



June 10, 2020

Via electronic submission (CalGEMRegulations@conservation.ca.gov)

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Re: CalGEM Public Health Near Oil & Gas Rulemaking

Dear Uduak:

Thank you for the opportunity to provide scoping comments concerning CalGEM's public health rulemaking. We have been impressed with the Division's efforts to seek widespread public participation in the scoping process for the rulemaking, and are hopeful that the input received will assist CalGEM in crafting new regulations that will represent a genuine step forward in protecting communities from the clearly documented health harms associated with oil and gas production.

As scoping process participants have made clear to date, establishing setback buffers from oil and gas operations is a number one priority for communities – as well it should be, given the consistent scientific findings of health risks in proximity to such operations. Our comments will speak to that issue, as well as to four other areas of potential reform that we view as important to protecting the public: more robust California Environmental Quality Act (CEQA) implementation, permitting process reform that provides for enhanced public engagement, expanded applicability of currently limited health and safety requirements, and enhanced spill and accident reporting requirements aimed at ensuring public awareness.

I. Setback Buffers

NRDC supports establishment of a 2,500' setback buffer for all of the reasons articulated by community members who have testified extensively at the scoping hearings. Our comments below are intended to address some of the specific issues that may come up in formulating a setback.

A. Science Supporting a 2,500' Setback

1. Consensus Concerning Risk at < 2,500' distance

The science supporting the need for a deep setback buffer has been accumulating at a rapid rate. Scientists knew very little about the human health impact of proximity to oil wells in the early 2000s, when oil and gas production in California and the rest of the United States was just beginning to ramp up. In recent years, however – and particularly in the last five – more than two dozen peer reviewed studies have demonstrated risks of potentially severe health consequences from living in proximity to production operations (including, as discussed in the next subsection, a California-based study released last week).

A number of meta-analyses have identified and compiled these studies, and confirmed the recent uptick in available risk data. In 2015, the California Council on Science & Technology (CCST) presented a health risk analysis in Chapter 6 of its SB 4-mandated analysis of fracking impacts, and identified four peer-reviewed studies regarding air pollution and health outcomes associated with oil and gas activities.¹ Last year, the lead author of Chapter 6, Dr. Seth Shonkoff, was again lead author of a human health study commissioned by the Office of Petroleum and Natural Gas Administration and Safety in the City of Los Angeles (Shonkoff 2019).² Shonkoff 2019 identified an additional 24 peer-reviewed studies concerning oil and gas proximity health risk performed during the period 2015-2018. STAND-LA, the coalition advocating for setbacks in the Los Angeles region, also published a literature review on the subject (Wong 2017).³

Taken as a whole, these studies indicate the need for a significant setback buffer from oil and gas operations, larger than the distances established in other states and local jurisdictions, which are generally well under than 1,000'.⁴ The CCST report concluded that the studies

¹ Well Stimulation in California (SB4) 2015, Chapter 6, “Potential Impacts of Well Stimulation on Human Health in California,” available at <https://ccst.us/wp-content/uploads/160708-sb4-vol-II-6-1.pdf>.

² S. Shonkoff, L. Hill, “Human Health and Oil And Gas Development: A Review Of The Peer-Reviewed Literature and Assessment of Applicability to the City of Los Angeles,” PSE Healthy Energy May 9, 2019, available at <https://www.psehealthyenergy.org/wp-content/uploads/2019/08/Literature-Review.pdf>.

³ N. Wong, “Existing Scientific Literature on Setback Distances from Oil and Gas Development Sites,” STAND-LA November 2017, available at https://www.stand.la/uploads/5/3/9/0/53904099/2500_literature_review_report-v2-share.pdf.

⁴ Pennsylvania, Wyoming, and Illinois require setbacks of 500'. 58 Pa. Stat. § 3215(a), Wyo. Rules and Regs. 055.0001.3 § 47, 225 ILCS 732/1-25(a)(2). Texas prohibits the drilling of any well nearer than 467' to any property line (subject to exceptions). 16 Tex. Admin. Code § 3.37. Colorado has the largest statewide setback, 1,000' for certain “high occupancy buildings.” 2 Colo. Admin. Code § 404-1:604. Various California local governments have established setback requirements, all well under 1,000'. See, e.g., Arvin (CA) Municipal Code § 17.46.022; Carson (CA) Oil and Gas Code § 9521; Huntington Beach (CA) Municipal Code § 15.20.030; Kern. Co. (CA) Zoning Ordinance § 19.98.060(A); Long Beach (CA) Municipal Code § 12.16; Signal Hill (CA) Municipal Code § 16.16.030. Los Angeles County recently proposed a 500' setback for new wells, available at

reviewed “indicate that community public health risks of exposures to toxic air contaminants, such as benzene and aliphatic hydrocarbons, are most significant within 800 meters (½ mile) from active oil and gas development.”⁵ The 24 studies reviewed in Shonkoff 2019 reference findings of health risk even for people living a mile or more away from drilling operations, and even more frequently within a half mile.⁶ Most of the studies addressed in Wong 2017 likewise concerned mostly distances greater than 2,500’.⁷ Of interest as well is a Delphi study seeking expert consensus on appropriate setback distances from human activity (Lewis 2018).⁸ The study found consensus that setback distances should be greater than ¼ mile from human activity, and that “additional setbacks should be used for settings where vulnerable groups are found, including schools, daycare centers, and hospitals.”

We note that the 2018 health study commissioned by the Los Angeles County Department of Public Health (LACDPH 2018) established 1,500 as the setback distance at which additional mitigation was not likely to be needed, and observed that “some uncertainty remains due to gaps in long term health and exposure data.”⁹ Shonkoff 2019 reflected a degree of skepticism of this conclusion, stating that the findings of LACDPH 2018 are consistent “to a large degree” with Shonkoff 2019 but qualifying it in this way: “However, as noted earlier, most of the studies that assess health risks and impacts as a function of distance in the peer reviewed literature do not consider distances less than 2,500 ft due to the need for population sample sizes large enough to power their study and the majority - but not all – of these studies have found evidence of health impacts associated with oil and gas development at this distance.”¹⁰

Finally, it bears note that all of the health studies examined a variety of different risk factors associated with drilling operations. These included, among others, air pollution, water pollution, noise, and light. The studies also addressed a wide range of health effects, including cancer, perinatal effects, respiratory issues, neurological issues, sleep disruption, and other health symptoms. While scientists are working to home in on the nature and cause of the associations

http://planning.lacounty.gov/assets/upl/data/2020-04-13-draft_oil_well_ordinance.pdf. A number of local jurisdictions in Texas have put in place setback buffers, usually less than 1,000’ but 1,500’ in some locations in Texas, although there are preemption questions attending these setbacks. See Shonkoff, *supra*, at 38; E. Elkind and T. Lamm, “Legal Grounds: Law and Policy Options to Facilitate a Phase-Out of Fossil Fuel Production in California,” Berkeley Center for Law, Energy and the Environment 2020, at 33 n. 187.

⁵ CCST Chapter 6, *supra*, at 412.

⁶ The study results are presented in tabular form in Shonkoff 2019 Table 4, p. 30 *et seq.* Eleven of the studies concerned distances greater than 2,500’.

⁷ The study results are presented in Tabular form in Wong 2017 Table 1, p. 6 *et seq.*

⁸ C. Lewis, L. Greiner, D. Brown, “Setback Distances for Unconventional Oil and Gas Development: Delphi Study Results,” PLoS One 2018: 13(8): e0202462, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6095590/>.

⁹ LACDPH (Los Angeles County Department of Public Health). (2018), *Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County*, available at http://publichealth.lacounty.gov/eh/docs/PH_OilGasFacilitiesPHSafetyRisks.pdf.

¹⁰ Shonkoff 2019 at 52.

observed, that type of assessment is still in progress. Consequently, there is currently no sound basis to establish additional controls on operations as an alternative to setbacks (as opposed to a supplemental measure). If CalGEM were, by way of example, to establish a 2,500' setback that could be reduced to 1,000' if certain air pollution mitigation control measures were put in place, other problems with the reduced proximity (e.g., light and noise) would remain unaddressed; and there is currently no conclusive assurance that control of any particular set of pollutants would mitigate all of the observed health risk associations. CalGEM should therefore not pursue this approach.

2. Applicability to California

The question has periodically arisen whether the results of studies conducted outside California can nonetheless be applied in California to determine an appropriate setback distance, given that California has different air quality regulations in place and a different mix of drilling types than some of the locations studied, where hydraulic fracturing is predominant.

That question has to some degree been addressed by several recent California-based studies, including two released last week, whose results were consistent with those of comparable out-of-state studies with respect to the studied risk. These studies include the following:

- *Tran 2020*.¹¹ A study published June 3, 2020 concluded that pregnant women living in urban areas within 1 kilometer (3,281') of the highest producing wells were 40% more likely to have babies with low birthweights and 20% more likely to have babies who were small for their gestational age, compared with people living farther away from wells or near inactive wells only. While this study covered only one area of health risk, it undercuts the notion that differences between California's oil industry and other states' industries will necessarily yield significant differences in health outcomes.
- *Gonzalez 2020*.¹² A study published June 5, 2020 assessed birth outcomes for pregnant women within 10 km (32,080') of oil and gas operations in the San Joaquin Valley for the period 1998 to 2011. The study identified an association between proximity to oil and gas wells and spontaneous preterm birth.

¹¹ K. Tran, J. Casey, L. Cushing, R. Morello-Frosch, "Residential Proximity to Oil and Gas Development and Birth Outcomes in California: A Retrospective Cohort Study of 2006-2015 Births," *Environmental Health Perspectives* Vol. 128 No. 6 (June 3, 2020), available at <https://ehp.niehs.nih.gov/doi/10.1289/EHP5842>.

¹² D. Gonzalez, A. Sherris, W. Yang, D. Stevenson, A. Padula, M. Baiocchi, M Burke, M. Cullen, G. Shaw, "Oil and Gas Production and Spontaneous Preterm Birth in the San Joaquin Valley, CA," *Environmental Epidemiology*: August 2020, Volume 4, Issue 4, p e099, available at https://journals.lww.com/environepidem/Fulltext/2020/08000/Oil_and_gas_production_and_spontaneous_preterm.1.aspx.

- *Shamasunder 2018*.¹³ A 2018 study surveyed randomly sampled residences within 1,500' of two oil production sites in Los Angeles. The survey found that physical-diagnosed asthma rates were elevated within both buffer zones compared to state-level and county-level surveys.

Additionally, both the CCST study and Shonkoff 2019 looked more broadly at the relevant differences between California and the other locations studied, and suggest that the out-of-state origin of the studies does not render them irrelevant to California policymaking.

CCST 2015 noted the relative paucity of California-specific data, but observed that the out-of-state studies generally do not differentiate the association of health risks between hydraulic fracturing and oil and gas development overall. Thus, it concluded in general terms that “the same health impacts that have been found near oil development enabled by hydraulic fracturing may exist in any oil and gas development.”¹⁴

Shonkoff 2019 addressed the question of out-of-state applicability in greater depth, in analysis concerning specifically the Los Angeles region. The researchers unpacked the similarities and differences in the various states' circumstances, including comparisons of petroleum geology, type of oil and gas development, differences in air pollution monitoring, types of pollutants addressed, and density of oil and gas development. They concluded, “While the magnitude of health risks and impacts associated with oil and gas development in the City of Los Angeles is not extensively characterized there are enough similarities between the types of operations studied outside of California to operations located in the Los Angeles Basin that this body of literature should be carefully considered by regulators and policy decisionmakers.”¹⁵

Moreover, both the CCST and Shonkoff 2019 reports identified an additional risk factor in California as compared to Colorado, Pennsylvania, and Texas, which is that in parts of California, the population density around oil and gas wells is much higher. This means that the “intake fraction” of air emissions, meaning the amount that people actually breathe in, is higher as well.¹⁶ It bears note, in this regard, that in California the majority of oil production takes place in low income communities and communities of color, and communities that are already disproportionately affected by industrial pollution.¹⁷

¹³ B. Shamasunder, A. Collier-Oxandale, J. Blickley, J. Sadd, M. Chan, S. Navarro, M. Hannigan, N. Wong, “Community-Based Health and Exposure Study Around Urban Oil Developments in South Los Angeles,” *Int J Environ Res Public Health* 2018 Jan 15;15(1):138. doi: 10.3390/ijerph15010138, available at <https://pubmed.ncbi.nlm.nih.gov/29342985/>.

¹⁴ CCST Chapter 6, *supra*, at 374. Shonkoff 2019 identifies some methodological limitations to this study, including self-reported data. *Id.* at 23.

¹⁵ Shonkoff 2019 at 39 *et seq.*

¹⁶ CCST 2015, Chapter 6 at 411 (referencing Chapter 3); Shonkoff 2019 at 44-48.

¹⁷ T. Srebotnjak and M. Rotkin-Ellman, *Drilling in California: Who's at Risk?*, NRDC 2014, available at <https://www.nrdc.org/sites/default/files/california-fracking-risks-report.pdf>.

While it is certainly the case that California-specific monitoring data is being collected through the Air Resources Board's Study of Neighborhood Air near Petroleum Sources (SNAPS) monitoring program, and this data should factor in to setback decisionmaking, it cannot and should not be the only source of data treated as relevant to establishing a setback. A sound approach to establishing setbacks in California requires consideration of all available data, both monitoring and peer-reviewed literature. Monitoring data is by nature an incomplete data source, as it does not collect data concerning all pollutants at all times. The CCST and Shonkoff 2019 analysis indicate that the peer-reviewed literature, although largely conducted out of state, provides a reasonable basis to move forward with setbacks.

In any event, waiting for more monitoring data to emerge – or for more California-specific studies to be published – is not a viable option in view of the consistent findings in the literature that proximity to oil and gas production operations carries with it significant health risks. CCST 2015 recommended five years ago the establishment of setbacks based on the limited data then available,¹⁸ and the dataset indicating health risk has grown significantly since then. Completion of the SNAPS monitoring, and completion of a larger set of California-specific studies, will take a significant and indefinite number of years. Given that the very real health risks of proximity to oil and gas operations have been repeatedly demonstrated in the existing peer-reviewed literature, the only sound course that protects public health is to establish setbacks now, and adjust them in the future as appropriate based on additional data that may emerge. We urge CalGEM to do so in this rulemaking.

B. Avoiding Preemption

In crafting a setback rule, CalGEM should take steps to avoid any possible preemption of local setback regulations that may be more stringent than the state rule. While as noted above, most current local setbacks are far smaller than is minimally necessary to protect public health – and hence smaller than we hope and anticipate CalGEM will establish – California's permitting practices have long deferred to local governments to take necessary measures to protect the health and safety of their citizens. Accordingly, the setback rule should be framed as a floor, not a ceiling; and should expressly state an intention not to preempt local regulations that may be more stringent.

Of particular importance in this regard is a 1976 California Attorney General opinion concerning the issue of local regulation of oil and gas activities.¹⁹ That Opinion addressed the question of whether local governing regulation of drilling operations may be more stringent than state law on the same subject matter. It concluded,

[T]he Supervisor's very comprehensive conservation and protection activities, . . . it appears, are mainly restricted to subsurface activities. With regard to activities which are regulated by the Supervisor for purposes other than conservation and resource protection, such as environmental protection, we do not conclude that the

¹⁸ CCST 2015 Chapter 6 at 437.

¹⁹ 59 Ops. Cal. Atty. Gen. 461 (1976).

Supervisor has occupied the field to the exclusion of the local governments. For the most part, however, these latter activities are phases of oil and gas operations where the need for uniformity does not in our opinion outweigh "the needs of local governments to handle problems peculiar to their communities." **With regard to this latter category of concerns, which include land use, environmental protection aesthetics, public safety, and fire and noise prevention, local governments may impose regulations more stringent than those imposed by the state so long as they do no conflict with, frustrate the purposes of, or destroy the uniformity of the Supervisor's statewide regulatory conservation and protection program.** As we have stated, these latter activities appear to be, for the most part, surface activities.²⁰

The Attorney General was thus clear that, so long as more stringent local environmental regulations do not conflict with, frustrate the purpose of, or destroy the uniformity of CalGEM's regulations, they are not preempted by those regulations. CalGEM should therefore make clear in the rulemaking an intention that local governments be allowed to promulgate more stringent setback regulations; and a view that such local regulations would not be considered in any way in conflict with the statewide regulation.

II. CEQA Regulatory Reform

CalGEM's current role in CEQA implementation is minimal, due to the Division's interpretation of CEQA exceptions. CalGEM deferred to Kern County (where the large majority of California drilling activity takes place) as the CEQA lead agency prior to the recent judicial invalidation of the Kern county drilling ordinance. Otherwise, it routinely determines that projects are exempt from CEQA review altogether.

Both of these approaches are deeply problematic and should be changed through regulatory reform. The Kern County EIR was substantively deficient in multiple respects, as made clear by the recent court decision invalidating the County's ordinance.²¹ The Environmental Impact Report (EIR) concerning the ordinance was deeply flawed, yet became the basis for eliminating CEQA review of individual permitting decisions by declaring such decisions ministerial. Additionally, a Kern County court recently held that CalGEM had misconstrued both CEQA and its CEQA implementing regulations in finding projects in the Belridge field (permitted prior to the Kern County ordinance) to be exempt from CEQA.²²

²⁰ 59 Ops. Cal. Atty. Gen. at 479.

²¹ *King and Gardiner Farms, LLC v. County of Kern*, No. F077656 (Cal. Ct. App. 5th Dist., February 25, 2020), available at https://www.biologicaldiversity.org/programs/climate_law_institute/energy_and_global_warming/pdfs/20-02-25-Opinion-Kern-County_Oil_and_Gas.pdf.

²² Minute Order concerning First Amended Writ Petition, *Assn. of Irrigated Residents v. California Dept. of Conservation* (AERA Energy), No. S-1500-CV-283418 (August 23, 2018) (Super. Ct. Kern Co.). The case is pending on appeal.

At issue for current purposes is not so much the specific outcome of either of these lawsuits, but more the lost opportunity for CalGEM to ensure that CEQA is robustly implemented at every level to address the environmental and public health impacts of oil production activities. CEQA is designed to ensure that all California agency decisionmaking includes a careful evaluation of environmental impacts.²³ Now more than ever, as evidence mounts concerning the harmful public health impacts associated with oil production activities, it is essential that CalGEM step up to oversee the robust implementation of CEQA to address those impacts and ensure that they are mitigated to the maximum extent practicable.

We recognize that CalGEM is not currently staffed with extensive public health expertise. However, CEQA's mandate intentionally applies across the board to all state agencies, not only those whose expertise is specifically geared toward the environmental issues that must be addressed in CEQA review. To the extent CalGEM's staff expertise is insufficient to fully implement CEQA, it should form more robust partnerships with other state agencies that do house the necessary expertise, and as necessary retain consultants. We are not asking CalGEM to do the logistically impossible; and we acknowledge that CEQA affords agencies a degree of flexibility in determining the level of review necessary for any particular project, the appropriateness of program-level review, and identification of the lead agency. However, as the state agency charged with a mandate of supervising production activities "so as to prevent, as far as possible, damage to life, health, property, and natural resources,"²⁴ and "protecting public health and safety and environmental quality, including reduction and mitigation of greenhouse gas emissions,"²⁵ CalGEM has the responsibility to ensure that CEQA is fully implemented in support of that mandate.

We believe there are two key steps that CalGEM can take in the context of this rulemaking process to further robust CEQA implementation: ensuring that CEQA exemptions are not misapplied, and ensuring that CEQA review is thorough and covers all relevant issues pertaining to public health.

1. Eliminate Misapplication of CEQA Exemptions

CalGEM should change course and make clear by regulation that the CEQA exemptions on which it has been relying do not, in fact, apply to approval of well drilling projects. To be clear, as noted above, we concur with the Kern County court's finding in *Ass'n of Irrigated Residents* to the extent it held that these exemptions do not apply as written. We are asking CalGEM to take a step beyond the litigation and make clear that, on a foregoing basis, it is no longer taking the position that these exemptions apply and is making sure by regulatory amendment that they do not.

²³ Cal. Pub. Res. Code § 21000(g).

²⁴ Cal. Pub. Res. Code § 3106(a).

²⁵ Cal. Pub. Res. Code § 3011(a).

There are three specific exemptions at issue. The following are our recommendations for amendments to address them:

- *The CEQA grandfathering provision.* CEQA exempts any project approved or undertaken prior to CEQA’s effective date (April 5, 1973).²⁶ Courts interpreting this provision have stated that the “key issue” in its applicability is whether the challenged action is a “normal, intrinsic part of the ongoing operation” of the project approved pre-CEQA.²⁷ The court in *Assn. of Irrigated Residents* pointed out it is simply not plausible that the nearly sixfold increase in the number of wells in the Belridge field since the inception of CEQA (from roughly 2,000 to more than 12,000) was merely part of the “ongoing operation” of that field.²⁸ CalGEM should promulgate regulations setting forth a narrowly-defined standard for when a new or reworked well in an existing field should be considered part of the ongoing operation and therefore exempt from CEQA under the grandfathering provision. The standard should preclude application of the statutory exemption whenever there has been any more than *de minimis* increase in the number of wells drilled in the field since April 1973.
- *Categorical exemption for existing facilities (Class 1).* The CEQA Guidelines provide a categorical exemption for minor changes to existing facilities,²⁹ and CalGEM’s regulations at § 1684.1 define a counterpart exemption that applies to, *inter alia*, “remedial, maintenance, conversion, and abandonment work on oil, gas, injection, and geothermal wells involving the alteration of well casing, such as perforating and casing repair, removal, or replacement; installation or removal of downhole production or injection equipment, cement plugs, bridge plugs, and packers set to isolate production or injection intervals.”³⁰ While on its face (as recognized by the *Assn. of Irrigated Residents* court) this exception does not apply to new activity,³¹ and does not reference at all the drilling or reworking of wells (which is clearly more than a “minor change”), CalGEM nonetheless regularly applies it to such activities. We therefore recommend that CalGEM promulgate an amendment to § 1684.1 clarifying that drilling and reworking of wells, and any other production-related construction and operations involving non-*de minimis* alterations, fall outside the scope of the Class 1 categorical exemption.

²⁶ Cal. Pub. Res. Code § 21169.

²⁷ *Assn. of Irrigated Residents*, *supra*, slip. Op. at 9, quoting *North Coast Rivers Alliance v. Westlands Water Dist.* (2014) 227 Cal.App.4th 832, 857.

²⁸ *Id.*

²⁹ 14 CCR § 15301.

³⁰ 14 CCR § 1684.1.

³¹ *Assn. of Irrigated Residents*, slip op. at 10.

- *Categorical exemption for minor alterations to land (Class 4)*. The CEQA Guidelines categorically exempt “minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes.”³² The Guidelines provision identifies examples of activities exempt under Class 4, including “new gardening and landscaping,” “minor temporary use” such as Christmas tree lots, and creation of bicycle lanes. CalGEM’s counterpart Class 4 regulation at § 1684.2, however, applies to “drilling operations that result only in minor alterations with negligible or no permanent effects to the existing condition of the land, water, air, and/or vegetation.”³³ Once again, we do not believe that on its face, this exemption should apply to drilling or reworking operations, since – as discussed above concerning setback buffers – oil drilling operations by nature involve permanent effects to the condition of (at minimum) air quality. Beyond doing as ordered by the Kern County court in *Assn. of Irrigated Residents*, which is to assess whether the impact of well drilling is non-negligible, CalGEM should simply make the Class 4 exemption inapplicable to drilling operations altogether, given the clear evidence that their impacts are consistently significant. We therefore recommend that CalGEM amend § 1684.2 to remove the reference to drilling as a covered category, and make clear that this category does *not* apply to drilling or re-drilling operations.

2. Ensure Robust Analysis Under CEQA

It is not sufficient to ensure merely that CEQA applies to oil drilling and reworking operations. It must be applied in a manner that ensures that CEQA analysis fully addresses all impacts of such operations, in particular public health-related impacts.

Assuming – as we hope will occur – CalGEM ends its practice of misapplying CEQA exemptions as discussed in the subsection above, the question will still exist as to what CalGEM’s CEQA review will consist of. Additionally, there will be a question whether CalGEM will serve as the lead agency conducting CEQA review, or will defer to the relevant local government as lead agency. We recognize that determination of lead agency status may depend on a variety of considerations.³⁴ What is important is that whoever the lead agency is conduct the proper inquiry; and that CalGEM not defer to that inquiry unless it meets basic criteria of sufficiency. CEQA does not require that CalGEM rubber stamp review by lead agencies.³⁵

³² 14 CCR 15304.

³³ 14 CCR § 1684.2.

³⁴ 14 CCR § 15051.

³⁵ Indeed, the CEQA guidelines state that a responsible agency “shall assume the role of the lead agency” whenever “[t]he lead agency prepared inadequate environmental documents without consulting with the responsible agency as required by Sections 15072 or 15082, and the statute of limitations has expired for a challenge to the action of the appropriate lead agency.” 14 CCR § 15052(a)(3).

CalGEM should accordingly establish its own set of standards for what areas of inquiry should be included in CEQA review, and what constitutes adequate analysis. Those standards should apply both to CalGEM's CEQA review as lead agency, and to its determination whether to defer as a responsible agency to analysis performed by a different lead agency. Such standards would help serve as a backstop against the type of clearly inadequate CEQA analysis performed by Kern County, which (as the court recently found) failed in multiple respects to fully evaluate the impact of oil production activities. With proper regulations in place, CalGEM would have a structure through which to reject such analysis and insist that CEQA review cover a well-defined set of issues using appropriate analytical criteria.

The CEQA guidelines provide a general framework for defining the scope of CEQA analysis; and the federal National Environmental Policy Act (NEPA) regulations³⁶ (as currently formulated³⁷) also provide a useful structure to consider. CalGEM's regulations should define, *inter alia*, the types of direct, indirect, and cumulative impacts that must be considered in the context of CEQA; and should establish significance thresholds for such impacts. The effects considered should include, without limitation, impacts to air, surface and groundwater, noise and light levels, aesthetics, community socioeconomic factors (beyond simply the value of economic transactions), and overall public health. They should ensure that the cumulative burden of other sources of pollution on a community is considered as part of the analysis, as well as public health factors extant in the community that may vary the impact of pollution and other health stressors.

Of particular importance in the oil drilling context is the fact that the environmental and public health impacts of oil production are not limited to the direct effects of the production itself (although such effects are highly significant). Oil and gas produced in California will have significant downstream effects when it is refined and combusted, involving both conventional pollutants and greenhouse gases. Pursuant to NEPA requirements, federal agencies are required consider such downstream impacts in their analysis of approvals related to fossil fuel production.³⁸ Hence, in NEPA review of such approvals, they generally calculate the volume of

³⁶ 40 CFR Part 1500.

³⁷ The current federal administration has proposed changes to the NEPA regulations that would significantly – and unlawfully – weaken them. 40 Fed.Reg. 1684 (January 10, 2020).

³⁸ NEPA regulations require not only analysis of direct project impacts, but also indirect impacts “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). Recent court decisions concerning fossil fuel projects have consistently interpreted this provision to require agencies, at a minimum, to quantify downstream combustion emissions in addition to the direct emissions of project-specific operations. *See Wilderness Workshop v. U.S. Bureau of Land Mgmt.*, 2018 WL 5043909 *6 (D. Colo. October 17, 2018) (“BLM acted in an arbitrary and capricious manner and violated NEPA by not taking a hard look at the indirect effects resulting from the combustion of oil and gas in the planning area under the RMP. BLM must quantify and reanalyze the indirect effects that emissions resulting from combustion of oil and gas in the plan area may have on GHG emissions.”); *San Juan Citizens Alliance v. U.S. Bureau of Land Mgmt.*, 2018 WL 2994406, at *10 (D.N.M. June 14, 2018) (BLM’s reasoning for not analyzing indirect GHG emissions was “contrary to the reasoning in several persuasive cases that have determined that combustion emissions are an indirect effect”); *W. Org. of Res. Councils v. U.S. Bureau of Land Mgmt.*, 2018 WL 1475470, at *13 (D. Mont. March 26, 2018) (“In light of the degree of foreseeability and specificity of information available to the agency while completing the EIS, NEPA requires BLM to consider in the EIS the environmental consequences of the downstream combustion of the coal, oil and gas resources potentially open to development under these RMPs.”); *Sierra Club v. Fed. Energy*

emissions that will be emitted downstream, and in some cases use the Social Cost of Carbon tool³⁹ to assess the impact and significance of the GHG emissions. CalGEM's environmental review analysis should certainly not be less robust than current federal analysis.

III. Permitting Process Reform

The current CalGEM requirements governing notices of intention to drill are minimal. The notice of intention to drill referenced in Public Resources Code § 3106 is implemented via a regulation⁴⁰ requiring submission of a Division form, which is one-half page long and requires almost no substantive information about the proposed well.⁴¹ While CalGEM's website states that attachments "may" include "a complete drilling program, lease map or plat, lease description and proposed wellbore schematic," the regulations and the form do not specifically require that information.

We understand that CalGEM has procedures informally in place to secure additional information before authorizing drilling, including letters of abeyance. We further understand that there exist field rules with which operators must in some instances comply. However, this loose approval process creates two significant problems with drilling authorization, both of which ultimately redound to public health. First, it fails to define the criteria for when CalGEM may exercise discretion to deny a permit, or demand changes and supplements to an application, based on its § 3106 mandate to supervise production "so as to prevent, as far as possible, damage to life, health, property, and natural resources" and address GHG impacts. Second, and relatedly, the approach makes it functionally impossible for members of the public who may be affected by a proposed well to understand what type of authorization is being sought, whether applicable requirements are being met, and how the approved project might affect them and the health of their communities. The latter problem is compounded by the fact that there is currently no viable

Regulatory Comm'n, 867 F.3d 1357, 1374 (D.C. Cir. 2017) (stating that GHG emissions from the combustion of gas transported by the Sabal Trail pipeline "are an indirect effect of authorizing this [pipeline] project, which [the agency] could reasonably foresee"); *Dine Citizens Against Ruining Our Env't v. U.S. Office of Surface Mine Reclamation & Enforcement*, 82 F.Supp. 3d 1201, 1213 (D. Colo. 2015) ("find[ing] that the coal combustion-related impacts of [the mine's] proposed expansion are an 'indirect effect' requiring NEPA analysis"); *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp.3d 1174, 1198 (D. Colo. 2014) ("reasonably foreseeable effect" of downstream combustion "must be analyzed, even if the precise extent of the effect is less certain").

³⁹ The Social Cost of Carbon is a tool that is widely accepted in the scientific community, which attaches a cost per ton to carbon dioxide emissions by modeling damage that will flow from climate disruption, including changes in net agricultural productivity, human health, property damages, and the value of ecosystem services. An introductory explanation of the tool can be found at <https://www.carbonbrief.org/qa-social-cost-carbon>.

⁴⁰ 14 CCR § 1722(d).

⁴¹ Referencing the form available at https://www.conservation.ca.gov/calgem/for_operators#otherwellpermitting, under "Drill New Wells" item 2.

mechanism through which the public can reliably learn about requests for drilling authorization before they are granted.⁴²

We therefore recommend that CalGEM address both problems by establishing a clear set of substantive application requirements in connection with a drilling authorization issued pursuant to Public Resources Code § 3203; and that it provide for public notice concerning all such applications.

The regulations governing hydraulic fracturing permit applications⁴³ provide a general model for how CalGEM should spell out application requirements for all drilling permits. While not every provision in those regulations would be substantively applicable to non-hydraulic fracturing authorizations, many of them are (particularly to cyclic steaming operations); and there may be other critical information that CalGEM currently demands informally that should be more formally spelled out. CalGEM should also provide a form for authorization applications that spells out all basic categories of information required (while making clear that the Division may still require supplementation of the information based on relevant circumstances).

Additionally, CalGEM should promulgate regulations defining the criteria it may use to discretionarily deny an application for authorization to drill pursuant to § 3203, even when it is in receipt of complete information. Since CalGEM has general authority under § 3106 to prevent damage to life, health, property, and natural resources and under § 3011 to address mitigation of GHGs, it should spell out the specific parameters by which it will exercise such authority in the face of public health and environmental threats. Among other things, CalGEM should specify that it has authority to reject a drilling authorization application where it has been demonstrated that surrounding populations may suffer adverse health consequences due to air or water emissions associated with the proposed operations, that wildlife or water resources may be adversely affected, or that the proposed activity is incompatible with California's climate goals.

To facilitate public information and participation, CalGEM should require that all applications for drilling approval of any kind be posted on its website upon receipt (and updated with any additional requests for additional information and responses). Interested persons should also be able to sign up for notification of the posting of such applications. CalGEM should also provide a reasonable window of time in which such persons may comment to the Division concerning such applications and how they might be affected.⁴⁴ Regulations promulgated in Illinois provide a model for what a public notification process could look like.⁴⁵

⁴² While CalGEM's regulations contain "neighbor notification" provisions requiring that a copy of an issued permit be provided to property owners and tenants within a 1,500-foot radius of the project, there is no requirement that the *application* be automatically made available. 14 CCR § 1783.2.

⁴³ 14 CCR § 1783.1.

⁴⁴ The 10-day time limitation in Public Resources Code § 3203 should not impact CalGEM's ability to provide the public with a reasonable period of time to react to applications received, so long as the Division provides a response to the applicant within 10 days specifying that the public response period has begun to run.

⁴⁵ 62 Ill. Admin. Code 245.240.

IV. Expanded Applicability of Enhanced Requirements

CalGEM's current regulations establish enhanced requirements for two categories of wells: critical wells and hydraulically fractured wells. Where appropriate, the Division should apply these enhanced requirements universally to all types of wells.

CalGEM regulations define a "critical well" as a well within either 300 feet of occupied buildings and airport runways, or 100 feet from certain other infrastructure and natural features.⁴⁶ Such wells are required to have installed and maintained an array of safety devices, both surface and subsurface – including, *e.g.*, fail-close shutdown devices and associated high-low pressure sensors, check valves, fire detection devices, and remotely-operable shut-in controls.⁴⁷

There is no sound reason why these basic requirements should not apply to all wells in the state. While the risk of damage and injury from a well accident is likely higher within 100-300' of well operations, there is risk outside that range as well. In particular, it bears note that the Aliso Canyon gas leak might have been prevented by auto-shutoff devices. At Aliso Canyon, while the injection well originally had safety valves installed in 1953, they were removed in 1979 when they were old and leaking, and never replaced because it was not a critical well.⁴⁸

With regard to hydraulic fracturing, CalGEM's regulations contain an array of requirements that are not applicable to non-stimulated wells.⁴⁹ While these requirements were for the most part put into place pursuant to SB 4, nothing in CalGEM's authorizing statute would prohibit their applicability to non-stimulated wells as appropriate to protect public health and safety.

A number of these requirements are specific to hydraulic fracturing, but many more are not, and should be applied to all production operations; or, as appropriate, to production operations bearing relevant similarities to hydraulic fracturing such as cyclic steaming. We have already noted in previous sections that the requirements pertaining to the substance of permit applications and public notice should be universally applied and expanded. Other examples of requirements that could be expanded to non-stimulation operations include regulations regarding handling of fluids and wastes,⁵⁰ and water quality testing requirements.⁵¹

⁴⁶ 14 CCR § 1720.

⁴⁷ 14 CCR § 1724.3.

⁴⁸ "Leaking Gas Well in Porter Ranch Area Lacked a Working Safety Valve," *Los Angeles Times* January 3, 2016, available at <https://www.latimes.com/local/california/la-me-0104-gas-leak-20160104-story.html>.

⁴⁹ 14 CCR §§ 1782-1789.

⁵⁰ 14 CCR § 1786.

⁵¹ 14 CCR § 1783.3.

V. Spill and Accident Reporting

The CalGEM regulations that took effect last year addressing surface expressions⁵² are a step in the right direction in managing these events. However, there was significant community concern following the Cymric Field spill about the time lag between the event and public awareness of it. While the new regulations require reporting to CalGEM,⁵³ and to the Office of Emergency Services in the event a reportable quantity is released,⁵⁴ these provisions do not by themselves ensure prompt public awareness.

This problem is relatively easy to solve. CalGEM should establish a spill and accident reporting page on its website, in which it would post incident reports as soon as possible upon receipt. The Division could then add to the page information as it emerges concerning the impact of the event, any necessary safety precautions, and steps being taken to address it. Additionally, CalGEM should allow members of the public to sign up for immediate email or text notification of any reported events. Similar steps should be taken with respect to reportable leaks from a gas storage facility.⁵⁵

Additionally, loss of well casing integrity should be immediately reportable to both CalGEM and to the applicable regional water quality control board. While current law requires reporting of a spill or release to various agencies,⁵⁶ it is important to ensure awareness of events that may precipitate such releases as well, to afford time to prepare to address them. Again, all such events should also be reported publicly through the means discussed above.

Thank you for the opportunity to submit these comments, and for your very well-run process of soliciting pre-rulemaking public input. We look forward to continued dialogue in the days ahead.

Very truly yours,



Ann Alexander
Senior Attorney, Nature Program
Natural Resources Defense Council

⁵² 14 CCR § 1724.11.

⁵³ 14 CCR § 1724.11(c).

⁵⁴ 14 CCR § 1724.11(h).

⁵⁵ 14 CCR § 1724.26.9.

⁵⁶ Government Code § 8589.7(b).

A handwritten signature in black ink that reads "Bill Allayaud". The signature is written in a cursive style with a large, looping initial "B".

Bill Allayaud
Calif. Director of Government Affairs
Environmental Working Group