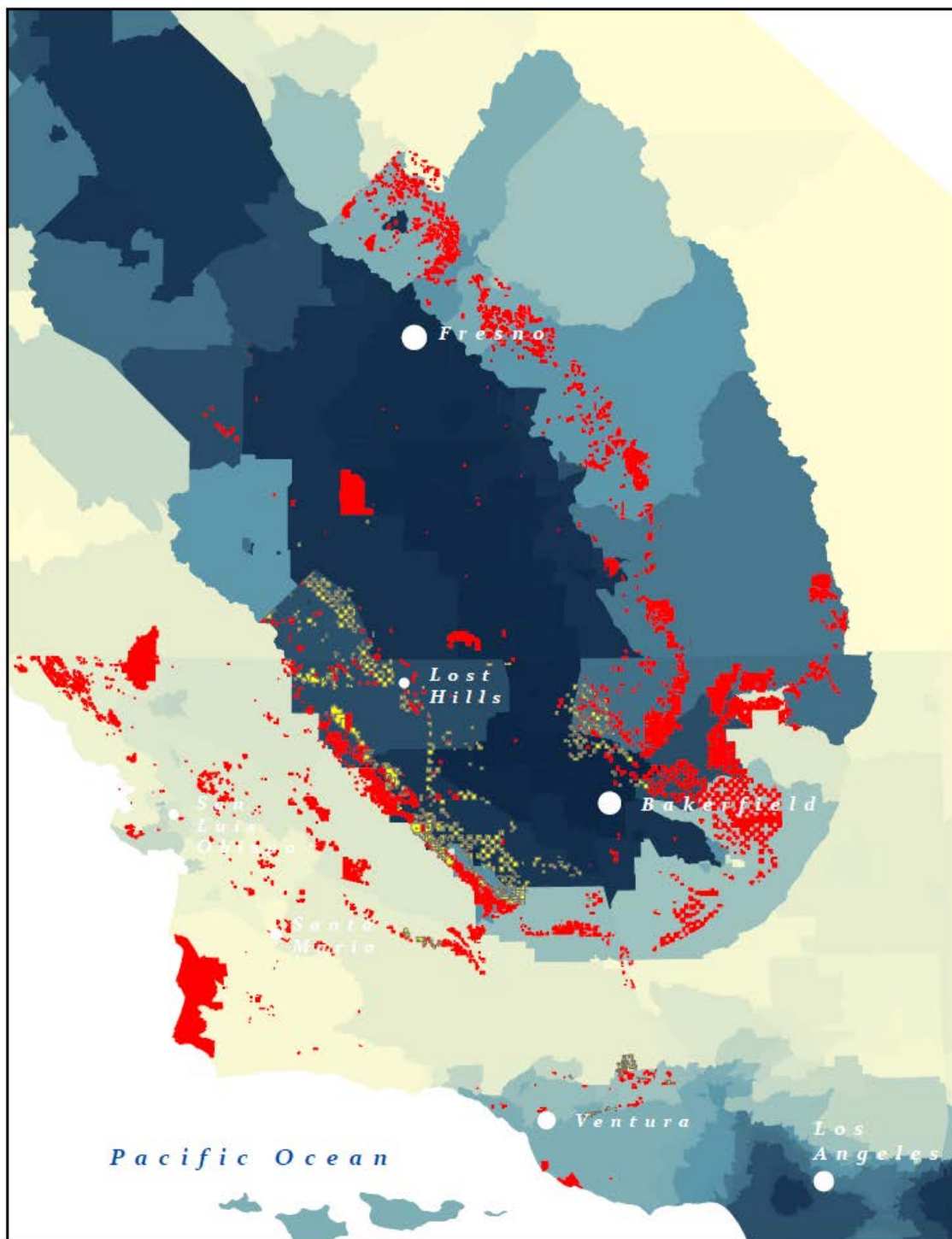
Exhibit 2





CalEnviroScreen 5.0 Draft

Exhibit 3



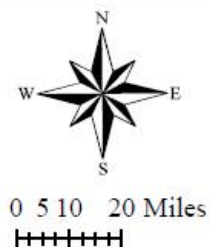
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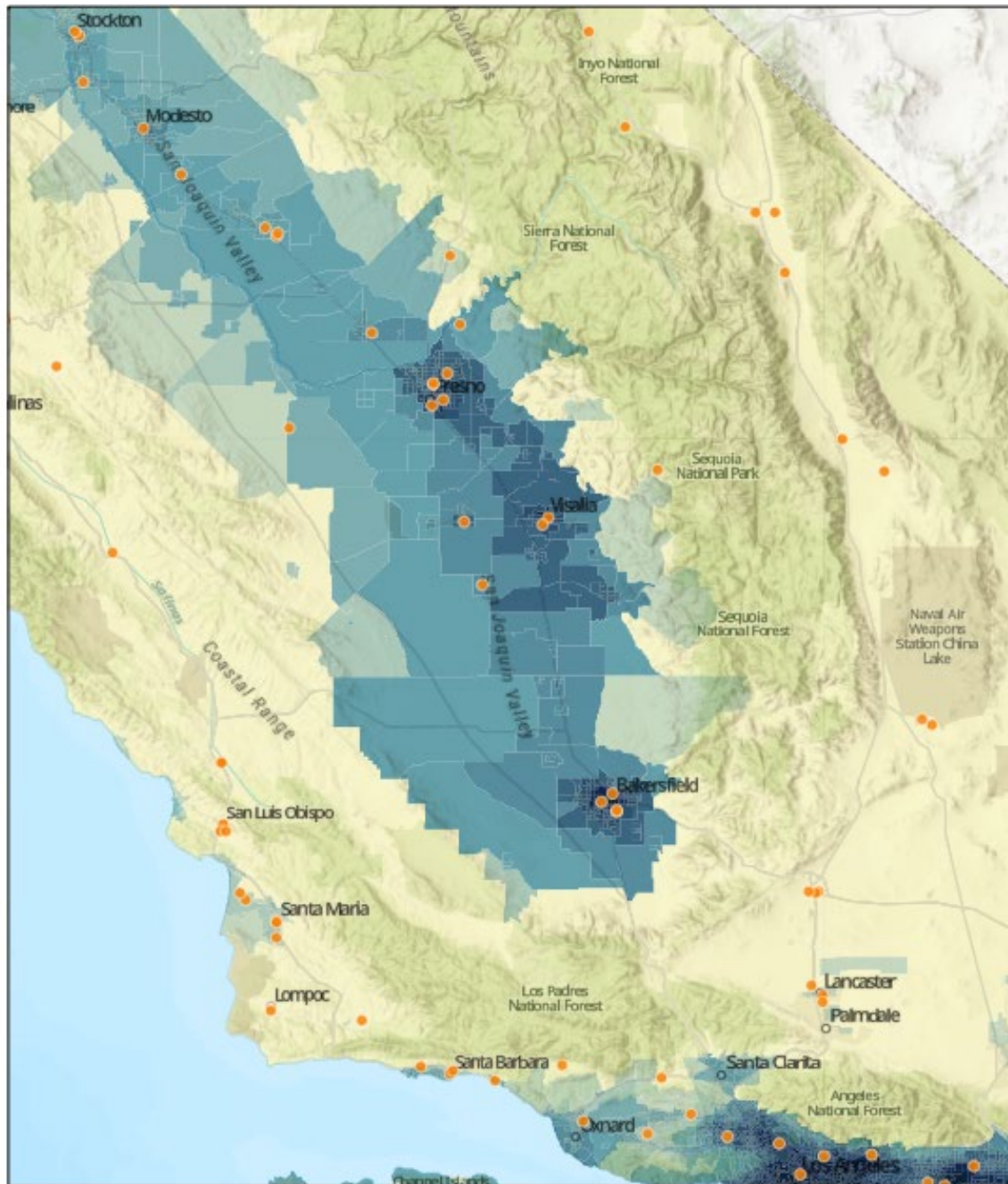
- Oil and Gas Leases
- Open for Leasing

PM 2.5 Percentile

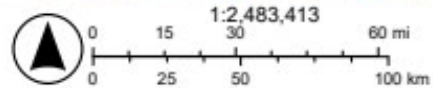
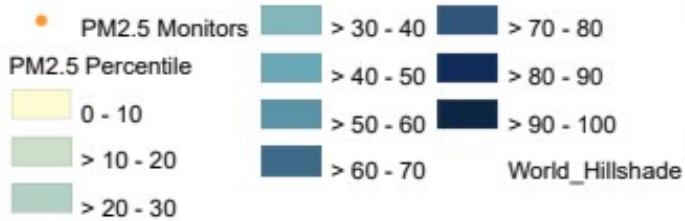
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CalEnviroScreen 3.0 PM 2.5
Percentile for Bakersfield
Hydraulic Fracturing Planning
Area





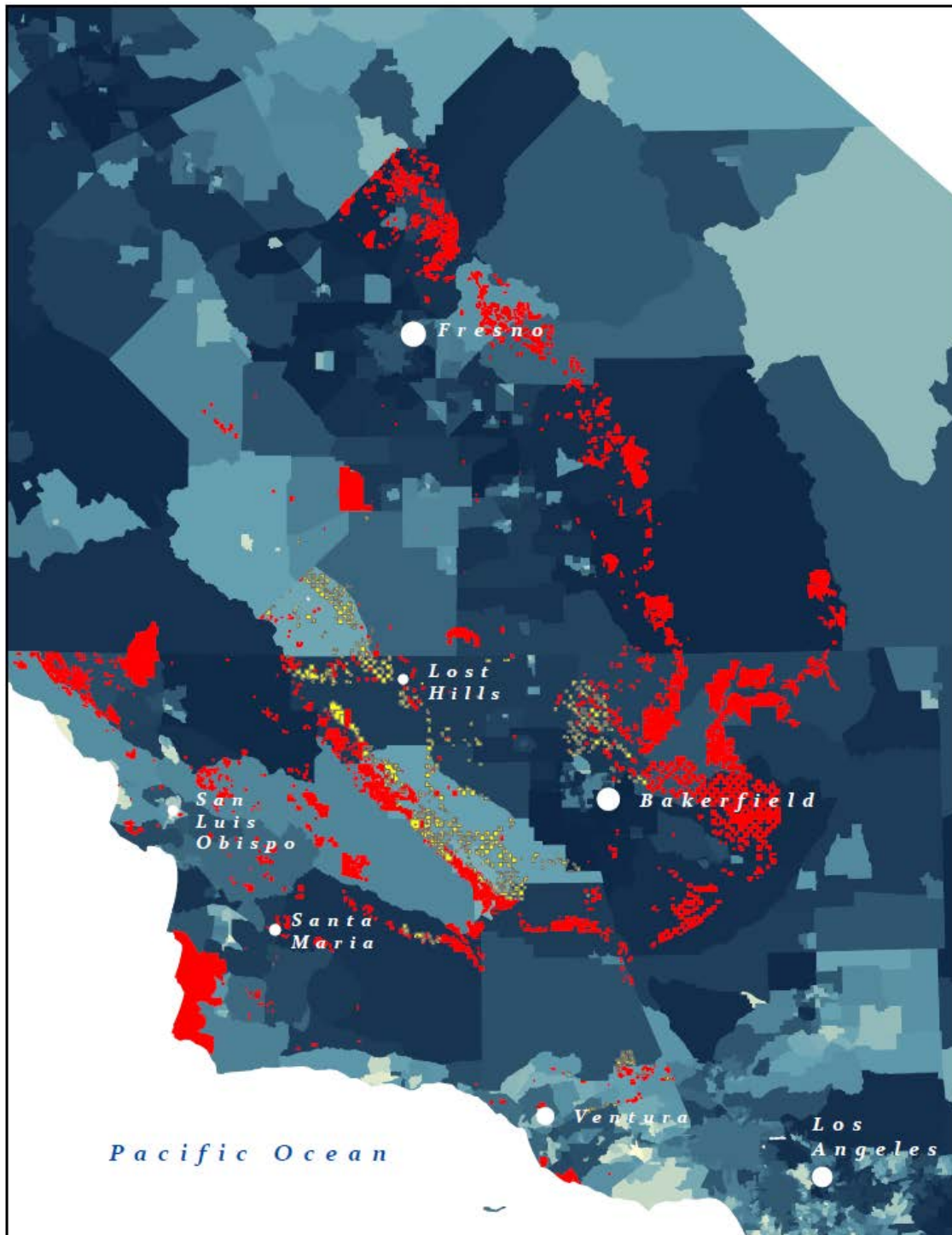
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

CalEnviroScreen 5.0 Draft

Exhibit 4



Legend

Oil and Gas Leases

Open for Leasing

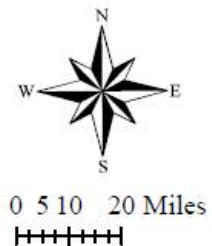
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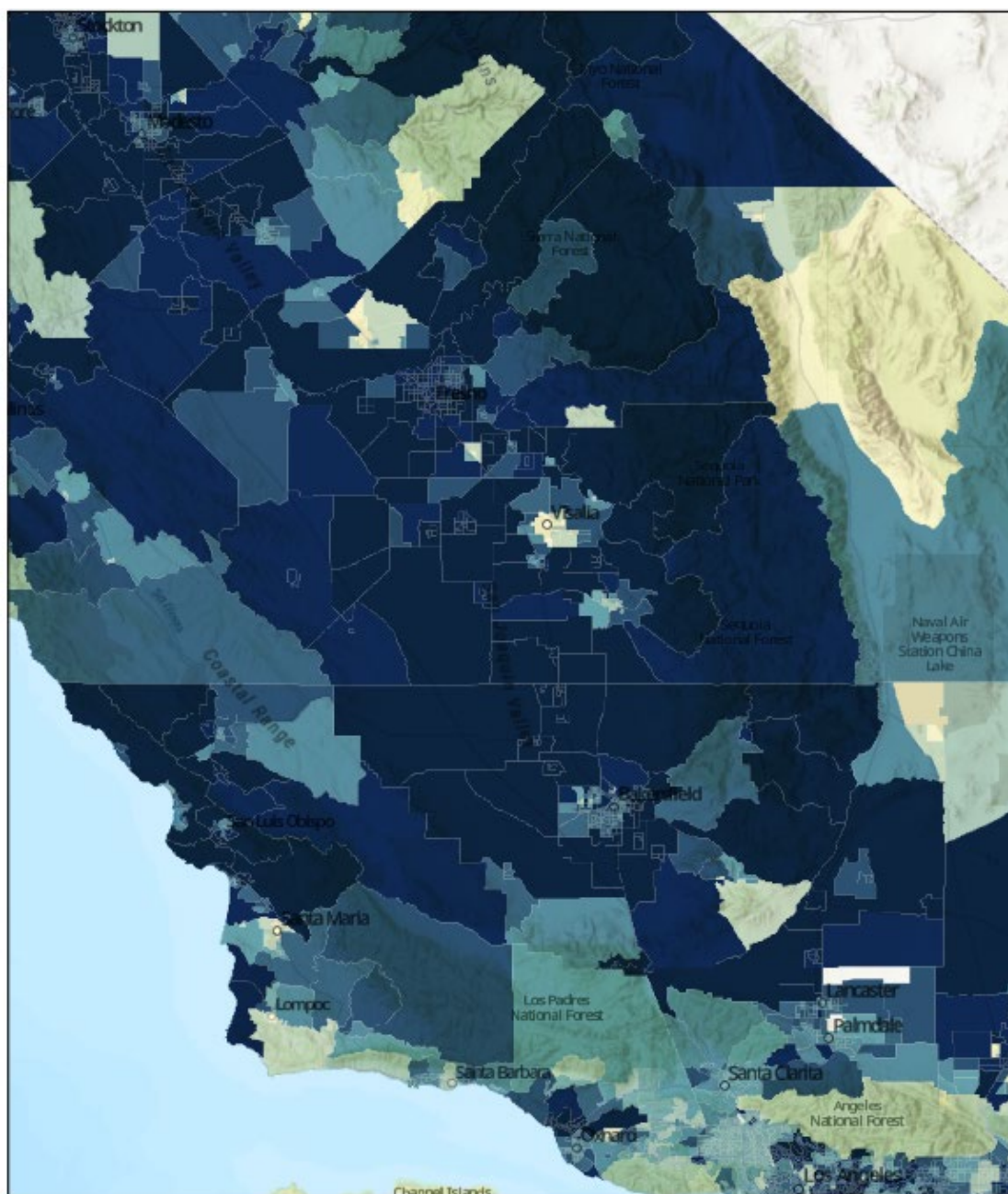
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CalEnviroScreen 3.0 Drinking
Water Percentile for
Bakersfield Hydraulic
Fracturing Planning Area





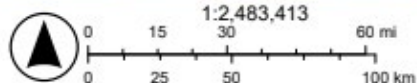
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Drinking Water Contaminants Percentile

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 > 20 - 30
 > 30 - 40
 > 40 - 50

> 50 - 60
 > 60 - 70
 > 70 - 80
 > 80 - 90
 > 90 - 100

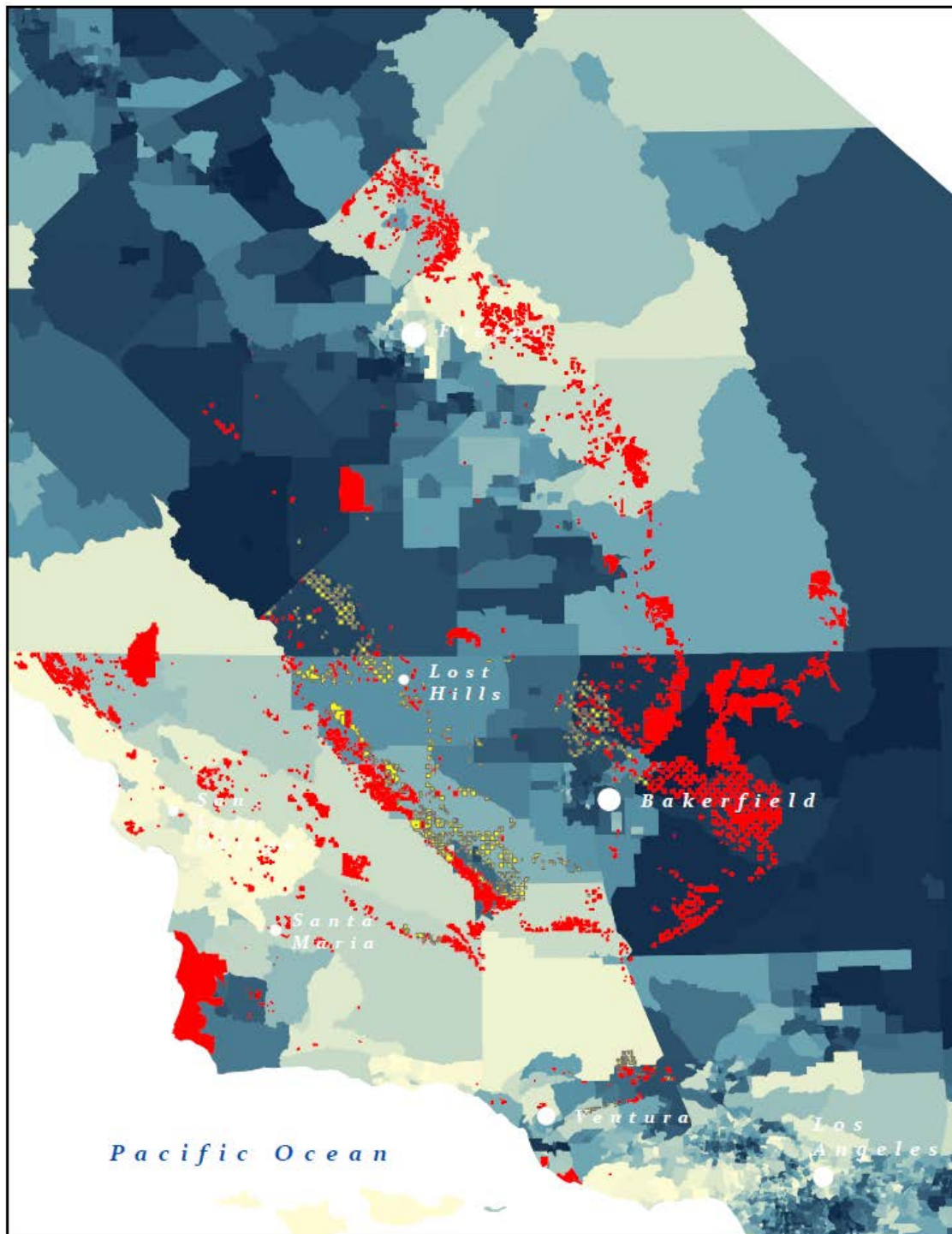
World_Hillshade



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

CalEnviroScreen 5.0 Draft

Exhibit 5



Legend

Oil and Gas Leases

Open for Leasing

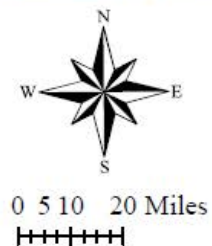
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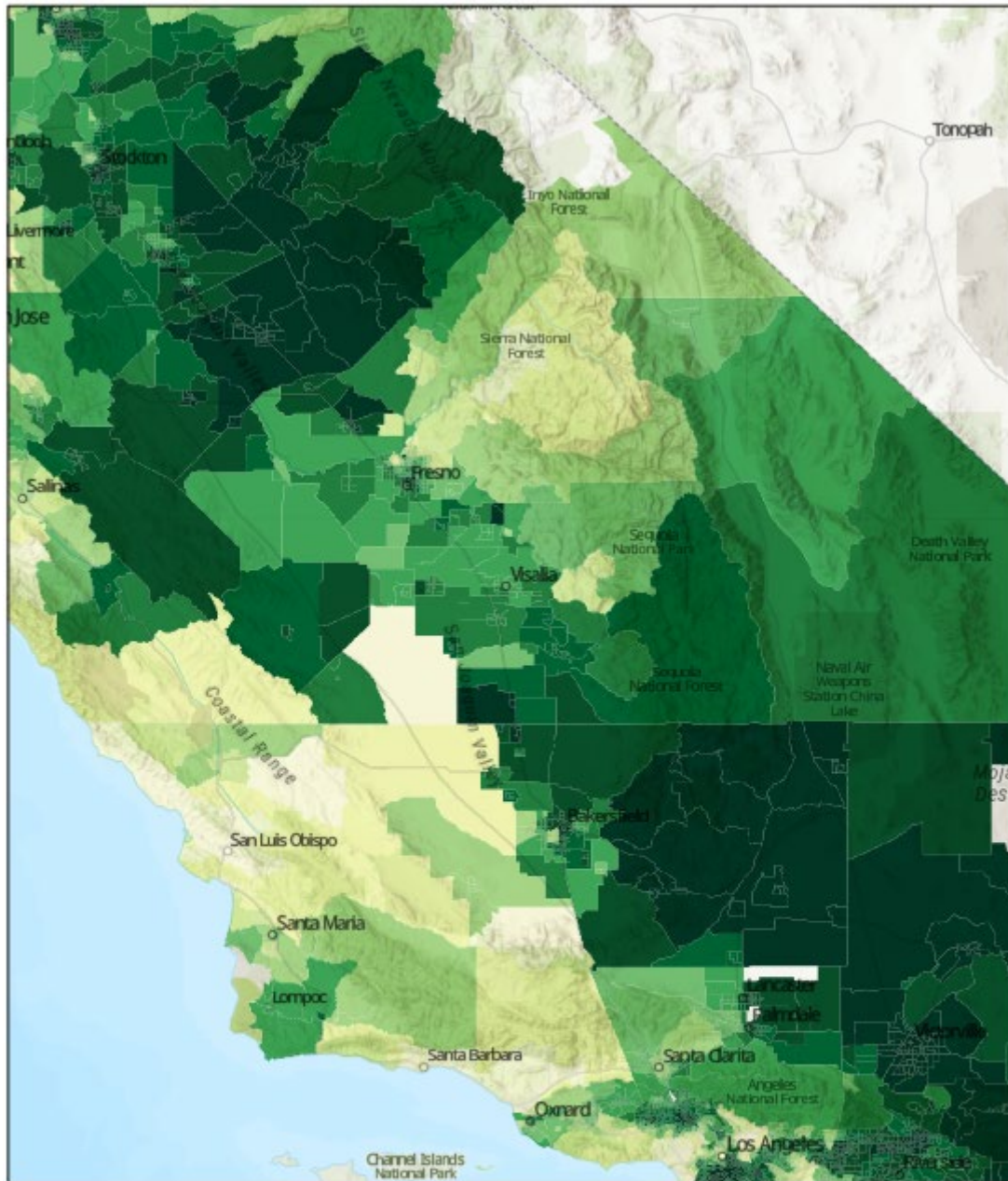
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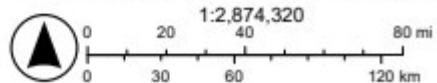
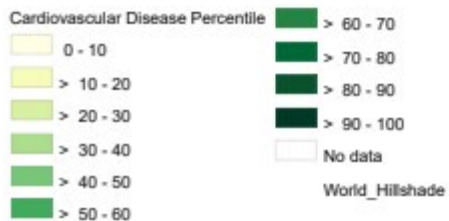
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CalEnviroScreen 3.0
Cardiovascular Rate
Percentile for Bakersfield
Hydraulic Fracturing Planning
Area





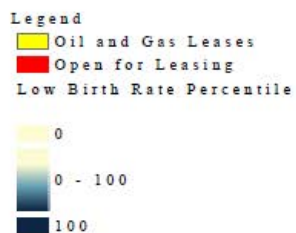
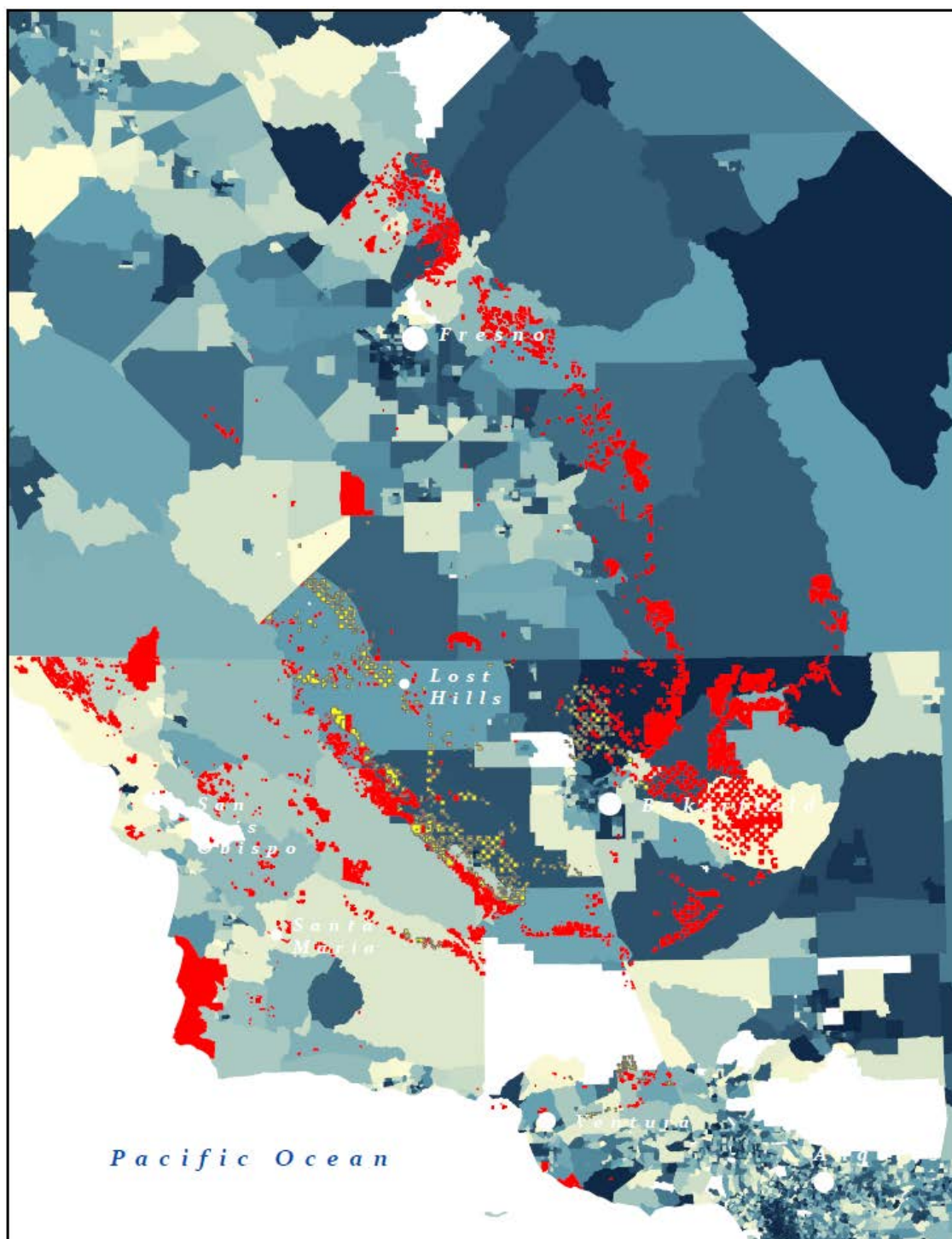
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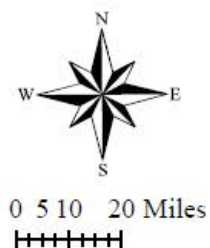
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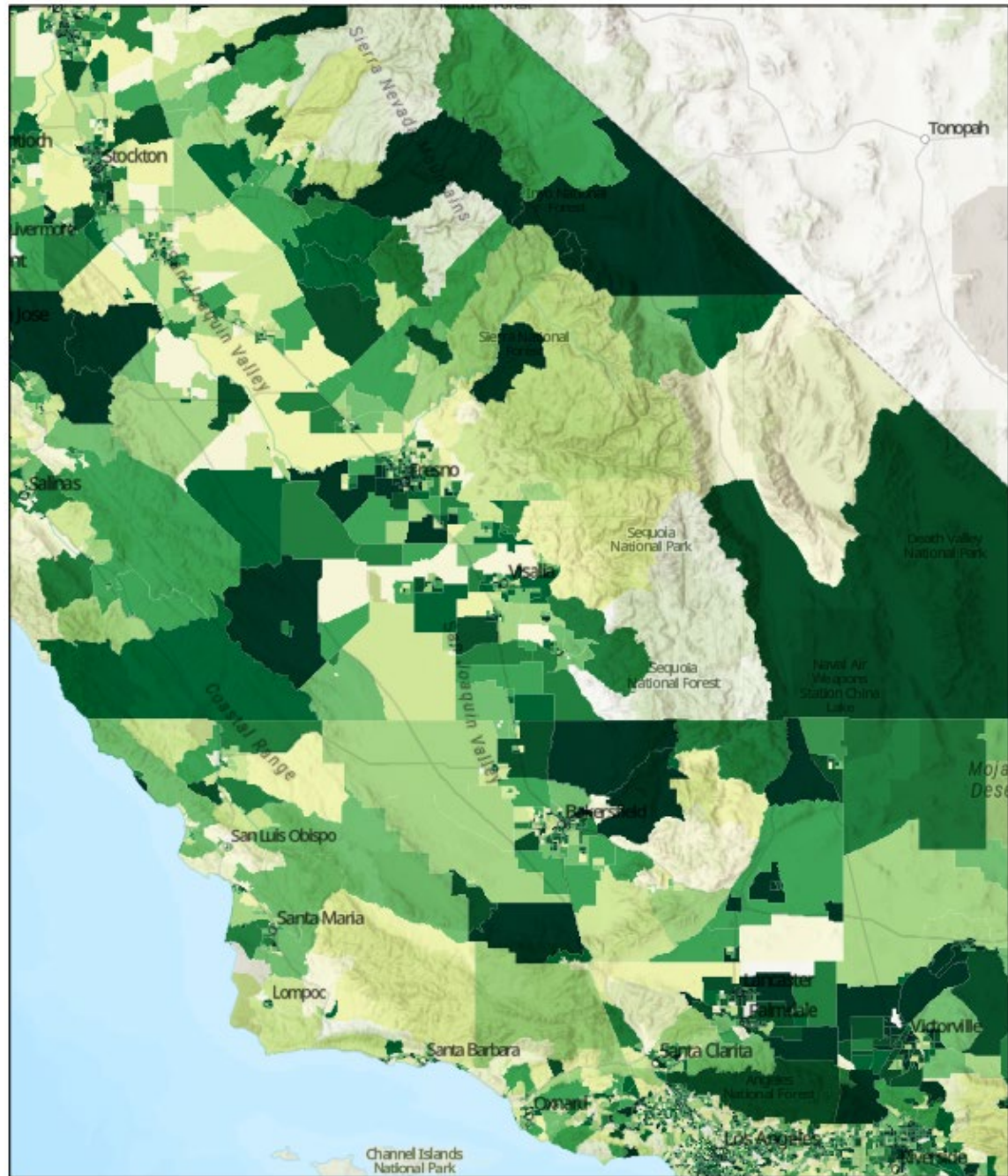
CalEnviroScreen 5.0 Draft

Exhibit 6

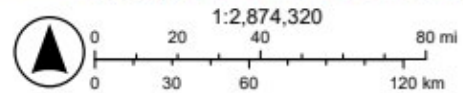


CalEnviroScreen 3.0 Low Birth Rate Percentile for Bakersfield Hydraulic Fracturing Planning Area





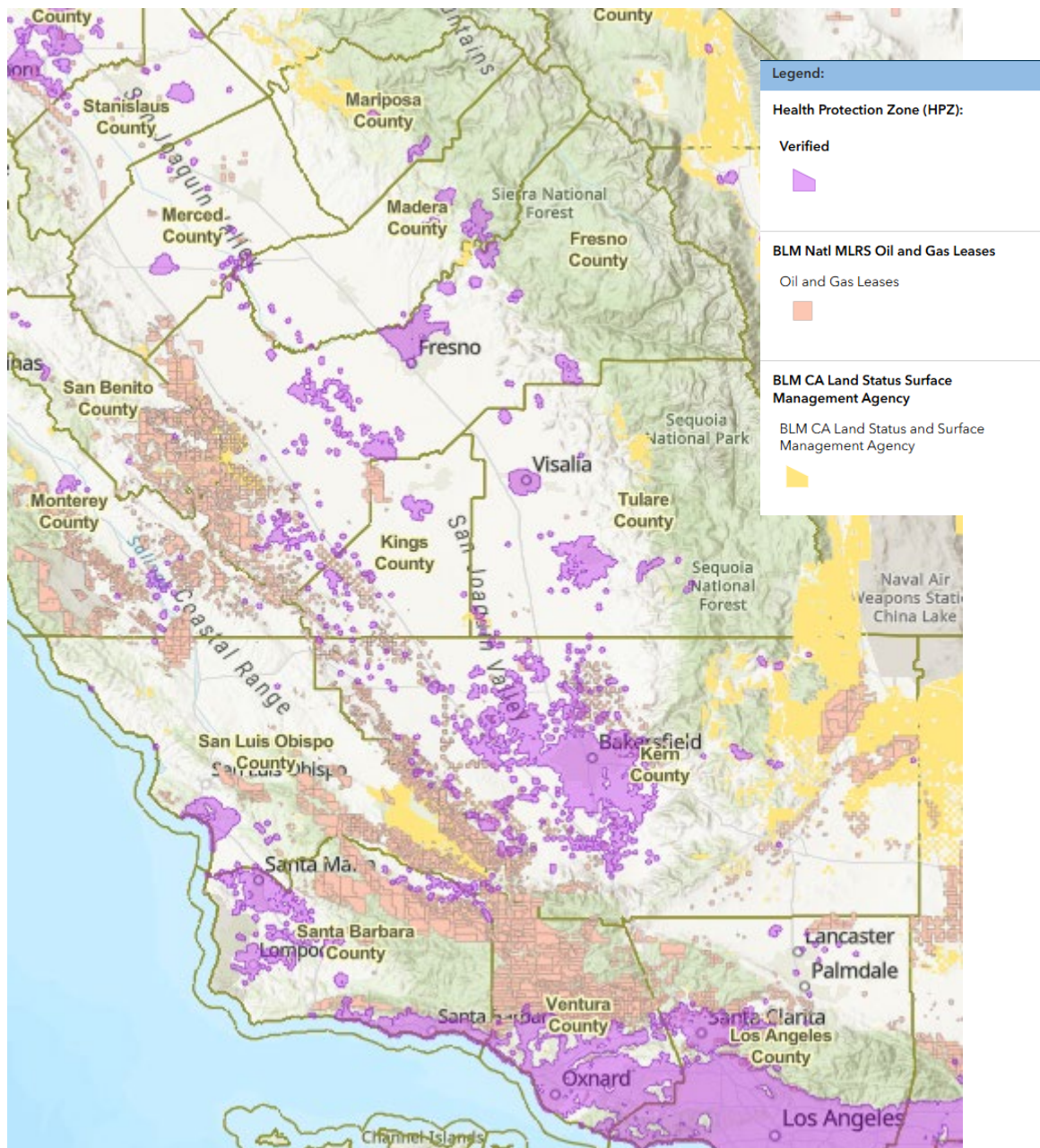
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CalEnviroScreen 5.0 Draft

Exhibit 7



<https://maps.conservation.ca.gov/calgem/HPZ/>

EXHIBIT B



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March 13, 2026

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RE: Comments on the Bureau of Land Management, Central Coast Field Office Oil and Gas Leasing and Development Draft Supplemental Environmental Impact Statement, DOI-BLM-CA-C090-2025-0017-RMP-EIS

Dear Ms. Matthews:

On behalf the Attorney General of California, Rob Bonta,¹ we submit these comments on the 2025 Draft Supplemental Environmental Impact Statement (“Draft SEIS”) issued by the U.S. Bureau of Land Management’s (“BLM”) Central Coast Field Office (“CCFO”) “to analyze the environmental effects of oil and gas leasing and development within the Planning Area and to determine whether changes are needed to the fluid mineral decisions based on new information or changes in circumstances in the CCFO.” 2025 Draft SEIS at ES-1. The CCFO encompasses approximately 6.8 million acres of federal, state, and private land across 12 counties in Central California, in which BLM manages approximately 284,000 acres of public land and 509,000 acres of split estate, totaling 793,000 acres of federal mineral estate. *Id.* BLM proposes to open the vast majority of that estate—725,500 acres—to oil and gas leasing.

The Draft SEIS was allegedly prepared to respond to a stipulated settlement requiring that BLM “prepare a SEIS and issue a new decision document” to address deficiencies in BLM’s 2019 resource management plan amendment (“RMPA”) and environmental impact statement (“2019 EIS”). *Id.* (citing *Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, No. 3:19-cv-07155-JSC). Pursuant to the settlement, BLM also agreed to “solicit additional alternatives during the public scoping process and [] consider incorporating those alternatives into the

¹ The California Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. *See* Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12612; *D’Amico v. Bd. of Medical Examiners*, 11 Cal.3d 1, 1415 (1974).

analysis.” In addition, BLM committed to “coordinate with local governments and, to the maximum extent consistent with federal law, cooperate with local governments to ensure consistency of federal actions with local land use plans.”

BLM’s Draft SEIS, and the process undertaken to prepare it, fails to meet the requirements of the 2022 stipulated settlement and address the deficiencies in the 2019 EIS that gave rise to it. BLM failed to take a “hard look” at new information and changed circumstances affecting resources in the Planning Area, including those associated with hydraulic fracturing and other well stimulation techniques, public health impacts, listed species, and state and local laws, and provide sufficient evidence to support its conclusions regarding the severity of impacts to those resources. BLM also failed to incorporate additional alternatives solicited during the scoping process into its analysis or address inconsistencies with state law and local land use plans. These failures of analysis and disclosure not only violate the National Environmental Policy Act (“NEPA”), but they in turn also fail to support BLM’s conclusion that it does not need to pursue a new amendment to the 2019 RMPA under the Federal Land Policy and Management Act (“FLPMA”). And last, the Draft SEIS provides no evidence that BLM has consulted with the U.S. Fish and Wildlife Service (“USFWS”) as required by the Endangered Species Act (“ESA”).

For these reasons, Attorney General Bonta recommends that BLM withdraw its Draft SEIS and prepare a new analysis that fully considers the environmental impacts of opening over seven hundred thousand acres of public lands in California to new oil and gas leasing.

STATUTORY BACKGROUND

Pursuant to the FLPMA, 43 U.S.C. § 1701 *et seq.*, BLM develops resource management plans (“RMPs”) to guide the management of public lands within BLM’s jurisdiction. FLPMA requires that BLM “develop, maintain, and when appropriate, revise land use plans” to ensure that land management be conducted “on the basis of multiple use and sustained yield.” 43 U.S.C. §§ 1701(a)(7), 1712(a), 1732. The statute mandates that BLM manage public lands “in accordance with the land use plans developed” under FLPMA. *Id.* § 1732. RMPs establish land areas for specific uses, allowable resource uses and production levels, resource condition goals and objectives, and program constraints and management practices. 43 C.F.R. § 1601.0–5.

FLPMA requires that BLM, in developing and revising RMPs, “provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans;” “coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs” of the “local governments within which the lands are located;” and “provide for meaningful public involvement of State and local government officials, both elected and appointed, in the development of land use programs, land use regulations, and land use decisions for public lands.” 43 U.S.C. § 1712(c)(8)-(9).

FLPMA also requires that BLM manage public lands “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water

resource, and archeological values.” *Id.* § 1701(a)(8). BLM must “by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of [public] lands” under its management. *Id.* § 1732(a).

BLM must prepare an RMP amendment when there is a “need to consider monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.” 43 C.F.R. § 1610.5–5. The amendment process requires “an environmental assessment of the proposed change, or an environmental impact statement, if necessary, public involvement as prescribed in § 1610.2 of this title, interagency coordination and consistency determination as prescribed in § 1610.3 of this title and any other data or analysis that may be appropriate.” 43 C.F.R. § 1610.5–5. RMPs, and their amendments, are subject to environmental review under NEPA. *Cascadia Wildlands v. U.S. Bureau of Land Mgmt.*, 153 F.4th 869, 881 (9th Cir. 2025); *Ctr. for Biological Diversity v. U.S. Dep’t of Interior*, 623 F.3d 633, 647 (9th Cir. 2010) (“Amending a resource management plan ordinarily constitutes “major federal action” requiring NEPA analysis.”).

NEPA has two fundamental purposes: (1) to guarantee that agencies take a “hard look” at the consequences of their actions before the actions occur by ensuring that “the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts,” and (2) to ensure that “the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349-50 (1989).

NEPA requires the preparation of a detailed EIS for any “major federal action significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). In taking a “hard look,” NEPA requires federal agencies to consider the direct, indirect, and cumulative impacts of its proposed action. *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 973 (9th Cir. 2002); *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975); *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972). Moreover, “an agency may not rely on incorrect assumptions or data.” *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 964 (9th Cir. 2005).

BLM must supplement an EIS when it makes substantial changes to a proposed action or “there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its effects.”² Courts review decisions not to prepare supplemental EISs utilizing the “arbitrary and capricious” standard of the Administrative Procedure Act. Courts do not “automatically defer to” to an agency when it decides not to supplement an EIS “without carefully reviewing the record and satisfying themselves that the agency has made a reasoned decision based on its evaluation of the significance—or lack of

² Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6, <https://www.doi.gov/media/document/doi-nepa-handbook>.

significance—of [] new information.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 378 (1989).

FACTUAL BACKGROUND

BLM’s NEPA Review for the Central Coast Resource Management Plan

The BLM Central Coast Field Office manages 284,000 acres of public land and 793,000 acres of federal mineral estate in San Francisco, Contra Costa, San Mateo, Alameda, San Joaquin, Santa Cruz, Santa Clara, Stanislaus, Monterey, San Benito, Merced, and Fresno Counties (the “Planning Area”). In early 2017, BLM published a draft EIS and RMPA. BLM prepared the EIS and RMPA after a court found that BLM’s environmental analysis for several oil and gas lease sales, held pursuant to the existing RMP, failed to comply with NEPA. *Ctr. for Biological Diversity et al. v. Bureau of Land Mgmt.*, 937 F. Supp. 2d 1140 (N.D. Cal. 2013).

The 2017 Draft EIS analyzed five alternatives and selected a preferred alternative (Alternative C) that would open roughly 400,000 acres of land to drilling—368,800 acres with controlled surface use stipulations and 29,800 acres with no surface occupancy stipulations. BLM relied on a 2015 Reasonably Foreseeable Development Scenario (“RFDS”) that projected the exploration, drilling, and production activity that would likely occur in the next 15 to 20 years—roughly 32 to 37 wells and 179 to 206 acres of disturbance. Well stimulation technologies and enhanced oil recovery techniques were “assumed to be used on any or all of these wells.” 2017 Draft EIS at 2-3. The California Coastal Commission and the Division of Oil, Gas, and Geothermal Resources commented on the draft EIS.

In 2019, BLM released a Final EIS (“FEIS”) and proposed RMPA. The FEIS identified an entirely new proposal as the preferred alternative (Alternative F) that would open nearly twice as much public land and mineral estate to oil and gas leasing as was considered in the draft EIS—683,100 acres with controlled surface use stipulations and 42,400 acres with no surface occupancy stipulations.

Alternative F stripped no surface occupancy (“NSO”) stipulations from categories of lands that, under all the other alternatives, were protected by an NSO stipulation or closed to leasing. Under Alternatives A through E, all Recreation and Public Purpose leased lands were either closed to leasing or had NSO stipulations. 2017 Draft EIS at 2-8 – 2-12 and Figures 2-1 – 2-5.³ Alternative F, by contrast, removed NSO stipulations from nearly 12,600 acres, including from public lands within state parks and a regional preserve. Parks affected include the Mount Diablo and Henry W. Coe State Parks. 2019 FEIS at Figure 2-6 (map of Alternative F). The

³ NSO stipulations applied to Recreation & Public Purpose lease lands under Alternatives A and D, and “state and county park lands” under Alternative C. Because Alternative B would close all land beyond a 0.5 mile buffer around existing oil and gas fields, no public lands within, or mineral estate below, state or county parks would be available for lease under this alternative. Also, because Alternative E would apply NSO stipulations applied to mineral estate overlapping certain groundwater resources, NSO stipulations would be incidentally applied to all Recreation & Public Purpose lease lands under this alternative.

FEIS continued to rely on the 2015 RFDS and stated that “[w]ell stimulation technologies and enhanced oil recovery techniques are assumed to be used on any or all of these wells.” 2019 FEIS at ES-4.

Several environmental groups and the Counties of Santa Cruz and Monterey filed a lawsuit (Case No. 3:19-cv-07155-JSC) alleging that, in approving the RMPA and FEIS, BLM violated NEPA, FLPMA, and the Administrative Procedure Act because it failed to: (1) identify and analyze reasonable alternatives; (2) take a hard look at the impacts of oil and gas development, including the use of hydraulic fracturing and enhanced oil recovery techniques, on greenhouse gas (“GHG”) emissions and climate, groundwater, surface water, air quality, seismicity, and wildlife and plant species; (3) prepare and circulate a supplemental EIS (“SEIS”); and (4) discuss possible conflicts with local land use policies and coordinate planning efforts with local governments. The case was stayed in June 2021 before motions for summary judgment were filed. The case settled in 2022. Pending issuance of a final decision, BLM also agreed to defer any oil or gas lease sale in the Planning Area. Under the settlement, BLM agreed to prepare a supplement to the 2019 FEIS pursuant to NEPA, “coordinate with local governments,” and “cooperate with local governments to ensure consistency of federal actions with local land use plans.” Stipulated Settlement Agreement, *Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, No. 3:19-cv-07155-JSC (Nov. 29, 2022).

On June 23, 2025, BLM issued a notice of intent to prepare a Draft SEIS and potential RMP amendment for the Planning Area and requested scoping comments. 90 Fed. Reg. 26,602. BLM solicited comment on its intent to prepare a SEIS and stated that: “Only those portions of the existing plan related to land use decisions for management of Federal fluid minerals resources that need to be updated to respond to the issues and management concerns will be reviewed.” *Id.* at 26,603. Numerous state agencies commented in opposition to the proposal during the scoping period, including the California Department of Conservation, California Department of Fish and Wildlife, California Department of Parks and Recreation, State Water Resources Control Board, California Coastal Commission, and California Department of Water Resources.

The Department of Interior posted a notice in the federal register on January 13, 2026, announcing that the Draft SEIS was available on eplanning and the deadline for comments would be 45 days following the date the U.S. Environmental Protection Agency (“EPA”) published the Notice of Availability. 91 Fed. Reg. 1329, 1329 (Jan. 13, 2026). EPA posted the Notice of Availability on January 16, 2026. 91 Fed. Reg. 2131, 2131. BLM later extended the deadline to March 13, 2026. 91 Fed. Reg. 5474, 5474.

The Draft SEIS carries forward the same six alternatives identified in the 2019 FEIS, and again chooses Alternative F as the preferred alternative. Draft SEIS at ES-1. BLM also relies on the same 2015 RFDS, projecting the same amount of exploration, drilling, and production activity for all alternatives (for the next 15-20 years, 3-5 exploratory wells outside of existing oilfields and 0-32 wells in existing oilfields and up to 206 acres of disturbance). *Id.* at 2, 16. BLM states that “all these potential wells could employ hydraulic fracturing or other well stimulating technology.” *Id.* at 3. BLM identified five resource areas to consider further based on

information or circumstances identified during the scoping period: air quality and GHG emissions, water resources, special status species, and recreation. *Id.* at 7-8. Additional issues identified during the scoping period were not carried forward for further analysis. *Id.* at 8-13. Except for “updated emissions inventories” based on “a review of new data related to air quality,” BLM did not update any of its modeling or analyses from prior EISs. *Id.* at ES-1. And BLM does not address any changes in state, local, or federal policy that have occurred since 2019 or explain how such changes affect oil and gas development in the Planning Area.

Hydraulic Fracturing on Public Lands

In recent years, the United States has experienced a boom in oil and gas production enabled by well stimulation treatments, such as hydraulic fracturing and horizontal drilling used in combination with hydraulic fracturing. 80 Fed. Reg. 16,128, 16,131 (Mar. 26, 2015). Hydraulic fracturing is a process by which oil and gas producers inject water, sand, and certain chemicals at high pressure into rock formations to create fissures and allow oil and gas to escape for collection in a well. While most of the fluid is water, an assortment of chemicals, some of which are known carcinogens or other types of toxins, are added for different purposes such as lubrication of the fracture and minimization of corrosion. Much of the fracturing fluid, along with subsurface fluids, flows back to the surface and can be held in open pits or circulation tanks at the well site prior to disposal. This water is typically disposed of by subsequent injection into underground wells.

A growing body of science connects hydraulic fracturing with water and air pollution, increased seismic activity, and a prolonged dependence on fossil fuels. For example, inadequate well casings that run through groundwater zones can break during hydraulic fracturing operations and allow hydraulic fracturing fluids to infiltrate groundwater. Air pollution can occur due to the handling of the flow back fluids, which contain toxic chemicals that could evaporate through handling and storage. Lastly, some areas of heavy hydraulic fracturing operations have seen a pronounced increase in the frequency of seismic events.

BLM is the agency responsible for overseeing oil and gas development on over 245 million acres of public lands and 700 million acres of subsurface mineral estate across the United States, including 15 million acres of public lands and 47 million acres of subsurface mineral estate in California. Most hydraulic fracturing on federal lands occurs in nine states, and California historically had the fifth or sixth largest number of fracking operations per year. *See* 80 Fed. Reg. at 16,206. In 2015, BLM estimated that ninety percent of new wells drilled on federal lands are now being stimulated using hydraulic fracturing. *Id.* at 16,131, 16,190.

The State of California’s Geologic Energy Management Division (“CalGEM”) has not approved a state permit for hydraulic fracturing since 2021 and has phased out hydraulic fracturing pursuant to regulations that went into effect on October 1, 2024. Cal. Code Regs. tit. 14 § 1780(d). BLM has historically respected state regulation of oil and gas extraction methods on federal land and consistently acknowledged CalGEM’s jurisdiction to regulate hydraulic fracturing operations on federal lands within the state. Draft SEIS at 72-73 (“BLM does not have regulatory authority over hydraulic fracturing in California; that authority rests with the

California Department of Conservation's Geologic Energy Management Division (CalGEM), which oversees all well stimulation activities in the state.”).

BLM'S DECISION NOT TO AMEND THE 2019 RMPA IS ARBITRARY AND CAPRICIOUS

BLM argues that no amendment to the 2019 RMPA is warranted because the SEIS “did not show notable increase in total impacts” and its range of alternatives has not changed since 2019. Draft SEIS at 14. This reasoning is arbitrary and capricious because it is divorced from the criteria for determining whether to revise or amend an RMP. An RMP amendment shall be initiated “by the need to consider monitoring and evaluation findings, new data, new or revised policy, and a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.” 43 C.F.R. § 1610.5-5. Similarly, an RMP “shall be revised as necessary, based on monitoring and evaluation findings, new data, new or revised policy, and changes in circumstances.” 43 C.F.R. § 1610.5-6. Notably, an amendment is initiated “by the need to consider” new information and changes in circumstances, which is certainly the case here where BLM prepared a SEIS pursuant to the 2022 stipulated settlement.

In the time that has passed since the adoption of the 2019 RMPA, there have been significant new developments in the knowledge and evidence of the harms drilling poses to human health, natural resources, and the climate, significant shifts in California policies, and significant changes in the landscape of oil and gas development in the Planning Area (described in detail, *infra*). Given these changes, BLM was required to amend or revise its RMPA.

THE DRAFT SEIS DOES NOT COMPLY WITH NEPA

A. The Draft SEIS Provides Contradictory Statements Concerning Hydraulic Fracturing and other Well Stimulating Technology.

NEPA requires agencies to take a “hard look” at the environmental consequences of proposed agency actions before those actions are undertaken. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004); *see* 42 U.S.C. § 4332. “To take the required ‘hard look’ at a proposed project’s effects, an agency may not rely on incorrect assumptions or data.” *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953, 964 (9th Cir. 2005); *see also* DOI Handbook (June 26, 2025), pp. 17-18, 24 (NEPA requires agencies to ensure that the analysis and assumptions of any existing EIS they rely on remains adequate). Here, rather than providing the sufficient analysis or evidence required by NEPA to take a “hard look” at its Proposed Action, BLM’s findings in the Draft SEIS regarding hydraulic fracturing and other well stimulating technology are internally contradictory, thereby rendering its analysis of the likely impacts associated with these drilling activities unsupported.

In the Draft SEIS, BLM relies on the 2015 RFDS to project the amount of oil and gas exploration, drilling, and production activity in the Planning Area (for the next 15-20 years, 3-5 exploratory wells outside of existing oilfields and 0-32 wells in existing oilfields and up to 206 acres of disturbance). Draft SEIS at 2, 16. BLM states that “all these potential wells could

employ hydraulic fracturing or other well stimulating technology.” *Id.* at 3. And in its 2019 EIS, which BLM continues to rely upon to support the Draft SEIS analysis, BLM assumed that well stimulation technologies and enhanced oil recovery techniques would “be used on any or all” new exploratory and development wells drilled on federal oil and gas leases over the next 15 to 20 years.⁴

However, BLM recognizes elsewhere in the Draft SEIS that California in October 2024 “implemented a ban on the issuance of new hydraulic fracturing permits” Draft SEIS at 30. BLM further states that it “does not have regulatory authority over hydraulic fracturing in California; that authority rests with the California Department of Conservation’s Geologic Energy Management Division (CalGEM), which oversees all well stimulation activities in the state.” *Id.* at 72-73. BLM’s assumption that hydraulic fracturing will occur at all in the Planning Area is thus contrary to California law.

BLM does not acknowledge this internal contradiction regarding hydraulic fracturing anywhere in the Draft SEIS. Agency decisionmakers and the public are thereby left guessing about the assumptions underlying the BLM’s analysis, demonstrating that it has neither “carefully consider[ed] detailed information” concerning the potential impacts of drilling in the Planning Area nor ensured that “the relevant information” is made available to the public, contrary to NEPA’s fundamental purposes. *Robertson*, 490 U.S. at 349-50.

B. The Draft SEIS Fails to Properly Consider the Significant Environmental Impacts Related to Oil and Gas Operations, Including Hydraulic Fracturing and Other Enhanced Recovery and Well Stimulating Technologies.

To fulfill NEPA’s “hard look” requirement, an agency must consider all foreseeable direct, indirect, and cumulative impacts of its proposed action. *See N. Alaska Env’tl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006); *Ctr. For Biological Diversity v. Salazar*, 695 F.3d 893, 916–17 (9th Cir. 2012). An agency must provide sufficient evidence and analysis to support its conclusions. As the Ninth Circuit has stated, “general statements about ‘possible effects’ and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998).

BLM states in the Draft SEIS that all “wells could employ hydraulic fracturing or other well stimulating technology.” Draft SEIS at 3. If BLM continues to maintain this assumption that hydraulic fracturing may be used on all wells in the Planning Area despite California’s ban, it must analyze the impacts that it may create. As discussed below, it has not done so.

Even if there is an absence of hydraulic fracturing in the Planning Area, the Draft SEIS must provide a full analysis of all the potential impacts from all types of production wells. The

⁴ BLM, Proposed Resource Management Plan Amendment and Final Environmental Impact Statement for Oil and Gas Leasing and Development, Central Coast Planning Area (May 2019) at ES-4, 2-3, 4.17-1, 4.20-2.

Draft SEIS continues to rely on the 2015 RFDS and the analysis contained in the 2019 FEIS, which stated that “[w]ell stimulation technologies and enhanced oil recovery techniques are assumed to be used on any or all of these wells.” 2019 FEIS at ES-4. The use of enhanced oil recovery for new wells must be analyzed since it is currently used in the Planning Area, especially in Fresno and Monterey Counties.⁵ BLM must accordingly analyze other enhanced recovery techniques used in California for potential impacts to the environment. These recovery techniques include water flood, steam flood, cyclic steam, and dual type that alternates between steam and water flood. These techniques may in turn increase the need for wastewater treatment, percolation ponds, and injection wells.

1. Air Quality Impacts

Protecting public health is fundamental to NEPA’s purpose. NEPA was enacted in part to “stimulate the health and welfare of man,” 42 U.S.C § 4321, and mandates that agencies consider the degree to which their proposed actions affect public health and safety. NEPA requires federal agencies “to use all practicable means, consistent with other essential considerations of national policy” to “assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surroundings.” *Id.* § 4331(b).

The Proposed Action is likely to significantly increase air pollution. Oil and gas facilities emit significant air pollution, including 30 percent of all sulfur oxides, over 70 percent of hydrogen sulfide, and 80 percent of anthropogenic volatile organic compounds (“VOCs”) in the San Joaquin Valley, which in turn react with nitrogen oxides (“NOx”) to create ozone.⁶ Oil and gas development is also responsible for the majority of emissions of multiple toxic air contaminants including acetaldehyde, benzene, formaldehyde, hexane and hydrogen sulfide in the Central Valley.⁷ Fracking on public lands produces significant air pollution emissions including nitrogen oxides, sulfur dioxide, fine particulate matter, volatile organic compounds, silica dust, and toxic air contaminants like benzene.⁸ In addition, the ponds that store produced water from hydraulic fracturing operations have the potential to generate significant emissions of toxic air contaminants.⁹

⁵ California Energy Commission, *Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery* (Dec. 2021) available at https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf.

⁶ Brandt, A., Millstein, D., Jin, L., & Englander, J., *Air Quality Impacts from Well Stimulation* at 182 (2015), available at <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

⁷ Shonkoff et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel* at 10 (Oct. 2021), available at https://www.conservation.ca.gov/calgem/Documents/public-health/Public%20Health%20Panel%20Responses_FINAL%20ADA.pdf.

⁸ Natural Resources Defense Council, *Fracking Fumes* (Dec. 2014), available at <https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf>.

⁹ California Council on Science and Technology, *An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report* at 191-92 (July 2022), available at <https://www.psehealthyenergy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf>.

The effects of air pollution resulting from the oil and gas development contemplated in the Draft SEIS, including new information concerning the same, requires further analysis. As noted in EPA's scoping comments for the Draft SEIS, the "air quality analysis for this supplemental Draft EIS is particularly important given the large number of wells, potential use of hydraulic fracturing and the associated emissions proposed in an area where the ambient air quality is already compromised and includes areas in nonattainment for ozone and fine particulate matter." EPA Scoping Comments at 5. BLM recognizes in the Draft SEIS that oil and gas extraction contributes to air pollution in the Planning Area, including particulate matter, hazardous air pollutants, and ozone precursors, but fails to analyze the full scope of impacts from its Proposed Action. Draft SEIS at 59.

Oil and gas operations, including traditional exploration, drilling, and production, produce ozone by way of NO_x and VOCs that react in air and sunlight. Ozone pollution "is a powerful lung irritant," that, when inhaled, "reacts with the delicate lining of the small airways, causing inflammation and other damage that can impact multiple body systems."¹⁰ Ozone exposure can cause a number of health effects including asthma, various respiratory and cardiovascular diseases, and premature death.¹¹ Long-term exposure to ambient ozone is "significantly associated with multiple causes of mortality, including cardiovascular disease, ischemic heart disease, respiratory disease, and [chronic obstructive pulmonary disease]."¹²

The American Lung Association's "State of the Air" 2025 report card marked Alameda County, Santa Clara County, Fresno County, and Merced County with "F" grades based on unhealthy levels of ozone pollution.¹³ At risk groups and rates of lung disease occurrences (including pediatric asthma, adult asthma, chronic obstructive pulmonary disease, and lung cancer) are higher for Central Coast communities than elsewhere in the country.¹⁴ In Alameda County, for example, over 130,000 residents, including over 20,000 children, have asthma.¹⁵ In Santa Clara County, over 155,600 people, including nearly 24,000 children, have asthma.¹⁶

¹⁰ American Lung Association, *State of the Air 2025 Report* (2025) at 28-29, available at <https://www.lung.org/getmedia/5d8035e5-4e86-4205-b408-865550860783/State-of-the-Air-2025.pdf>.

¹¹ Air & Waste Management Assn., *Air Pollution Issues Associated with Natural Gas and Oil Operations* at fn. 3-4 (2012), <https://www.edf.org/sites/default/files/AWMA-EM-airPollutionFromOilAndGas.pdf>; U.S. EPA, Health Effects of Ozone in the General Population, <https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>.

¹² Lim, Chris, et al., *Long-Term Exposure to Ozone and Cause-Specific Mortality Risk in the United States* (2019) at 1027, <https://pubmed.ncbi.nlm.nih.gov/31051079/>.

¹³ American Lung Association, *State of the Air 2025 Report* *supra* n.10 at 58-59.

¹⁴ *Id.*

¹⁵ American Lung Association, *State of the Air 2025 Report Card Alameda County*, available at <https://www.lung.org/research/sota/city-rankings/states/california/alameda>.

¹⁶ American Lung Association, *State of the Air 2025 Report Card Santa Clara County*, available at <https://www.lung.org/research/sota/city-rankings/states/california/santa-clara>.

Given that ozone is thus among the most widespread and significant air pollution health threats in the Planning Area, which includes populations already at higher risk of lung disease, any additional emissions of VOCs, NO_x, and other air pollutants in these areas from expanded oil and gas production are therefore significant and should be mitigated.

Oil and gas activities also emit multiple types of hazardous air pollutants. These pollutants have the potential to cause cancer or other serious health effects, such as reproductive or developmental effects, along with adverse environmental impacts. For this reason, EPA recommended that the Draft SEIS evaluate the potential for exceedances of relevant health-based risk thresholds for hazardous air pollutants including acetaldehyde, benzene, ethyl benzene, ethylene glycol, formaldehyde, methanol, n-hexane, toluene, xylene (mixture), and any other compounds that the BLM identifies as potential hazardous air pollutants in the Planning Area. EPA also suggested that BLM discuss the potential reasonably foreseeable impacts of any exceedances on human health. It did neither, and this failure to analyze hazardous air pollutants and their public health impacts renders the discussion of air quality impacts inadequate.

In addition, the California Air Resources Board (“CARB”) has initiated an ongoing study on air quality in neighborhoods near oil production, referred to as the Study of Neighborhood Air Near Petroleum Sources (“SNAPS”). California also passed a law in 2017, Assembly Bill (“AB”) 617, that created a program to monitor and reduce air pollution at a local level.¹⁷ The Draft SEIS should include a conservative consideration of potential toxic air contaminant emissions and the impact on nearby communities, including results from CARB’s SNAPS and a discussion of any AB 617 communities in the Planning Area.

The Draft SEIS also fails to account for the air quality-related public health impacts from living near oil and gas activities in the Planning Area. Studies have found that the health risk exposure for toxic air contaminants is greatest near active oil and gas sites.¹⁸ One study conducted in California found significant concentrations of VOCs and other toxic pollutants near oil and gas operations.¹⁹ Another study published in California assessed data from the EPA Air Quality System from 2006 to 2019, and documented higher concentrations of air pollutants including particulate matter 2.5, nitrogen dioxide, VOCs, and ozone as far away as four kilometers (13,123 feet) from well sites.²⁰ Another study indicates that populations residing in

¹⁷ Assembly Bill 617 (C. Garcia, Chapter 136, Statutes of 2017), adding Cal. Health & Safety Code §§ 39607.1, 42705.5, 44391.2.

¹⁸ California Council on Science and Technology, *An Independent Scientific Assessment of Well Stimulation in California*, Vol. II (2015) at 407-412, available at http://ccst.us/projects/hydraulic_fracturing_public/SB4.php.

¹⁹ J. Arbelaez & B. Baizel, *Californians at Risk: An Analysis of Health Threats from Oil and Gas Pollution in Two Communities* (2015), available at <https://www.cleanwaterfund.org/sites/default/files/docs/publications/CaliforniansAtRiskFINAL.pdf>.

²⁰ D.J. Gonzalez et al., *Upstream Oil and Gas Production and Ambient Air Pollution in California*, SCIENCE OF THE TOTAL ENVIRONMENT 806 (2022) 150298, available at <https://doi.org/10.1016/j.scitotenv.2021.150298>.

close proximity to oil and gas activity have almost four times the risk of asthma exacerbation than those that do not.²¹

The potential harm to the public health posed by nearby oil and gas drilling prompted EPA to recommend in their scoping comments that the Draft SEIS include an updated map to show the locations of residences and production wells to assist in determining the potential for exposure to air pollutants, and implement an oil and gas surface occupancy buffer from occupied structures such as homes, schools, and office buildings sufficient to minimize the potential for public health impacts associated with exposure to near-field criteria pollutants, hazardous air pollutants, and any other potential toxic emissions such as hydrogen sulfide releases, and potential emissions associated with well blowouts or other explosive events. The Draft SEIS should give special consideration to the effects of the proposed activities on sensitive receptors such as residences, worksites, schools, daycare centers, playgrounds, and medical facilities. See Pub. Res. Code §§ 3280(c), 3281(b).

2. Water Quality Impacts

BLM has failed to take a hard look at the impacts to water quality in the Draft SEIS. Hydraulic fracturing and other well stimulation techniques can adversely impact drinking water resources, including private residential water wells, as well as agricultural water sources, via a number of different pathways.²² BLM recognizes that “[s]ince the release of the 2019 FEIS, both national and California-specific studies have highlighted the potential impacts of hydraulic fracturing on water resources” and that “oil and gas development, including hydraulic fracturing, remains a dynamic water resources concern.” Draft SEIS at 72-73. BLM goes on to say that “updates are provided here in the consideration of new, best information.” *Id.* at 73. However, BLM does not discuss whether the “updates” provide new information or demonstrate changed circumstances that could cause different or more severe impacts than those included in BLM’s analysis of impacts to water resources in the 2019 FEIS. Instead, BLM provides the excuse that because “no hydraulic stimulation has occurred on federal lands in California since the 2019 FEIS, limited opportunity exists in performing new impact analyses” and that “[s]ignificant scientific uncertainty, however, persists regarding the frequency and severity of impacts.” *Id.* at 72-73. But under NEPA, scientific uncertainty is not an excuse for failing to analyze potential impacts. *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1079 (9th Cir. 2011). Having identified new information, BLM must go beyond a mere summary of what the cited sources say to analyze whether their findings change the agency’s analysis of impacts.

The Draft SEIS also fails to consider additional new information providing data regarding the likelihood and severity of these impacts. For example, data collected by the State Water Resources Control Board, which produces a report every six months on the regulation of oil field

²¹ S.G. Rasmussen et al., *Association Between Unconventional Natural Gas Development in the Marcellus Shale and Asthma Exacerbations* (2016) JAMA INTERN MED. 2016 September 01; 176(9): 1334–1343, <https://pubmed.ncbi.nlm.nih.gov/27428612/>.

²² U.S. Environmental Protection Agency, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary*, available at https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf.

produced water ponds within each region, illustrates the potential impacts ignored by BLM. According to the most recent report dated January 31, 2019, the Central Valley region had 561 active ponds, 501 of which were permitted and 60 unpermitted.²³ Moreover, most of the active ponds (530 of 560) were unlined.²⁴ The report also identified additional inactive ponds (507 of which were unlined), and noted that 161 ponds were under active enforcement actions.²⁵ An updated list of ponds developed in 2021 still shows many active ponds.²⁶ Testing of these ponds, as required by the Central Valley Regional Water Quality Control Board, has identified numerous hazardous compounds that could pose a threat to groundwater for municipal and agricultural uses and domestic water wells.²⁷ Compounds used in hydraulic fracturing fluids, including polynuclear aromatic hydrocarbons, affect pulmonary, gastrointestinal, and renal systems in humans, and a few compounds are considered carcinogens.²⁸ The California Council on Science and Technology (“CCST”) also expressed concern about the regular use of unlined pits for the disposal of produced water, finding that such practices could “introduce contaminants into the food web and expose human populations to known and potentially unknown toxic substances.”²⁹

In addition, BLM arbitrarily ignores the environmental impacts of other types of well stimulation treatments and enhanced oil recovery techniques in the Planning Area given their likely utilization in the future. These techniques include acidizing, water flooding, steam flooding, cyclic steam injection, and a dual type that alternates between steam and water flooding. NEPA requires that an agency consider the full scope of activities encompassed by its Proposed Action. *See N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006) (the “hard look” requirement of NEPA includes “considering all foreseeable direct and indirect impacts.”). For the Proposed Action, this should include not only hydraulic fracturing activities, but also other types of well stimulation treatments and enhanced oil recovery techniques that will be foreseeably used in the Planning Area. BLM assumes that “[w]ell stimulation technologies (e.g., hydraulic fracturing, acid matrix stimulation, acid fracturing) and enhanced oil recovery techniques (e.g., cyclic steam, steam flood, water flood) may be used on “any or all” wells drilled on federal mineral estate. FEIS at 4-17.1. But the Draft SEIS contains no analysis of the impacts from using these techniques, as it is required to do.

BLM also fails to consider that hydraulic fracturing, other well stimulation technologies, and enhanced recovery techniques are commonly used to extend the life of existing oil wells with declining production and related infrastructure, resulting in additional significant impacts

²³ State Water Resources Control Board, Produced Water Ponds Status Report: January 31, 2019, *available at* https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/docs/pwpondsreport_january2019.pdf.

²⁴ *Id.*

²⁵ *Id.*

²⁶ Central Valley Regional Water Quality Control Board, Pond List (Feb. 2021), *available at* https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/20210211_pondlist.pdf.

²⁷ *See, e.g.*, Central Valley Regional Water Quality Control Board, Oil Field Pond 13267 Order Responses, Information Requested by 13267 Order, Lost Hills Oil Field.

²⁸ *See supra* n. 9 at 153-156.

²⁹ *See supra* n. 18 at 403.

from the continued production of fossil fuels in these areas. As BLM itself states in the Draft SEIS for the Bakersfield Planning Area, “hydraulic fracturing usually occurs in oil fields on existing leases, many of which have been continuously developed over the last 100 years.” Bakersfield Field Office Oil and Gas Leasing and Development Draft Supplemental Environmental Impact Statement, DOI-BLM-CA-C060-2025-0053-RMP-EIS at 6. Yet nowhere does BLM consider the environmental impacts of using hydraulic fracturing and other well stimulation treatments on *existing* wells within the Central Coast Planning Area.

It is imperative that BLM comply with its legal obligations to complete a full and accurate analysis of water quality impacts from the Proposed Action because many parts of the Planning Area already suffer from drinking water contamination problems. Of the 15 counties in California with the greatest number of water systems known to rely on contaminated groundwater sources for drinking water, three are in the Central Coast Planning Area: Fresno, San Joaquin, and Monterey.³⁰ The vast majority of public water systems in California rely on groundwater, and more than 25 percent of those systems have to provide drinking water from a contaminated groundwater source.³¹ Small community water systems, which serve residents in parts of the Planning Area, typically lack the infrastructure and economies of scale of larger water systems to afford the necessary treatment or identification of alternative water supplies to replace a contaminated groundwater source.³²

Additional oil and gas production is likely to cause further contamination of both surface water and groundwater in and near the Planning Area. Studies show that oil and gas operations contaminate groundwater through the common practice of disposing wastewater in unlined pits, which are prone to leaking.³³ The contaminants, which include arsenic, uranium, and other naturally occurring toxic elements, make their way into water used for human consumption and agricultural crop irrigation and are potentially carcinogenic chemicals.³⁴ BLM must consider how oil and gas development may impact already degraded water supplies near agricultural land in the Planning Area and the possible carcinogenic effects of oil and gas contaminants mixed with agricultural contaminants. BLM must also consider whether oil and gas development near agriculture could provide new pathways for agricultural toxic byproducts to enter water tables.

In its scoping comments, EPA advises that to ensure that public drinking water supply sources (e.g., surface water sources, including groundwater under the direct influence of surface

³⁰ Cal. State Water Resources Control Board, *Report to the Legislature: Communities that Rely on a Contaminated Groundwater Source for Drinking Water* (2013) at 11-12, available at <https://www.waterboards.ca.gov/gama/ab2222/docs/ab2222.pdf>.

³¹ *Id.*

³² *Id.*

³³ EPA, *Hydraulic Fracturing for Oil and Gas*, *supra* n. 22; Graham, *Unlined Waste Disposal Pits Endanger Groundwater in San Joaquin Valley* (2021), available at <https://www.digitaljournal.com/techscience/unlined-waste-disposal-pits-endanger-groundwater-in-san-joaquin-valley/article>.

³⁴ S.B.C. Shonkoff et al., *Hazard Assessment of Chemical Additives Used in Oil Fields that Reuse Produced Water for Agricultural Irrigation, Livestock Watering, and Groundwater Recharge in the San Joaquin Valley of California: Preliminary Results* at 9 (2016), available at https://www.psehealthenergy.org/wp-content/uploads/2022/11/Preliminary_Results_13267_Disclosures_FINAL-1.pdf.

water sources, and groundwater sources) are protected from potential impacts associated with BLM-authorized activities in the Planning Area, it is important to identify where these sources are located. For that reason, EPA recommended that the Draft SEIS include an updated map that identifies source water protection areas for public water supply wells and surface water intakes (streams, rivers, and reservoirs) as well as reservoirs that are drinking water sources. After identifying the water resources, BLM should include an analysis of the potential impacts to those drinking water sources and consider NSO lease stipulations to ensure public drinking water supply sources are fully protected from potential impacts associated with oil and gas leasing.

In addition, EPA notes that the Planning Area may include important areas of alluvial aquifer recharge that are more susceptible to contamination. To ensure that future BLM-authorized activities are protective of groundwater resources, the agency should accordingly identify and characterize both the existing and potential groundwater drinking water resources in the Planning Area by including: a description of all aquifers in the planning area, noting which aquifers are underground sources of drinking water; water quality and water yield information for each aquifer, if available; maps depicting the location of sensitive groundwater resources such as municipal watersheds, source water protection zones, sensitive aquifers, and recharge areas; descriptions and locations of groundwater use (e.g., public water supply wells, domestic wells, springs, and agricultural and stock wells; and a map and analysis of proposed oil and gas wells, existing producing wells, and nonproducing wells in the area including their status (e.g., idle, shut-in, plugged, and abandoned). BLM should prepare this information and include it in the final EIS to support an analysis of groundwater impacts.

3. Groundwater Quantity Impacts

The Draft SEIS's consideration of impacts to groundwater quantity is similarly deficient. EPA put BLM on notice in its scoping comments that water demand associated with oil and gas development can be substantial and has the potential to impact environmental resources. For that reason, it recommended that the SEIS include a discussion of: a range of estimated water demand per well developed in the Planning Area (based on reasonably foreseeable development, predicted well depths, formation characteristics, and well designs, as well as hydraulic fracturing operations, if used); possible sources of water for oil and gas development; and potential impacts of the water withdrawals (e.g., drawdown of aquifer water levels, reductions in stream flow, impacts to groundwater dependent ecosystems, impacts on aquatic life, wetlands, springs and other aquatic resources). EPA also recommended that BLM consider measures to encourage operators to use recycled produced water in well drilling and stimulation and for produced water management and disposal facilities, thereby decreasing the need for water withdrawals and minimizing the associated impacts. However, BLM included none of this analysis in the Draft SEIS.

An analysis of water quantity impacts is necessary to comply with NEPA. As the CCST has explained, water use from fracking and other well stimulation techniques is significant: the authors "estimate that well stimulation in California uses 850,000 to 1,200,000 cubic meters

(690–980 acre-feet) of water per year.”³⁵ Most of this water is sourced from a nearby irrigation district: “Operators obtained the water needed for well stimulation from nearby irrigation districts (68 percent), produced water (13 percent), operators’ own wells (13 percent), a nearby municipal water supplier (4 percent), or a private landowner (1 percent).”³⁶ Around 90 percent of the total water volume used for oil and gas extraction in California would otherwise be suitable for irrigation or domestic use.³⁷ In places where fracking has occurred in California, like in the San Joaquin Valley, water extractions have stressed an already receding water table and caused an 8-meter drop in the land surface.³⁸

Like fracking and other well stimulation treatments, enhanced oil recovery methods such as steam injection, water flooding, and steam flooding involve the injection of large volumes of water underground to increase the flow of oil or gas to the surface. The CCST notes that cyclic steam injection for enhanced oil recovery uses between 2-15 times as much freshwater as well stimulation operations.³⁹ These methods are increasingly used both to expand the productivity of existing wells in California and to maximize production from new wells.⁴⁰

There are unique concerns about water quantity across all of the basins and subbasins in the Central Coast Planning Area. For example, in San Benito County, a portion of its water management areas rely on imported water from the Central Valley Project.⁴¹ BLM must coordinate with local water districts like the San Benito County Water District to ensure it has the best and most up-to-date data available on water levels. As another example, in Monterey County, the vast majority (95 percent) of water used is drawn from underground aquifers.⁴² The total amount of water pumped per year is approximately 500,000 acre-feet, of which 450,000 acre-feet are used for agriculture.⁴³ Excessive water pumping can lead to seawater intrusion in certain areas, an issue felt particularly in the Salinas Valley of Monterey County.⁴⁴

BLM must meaningfully consider these unique issues and whether oil and gas development paired with extensive agricultural development will overdraw already strained water tables in the Central Coast Planning Area.

³⁵ See *supra* n. 18 at 65.

³⁶ *Id.* at 57.

³⁷ *Id.*

³⁸ *Id.* at 65.

³⁹ *Id.* at 61.

⁴⁰ California Energy Commission, *Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery* (Dec. 2021), https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf.

⁴¹ San Benito County Water District, *Annual Groundwater Report* (Water Year 2023), <https://sbcwd.ca.gov/wp-content/uploads/2024/04/SGMA-Annual-Report-WY23-FINAL-03252024.pdf>.

⁴² Monterey County Water Resources Agency, *Groundwater Level Monitoring*, available at <https://www.countyofmonterey.gov/government-links/water-resources-agency/programs/groundwater-level-monitoring/overview>.

⁴³ *Id.*

⁴⁴ *Id.*

4. Subsidence

In addition, the depletion of groundwater for use in well stimulation techniques and enhanced oil recovery, and the extraction of oil and gas from the ground that those technologies enable, both have the potential to cause land subsidence, the gradual caving in or sinking of land. BLM recognizes that such subsidence “can permanently reduce the amount of storage available in a groundwater aquifer,” further reducing groundwater levels. Draft SEIS at 74. It also notes that the “principal aquifers of the Central Valley portion of the Planning Area are in general described as being in chronic groundwater overdraft.” But despite saying that the SEIS “includes updated ... land subsidence analysis,” BLM fails to provide any analysis of subsidence, noting only that it is “difficult to analyze and predict.” *Id.* This deficiency must be resolved in the SEIS.

5. Deferral of Analysis

BLM says it will “consider site specific conditions and data during project level review.” Draft SEIS at 72. But consideration of impacts may not be deferred, as that would violate NEPA’s mandate that agencies confront the full extent of environmental impacts from a proposed action at the earliest reasonable time. *Robertson*, 490 U.S. at 349. As the Ninth Circuit has frequently stated, it is “not appropriate to defer consideration” of impacts to a future date “when meaningful consideration can be given now.” *Kern v. U.S. BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002). Hydrologic regions and water basins do not obey the boundaries of oil and gas leases, so impacts to them are best analyzed at the Planning Area level instead of in a segmented and cabined review later. Moreover, BLM states that the SEIS is the relevant analysis document for two suspended leases issued in 2011 and 2012. Draft SEIS at ES-1. Its failure to do what it said it would do for these leases, namely “consider site specific conditions and data,” belies the agency’s assurances that it will conduct further analysis before offering leases in the future.

C. The Draft SEIS Fails to Consider Environmental and Public Health Impacts to Low-Income Communities and Communities of Color.

The Draft SEIS fails to consider how the Proposed Action will impact low-income communities and communities of color in the Planning Area, whether resulting from increased air pollution, groundwater contamination, or other impacts.

BLM argues it does not need to consider environmental justice impacts under NEPA due to the repeal of executive orders that required agencies to make achieving environmental justice part of their mission. Draft SEIS at 12. But the consideration of environmental justice has long been a part of the required NEPA analysis, *see, e.g., Mid States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d. 520, 541 (8th Cir. 2003); *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1370 (D.C. Cir. 2017), and the statute itself rather than executive orders drives this requirement. NEPA makes it the federal government’s responsibility to “assure for *all* Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings,” 42 U.S.C. § 4331(b)(2) (emphasis added), and states “that *each person* should enjoy a healthful environment,” *id.* § 4331(c) (emphasis added). Consideration of how a proposed federal action might disproportionately affect *some* Americans more than others is thus a highly relevant

consideration under the statute. NEPA’s focus on “the quality of the *human* environment,” *id.* § 4332(c) (emphasis added), is also a concern advanced by analyzing the distribution of environmental burdens in the human environment.

Many federal oil and gas activities in California occur in close proximity to the state’s most vulnerable communities. The Planning Area is home to several communities that are disproportionately exposed to pollution and who are most vulnerable to pollution and its health effects, called “disadvantaged communities” under California law.⁴⁵ To designate disadvantaged communities, the California Environmental Protection Agency uses the California Office of Environmental Health Hazard Assessment’s (“OEHHA”) CalEnviroScreen Tool to rank census tracts in the state using indicators that measure the communities’ exposure to pollution and the communities’ vulnerability to the effects of pollution. Many census tracts in the Planning Area meet the state’s definition for a disadvantaged community, but disadvantaged communities in Contra Costa, Fresno, Santa Clara, and Stanislaus Counties are most likely to be impacted by the expanded oil and gas drilling contemplated in the Proposed Action.⁴⁶ This means that these communities are already exposed to significantly more air pollution, water pollution, and other pollution sources that cause significant health risks than other parts of the state, and they are more vulnerable to these exposures. For example, residents in Fresno County’s City of Coalinga already experience more pollution from oil and gas wells than 96 percent of census tracts in the state and more drinking water contamination than 89 percent of census tracts in the state.⁴⁷ These residents are also more vulnerable to pollution burdens than 80 percent of census tracts in the state due to factors like socioeconomic status and chronic disease prevalence.⁴⁸

Furthermore, much of the Planning Area is located in agricultural areas of the state, where farmworkers labor long hours outside and will be exposed to air pollution from oil and gas drilling. In Monterey County, known as the salad bowl of the world, around 30,000 individuals work in crop production.⁴⁹ And farmworkers in several Monterey County census tracts are already exposed to more air toxics from oil and gas wells than more than 90 percent of census tracts in the state.⁵⁰ Because farmworkers spend their days outside, they have no protections from air pollution. In addition, farmworkers are also more likely to live in substandard housing

⁴⁵ Cal. Health & Safety Code § 39711; SB 535 Disadvantaged Communities Webpage, <https://oehha.ca.gov/calenviroscreen/sb535>.

⁴⁶ See Cal OEHHA, SB 535 Disadvantaged Communities Webpage, <https://oehha.ca.gov/calenviroscreen/sb535>. Census tracts that are in the top 25 percentile overall in CalEnviroScreen are “disadvantaged communities.” See California Environmental Protection Agency, Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon), April 2017. See also CalEnviroScreen 5.0 Draft, attached as Exhibit 1 and available at <https://oehha.ca.gov/calenviroscreen/report/draft-calenviroscreen-50>.

⁴⁷ See CalEnviroScreen 5.0 Draft, Drinking Water Contaminants Percentile, attached as Exhibit 2 and Small Air Toxics Site Percentile, attached as Exhibit 3.

⁴⁸ See CalEnviroScreen 5.0 Draft, Population Characteristics, attached as Exhibit 4.

⁴⁹ County of Monterey Agricultural Commissioner’s Office, Economic Contributions of Monterey County Agriculture (Nov. 2025) at 7, available at <https://montereycfb.com/wp-content/uploads/2025/11/Economic-Contributions-of-MoCo-Ag-2025.pdf>.

⁵⁰ See CalEnviroScreen 5.0 Draft, Small Air Toxic Sites Indicator, attached as Exhibit 5.

with poor ventilation and water quality.⁵¹ Thus, even once they return home, they are more likely to be exposed to the air and water quality impacts from oil and gas production.

Studies increasingly show links between exposure to oil and gas operations and other public health impacts,⁵² including cancer,⁵³ adverse birth outcomes,⁵⁴ and preterm births.⁵⁵ Residents living near oil and gas operations can experience acute respiratory, neurological, and gastrointestinal symptoms from exposure to the operations, such as headaches, fatigue, burning eyes and throats, nausea, and nosebleeds.⁵⁶ Residents also experience sleep disturbance from noise levels from oil and gas activity.⁵⁷ Further, a state-commissioned public health expert panel that worked with CalGEM, the state's oil and gas regulatory agency, recently released a report affirming that proximity to oil and gas production increases the likelihood of adverse health outcomes, and that those outcomes get worse where the density of wells is greater.⁵⁸ The report concludes with a "high level of certainty" that there is a causal relationship between close proximity to oil and gas development and negative health impacts, particularly adverse perinatal

⁵¹ University of California, Merced, *Farmworker Health in California: Health in a Time of Contagion, Drought, and Climate Change* (2022) at 24, 27, available at https://clc.ucmerced.edu/sites/g/files/ufvvjh626/f/page/documents/fwhs_report_2.2.2383.pdf.

⁵² Intrinsik Environmental Sciences Inc., *Phase 2- Human Health Risk Assessment of Oil and Gas Activity in Northeastern British Columbia: Task 3 – Literature Review*. Prepared for British Columbia Ministry of Health, April 2013.

⁵³ See, e.g., McKenzie, Lisa M., et al., *Childhood Hematologic Cancer and Residential Proximity to Oil and Gas Development*, PLoS ONE 12(2): e0170423 (2017), available at <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170423>.

⁵⁴ Balise, et al., *Systematic Review of the Association between Oil and Natural Gas Extraction Processes and Human Reproduction*, 106 FERTILITY & STERILITY 4, 795-819 (September 2016), available at <https://www.sciencedirect.com/science/article/pii/S0015028216625293>; McKenzie, Lisa M., et al., *Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado*, 122 ENVIRONMENTAL HEALTH PERSPECTIVES 412-417 (2014), available at <https://pubmed.ncbi.nlm.nih.gov/20923742/>; Lupo, P.J., et al., *Maternal Exposure to Ambient Levels of Benzene and Neural Tube Defects Among Offspring: Texas, 1999–2004*, 119 ENVIRONMENTAL HEALTH PERSPECTIVES 397-402 (2011), available at <https://pubmed.ncbi.nlm.nih.gov/20923742/>.

⁵⁵ Casey, et al., *Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania*, 27 EPIDEMIOLOGY 163-172 (2016), available at <https://www.sciencedirect.com/science/article/pii/S0015028216625293>; Li, X., et al., *Association between Ambient Fine Particulate Matter and Preterm Birth or Low Birth Weight: An Updated Systematic Review and Meta-Analysis*, 227 ENVIRONMENTAL POLLUTION 596-605 (2017), available at <https://pubmed.ncbi.nlm.nih.gov/28457735/>.

⁵⁶ Webb, et al., *Potential Hazards of Air Pollutant Emissions from Unconventional Oil and Natural Gas Operations on the Respiratory Health of Children and Infants*, 31 REVIEWS ON ENVIRONMENTAL HEALTH 225-243 (2016), available at <https://pubmed.ncbi.nlm.nih.gov/27171386/>; Tustin, et al., *Associations between Unconventional Natural Gas Development and Nasal and Sinus, Migraine Headache, and Fatigue Symptoms in Pennsylvania*, 125 ENVIRONMENTAL HEALTH PERSPECTIVES 189-197 (2016), available at <https://pmc.ncbi.nlm.nih.gov/articles/PMC5289909/>; Liberty Hill Foundation, *Drilling Down: The Community Consequences of Expanded Oil Development in L.A.* (2015) available at https://libertyhill-assets-2.s3-us-west-2.amazonaws.com/media/documents/Drilling_Down_Report_-_Full.pdf; Los Angeles County Department of Public Health, *Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County*, February 2018, available at http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf.

⁵⁷ Hays, et al., *Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development*, 580 SCIENCE OF THE TOTAL ENVIRONMENT 448-456 (2017).

⁵⁸ Shonkoff et al, *Public Health Dimensions of Upstream Oil and Gas Development in California* (June 21, 2024), available at https://www.conservation.ca.gov/calgem/Documents/Public_Health_Panel_Final_Report_20240621.pdf.

and respiratory outcomes like reduced fetal growth, preterm birth, asthma, and reduced lung function. It cites research estimating that in 2025, nearly 100 premature deaths in California will be attributed to oil and gas pollution.

The increasing evidence of public health effects for residents exposed to oil and gas activity is particularly concerning in the Planning Area given the existing pollution burdens and vulnerabilities. BLM thus must revise its analysis to include a consideration of how the Proposed Action will impact low-income communities and communities of color.

D. The Draft SEIS Fails to Consider Cumulative Impacts.

The Draft SEIS fails to adequately analyze and disclose the cumulative impacts from the Proposed Action. NEPA requires an analysis of the cumulative effects of a federal action as part of its mandate that agencies consider the reasonably foreseeable effects of an action “to the fullest extent possible.” 42 U.S.C. §§ 4332, 4332(2)(C). This requirement stems from NEPA’s recognition that “each ‘limited’ federal project is part of a large mosaic of thousands of similar projects and that cumulative effects can and must be considered on an ongoing basis.” *Swain v. Brinegar*, 517 F.2d 766, 775 (7th Cir. 1975). Courts have also recognized that cumulative impacts analysis is necessary to put a proposed action’s effects into meaningful context and fulfill NEPA’s informed decision-making purpose. *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972). Cumulative impacts analysis requires an assessment of the actual impact in light of background effects—e.g., how increased emissions affect air quality in light of existing emissions—not merely a comparison of the relative increase in emissions against total background emissions. NEPA reviews “must give a realistic evaluation of the total impacts and cannot isolate a proposed project, viewing it in a vacuum.” *Grand Canyon Trust v. FAA*, 290 F.3d 339, 342 (D.C. Cir. 2001).

As BLM is well aware, the agency is also currently proposing a RMP Amendment and Draft SEIS for Oil and Gas Leasing and Development in the neighboring Bakersfield Planning Area. That proposal involves considerable new well development. Yet, inexplicably, the Central Coast Draft SEIS fails to mention that other major BLM planning effort, which would ostensibly involve the development of new wells, including new hydraulically-fractured wells, during the same timeframe as the Proposed Action.

This raises serious cumulative impact concerns. Cumulative impacts result from the incremental impact of an action combined with past, present, and reasonably foreseeable future actions. The San Joaquin Valley is in extreme ozone nonattainment status, and smog is very much a cumulative air pollution concern (NO_x and reactive organic gas (“ROG”) emissions are both ozone precursors which generate smog by reacting in the atmosphere across the entire air basin). Despite these facts, BLM fails to consider the cumulative NO_x and ROG related effects of two major planning efforts—both undertaken by BLM at the same time, and both of which involve approving new hydraulic fracturing and other well development activities which would occur during the same timeframe and in the same extreme nonattainment air basin.

Finally, hydraulic fracturing is associated with significant GHG emissions, including carbon dioxide, methane, NO_x, VOCs, and black carbon.⁵⁹ GHG emissions also result from fuel combustion by the equipment used to prepare oil and gas well pads and drill wells, from fugitive leaks of methane from production equipment, as well as from fuel used to power boilers and steam generators used in enhanced oil recovery operations.⁶⁰ “The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008).

E. The Draft SEIS Fails to Consider Impacts to Listed Species.

BLM must take a hard look at the impacts of oil and gas development, including those from hydraulic fracturing and other drilling techniques, on sensitive species and habitats in the Planning Area. New species have been listed, and their critical habitat designated, within the Planning Area since the 2019 FEIS that implicate both existing oil and gas leases and unleased oil and gas areas. BLM’s SEIS must take into account these newly-protected species and consider the impacts of oil and gas activities on them and their habitats.

These include the following actions under the federal Endangered Species Act (“ESA”):

- The Central Coast Distinct Population Segment (“DPS”) and South Coast DPS foothill yellow-legged frogs were listed as threatened and endangered, respectively, on September 28, 2023. On January 14, 2025, the U.S. Fish and Wildlife Service (“FWS”) proposed a final rule designating 249,942 acres of critical habitat for the Central Coast DPS and 10,077 acres of critical habitat for the South Coast DPS;
- The FWS proposed to list the northwestern pond turtle and the southwestern pond turtle as threatened on October 3, 2023;
- The FWS proposed to list the Northern DPS western spadefoot as threatened on December 5, 2023; and
- The FWS proposed to list the monarch butterfly and designate 4,395 acres of critical habitat on December 12, 2024.

Under the California Endangered Species Act (“CESA”):

- The Central Coast DPS and South Coast DPS foothill yellow-legged frogs were listed as endangered on March 20, 2020;
- The Temblor legless lizard was given endangered candidate status on July 1, 2022; and
- The burrowing owl was given candidate status on October 10, 2024.

⁵⁹ Brandt, A., Millstein, D., Jin, L., & Englander, J., *Air Quality Impacts from Well Stimulation* at 185-86 (2015), available at <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf>.

⁶⁰ Bureau of Land Management, 2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends (Aug. 2024), available at <https://www.blm.gov/sites/default/files/docs/2025-04/BLM-2023-Base-GHG-Report.pdf>.

- On February 12, 2026, the Fish and Game Commission voted to list the Southern California/Central Coast Evolutionarily Significant Unit (ESU) of Mountain Lion. The actual listing date is pending adoption of regulation. Key protected regions and subpopulations are located in the Planning Area.

The Draft SEIS fails to assess potential impacts to federally listed and candidate species. First, BLM has not evaluated impacts to all species that have been either proposed for listing or formally listed under the ESA and CESA since 2019. In particular, BLM ignores impacts to monarch butterflies, despite finding in its Draft SEIS for the Bakersfield Planning Area that “monarch butterflies may occur within the lease parcels” due to the prevalence of the milkweed plant, which is also present in the Central Coast Planning Area. Bakersfield Draft SEIS at 27.

Second, BLM arbitrarily discounts the possibility of impacts to the other species. It recognizes that keeping the Clear Creek Serpentine Area of Critical Environmental Concern (ACEC) closed to oil and gas leasing under all alternatives considered in this SEIS would prevent any potential impacts to foothill yellow-legged frog habitat on those lands. But BLM dismisses the possibility of impacts to the foothill yellow-legged frog and other species and their critical habitats outside the ACEC because their habitats “are outside of areas where the RFDS suggests oil and gas development would occur.” Draft SEIS at 75. This ignores the fact that the agency’s preferred alternative would open critical habitat for these species to oil and gas drilling in the Planning Area.

The Draft SEIS contains no discussion of the Temblor legless lizard or the burrowing owl. In considering impacts to these species, BLM should discuss studies prepared by state agencies and other relevant stakeholders. These include a 2019 conservation assessment prepared for the California Department of Fish and Wildlife (“CDFW”) in which scientists recommended federal and state ESA protection for the Temblor legless lizard.⁶¹ In its candidate review, CDFW noted that the Temblor legless lizard has a “very small range, making its continued existence especially vulnerable to threats.”⁶² CDFW found sufficient evidence that oil and gas development “result[s] in habitat loss, degradation and fragmentation and can restrict the species’ ability to carry out essential functions such as feeding, burrowing, and reproduction.”⁶³ Further, given the threats and small range of the species, along with its specialized habitat requirements, these factors “could be immediately threatening to the species’ continued survival and reproduction.”⁶⁴ BLM should also consider that a CDFW staff report on burrowing owl mitigation says that the potential displacement of burrowing owls poses a serious concern for the

⁶¹ Parham, J.F. et al., *Conservation Assessment of the California Legless Lizard (Anniella)*, prepared for California Department of Fish and Wildlife (2019), available at https://meridian.allenpress.com/jfwm/article-supplement/501241/pdf/refs1_parham_et_al_2019/.

⁶² California Dept. of Fish and Wildlife, *Evaluation of the Petition From the Center For Biological Diversity to List the Temblor Legless Lizard (Anniella Alexanderae) As Threatened or Endangered Under the California Endangered Species Act* (March 25, 2022) at 1, available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=201997&inline>.

⁶³ *Id.* at 18.

⁶⁴ *Id.*

survival of the species.⁶⁵ Further, burrowing owls are often observed foraging along roads, and sometimes nest near them, making them especially vulnerable to vehicle collisions.⁶⁶

BLM must also consider new information concerning already listed species in the Planning Area that has been published after the 2019 FEIS. For example, the U.S. Fish and Wildlife Service in 2020 published a study concerning the San Joaquin kit fox that found: “Permanent modification to habitat due to oil and gas activities can reduce the species’ ability to disperse and find new habitat. As more land is affected by extraction of natural resources, there could be population level responses associated with habitat degradation and habitat modification.”⁶⁷

F. The Draft SEIS Fails to Consider Reasonable Alternatives to the Proposed Action.

The Draft SEIS also fails to consider a reasonable range of alternatives to the Proposed Action. NEPA requires project proponents to provide a “detailed statement” regarding the “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii). The requirement to consider reasonable alternatives “lies at the heart of any NEPA analysis.” *California ex rel. Lockyer v. U.S. Dept. of Agric.*, 459 F. Supp. 2d 874, 905 (N.D. Cal. 2006). The alternatives requirement also “ensures that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance.” *Calvert Cliffs Coordinating Committee v. United States Atomic Energy Commission*, 449 F.2d 1109, 1114 (D.C. Cir. 1971). “The existence of a viable but unexamined alternative renders” an EIS inadequate. *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (internal quotations and citations omitted).

In the stipulated settlement that required BLM to prepare its SEIS, BLM committed to “solicit additional alternatives during the public scoping process and [] consider incorporating those alternatives into the analysis.” But in the Draft SEIS, BLM “carries forward” the same alternatives that it previously considered in the 2019 FEIS. Draft SEIS at 16. In so doing, its analysis suffers from the same flaws as the 2019 FEIS.

The 2017 draft EIS considered five alternatives, “A” through “E,” each of which proposed opening different acreages for oil and gas leasing and development. BLM in that draft identified its preferred alternative as “Alternative C,” which would open a total of 398,600 acres

⁶⁵ California Department of Fish and Game, *Staff Report on Burrowing Owl Mitigation* (March 7, 2012), available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843>.

⁶⁶ Scobie, Corey et al, *Influence of petroleum development on burrowing owl ecology*, Univ. Alta. Dep’t of Biological Scis., (July 2013) 1, 16, available at https://www.researchgate.net/publication/309310446_Influence_of_petroileum_development_on_burrowing_owl_ecology.

⁶⁷ United States Fish and Wildlife Service, *Species Status Assessment Report for the San Joaquin Kit Fox* (2020) at 32, 35, available at <https://iris.fws.gov/APPS/ServCat/DownloadFile/185116>.

of federal mineral estate for oil and gas development. Under Alternative C, federal mineral estate underlying core population habitat areas for the giant kangaroo rat and California's coastal zone would be closed to oil and gas development, and no surface occupancy would be allowed on land designated by the U.S. Fish and Wildlife Service as critical habitat for threatened or endangered species. Further, all federal mineral estate in Alameda, Contra Costa, Santa Clara, Santa Cruz and San Mateo Counties would be closed to oil and gas leasing and development.

However, the 2019 FEIS introduced a wholly new alternative that was not included or analyzed in the Draft EIS, "Alternative F," and selected it as the agency's preferred alternative. Alternative F opens for oil and gas development a total of 725,500 acres of federal mineral estate, more than 91 percent of all land and mineral estate in the Planning Area under BLM's control, and nearly double the estate open under the previous preferred alternative. Unlike Alternative C, Alternative F opens federal mineral estate in Alameda, Contra Costa, Santa Cruz, Santa Clara and San Mateo Counties for oil and gas development. It also opens for oil and gas development, including surface occupancy, mineral estate underlying designated critical habitat for threatened and endangered species, and within California's coastal zone. Even more, Alternative F opens for oil and gas development mineral estate overlying portions of all 20 groundwater basins in the Planning Area, and opens for oil and gas leasing, including surface occupancy, federal lands within portions of Panoche-Coalinga ACEC and federal lands subject to Recreation and Public Purpose leases. There are Recreation and Public Purpose lease lands in the Mount Diablo State Park and Henry W. Coe State Park that would be open for oil and gas leasing with surface occupancy under this alternative.

Introduction in a final EIS of a new alternative that is outside "the range of alternatives the public could have reasonably anticipated," and to which the "public's comments on the draft EIS alternatives" do not include "the chosen alternative [to] inform [the agency] meaningfully of the public's attitudes toward the chosen alternative" is sufficient rationale to require a supplemental EIS. *California v. Block*, 690 F.2d 753, 772 (9th Cir. 1982). BLM in 2019 adopted an alternative presented for the first time in its FEIS that was outside the range of the alternatives the public could reasonably have anticipated that BLM was considering. Comments from the public were therefore insufficient to inform BLM of the public's view of the chosen alternative and its impacts since they did not address the chosen alternative. *Id.*

The present Draft SEIS does not remedy BLM's failure to seek public comment on Alternative F. BLM's failure to prepare and circulate a supplemental EIS that provides for public comment on the entirety of Alternative F does not satisfy NEPA's public participation requirements. Put another way, BLM cannot simply carry forward the same alternatives from a prior defective review that entirely prevented public comment on its preferred alternative.

This flaw is compounded by the fact that the present Draft SEIS only analyzed a small subset of potential impacts to the Planning Area. For example, it provided little in the way of analysis to recreation issues, providing only a statement that "[i]mpacts on recreation can be inferred based on the potential for oil and gas activities within the vicinity of the recreation areas and BLM-managed [Special Recreation Management Areas (SRMAs)] described in Section 3.6 of this SEIS." Draft SEIS at 75. There is no map illustrating the areas open to leasing and the

SRMAs together, and no acknowledgment of how recreation impacts changed in Alternative F relative to the other alternatives, including opening California State Park lands to leasing.

In addition, BLM has failed to abide by its commitment in the stipulated settlement to “consider incorporating [] alternatives into the analysis” that were raised during scoping. It instead lumped these alternatives together into a brief discussion and provided unsupported and conclusory statements as to why they were not considered in the Draft SEIS.

For example, despite noting that “[n]umerous scoping comments urged the BLM to consider an alternative that would ban the use of well stimulation technologies on Federal mineral estate,” it failed to consider that alternative. The explanation provided is that BLM does not regulate hydraulic fracturing in California, but this fails to support the agency’s decision for a number of reasons. First, it contradicts what BLM says elsewhere in the Draft SEIS, that it “carries forward” the alternatives considered in the 2019 EIS, which all assume that all wells “could employ hydraulic fracturing or other well stimulating technology.” Draft SEIS at 3. Second, BLM has recognized elsewhere in the Draft SEIS that California has banned hydraulic fracturing. *Id.* at 28. It defies reason to refuse to analyze an alternative to consider new information and changed circumstances that the agency itself has acknowledged. Third, BLM could choose to respect state law and implement its requirements with respect to hydraulic fracturing. And last, hydraulic fracturing is only one of several well stimulation techniques and enhanced recovery methods used in California. BLM’s statement that it does not regulate hydraulic fracturing accordingly does not provide a basis for refusing to consider an alternative that precludes other well stimulation and enhanced recovery technologies. As discussed above, these pose risks to resources, particularly public health, and their elimination from the analysis would accordingly “alter the environmental impact and the cost-benefit balance.” *Calvert Cliffs*, 449 F.2d at 1114.

BLM also refused to consider alternatives that would require NSO stipulations on new leases or not leasing in habitats for listed species. The rationale BLM provides is that the 2019 EIS already considered alternatives that address the closure of listed species habitat. The agency cites alternatives that would “close all split estate lands to oil and gas leasing and development,” or lease “only federal minerals in an existing oil and gas field (plus half-mile buffer),” or restrict leasing on “state parks, county parks, conservation easements, and other split estate lands.” Draft SEIS at 20. BLM, however, provides no analysis of how the lands that would be closed to leasing under these other alternatives overlaps with listed species habitats. And as discussed above, with new species having been listed since 2019, the alternatives mentioned could not have been developed or analyzed with those species’ habitats in mind.

Last, BLM rejected consideration of an alternative that would prevent development in setback zones to protect public health and safety. *Id.* at 20-21. BLM recognizes that “California Senate Bill 1137 established a 3,200-foot physical setback area between new and reworked oil and gas wells and sensitive receptors,” but states it cannot analyze an alternative implementing that setback in detail because it “does not have authority to enforce State laws and regulations (i.e. legal and policy considerations).” *Id.* This rationale fails to provide a basis for rejecting the alternative. BLM could choose to respect state law and implement its requirements, and it could

adopt an alternative based on the public health considerations that led to Senate Bill (“SB”) 1137 in the first place. As discussed below, the physical setback area was established based on substantial data and study regarding the impacts of oil and gas development on public health. In addition, EPA recommended that BLM consider setbacks in the Draft SEIS to protect public health. By analyzing an alternative that incorporates setbacks, BLM could provide an analysis that would show a marked difference in public health impacts from its proposed action.

Without a logically and factually sound consideration of the reasonable alternatives solicited during scoping, BLM’s alternatives fail to allow for “informed decision-making and informed public participation,” in violation of NEPA. *See California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982). BLM should therefore consider these reasonable alternatives.

G. BLM Failed to Identify or Discuss Adequate Mitigation Measures.

NEPA requires that an agency identify feasible mitigation measures for any adverse environmental impacts resulting from a proposed action and its alternatives. *Robertson*, 490 U.S. at 351-52 (“[O]ne important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences.”). Mitigation of environmental impacts must “be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.” *City of Carmel-By-The-Sea v. U.S. Dep’t of Transp.*, 1 123 F.3d 1142, 1154 (9th Cir. 1997) (quoting *Robertson*, 490 U.S. at 353). Moreover, “[a]n essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective.” *S. Fork Band Council of W. Shoshone of Nev. v. U.S. Dep’t of the Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (finding that the EIS violated NEPA by failing to “assess the effectiveness of the mitigation measures relating to groundwater”).

NEPA does not allow BLM to simply ignore consideration of mitigation measures now by listing steps that might be taken in the future. *See S. Fork Band Council*, 588 F.3d at 727 (“[T]hat these individual harms are somewhat uncertain due to BLM’s limited understanding of the hydrologic features of the area does not relieve BLM of the responsibility under NEPA to discuss mitigation of reasonably likely impacts at the outset.”); *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998) (finding a “mere listing of mitigation measures” is not enough to satisfy NEPA); *Nat’l Parks & Conservation Ass’n v. Babbitt*, 241 F.3d 722, 734 (9th Cir. 2001) (“A perfunctory description, or mere listing of mitigation measures, without supporting analytical data, is insufficient to support a finding of no significant impact.”) (internal quotations and citations omitted). As the Ninth Circuit has frequently stated in NEPA cases, it is “not appropriate to defer consideration” of impacts to a future date “when meaningful consideration can be given now.” *See Kern v. U.S. BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002).

Throughout the Draft SEIS, BLM declines to consider mitigation measures and instead indicates that such measures will be evaluated later in the development process:

- Page 4 – “During this project-specific [APD] review, BLM will finalize project conditions or approval, monitoring, and/or mitigation.”
- Page 38 – “In exercising its permitting authority - including review of Applications for Permit to Drill and related authorizations - the BLM ... may require design features or conditions of approval to avoid or minimize impacts to surface water and groundwater.”
- Page 38 – “BLM will consider water-quantity risks during APD review . . . Mitigation may be required through design features and enforceable conditions of approval-for example, source-water selection, pumping limits, and metering/monitoring and reporting-and by requiring operators to obtain and comply with all applicable federal and state authorizations and regulations and, where applicable, local requirements.”
- Page 72 – “BLM concludes that the SJVAPCD requirement to quantify GHG emissions and to implement SJVAPCD Best Performance Standards to reduce GHG emissions would occur at the APD or Sundry stage, to be analyzed in a site-specific NEPA analysis.”
- Page 74 – “These potential impacts [to surface and groundwater] would be avoided or minimized through site-specific monitoring standards and regulations and application of best management practices (BMPs), as required by applicable federal, state, and local regulations, once sufficiently detailed location information is available.”

This deferral of mitigation and best management practices is inappropriate. BLM is in a better position now to evaluate and mitigate impacts that will result from the collective increase in oil and gas development than it will be when it considers Applications for Permits to Drill (“APDs”). For example, air pollution increases that contribute to nonattainment are better assessed holistically rather than when operators seek APDs for one well at a time. Similarly, impacts to aquifers cannot be addressed only at the site-specific scale of APDs. Mitigation is especially critical if BLM and operators expect CalGEM to rely on BLM’s SEIS for approval of oil and gas permits without conducting additional environmental review pursuant to CEQA, as CEQA requires a separate discussion of mitigation measures. *See* Cal. Code Regs., tit. 14, § 15221.

As discussed, *infra*, BLM should not allow drilling with 3,200 feet of sensitive locations and should implement relevant safety measures identified in SB 1137. Relevant measures include leak detection and repair of sites including pipelines, suspension of operations in the event of a leak, vapor venting prevention, water sampling, sound controls, lighting controls, and dust controls. These measures should be considered as mitigation measures in the SEIS. A 2024 public health expert panel report, discussed below, sets out further reasonable mitigation measures that BLM should analyze and implement, including improved air quality monitoring and leak detection that is more specifically tailored to the variety of extraction processes and equipment that produce VOCs, additional setbacks between oil and gas wells and potential sources of drinking water, prohibitions on disposal of produced water into unlined ponds, better

access to information about produced water disposal, restriction of chemicals with the greatest health risks, and chemical disclosure requirements.⁶⁸

EPA noted that buffers can be effective health protection tools because they provide an opportunity for air pollutants to disperse before entering an area where they could affect human health, as well as provide extra time to warn residents of any unintended releases or emissions. EPA also recommended that BLM consider other risk reduction mitigation, including: requiring closed-loop drilling and completion; prohibiting reserve pits or produced water ponds; using lower emitting engine technology; capturing emissions from tanks, separators, and glycol dehydrators; and implementing stringent fugitive vapor controls.

BLM's failure to identify and discuss feasible mitigation measures in the SEIS regarding public health or sensitive species and their habitat is arbitrary and capricious and contrary to the requirements of NEPA and the Administrative Procedure Act.

H. The Draft SEIS Fails to Consider Conflicts with State and Local Laws and Policies.

The Draft SEIS fails to properly consider conflicts between the Proposed Action and directly applicable California laws and policies. BLM's RMPs "shall" be consistent with state and local government resource related plans, policies, and programs. 43 C.F.R. § 1610.3-2. BLM is "accountable for ensuring consistency if they have [] been notified, in writing, by State and local governments or Indian tribes of an apparent inconsistency" with state policies, plans, and programs. *Id.* To effectuate these requirements, BLM must identify inconsistencies and also provide the Governor the opportunity to identify inconsistencies and provide recommendations. *Id.* BLM must also document how inconsistencies between the proposed plan and state and local plans were "addressed and, if possible, resolved." *Id.* at § 1610.3-1(f).

BLM has acknowledged that "[a]ll state laws apply on Federal lands, except those that are preempted by Federal law." 80 Fed. Reg. at 16,179; *see also id.* (the requirement that operators "comply with all applicable laws," "includes other Federal and state and local laws, rules, and regulations," and is "repeated in the existing regulations at sections 3162.1(a) and 3162.5-1(a)."). Specifically with respect to hydraulic fracturing, operators "must comply" with "any applicable state requirements, just as they already must comply with both BLM rules and state rules on a variety of drilling and completion issues." *Id.*

NEPA also requires that an agency discuss possible conflicts between the proposed action and state plans or policies. *See, e.g., Quechan Tribe of Ft. Yuma Indian Reservation v. U.S. Dep't of the Interior*, 927 F. Supp. 2d 921, 946 (S.D. Cal. 2013) (finding that BLM did not violate NEPA where "numerous provisions" in EIS and ROD examined the project's consistency with local laws and regulations and California determined there were no inconsistencies between the

⁶⁸ Shonkoff, et al., *Public Health Dimensions of Upstream Oil and Gas Development in California* (June 21, 2024), available at https://www.conservation.ca.gov/calgem/Documents/Public_Health_Panel_Final_Report_20240621.pdf.

Project and state or local laws). In addition, NEPA requires supplementation when there “are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 372 (1989); Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6, <https://www.doi.gov/media/document/doi-nepa-handbook>.

BLM claims that the Draft SEIS was prepared to “determine whether changes are needed to the fluid minerals decisions in the 2014 RMP based on new information or changes in circumstance.” Draft SEIS at ES-1. However, BLM entirely fails to acknowledge relevant new information and changes in circumstances related to state and local laws and policies that address environmental concerns. Most significantly, the Draft SEIS ignores two state policy developments that significantly affect oil and gas activities in the Planning Area: a ban on hydraulic fracturing and a law establishing a 3,200-foot setback between new and reworked oil and gas wells and all sensitive locations. All oil and gas wells located on lands within California (including federal, state, local, and private lands) are permitted, drilled, operated, maintained, and plugged and abandoned under legal requirements and administrative procedures that CalGEM enforces and administers. CalGEM’s permitting authority and process applies to oilfield operations in California on all land administered by BLM whether that land is owned in total by the federal government or is a “split-estate.”⁶⁹

Regulations prohibiting new permits for well stimulation treatments such as hydraulic fracturing and acid matrix stimulation went into effect in October 2024. Cal. Code Regs., tit 14, § 1780(d). The regulations were developed following a 2020 Executive Order from Governor Newsom announcing that the State would cease issuing fracking permits due to health and safety harms to communities and workers.⁷⁰ Although BLM acknowledges the CalGEM has “regulatory authority over hydraulic fracturing in California,” and that California has a ban on the issuance of new hydraulic fracturing permits, BLM provides no affirmation that well stimulation is disallowed in the Planning Area.

In 2022, California’s SB 1137 established 3,200-foot drilling setback requirements and other statutory requirements, including engineering controls for all wells, to protect the health and safety of adjacent communities, including residences and schools.⁷¹ SB 1137 sets forth a variety of new requirements related to health protection zones and to wells and production facilities based on their location relative to a health protection zone. CalGEM is no longer authorized to approve a notice of intention for any well with a wellhead (i.e., a surface location) situated within a health protection zone, unless a specific exception applies. Cal. Pub. Resources Code, §§ 3281, 3281.5. Construction and operation of new production facilities within a health protection zone is also prohibited unless a specific exception applies. *Id.*, § 3280(b). To implement SB 1137, CalGEM adopted emergency regulations establishing administrative

⁶⁹ See Public Resources Code §§ 3008, 3013, 3106, 3203, and 3204; Cal. Code of Regs., title 14, §§ 1712, 1714; CalGEM Notice to Operators 2017-03.

⁷⁰ Executive Department, State of California, Executive Order N-70-20, Gavin Newsom (Sept. 23, 2020), available at <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>.

⁷¹ SB 1137, 2022 Leg., Reg. Sess. (Cal. 2022).

framework for the statutory prohibition of new wells and facilities within a 3,200-foot setback area from certain sensitive locations, and requiring pollution controls for existing wells and facilities.⁷² The agency is currently undertaking a rulemaking process to adopt permanently those regulations.⁷³ The Draft SEIS does not ensure consistency with this law by evaluating a compliant alternative or mitigation that would apply to wells within 3,200-feet of sensitive receptors.

Other recent regulatory updates directly affect oil and gas operations. In 2019, updated underground injection control regulations went into effect that increase testing, monitoring, and disclosure requirements, as well as set automatic triggers that require operators to cease injections to protect groundwater and public safety. Cal. Code Regs., tit 14, §§ 1724.5-1724.13. Effective in 2019 and updated in 2025, there are also requirements for testing and elimination of idle wells. Pub. Resources Code, § 3206; Cal. Code Regs., tit. 14, §§ 1772-1772.7. BLM must evaluate if its Proposed Action is consistent with these requirements.

There are several additional state plans and policies that conflict with BLM's Proposed Action. The use of hydraulic fracturing would open up previously unproductive hydrocarbon formations and extend the life of existing formations, with resulting significant impacts. California has a statutory target of reducing GHG emissions by 40 percent below 1990 levels by 2030, Cal. Health & Safety Code § 38566, and reaching net zero GHG emissions by 2045 (Assembly Bill 1279). *Id.* § 38562.2; Executive Order B-55-18. CARB's 2022 Scoping Plan for Achieving Carbon Neutrality lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. This path includes reduction of oil and gas extraction by approximately 89 percent in 2045 from 2022 levels.⁷⁴ Each scenario the California Air Resources Board studied incorporated a phaseout of 90 to 100 percent of oil extraction and oil refining by 2045.⁷⁵ Increasing oil and gas operations and opening new lands to leasing is contrary to and inconsistent with these statutory targets and the 2022 Scoping Plan.

There are also several state water laws and policies that are largely ignored by the Draft SEIS. In 2012, California enacted Water Code section 106.3, making California the first state in the nation to recognize the human right to water.⁷⁶ Water Code section 106.3 established the state's policy that every person has the right to safe, clean, affordable, and accessible water

⁷² CalGEM, SB 1137 First Emergency Implementation Regulations, Cal. Code Regs., tit. 14, § 1765 et seq., available at <https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf>.

⁷³ CalGEM, SB 1137 Notice of Proposed Action (Aug. 1, 2025), available at https://conservation.ca.gov/calgem/Documents/SB%201137%20Notice%20of%20Proposed%20Action%20v2_Clean.pdf.

⁷⁴ California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022) at 102, available at <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>.

⁷⁵ *Id.* at 24, Table 1.

⁷⁶ California State Assembly Bill 685 (2012).

adequate for drinking, cooking, and sanitary purposes.⁷⁷ Thus, preventing and addressing discharges that could threaten human health by contributing to contamination of drinking water sources are among the state's highest priorities. The California Sustainable Groundwater Management Act, enacted in 2014, also requires implementation of groundwater sustainability plans to avoid undesirable groundwater impacts and mitigate overdraft within 20 years. Cal. Water Code § 10720 *et seq.*

As discussed above, many of the disadvantaged and marginalized communities residing in the Planning Area do not have access to clean, safe, and affordable water.⁷⁸ In addition, there are potentially significant impacts to groundwater from contamination, overdraft, and land subsidence resulting from the Proposed Action, which would compound the significant water contamination and overdraft issues many communities in the Planning Area are already dealing with. Thus, any risk of additional contamination or reduction in water supplies resulting from hydraulic fracturing on BLM lands is significant and would be inconsistent with the state's laws and policies.

The state's Natural Community Conservation Planning Program ("NCCP") is another source of inconsistency. Specifically, within the Central Coast planning area, are the East Contra Costa County NCCP, the Santa Clara Valley Habitat Plan NCCP, and the in-process San Benito NCCP. The NCCPs are broad-based plans to protect and conserve the state's wildlife and natural resources, while continuing to allow for development and growth. Fish & G. Code, § 2801, subd. (b). The NCCPs in the Central Coast planning area cover more than 1.5 million acres, conserving habitat for multiple special-status species and natural communities. The SEIS fails to evaluate the Proposed Action's potential impacts and conflicts with these NCCPs.

The Proposed Action also conflicts with local laws and policies. Pursuant to the stipulated settlement Agreement in *Center for Biological Diversity v. BLM*, Case No. 3:19-cv-07155-JSC, BLM was required to "cooperate with local governments to ensure consistency of federal actions with local land use plans." For instance, Santa Cruz County prohibits all oil and gas development within the county's unincorporated areas. (Santa Cruz County, Cal. General Plan, Public Safety Element (2020) 6.8.4(b).) Alameda County prohibits "high-intensity oil and gas operations," including well stimulation, enhanced recovery, and hydraulic fracturing, within the unincorporated area of the county. (Alameda County, Cal. Code of Ordinances, ch. 17 §§ 17.06.100-17.06.140 (Aug. 2, 2016).) The Draft SEIS ignores these local laws.

⁷⁷ California State Water Resources Control Board, Resolution No. 2016-0010; California Regional Water Quality Control Board, Central Valley Region, Resolution R5-20161-0018.

⁷⁸ University of California, Berkeley School of Law, International Human Rights Law Clinic, *The Human Right to Water Bill in California: An Implementation Framework for State Agencies* (2013), <https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf>.

I. BLM Failed to Provide an Adequate Opportunity for Public Comment.

The public is entitled to meaningful opportunities to participate in and comment on the preparation of BLM's planning activities. 43 C.F.R. § 1610.2(e). Accordingly, BLM is required to provide a 90-day public comment period for a draft EIS relating to a RMP, and it is expected to circulate a supplemental EIS in the same fashion as a draft EIS. 43 C.F.R. § 1610.2(e); BLM NEPA Handbook H-1790-1 at 102. Despite this mandate, BLM provided the public with only 60 days to comment on the Draft SEIS.⁷⁹ This is a full month less than the 90 days required by BLM's own regulations and NEPA handbook.

BLM'S FAILURE TO CONSULT WITH THE U.S. FISH AND WILDLIFE SERVICE VIOLATES THE ENDANGERED SPECIES ACT

The ESA provides that, "[e]ach federal agency shall ... insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species." 16 U.S.C. § 1536(a)(2). Section 7 of the ESA establishes an interagency consultation process to assist federal agencies in complying with their duty to ensure against jeopardy to listed species or destruction or adverse modification of critical habitat. An agency must initiate consultation with the U.S. Fish and Wildlife Service (FWS) whenever it takes an action that "may affect" a listed species or its critical habitat. *See* 50 C.F.R. § 402.14(a). Agencies also must consult with FWS "on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under [ESA Section 4] or result in the destruction or adverse modification of critical habitat proposed to be designated for such species." 16 U.S.C. § 1536(a)(4); *see also* 50 C.F.R. § 402.10.

"The minimum threshold for an agency action to trigger consultation with FWS is low." *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 496 (9th Cir. 2011). "Section 7(a)(2) consultation is required so long as a federal agency retains 'some discretion' to take action for the benefit of a protected species." *Nat. Res. Def. Council v. Jewell*, 749 F.3d 776, 784 (9th Cir. 2014) (en banc). "Actions that have any chance of affecting listed species or critical habitat—even if it is later determined that the actions are 'not likely' to do so—require at least some consultation under the ESA." *Karuk Tribe v. U.S. Forest Serv.*, 681 F.3d 1006, 1027 (9th Cir. 2012) (en banc). Even effects that are mitigated or "trivial" may meet the 'may affect' threshold. *Swan View Coal. v. Weber*, 52 F. Supp. 3d 1133, 1145–47 (D. Mont. 2014).

The amendment of an RMP is an "agency action" to which the obligation to consult applies if the amendment "may affect" listed species. 50 C.F.R. § 402.02; *All. for the Wild Rockies v. United States Dep't of Agric.*, 772 F.3d 592, 598–99 (9th Cir. 2014); citing *Lane Cty. Audubon Soc'y v. Jamison*, 958 F.2d 290, 293 (9th Cir. 1992) (BLM land use plans that designate

⁷⁹ 91 Fed. Reg. 1329 (Jan. 13, 2026); 91 Fed. Reg. 5474 (Feb. 6, 2026) ("extending the Comment Period from 03/06/2026 to 03/13/ 2026").

areas for particular uses are agency action to which section 7 applies); *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1055 (9th Cir. 1994).

BLM accordingly cannot make a decision unless and until it consults with FWS regarding protected species in the Central Coast Field Office Planning Area. It is particularly important for BLM to consult with FWS regarding the species listed and provided candidate status since 2019, including the Central Coast DPS and South Coast DPS of foothill yellow-legged frogs that were listed as threatened and endangered, respectively, on September 28, 2023, and their critical habitat.

CONCLUSION

Given the serious deficiencies in the Draft SEIS, BLM should withdraw its current proposal, circulate an RMP amendment or revision, and prepare a new analysis that fully considers the environmental impacts of opening over 700,000 acres of public lands in California to oil and gas leasing.

Sincerely,

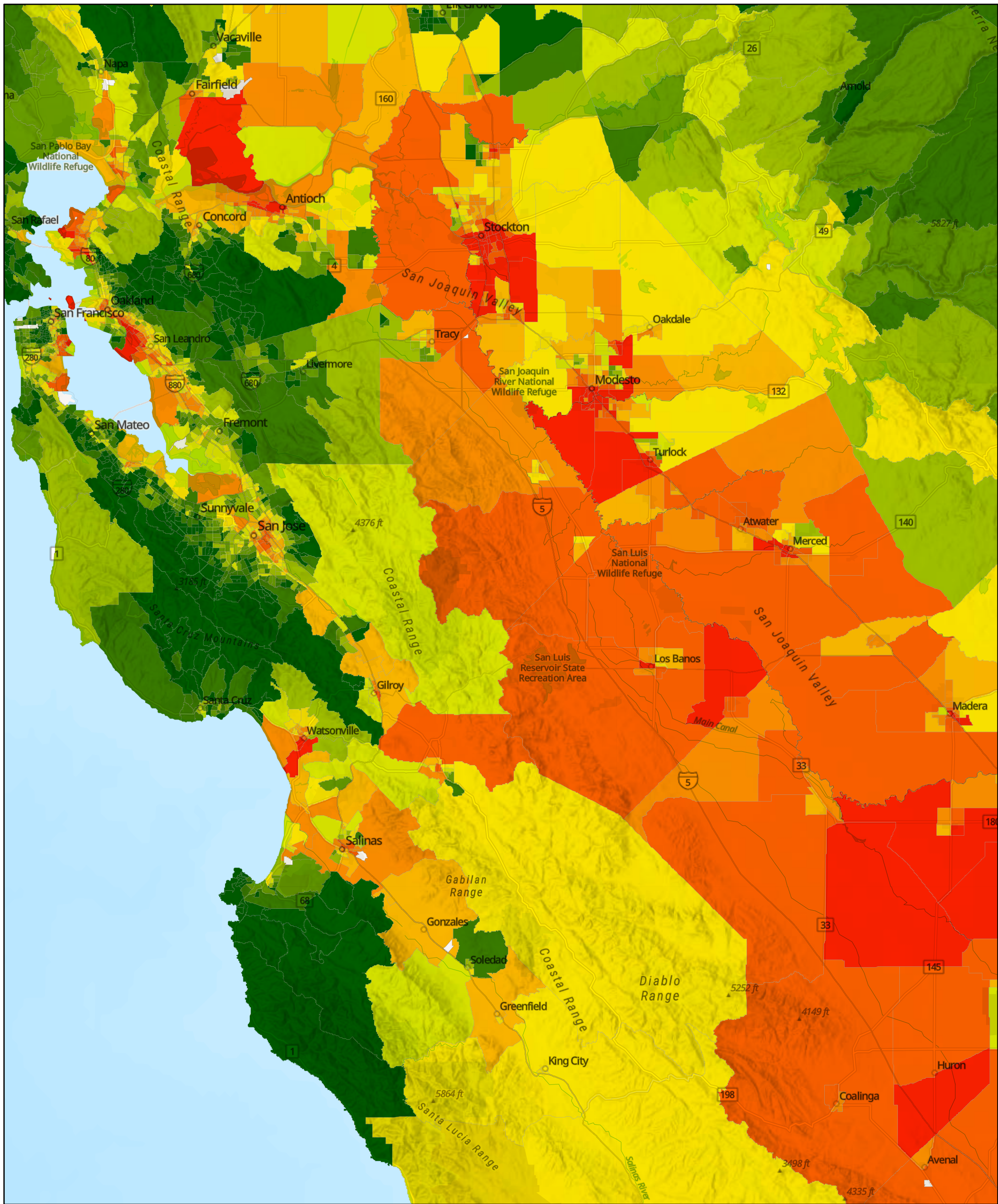
A handwritten signature in blue ink, appearing to read "Keith Bauerle".

KEITH BAUERLE
Deputy Attorney General
MONICA HEGGER
Deputy Attorney General
ABIGAIL BLODGETT
Supervising Deputy Attorney General

For ROB BONTA
California Attorney General

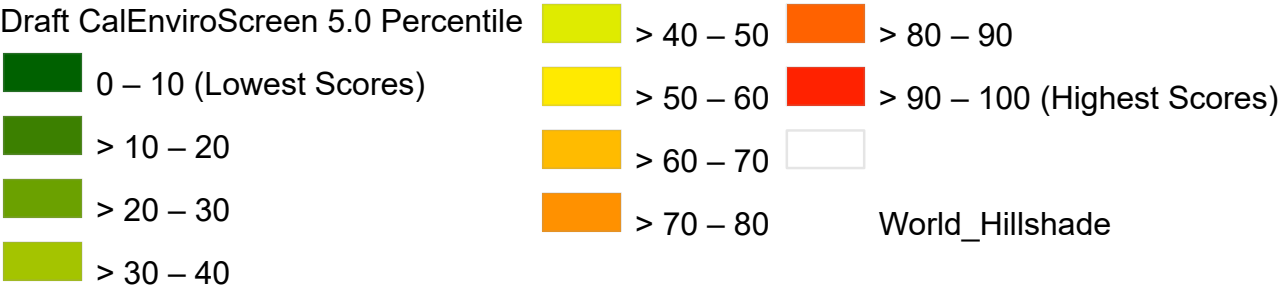
EXHIBIT 1

ArcGIS Web Map



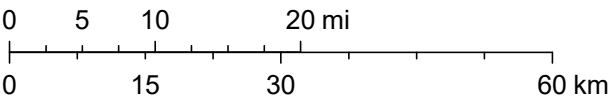
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Draft CalEnviroScreen 5.0 Percentile



World_Hillshade

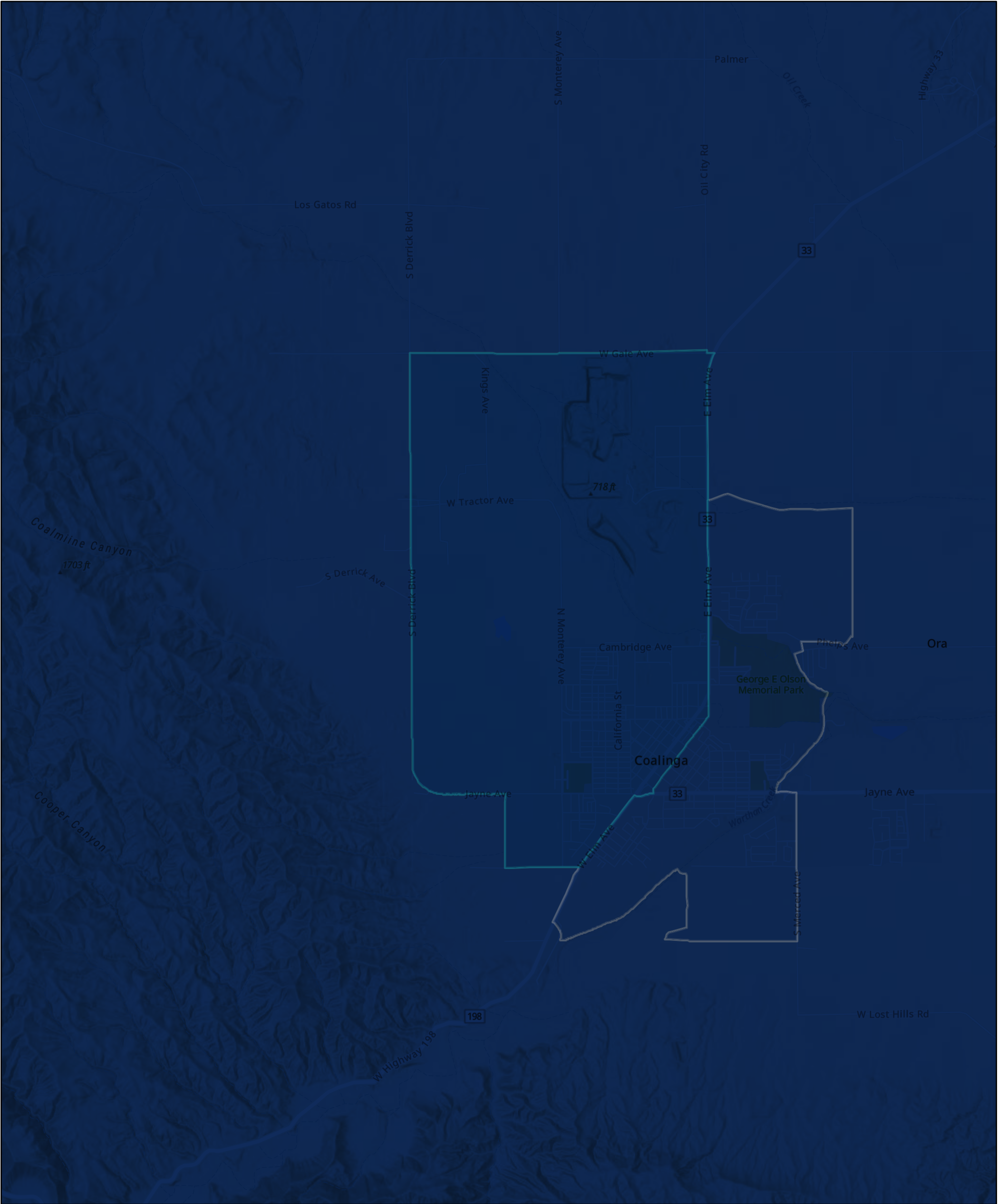
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, CGIAR, USGS

EXHIBIT 2

ArcGIS Web Map



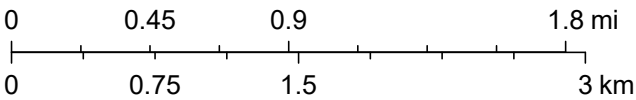
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Drinking Water Contaminants Percentile

> 80 - 90

World_Hillshade

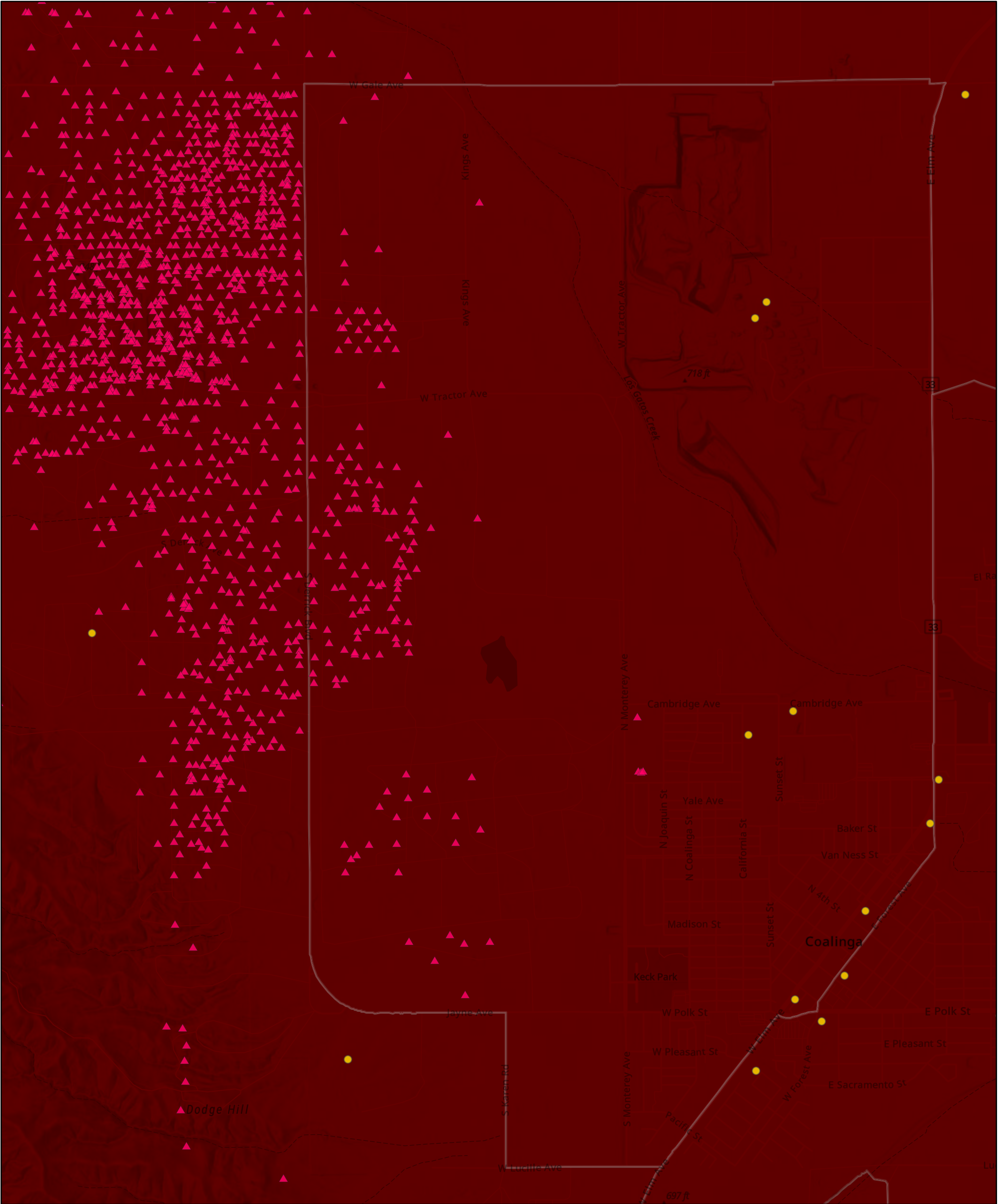
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

EXHIBIT 3

ArcGIS Web Map



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- Oil and Natural Gas Wells
- Other Point Sources
- Small Air Toxic Sites Percentile
 - > 90 – 100
- World_Hillshade

1:23,224

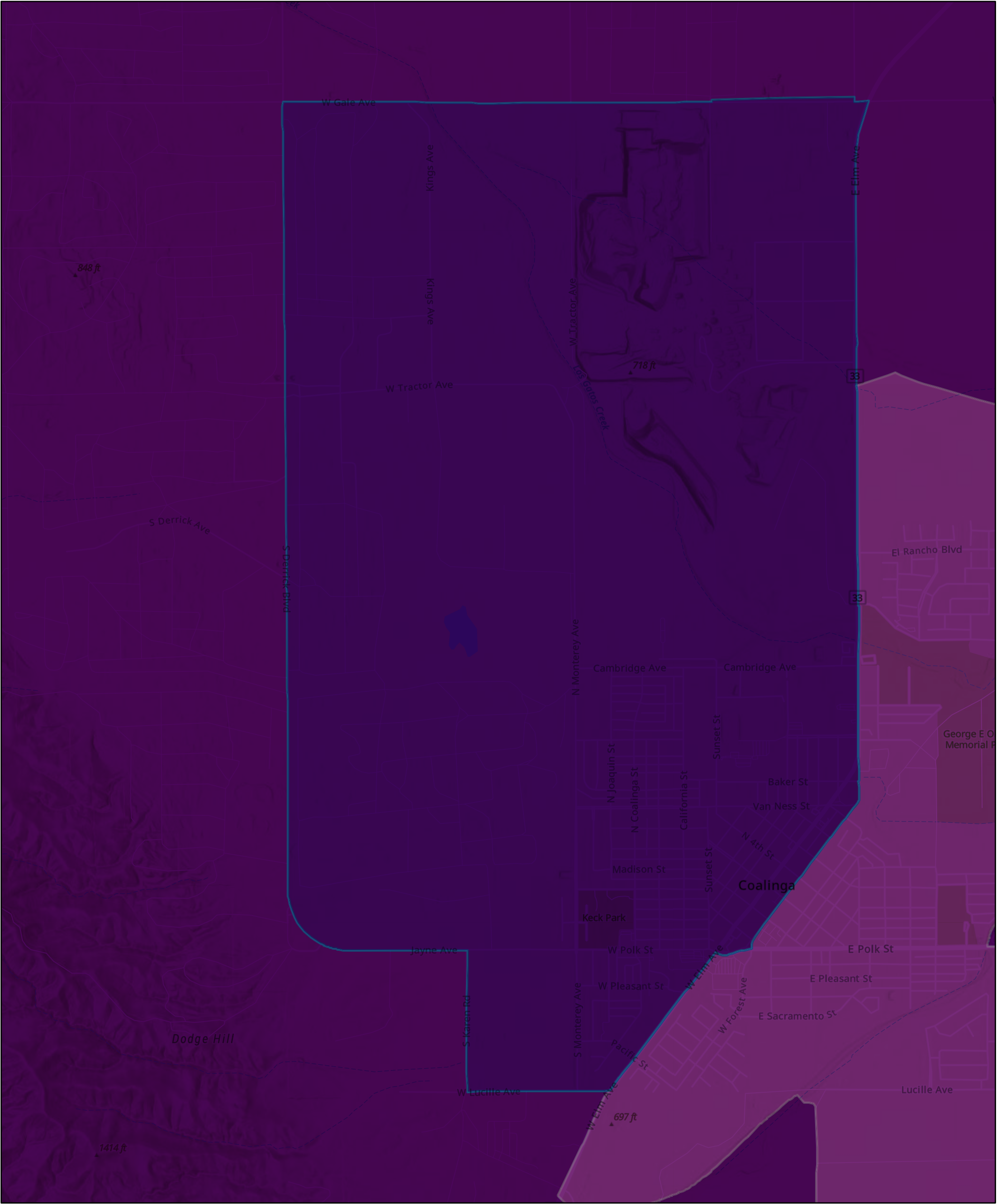
0 0.2 0.4 0.8 mi

0 0.35 0.7 1.4 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

EXHIBIT 4

ArcGIS Web Map



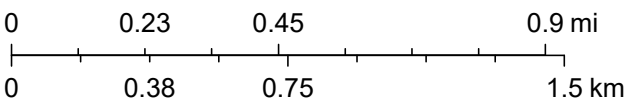
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Population Characteristics Percentile

- > 70 - 80
- > 80 - 90

World_Hillshade

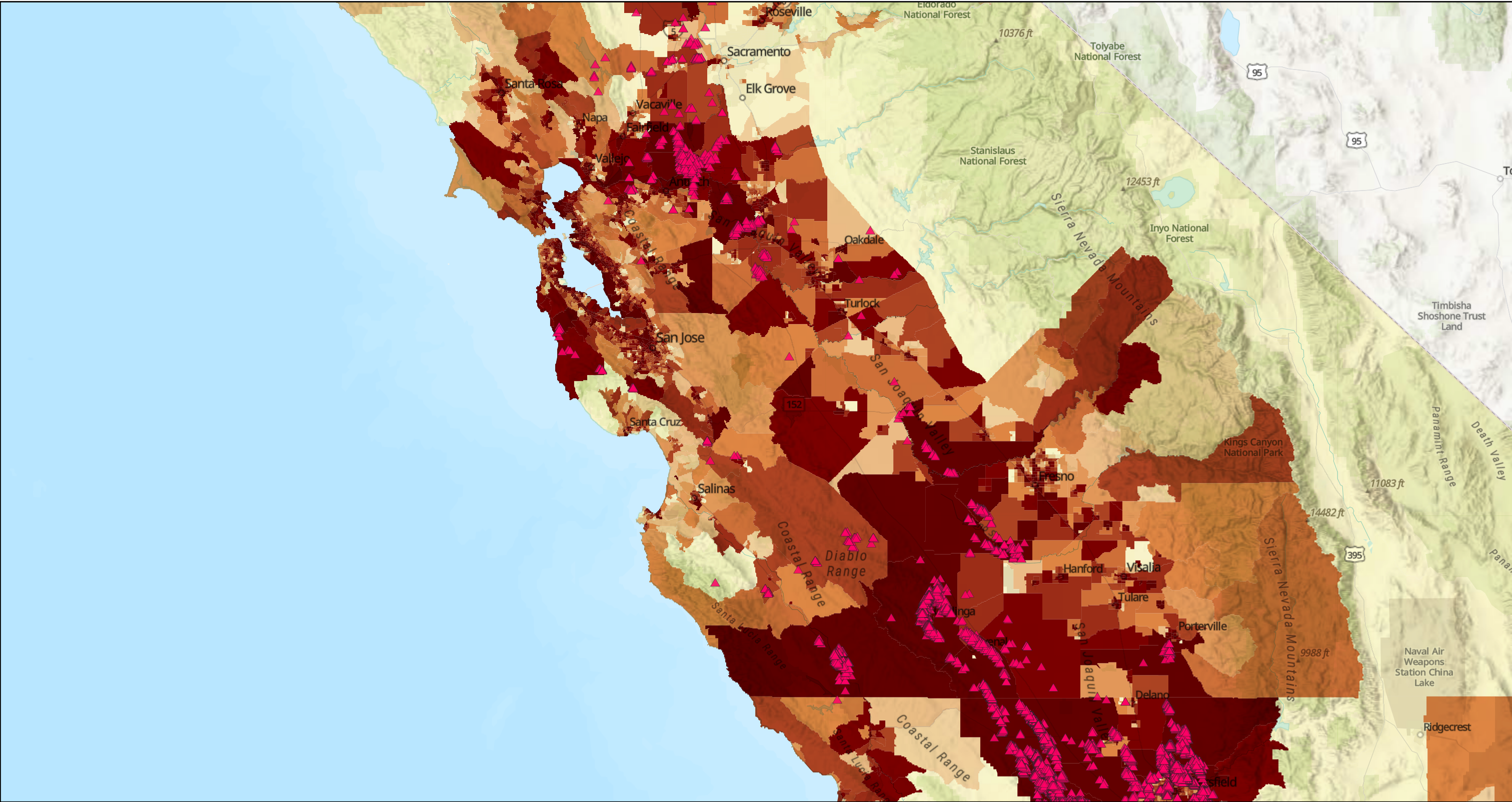
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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

EXHIBIT 5

ArcGIS Web Map



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▲ Oil and Natural Gas Wells

Small Air Toxic Sites Percentile

0 – 10

> 10 – 20

> 20 – 30

> 30 – 40

> 40 – 50

> 50 – 60

> 60 – 70

> 70 – 80

> 80 – 90

> 90 – 100

World_Hillshade

1:2,311,162

0204080 mi

03570140 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

Number	Index re Comments on the Bureau of Land Management, Central Coast Field Office Oil and Gas Leasing and Development Draft Supplemental Environmental Impact Statement, DOI-BLM-CA-C090-2025-0017-RMP-EIS
1	Air & Waste Management Assn., Air Pollution Issues Associated with Natural Gas and Oil Operations (2012), https://www.edf.org/sites/default/files/AWMA-EM-airPollutionFromOilAndGas.pdf
2	American Lung Association, State of the Air 2025 Report (2025), https://www.lung.org/getmedia/5d8035e5-4e86-4205-b408-865550860783/State-of-the-Air-2025.pdf
3	American Lung Association, State of the Air 2025 Report Card Alameda County, https://www.lung.org/research/sota/city-rankings/states/california/alameda .
4	American Lung Association, State of the Air 2025 Report Card Santa Clara County, https://www.lung.org/research/sota/city-rankings/states/california/santa-clara .
5	Arbelaez & Baizel, Californians at Risk: An Analysis of Health Threats from Oil and Gas Pollution in Two Communities (2015), https://www.cleanwaterfund.org/sites/default/files/docs/publications/CaliforniansAtRiskFINAL.pdf .
6	Balise, et al., Systematic Review of the Association between Oil and Natural Gas Extraction Processes and Human Reproduction, 106 Fertility & Sterility 4, 795-819 (September 2016), https://www.sciencedirect.com/science/article/pii/S0015028216625293
7	Brandt, A., Millstein, D., Jin, L., & Englander, J., Air Quality Impacts from Well Stimulation (2015), https://ccst.us/wp-content/uploads/160708-sb4-vol-II-3-1.pdf .
8	Bureau of Land Management, 2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends (Aug. 2024), https://www.blm.gov/sites/default/files/docs/2025-04/BLM-2023-Base-GHG-Report.pdf .
9	Bureau of Land Management, Proposed Resource Management Plan Amendment and Final Environmental Impact Statement for Oil and Gas Leasing and Development, Central Coast Planning Area (May 2019)
10	Cal OEHHA, SB 535 Disadvantaged Communities Webpage, https://oehha.ca.gov/calenviroscreen/sb535 .
11	CalGEM Notice to Operators 2017-03. CalGEM, SB 1137 First Emergency Implementation Regulations, Cal. Code Regs., tit. 14, § 1765 et seq., https://www.conservation.ca.gov/calgem/Documents/Final%20Text%20SB%201137%20First%20Emergency%20Regulations%2020230106.pdf .
12	CalGEM, SB 1137 Notice of Proposed Action (Aug. 1, 2025), https://conservation.ca.gov/calgem/Documents/SB%201137%20Notice%20of%20Proposed%20Action%20v2_Clean.pdf .
13	California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality (Nov. 16, 2022), https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf .
14	California Council on Science and Technology, An Assessment of Oil and Gas Water Cycle Reporting in California Evaluation of Data Collected Pursuant to California Senate Bill 1281, Phase II Report (July 2022), https://www.psehealthyeconomy.org/wp-content/uploads/2022/07/CCST-SB-1281-Phase-II-Full-Report-FINAL.pdf .
15	California Council on Science and Technology, An Independent Scientific Assessment of Well Stimulation in California, Vol. II (2015) http://ccst.us/projects/hydraulic_fracturing_public/SB4.php at 403.
16	California Department of Fish and Game, Staff Report on Burrowing Owl Mitigation (March 7, 2012), https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843
17	California Division of Fish and Wildlife, Evaluation of the Petition from the Center for Biological Diversity to List the Tumbler Legless Lizard (Anniella alexanderae) As Threatened or Endangered Under the California Endangered Species Act (March 25, 2022), https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=201997&inline .
18	California Energy Commission, Petroleum Watch: California Oil Fields with Thermal Enhanced Oil Recovery (Dec. 2021), https://www.energy.ca.gov/sites/default/files/2021-12/2021-12_Petroleum_Watch_ADA.pdf .
19	California Environmental Protection Agency, Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon), April 2017, https://calepa.ca.gov/wp-content/uploads/sites/6/2017/04/SB-535-Designation-Final.pdf .
20	California Regional Water Quality Control Board, Central Valley Region, Resolution R5-2016-0018
21	California State Water Resources Control Board, Resolution No. 2016-0010
22	Casey, et al., Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania, 27 Epidemiology 163-172 (2016), https://pubmed.ncbi.nlm.nih.gov/26426945/
23	Central Valley Regional Water Quality Control Board, Oil Field Pond 13267 Order Responses, Information Requested by 13267 Order, Lost Hills Oil Field.
24	Central Valley Regional Water Quality Control Board, Pond List (Feb. 2021), https://www.waterboards.ca.gov/centralvalley/water_issues/oil_fields/information/disposal_ponds/20210211_pondlist.pdf .
25	County of Monterey Agricultural Commissioner's Office, Economic Contributions of Monterey County Agriculture (Nov. 2025), https://montereycfb.com/wp-content/uploads/2025/11/Economic-Contributions-of-MoCo-Ag-2025.pdf .
26	Department of Interior, 516 DM 1 NEPA Handbook, Section 3.6 (2026), https://www.doi.gov/media/document/doi-nepa-handbook .
27	Executive Department, State of California, Executive Order N-70-20, Gavin Newsom (Sept. 23, 2020), https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf .
28	Gonzalez et al., Upstream Oil and Gas Production and Ambient Air Pollution in California, Science of The Total Environment, 806, 150298 (2022), https://doi.org/10.1016/j.scitotenv.2021.150298
29	Graham, Unlined Waste Disposal Pits Endanger Groundwater in San Joaquin Valley (2021), https://www.digitaljournal.com/techscience/unlined-waste-disposal-pits-endanger-groundwater-in-san-joaquin-valley/article .
30	Hays, et al., Public Health Implications of Environmental Noise Associated with Unconventional Oil and Gas Development, 580 Science of the Total Environment 448-456 (2017).
31	Intrinsic Environmental Sciences Inc. Phase 2- Human Health Risk Assessment of Oil and Gas Activity in Northeastern British Columbia: Task 3 – Literature Review. Prepared for British Columbia Ministry of Health, April 2013.
32	Li, et al., Association between Ambient Fine Particulate Matter and Preterm Birth or Low Birth Weight: An Updated Systematic Review and Meta-Analysis, 227 Environmental Pollution 596-605 (2017), https://pubmed.ncbi.nlm.nih.gov/28457735/
33	

Liberty Hill Foundation, Drilling Down: The Community Consequences of Expanded Oil Development in L.A. (2015), https://libertyhill-assets-2.s3-us-west-2.amazonaws.com/media/documents/Drilling_Down_Report_-_Full.pdf

Lim, et al., Long-Term Exposure to Ozone and Cause-Specific Mortality Risk in the United States (2019), <https://pubmed.ncbi.nlm.nih.gov/31051079/>

Los Angeles County Department of Public Health, Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County, February 2018, http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf.

Lupo, et al. Maternal Exposure to Ambient Levels of Benzene and Neural Tube Defects Among Offspring: Texas, 1999–2004, 119 Environmental Health Perspectives 397-402 (2011), <https://pubmed.ncbi.nlm.nih.gov/20923742/>

McKenzie, et al., Birth Outcomes and Maternal Residential Proximity to Natural Gas Development in Rural Colorado, 122 Environmental Health Perspectives 412-417 (2014), <https://pmc.ncbi.nlm.nih.gov/articles/PMC3984231/>

McKenzie, et al., Childhood Hematologic Cancer and Residential Proximity to Oil and Gas Development, PLoS ONE 12(2): e0170423 (2017), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170423>

Monterey County Water Resources Agency, Groundwater Level Monitoring, <https://www.countyofmonterey.gov/government/government-links/water-resources-agency/programs/groundwater-level-monitoring/overview>.

Natural Resources Defense Council, Fracking Fumes (Dec. 2014), <https://www.nrdc.org/sites/default/files/fracking-air-pollution-IB.pdf>.

Parham, et al., Conservation Assessment of the California Legless Lizard (Anniella), prepared for California Department of Fish and Wildlife (2019), https://meridian.allenpress.com/jfw/article-supplement/501241/pdf/refs1_parham_et_al_2019/

Rasmussen et al., Association Between Unconventional Natural Gas Development in the Marcellus Shale and Asthma Exacerbations (2016), <https://pubmed.ncbi.nlm.nih.gov/27428612/>

San Benito County Water District, Annual Groundwater Report (Water Year 2023), <https://sbcdwd.ca.gov/wp-content/uploads/2024/04/SGMA-Annual-Report-WY23-FINAL-03252024.pdf>

Scobie, et al, Influence of petroleum development on burrowing owl ecology, Univ. Alta. Dep't of Biological Scis., (July 2013), https://www.researchgate.net/publication/309310446_Influence_of_petroleum_development_on_burrowing_owl_ecology

Senate Bill (S.B.) 1137, 2022 Leg., Reg. Sess. (Cal. 2022).

Shonkoff et al., Hazard Assessment of Chemical Additives Used in Oil Fields that Reuse Produced Water for Agricultural Irrigation, Livestock Watering, and Groundwater Recharge in the San Joaquin Valley of California: Preliminary Results at 9 (2016), https://www.psehealthenergy.org/wp-content/uploads/2022/11/Preliminary_Results_13267_Disclosures_FINAL-1.pdf

Shonkoff et al., Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel (Oct. 2021), https://www.conservation.ca.gov/calgem/Documents/public-health/Public%20Health%20Panel%20Responses_FINAL%20ADA.pdf.

Shonkoff et al, Public Health Dimensions of Upstream Oil and Gas Development in California (June 21, 2024), https://www.conservation.ca.gov/calgem/Documents/Public_Health_Panel_Final_Report_20240621.pdf.

State Water Resources Control Board, Produced Water Ponds Status Report: January 31, 2019, https://www.waterboards.ca.gov/water_issues/programs/groundwater/sb4/docs/pwpondsreport_january2019.pdf.

State Water Resources Control Board, Report to the Legislature: Communities that Rely on a Contaminated Groundwater Source for Drinking Water (2013), <https://www.waterboards.ca.gov/gama/ab2222/docs/ab2222.pdf>.

Tustin, et al., Associations between Unconventional Natural Gas Development and Nasal and Sinus, Migraine Headache, and Fatigue Symptoms in Pennsylvania, 125 Environmental Health Perspectives 189-197 (2016), <https://pmc.ncbi.nlm.nih.gov/articles/PMC5289909/>

U.S. EPA, Health Effects of Ozone in the General Population, <https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>

U.S. Fish and Wildlife Service, Species Status Assessment Report for the San Joaquin kit fox (2020), <https://iris.fws.gov/APPS/ServCat/DownloadFile/185116>

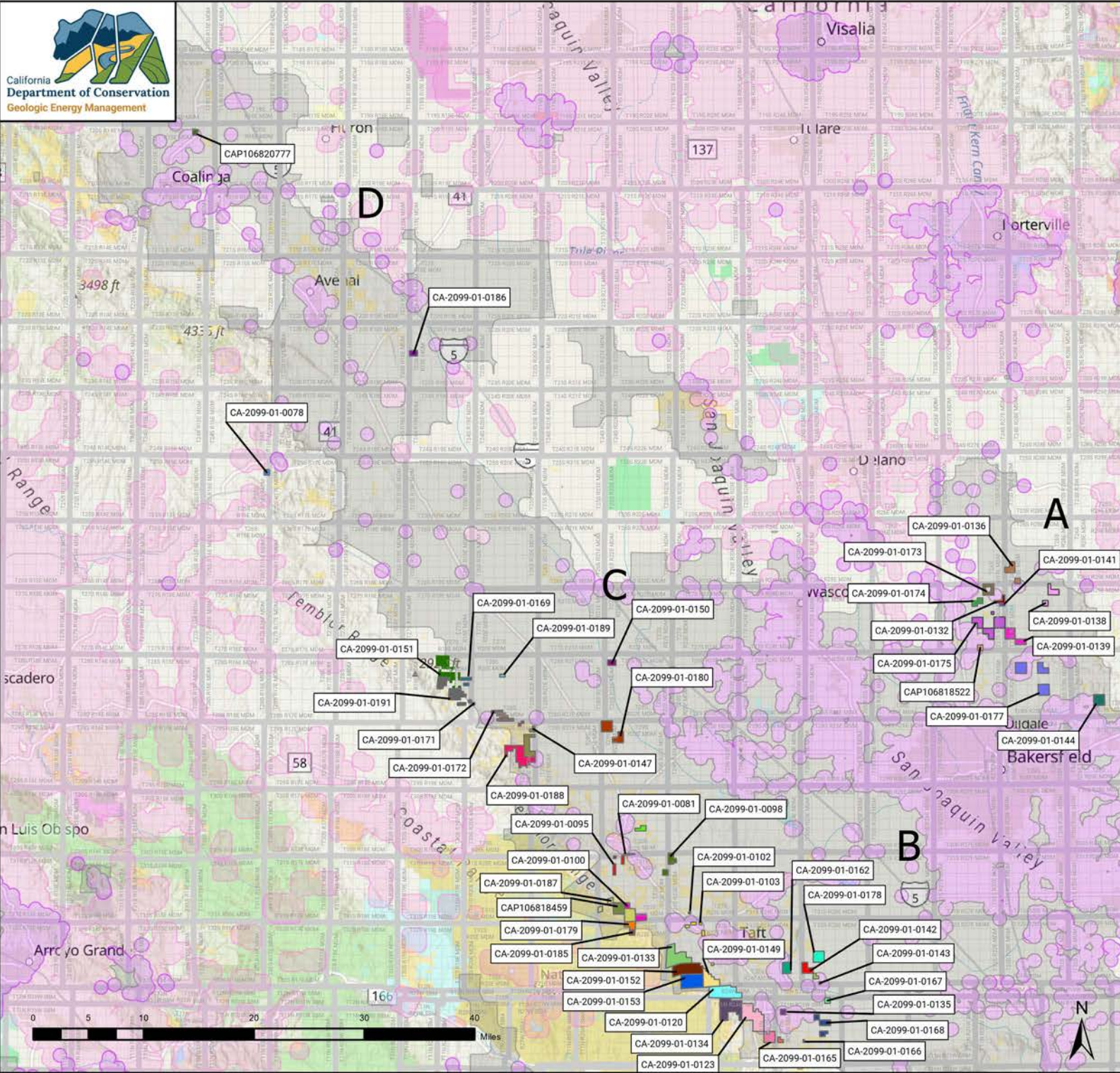
University of California, Berkeley School of Law, International Human Rights Law Clinic, The Human Right to Water Bill in California: An Implementation Framework for State Agencies, May 2013, https://www.law.berkeley.edu/files/Water_Report_2013_Interactive_FINAL%281%29.pdf

University of California, Merced, Farmworker Health in California: Health in a Time of Contagion, Drought, and Climate Change (2022) https://clc.ucmerced.edu/sites/g/files/ufvvh626/f/page/documents/fwhs_report_2.2.2383.pdf

US EPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States - Executive Summary (EPA-600-R-16-236ES), https://www.epa.gov/sites/default/files/2016-12/documents/hfdwa_executive_summary.pdf

Webb, et al., Potential Hazards of Air Pollutant Emissions from Unconventional Oil and Natural Gas Operations on the Respiratory Health of Children and Infants, 31 Reviews on Environmental Health 225-243 (2016), <https://pubmed.ncbi.nlm.nih.gov/27171386/>

EXHIBIT C



BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California Overview

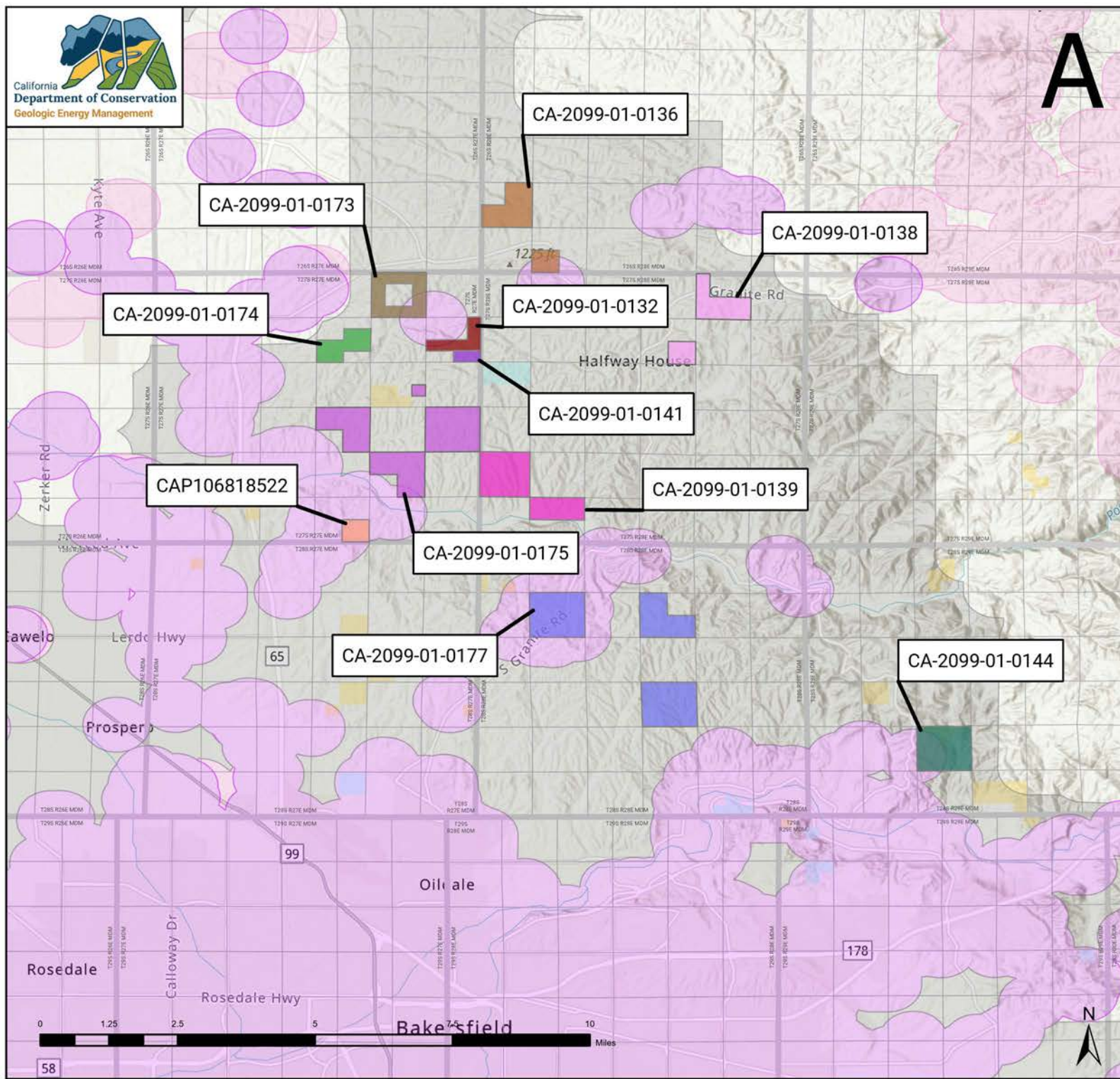
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 - CA-2099-01-0300
 - CA-2099-01-0301
 - CA-2099-01-0302
 - CA-2099-01-0303
 - CA-2099-01-0304
 - CA-2099-01-0305
 - CA-2099-01-0306
 - CA-2099-01-0307
 - CA-2099-01-0308
 - CA-2099-01-0309
 - CA-2099-01-0310
 - CA-2099-01-0311
 - CA-2099-01-0312
 - CA-2099-01-0313
 - CA-2099-01-0314
 - CA-2099-01-0315
 - CA-2099-01-0316
 - CA-2099-01-0317
 - CA-2099-01-0318
 - CA-2099-01-0319
 - CA-2099-01-0320
 - CA-2099-01-0321
 - CA-2099-01-0322
 - CA-2099-01-0323
 - CA-2099-01-0324
 - CA-2099-01-0325
 - CA-2099-01-0326
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 - CA-2099-01-0328
 - CA-2099-01-0329
 - CA-2099-01-0330
 - CA-2099-01-0331
 - CA-2099-01-0332
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 - CA-2099-01-0335
 - CA-2099-01-0336
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 - CA-2099-01-0339
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 - CA-2099-01-0366
 - CA-2099-01-0367
 - CA-2099-01-0368
 - CA-2099-01-0369
 - CA-2099-01-0370
 - CA-2099-01-0371
- Health Protection Zone
- Potential HPZ
 - Verified HPZ
 - Verified Not HPZ
- Land Management Agency
- Bureau of Land Management
 - Forest Service
 - National Park Service
 - Fish and Wildlife Service
 - Bureau of Reclamation
 - Bureau of Indian Affairs
 - Department of Defense
 - Other Federal
 - State
 - Local Government
 - Private



Data Sources: BLM Parcels and Land Management Agency from Bureau of Land Management, HPZ from California Geologic Energy Management (CalGEM) Prepared 7/10/2026

EXHIBIT D

A



BLM 2026 Proposed Lease Parcels

- CA-2099-01-0132
- CA-2099-01-0136
- CA-2099-01-0138
- CA-2099-01-0139
- CA-2099-01-0141
- CA-2099-01-0144
- CA-2099-01-0173
- CA-2099-01-0174
- CA-2099-01-0175
- CA-2099-01-0177
- CAP106818522

Health Protection Zone

- Potential HPZ
- Verified HPZ
- Verified Not HPZ

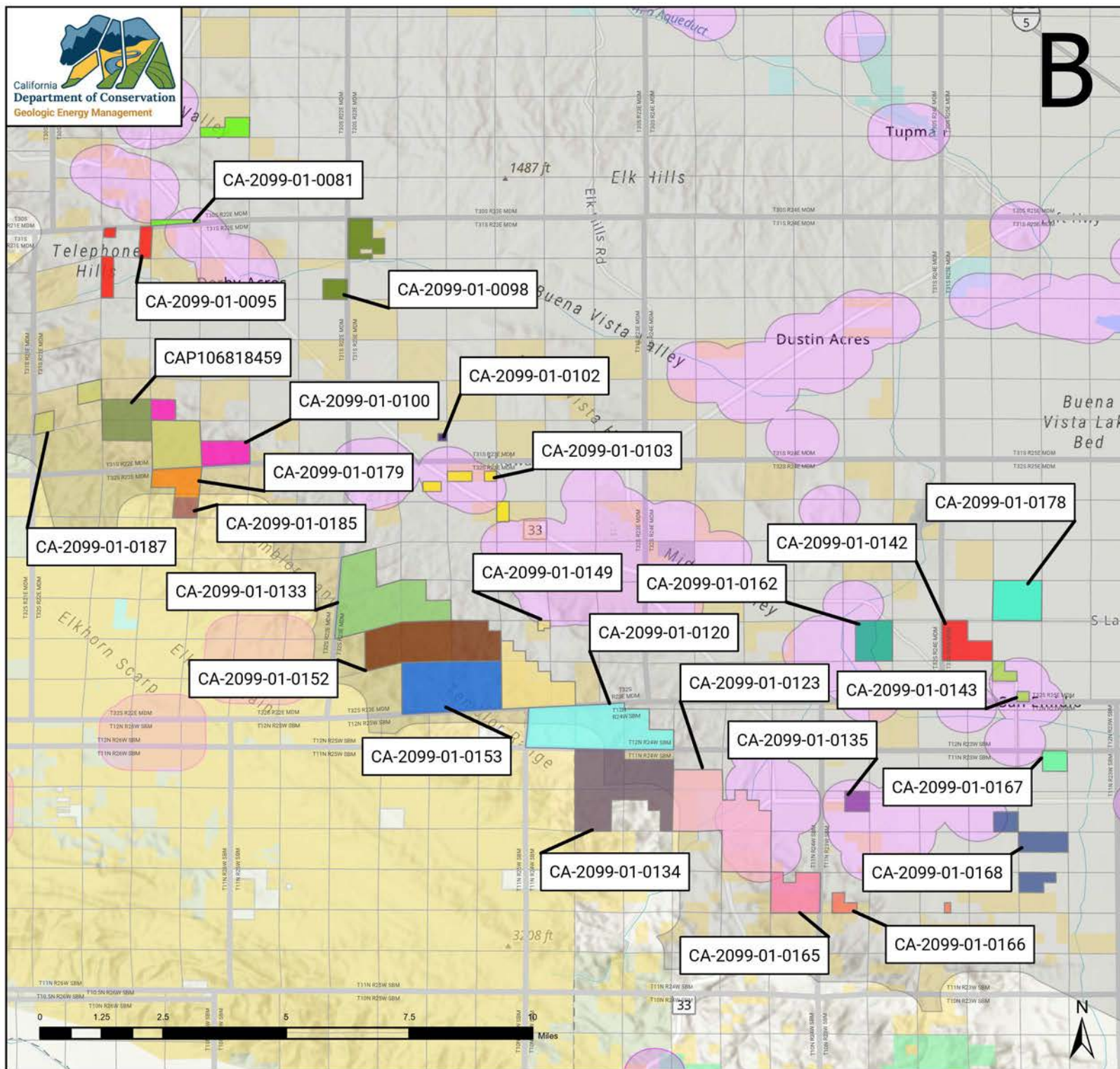
Land Management Agency

- Bureau of Land Management
- Forest Service
- National Park Service
- Fish and Wildlife Service
- Bureau of Reclamation
- Bureau of Indian Affairs
- Department of Defense
- Other Federal
- State
- Local Government
- Private



EXHIBIT E

BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California

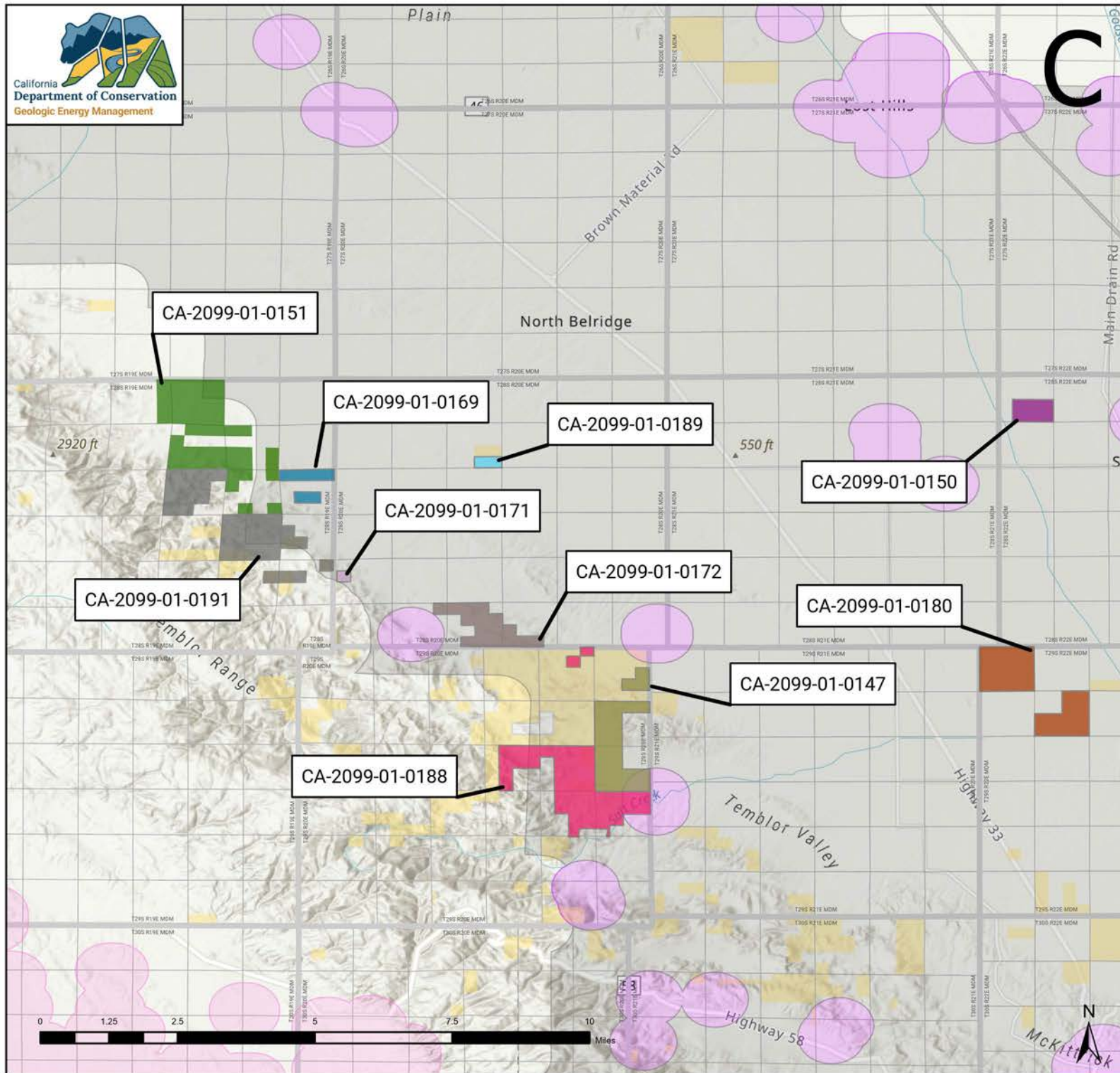


BLM 2026 Proposed Lease Parcels	Health Protection Zone
CA-2099-01-0081	Potential HPZ
CA-2099-01-0095	Verified HPZ
CA-2099-01-0098	Verified Not HPZ
CA-2099-01-0100	Land Management Agency
CA-2099-01-0102	Bureau of Land Management
CA-2099-01-0103	Forest Service
CA-2099-01-0120	National Park Service
CA-2099-01-0123	Fish and Wildlife Service
CA-2099-01-0133	Bureau of Reclamation
CA-2099-01-0134	Bureau of Indian Affairs
CA-2099-01-0135	Department of Defense
CA-2099-01-0142	Other Federal
CA-2099-01-0143	State
CA-2099-01-0149	Local Government
CA-2099-01-0152	Private
CA-2099-01-0153	
CA-2099-01-0162	
CA-2099-01-0165	
CA-2099-01-0166	
CA-2099-01-0167	
CA-2099-01-0168	
CA-2099-01-0178	
CA-2099-01-0179	
CA-2099-01-0185	
CA-2099-01-0187	
CAP106818459	



EXHIBIT F

BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California



BLM 2026 Proposed Lease Parcels

- CA-2099-01-0147
- CA-2099-01-0150
- CA-2099-01-0151
- CA-2099-01-0169
- CA-2099-01-0171
- CA-2099-01-0172
- CA-2099-01-0180
- CA-2099-01-0188
- CA-2099-01-0189
- CA-2099-01-0191

Health Protection Zone

StatusHPZ

- Potential HPZ
- Verified HPZ
- Verified Not HPZ

Land Management Agency

- Bureau of Land Management
- Forest Service
- National Park Service
- Fish and Wildlife Service
- Bureau of Reclamation
- Bureau of Indian Affairs
- Department of Defense
- Other Federal
- State
- Local Government
- Private



EXHIBIT G

CAP106820777

D

BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California

BLM 2026 Proposed Lease Parcels

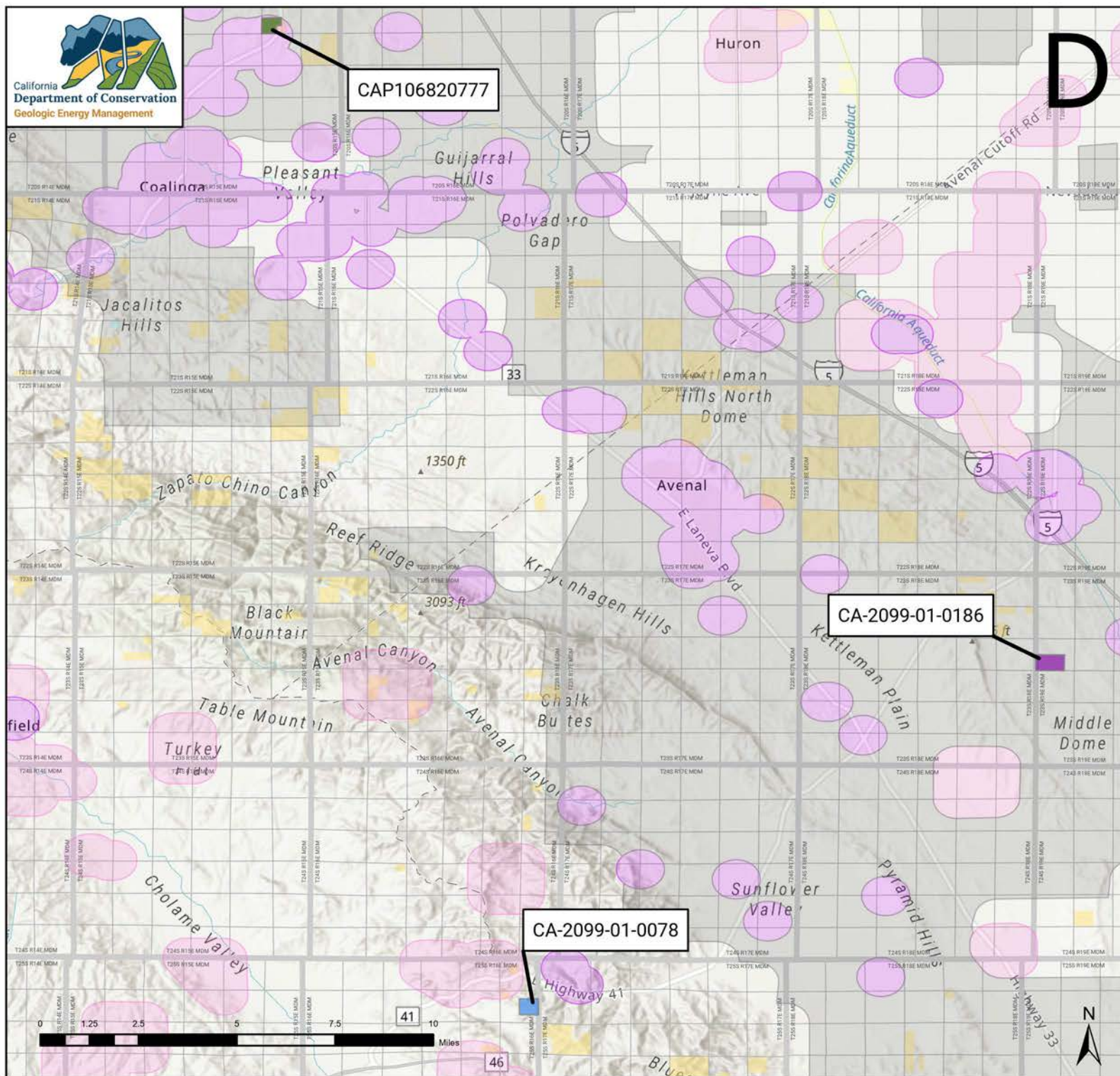
- CA-2099-01-0078
- CA-2099-01-0186
- CAP106820777

Health Protection Zone

- Potential HPZ
- Verified HPZ
- Verified Not HPZ

Land Management Agency

- Bureau of Land Management
- Forest Service
- National Park Service
- Fish and Wildlife Service
- Bureau of Reclamation
- Bureau of Indian Affairs
- Department of Defense
- Other Federal
- State
- Local Government
- Private

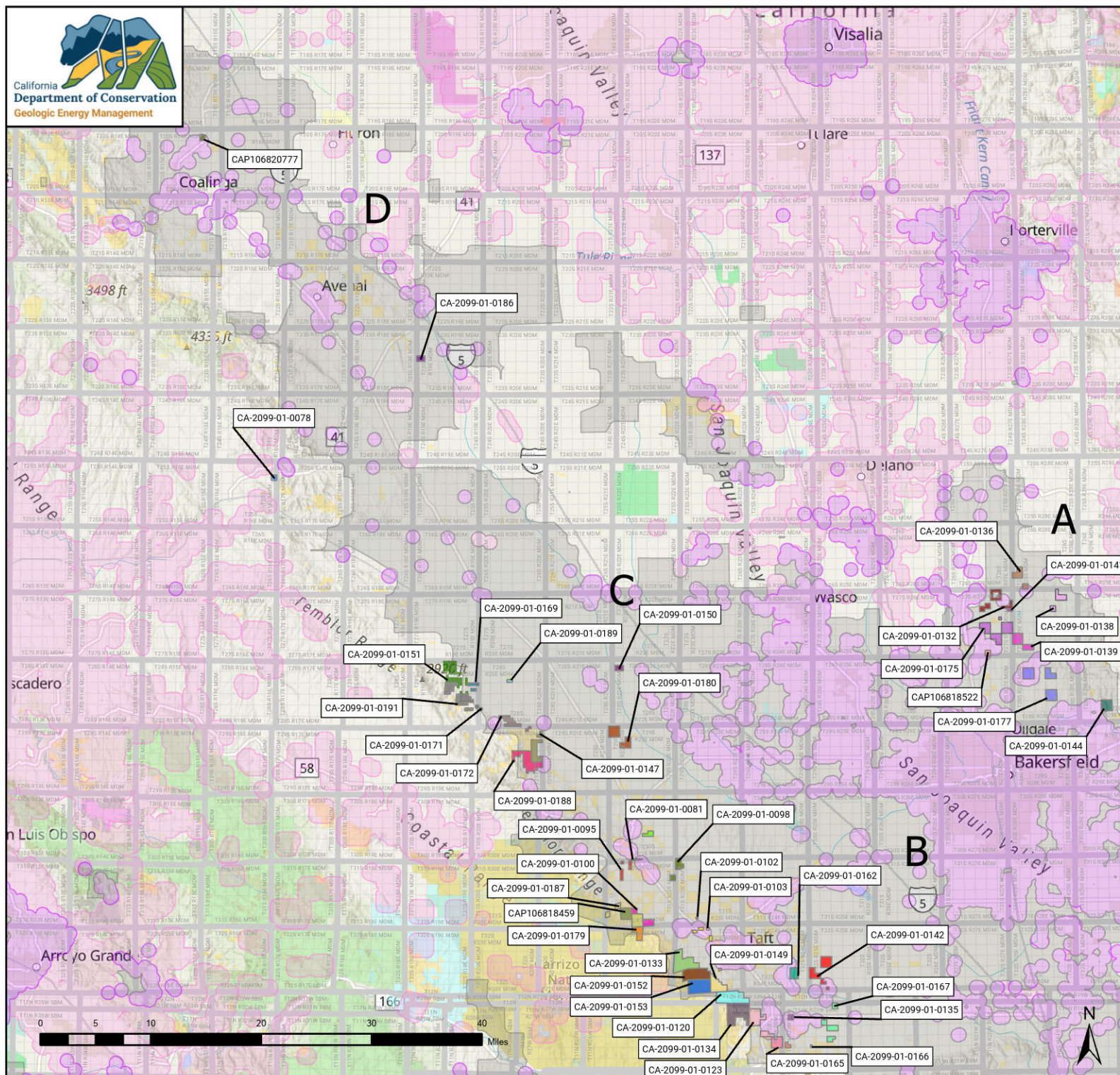


CA-2099-01-0186

CA-2099-01-0078

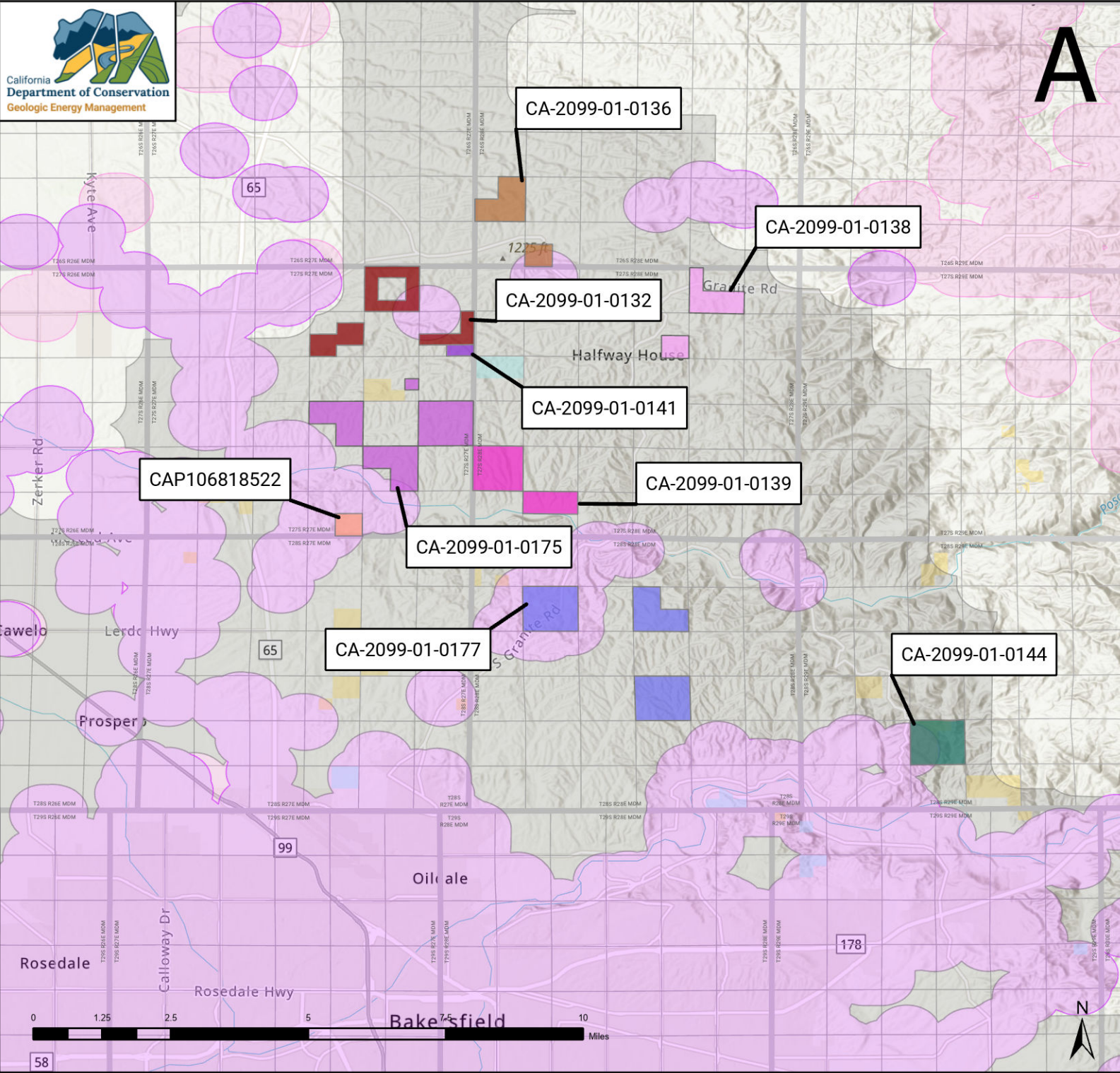


BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California Overview



- | | |
|---------------------------------|---------------------------|
| BLM 2026 Proposed Lease Parcels | CA-2099-01-0171 |
| CA-2099-01-0078 | CA-2099-01-0172 |
| CA-2099-01-0081 | CA-2099-01-0175 |
| CA-2099-01-0095 | CA-2099-01-0177 |
| CA-2099-01-0098 | CA-2099-01-0179 |
| CA-2099-01-0100 | CA-2099-01-0180 |
| CA-2099-01-0102 | CA-2099-01-0186 |
| CA-2099-01-0103 | CA-2099-01-0187 |
| CA-2099-01-0120 | CA-2099-01-0188 |
| CA-2099-01-0123 | CA-2099-01-0189 |
| CA-2099-01-0132 | CA-2099-01-0191 |
| CA-2099-01-0133 | CAP106818459 |
| CA-2099-01-0134 | CAP106818522 |
| CA-2099-01-0135 | CAP106820777 |
| CA-2099-01-0136 | Health Protection Zone |
| CA-2099-01-0138 | Potential HPZ |
| CA-2099-01-0139 | Verified HPZ |
| CA-2099-01-0141 | Verified Not HPZ |
| CA-2099-01-0142 | Land Management Agency |
| CA-2099-01-0144 | Bureau of Land Management |
| CA-2099-01-0147 | Forest Service |
| CA-2099-01-0149 | National Park Service |
| CA-2099-01-0150 | Fish and Wildlife Service |
| CA-2099-01-0151 | Bureau of Reclamation |
| CA-2099-01-0152 | Bureau of Indian Affairs |
| CA-2099-01-0153 | Department of Defense |
| CA-2099-01-0162 | Other Federal |
| CA-2099-01-0165 | State |
| CA-2099-01-0166 | Local Government |
| CA-2099-01-0167 | Private |
| CA-2099-01-0169 | |



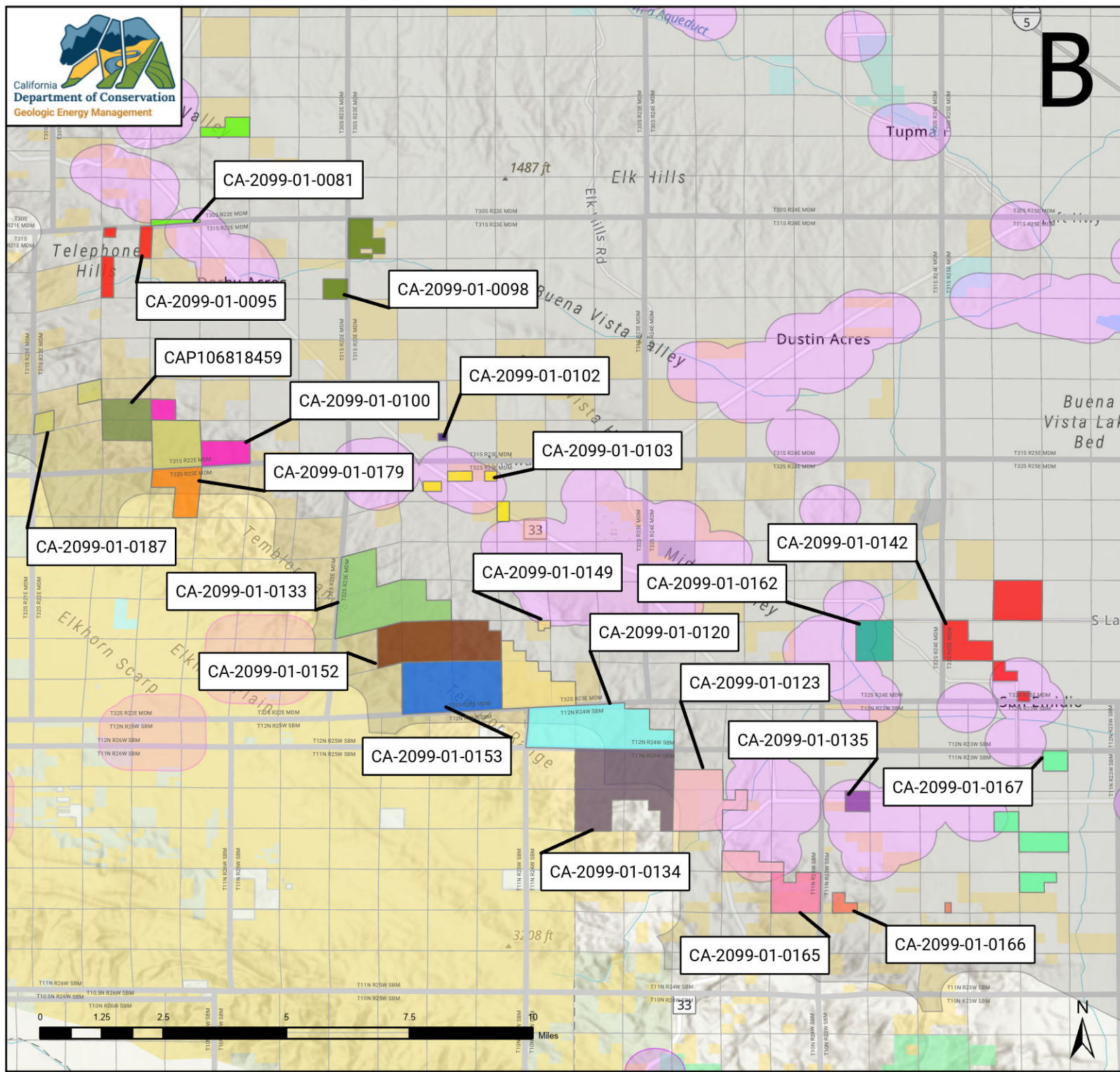


BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California

- BLM 2026 Proposed Lease Parcels
- CA-2099-01-0132
 - CA-2099-01-0136
 - CA-2099-01-0138
 - CA-2099-01-0139
 - CA-2099-01-0141
 - CA-2099-01-0144
 - CA-2099-01-0175
 - CA-2099-01-0177
 - CAP106818522
- Health Protection Zone
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 - Verified Not HPZ
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- Bureau of Land Management
 - Forest Service
 - National Park Service
 - Fish and Wildlife Service
 - Bureau of Reclamation
 - Bureau of Indian Affairs
 - Department of Defense
 - Other Federal
 - State
 - Local Government
 - Private

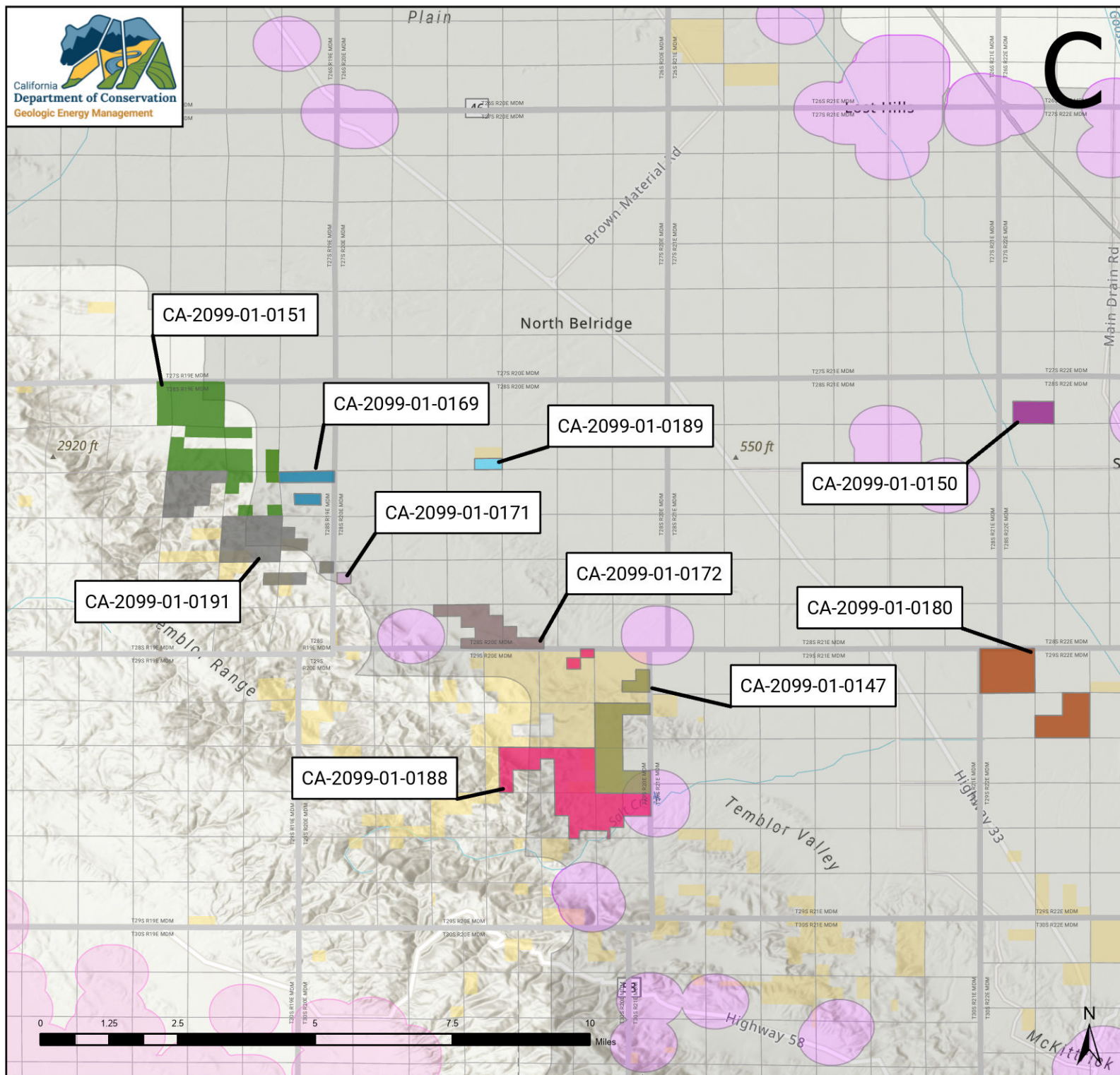


BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California



BLM 2026 Proposed Lease Parcels	Health Protection Zone
CA-2099-01-0081	Potential HPZ
CA-2099-01-0095	Verified HPZ
CA-2099-01-0098	Verified Not HPZ
CA-2099-01-0100	Land Management Agency
CA-2099-01-0102	Bureau of Land Management
CA-2099-01-0103	Forest Service
CA-2099-01-0120	National Park Service
CA-2099-01-0123	Fish and Wildlife Service
CA-2099-01-0133	Bureau of Reclamation
CA-2099-01-0134	Bureau of Indian Affairs
CA-2099-01-0135	Department of Defense
CA-2099-01-0142	Other Federal
CA-2099-01-0149	State
CA-2099-01-0152	Local Government
CA-2099-01-0153	Private
CA-2099-01-0162	
CA-2099-01-0165	
CA-2099-01-0166	
CA-2099-01-0167	
CA-2099-01-0179	
CA-2099-01-0187	
CAP106818459	





BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California

BLM 2026 Proposed Lease Parcels

- CA-2099-01-0147
- CA-2099-01-0150
- CA-2099-01-0151
- CA-2099-01-0169
- CA-2099-01-0171
- CA-2099-01-0172
- CA-2099-01-0180
- CA-2099-01-0188
- CA-2099-01-0189
- CA-2099-01-0191

Health Protection Zone

StatusHPZ

- Potential HPZ
- Verified HPZ
- Verified Not HPZ

Land Management Agency

- Bureau of Land Management
- Forest Service
- National Park Service
- Fish and Wildlife Service
- Bureau of Reclamation
- Bureau of Indian Affairs
- Department of Defense
- Other Federal
- State
- Local Government
- Private



CAP106820777

D

BLM Oil & Gas Preliminary Lease Sale 2026 and Health Protection Zones Central California

BLM 2026 Proposed Lease Parcels

- CA-2099-01-0078
- CA-2099-01-0186
- CAP106820777

Health Protection Zone

- Potential HPZ
- Verified HPZ
- Verified Not HPZ

Land Management Agency

- Bureau of Land Management
- Forest Service
- National Park Service
- Fish and Wildlife Service
- Bureau of Reclamation
- Bureau of Indian Affairs
- Department of Defense
- Other Federal
- State
- Local Government
- Private

CA-2099-01-0186

CA-2099-01-0078

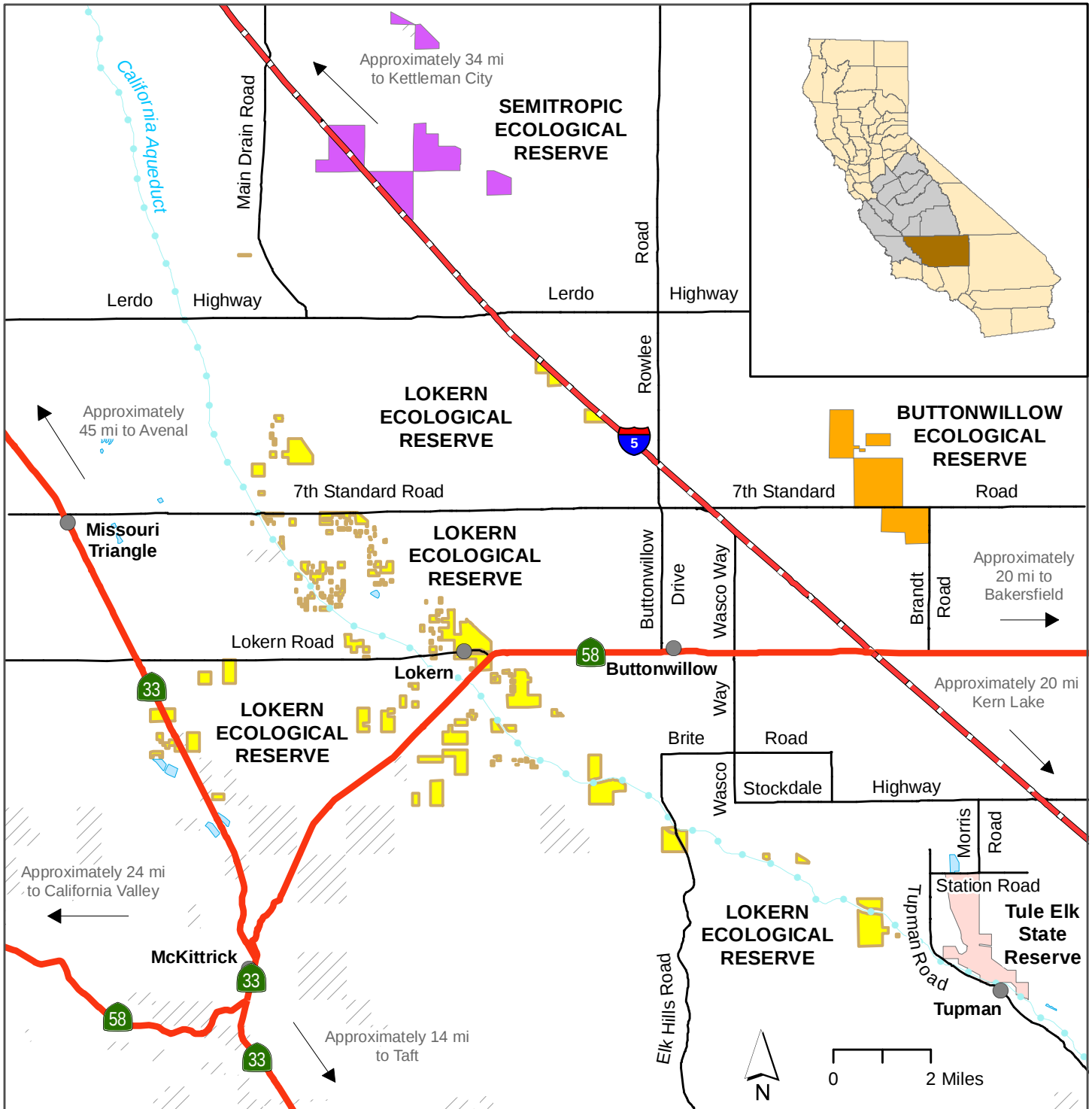


California Department of Fish and Wildlife

Central Region

LOKERN ECOLOGICAL RESERVE

Kern County

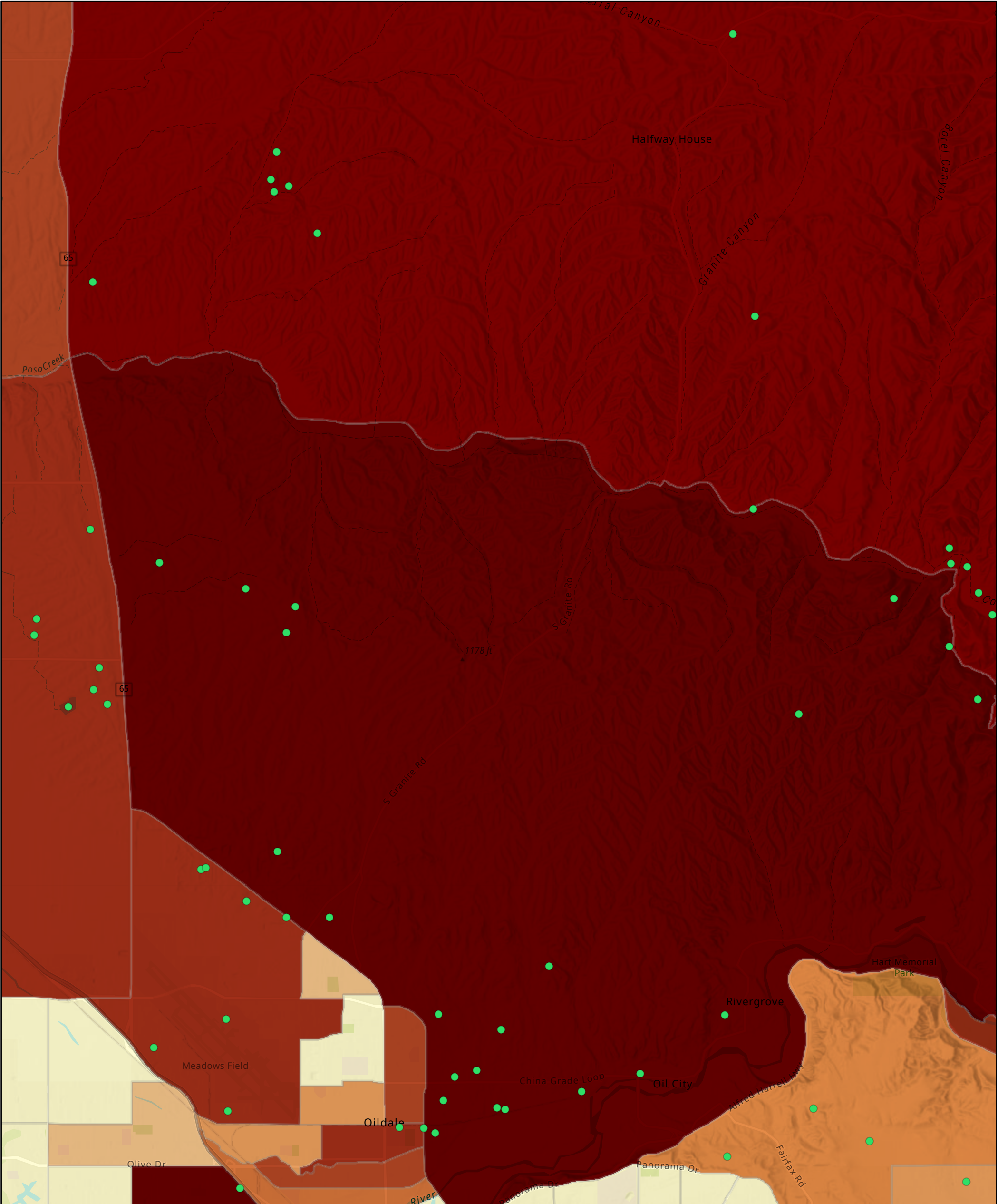


- | | | |
|---------------------------------|---------------------------|--------------------|
| Lokern Ecological Reserve | State Reserve | Interstate Highway |
| Semitropic Ecological Reserve | Bureau of Land Management | State Highway |
| Buttonwillow Ecological Reserve | | Local Road |

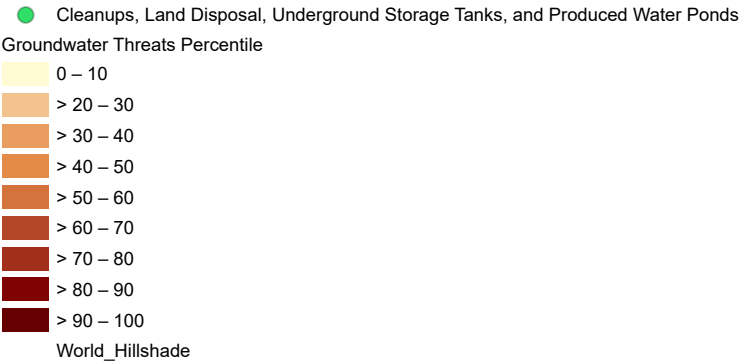
Disclaimer: Boundaries are approximate.
Maps are intended for general purposes only.

June 2023 - WLB

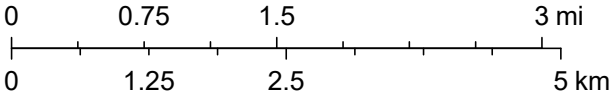
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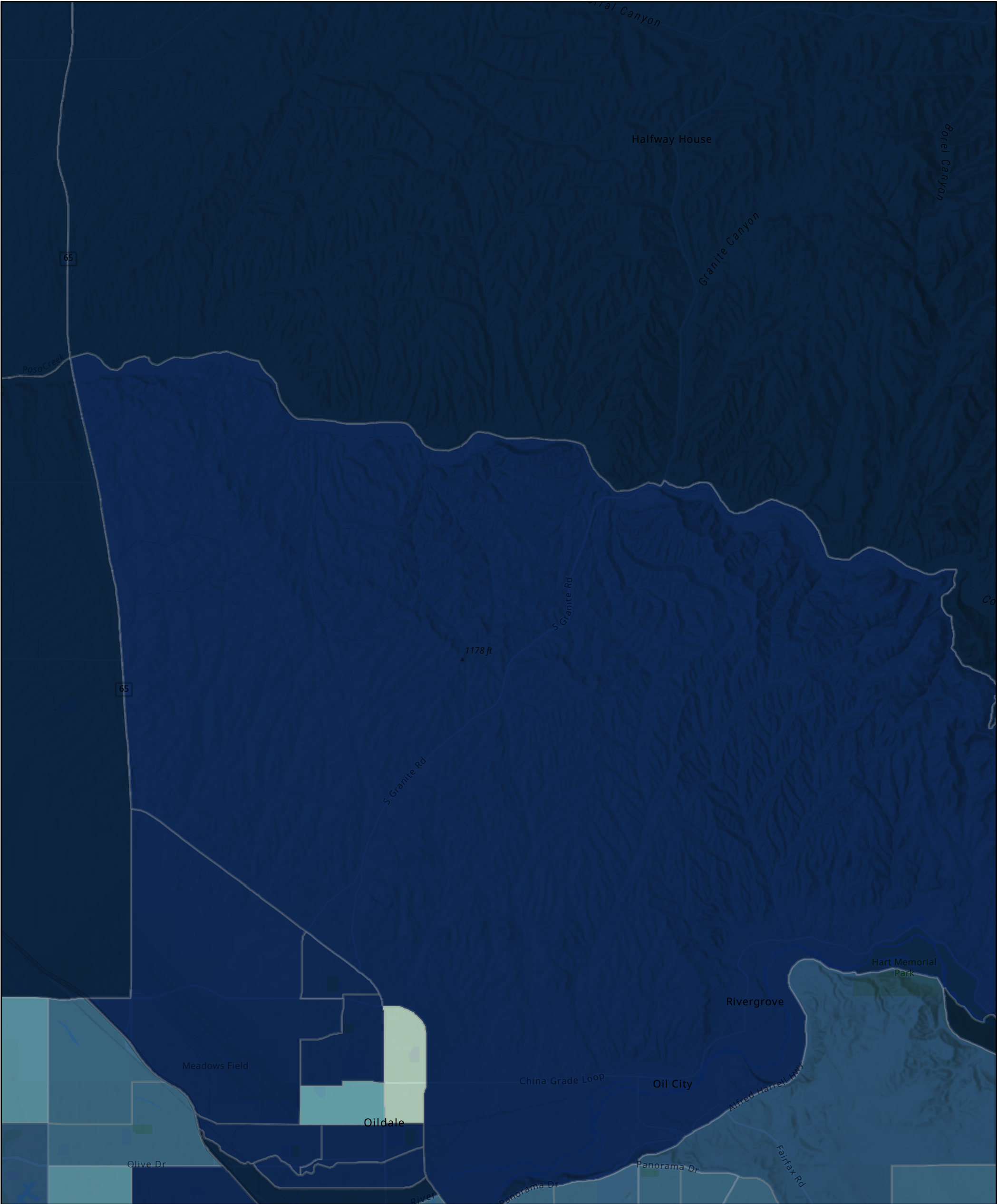


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Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA

ArcGIS Web Map



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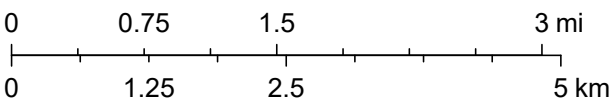
Drinking Water Contaminants Percentile

- > 20 - 30
- > 40 - 50
- > 50 - 60
- > 60 - 70

- > 70 - 80
- > 80 - 90
- > 90 - 100

World_Hillshade

1:84,470



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, NASA, NGA, USGS, FEMA