



NATIONAL ASSOCIATION OF ROYALTY OWNERS – CALIFORNIA, INC.
Serving the Citizens Who Own California's Oil and Gas Resources

City of Culver City, City Attorney's Office
Attn: Heather Baker, Assistant City Attorney
9770 Culver Blvd.
Culver City, CA 90232

October 22, 2020

Re: Inglewood Oil Field Amortization Study

Dear Ms. Baker:

My name is Ed Hazard. My family and I are California oil and gas mineral and royalty owners. I am president of the California chapter of the National Association of Royalty Owners. We represent the interests of the estimated 500,000 oil and gas royalty owners of California.

I am writing to you in strong opposition to the proposed shutdown of the portion of the Inglewood Oil Field that is within the Culver City limits. The proposed shutdown and amortization will affect hundreds of royalty owners. The mineral rights owned by these royalty owners are valuable assets of theirs.

I don't know how you equitably amortize mineral rights, especially when there is production and known reserves. Nobody knows how many years of production are left in this field. Mineral owners can't move their mineral rights, can't produce their oil somewhere else. The oil needs to be produced from where it was placed by nature. It is not like a hardware store that can move its business to another location. The oil can only be moved if it is produced. The mineral and royalty owners' assets will have no value if they are no longer able to produce oil from them. Their assets will have been taken from them by the City. The royalty and mineral owners will be forced to take action to protect their assets.

If forced to take action, NARO-California will stand with the royalty owners, just as we did in Monterey County. When Monterey County passed the oil shutdown Measure Z, NARO-California filed suit together with over 80 royalty owners as named co-plaintiffs. In addition, five oil companies filed suit. Millions were spent on legal fees and costs. We won, the County lost. Legal action is a last resort. We do not take it lightly. It is something I hope we never have to do again. Please, do not pursue the proposed amortization and shutdown.

Sincerely,

Edward S. Hazard, President

Founded in 1980, the National Association of Royalty Owners is the only national organization representing solely, and without compromise, oil and gas royalty owners' interests.

Ferrel, Mimi

From: Ellie Cohen <ellie@theclimatecenter.org>
Sent: Friday, October 23, 2020 7:55 PM
To: Public Comment at Culver City
Subject: Letter in support of Oil Drilling Subcommittee recommendations

Dear Councilmembers-

The Climate Center, an energy and climate policy nonprofit, strongly supports the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field and encourages the Culver City Council to do this as quickly as possible.

More than [5.5 million](#) Californians live within 1 mile of an oil or gas well, exposing them regularly to polluted air and increased risk for cardiovascular and respiratory diseases. Pregnant women living within 6 miles of oil and gas wells are significantly more likely to experience preterm birth with low birth weights. [Research shows](#) that these children face a [greater risk](#) of infections, developmental delays and other health problems.

Oil and gas [wells also release carcinogens](#) like benzene into neighboring communities as well as warming greenhouse pollutants into the atmosphere.

Neighborhood oil drilling is dangerous and poses serious risks to our health, local environment and climate. In order to protect the safety and well-being of Culver City residents, the City Council must act boldly and swiftly to enact a just transition and managed decline away from fossil fuels and to a clean, healthy and sustainable economy.

Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field.

Thank you.

Ellie Cohen

Ellie M. Cohen
Chief Executive Officer
The Climate Center
P.O. Box 3785
Santa Rosa, CA 95402

ellie@theclimatecenter.org

707-525-1665 x 102

www.theclimatecenter.org

Follow me on [LinkedIn](#) and [Twitter](#)

Endorse [Climate-Safe California](#)



Ferrel, Mimi

From: Nancy Matson [REDACTED]
Sent: Friday, October 23, 2020 8:18 PM
To: Public Comment at Culver City
Subject: stop drilling in Inglewood Oil Field

Hi,

I wanted to express my support for the recent decision to stop drilling in Inglewood Oil Field. As someone who lives adjacent to Culver City I appreciate the city's concern for the health effects on its citizens and its leadership on progressive issues like this one.

This change is long overdue.

Thanks!

Nancy Matson

--

Nancy Matson
Chair, Transportation Committee
Neighborhood Council Sustainability Alliance
"You don't need a car -- you need a ride!"

Ferrel, Mimi

From: Jim Stewart [REDACTED]
Sent: Friday, October 23, 2020 8:28 PM
To: Public Comment at Culver City
Subject: I support a phase-out period for nonconforming oil and gas uses

I am inspired by how Culver City is ready to stand up for the health, wellness and safety of its residents and businesses. Please protect us by approving an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field.

Thank you.

Jim Stewart

From: noreply@granicusideas.com
Sent: Friday, October 23, 2020 9:59 PM
To: Public Comment at Culver City
Subject: New eComment for City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board



New eComment for City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board

Karina Maher submitted a new eComment.

Meeting: City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board

Item: A-4. 21-389 CC - (1) City Council Oil Drilling Subcommittee ("Subcommittee") and City Staff Update Regarding the Preparation and Future Consideration of a Proposed Amortization Program for the Culver City Portion of the Inglewood Oil Field; (2) Consideration of the Subcommittee's Recommendation to Adopt a Resolution Declaring the City Council's Intent to Evaluate the Establishment of an Approximate Five-Year Phase-Out Period for the Amortization and Removal of Nonconforming Oil and Gas Activities within the City; and (3) Direction to the Subcommittee and City Staff as Deemed Appropriate.

eComment: Dear Members of the Culver City Council, As pediatrician who has worked in the Culver City area for 18 years caring for children of all ages, I am writing to express my strong support for phasing out oil and gas activities in the Inglewood Oil Field. *The medical evidence is clear: children who live near oil extraction sites have an increased risk of cancer, asthma, and birth defects and are more likely to be born prematurely. We know that the children most affected are those of color and those from low income homes. COVID-19 affects those same people disproportionately so the timing of this is urgent. Now more than ever, it is crucial that you do what you can to stop oil drilling and protect the health of the children who live in and near Culver City. Please vote yes to phase out oil and gas activities in the Inglewood Oil Field. If the COVID-

19 pandemic has taught us anything, it is to listen to scientists and medical experts. Our health depends on it. Sincerely, Karina Maher, MD Board Certified Pediatrician

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Ferrel, Mimi

From: karina maher [REDACTED]
Sent: Friday, October 23, 2020 10:01 PM
To: Public Comment at Culver City
Subject: Written public comment re Oct 26, 2020 City Council Meeting Agenda Item A-4. 21-389
CC

Dear Members of the Culver City Council,

As pediatrician who has worked in the Culver City area for 18 years caring for children of all ages, I am writing to express my strong support for phasing out oil and gas activities in the Inglewood Oil Field.

The medical evidence is clear: children who live near oil extraction sites have an increased risk of cancer, asthma, and birth defects and are more likely to be born prematurely. We know that the children most affected are those of color and those from low income homes. COVID-19 affects those same people disproportionately so the timing of this is urgent.

Now more than ever, it is crucial that you do what you can to stop oil drilling and protect the health of the children who live in and near Culver City.

Please vote yes to phase out oil and gas activities in the Inglewood Oil Field. If the COVID-19 pandemic has taught us anything, it is to listen to scientists and medical experts. Our health depends on it.

Sincerely,
Karina Maher, MD
Board Certified Pediatrician

Ferrel, Mimi

From: Shelly Wolf [REDACTED]
Sent: Saturday, October 24, 2020 12:48 PM
To: Public Comment at Culver City

Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field. Thank you.

Sheldon Wolf

[REDACTED]

From: noreply@granicusideas.com
Sent: Saturday, October 24, 2020 9:32 PM
To: Public Comment at Culver City
Subject: New eComment for City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board



New eComment for City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board

Ann Dorsey submitted a new eComment.

Meeting: City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board

Item: A-4. 21-389 CC - (1) City Council Oil Drilling Subcommittee ("Subcommittee") and City Staff Update Regarding the Preparation and Future Consideration of a Proposed Amortization Program for the Culver City Portion of the Inglewood Oil Field; (2) Consideration of the Subcommittee's Recommendation to Adopt a Resolution Declaring the City Council's Intent to Evaluate the Establishment of an Approximate Five-Year Phase-Out Period for the Amortization and Removal of Nonconforming Oil and Gas Activities within the City; and (3) Direction to the Subcommittee and City Staff as Deemed Appropriate.

eComment: Please support the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field. I encourage the Culver City City Council to do this as quickly as possible. Oil drilling operations near neighborhoods can cause serious health problems, damages the local environment, makes climate change impacts more severe, and is dangerous. I urge the city council to enact a just transition away from fossil fuels to sustainable renewable fuels. Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field. Thank you, Ann Dorsey

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Ferrel, Mimi

From: Penelope Moffet [REDACTED]
Sent: Sunday, October 25, 2020 7:50 AM
To: Public Comment at Culver City
Subject: phase out oil drilling in the Inglewood Oil Field

The Oil Drilling Subcommittee took an important step with its recommendations to phase out oil drilling at the Inglewood Oil Field. I encourage the Culver City City Council to do this as quickly as possible. As a 10-year resident of Fox Hills, I am deeply concerned about this issue. I pay attention to what happens in local government, and I vote.

Neighborhood oil drilling is dangerous and poses serious risks to the health of residents who live near the oil field, to the local environment and to the overall climate of our country and the world. The council has the opportunity to take significant action on behalf of our community and the planet.

Please vote yes on the establishment of a phase-out period of about 5 years for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field.

Thank you.

Penelope Moffet
Culver City

Ferrel, Mimi

From: Brenda Nuyen [REDACTED]
Sent: Sunday, October 25, 2020 1:12 PM
To: Public Comment at Culver City
Subject: Phase out oil drilling

I am in support of the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field and encourage the Culver City city council to do this as quickly as possible. We know that neighborhood oil drilling is dangerous and poses serious risks to our health, local environment and climate. In order to protect the safety and well being of Culver City residents, the council must act boldly and swiftly to enact a just transition and managed decline away from fossil fuels and to a clean, healthy and sustainable economy. Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field. Thank you.

Ferrel, Mimi

From: Roberta Frye [REDACTED]
Sent: Sunday, October 25, 2020 2:20 PM
To: Public Comment at Culver City
Subject: Oil drilling

I support the Oil Drilling subcommittee's recommendation to phase out drilling in the Inglewood oil field and urge the council to do so as quickly as possible.

Roberta

Ferrel, Mimi

From: karina maher [REDACTED]
Sent: Sunday, October 25, 2020 7:24 PM
To: Public Comment at Culver City
Subject: Written public comment re Oct 26, 2020 City Council Meeting Agenda Item A-4. 21-389
CC

Dear Members of the Culver City Council,

As physician representatives for Climate Health Now, a group of over 350 healthcare professionals throughout California, we would like to express our strong support for phasing out oil and gas activities in the Inglewood Oil Field.

The medical evidence is clear: those who live near oil extraction sites have an increased risk of cancer, heart attack, stroke, asthma, and birth defects. We know that the people most affected are those of low income and of color. These communities, already overburdened by pollution, are also suffering the highest SARS-CoV-19 infection and death rate, and evidence is growing that chronic air pollution exposure increases their risk of dying from COVID-19.

Since AB 345 was not passed, there is no current progress on establishing a minimum setback distance between oil and gas production and the places where people live, work, and go to school. Now more than ever, it is crucial that you do what you can to stop oil drilling, support a just transition to a renewable fuel economy, and protect the health of those who live in and near Culver City. Not only will their health be improved immediately by decreased exposure to toxins in their air and water, you will be protecting future generations from the devastating health effects of climate change.

Please vote yes to phase out oil and gas activities in the Inglewood Oil Field. If the COVID-19 pandemic has taught us anything, it is to listen to the scientists and medical experts. Our health depends on it.

Sincerely,
Karina Maher, MD
Cynthia Mahoney, MD
Ashley McClure, MD
Amanda Millstein, MD
Sarah Schear, MS, MD Candidate

From: noreply@granicusideas.com
Sent: Sunday, October 25, 2020 7:50 PM
To: Public Comment at Culver City
Subject: New eComment for City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board



New eComment for City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board

Amanda Millstein submitted a new eComment.

Meeting: City Council Meeting Agenda on 2020-10-26 7:00 PM - Regular Meeting of the City Council, Successor Agency to the Culver City Redevelopment Agency Board, and Culver City Housing Authority Board

Item: A-4. 21-389 CC - (1) City Council Oil Drilling Subcommittee ("Subcommittee") and City Staff Update Regarding the Preparation and Future Consideration of a Proposed Amortization Program for the Culver City Portion of the Inglewood Oil Field; (2) Consideration of the Subcommittee's Recommendation to Adopt a Resolution Declaring the City Council's Intent to Evaluate the Establishment of an Approximate Five-Year Phase-Out Period for the Amortization and Removal of Nonconforming Oil and Gas Activities within the City; and (3) Direction to the Subcommittee and City Staff as Deemed Appropriate.

eComment: Dear Members of the Culver City Council, As physician representatives for Climate Health Now, a group of over 380 healthcare professionals throughout California, we would like to express our strong support for phasing out oil and gas activities in the Inglewood Oil Field. The medical evidence is clear: those who live near oil extraction sites have an increased risk of cancer, heart attack, stroke, asthma, and birth defects. We know that the people most affected are those of low income and of color. These communities, already overburdened by pollution, are also suffering the highest SARS-CoV-19 infection and death rate, and evidence is growing that chronic air pollution exposure increases their risk of dying from COVID-19. Since AB 345 did not pass in the state legislature, there is no current progress on establishing a minimum setback distance between oil and gas production and the places where people live, work, and go to school. Now more than ever, it is crucial that you do what you can to stop oil drilling, support a just transition to a renewable-based economy, and protect the health of those who live in and

near Culver City. Not only will their health be improved immediately by decreased exposure to toxins in their air and water, you will be protecting future generations from the devastating health effects of climate change. Please vote yes to phase out oil and gas activities in the Inglewood Oil Field. If the COVID-19 pandemic has taught us anything, it is to listen to the scientists and medical experts. Our health depends on it. Sincerely, Karina Maher, MD Cynthia Mahoney, MD Ashley McClure, MD Amanda Millstein, MD Sarah Schear, MS, MD Candidate

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Ferrel, Mimi

From: Chan Park [REDACTED]
Sent: Sunday, October 25, 2020 8:58 PM
To: Public Comment at Culver City
Subject: A written comment to phase out oil field in culver city

Dear Members of the Culver City Council,

As a psychiatrist who have witnessed negative mental health effect of climate crises, I am writing to express my strong support for phasing out oil and gas activities in the Inglewood Oil Field.

The medical evidence is clear: those who live near oil extraction sites have an increased risk of cancer, heart attack, stroke, asthma, and birth defects. We know that the people most affected are those of low income and of color. These communities, already overburdened by pollution, are also suffering the highest SARS-CoV-19 infection and death rate, and evidence is growing that chronic air pollution exposure increases their risk of dying from COVID-19.

Now more than ever, it is crucial that you do what you can to stop oil drilling and protect the health of the children who live in and near Culver City.

Please vote yes to phase out oil and gas activities in the Inglewood Oil Field. If the COVID-19 pandemic has taught us anything, it is to listen to scientists and medical experts. Our health depends on it.

Sincerely,

Chan Y. Park, MD
Psychiatry Resident at GLA-VA

Ferrel, Mimi

From: Nora Privitera [REDACTED]
Sent: Sunday, October 25, 2020 10:12 PM
To: Public Comment at Culver City
Subject: Support Culver City's resolution to transition away from fossil fuels.

Culver City's Council has made the courageous and necessary decision to begin a just transition away from a fossil fuel economy. This decision must be upheld and implemented as soon as possible.

The fossil fuel industry is destroying our planet and negatively impacting the health of those who have the misfortune to live near oil and gas wells. The vast majority of these people are low income people of color, who cannot afford to move away from these toxic sites.

Culver City has created an opportunity to transform its community into a safe and healthy place to live, one that will benefit generations to come, and reduce the threat to the climate as well as the threat to its people's health and well being.

Please vote yes on an approximate five year phase out period for the amortization of nonconforming oil and gas uses in Culver City's portion of the Inglewood oil and gas field.

Thank you.
Sent from my iPhone

Ferrel, Mimi

From: Kendal Asuncion <KAsuncion@lachamber.com>
Sent: Monday, October 26, 2020 8:58 AM
To: Public Comment at Culver City
Subject: Agenda Item A-4: Oppose Proposed Amortization Program

Good afternoon –

Below you'll find the LA Chamber's comments in opposition to the 10/26 agenda item A-4 the proposed amortization program for the Culver City Port of the Inglewood Oilfield:

Good evening, Council Members. The Los Angeles Area Chamber of Commerce opposes the proposed amortization of the Inglewood Oil field.

The land is currently zoned as commercial industrial, and operations are in alignment with that zoning code. It's been made clear in many of the committee meetings leading up to tonight's council meeting that moving forward with this proposal the City will face substantial and costly legal challenges on takings grounds .

Furthermore, the Chamber is concerned that such a decision sets a dangerous precedent for any other business in Culver City. Businesses need a level of certainty to continue to operate, generate tax dollars, and contribute to the community – moving forward with this plan opens the door for the same process to be used on any other business. The Chamber urges you to oppose this plan, thank you for your time.

Ferrel, Mimi

From: Charlotte Soestini [REDACTED]
Sent: Monday, October 26, 2020 9:55 AM
To: Public Comment at Culver City
Subject: Oil Drilling Subcommittee comment

Hi there,

As a resident, I am in strong support of the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field and encourage the Culver City city council to do this as quickly as possible.

We know that neighborhood oil drilling is dangerous and poses serious risks to our health, local environment and climate.

In order to protect the safety and well being of Culver City residents, the council must act boldly and swiftly to enact a just transition and managed decline away from fossil fuels and to a clean, healthy and sustainable economy. I appreciate everything that's been done thus far, and would be excited to continue to see more.

Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field.

Thank you,
Charlotte Soestini

Ferrel, Mimi

From: Ben Oakley <boakley@wspa.org>
Sent: Monday, October 26, 2020 10:42 AM
To: Public Comment at Culver City
Cc: Weiss, Charles; Hill, Alonzo E; Z-Adam Smith; Patty Senecal; Bob Brown
Subject: WSPA Comment Letter - Culver City Five-Year Phase-Out Period (October 26, 2020 Agenda Item A-4. 21-389)
Attachments: WSPA Culver City Five-Year Phase-Out Period 10-26-20.pdf

To Whom It May Concern, please see the attached comment letter on the proposed Culver City Five-Year Phase-Out Period (October 26, 2020 Agenda Item A-4. 21-389).

Regards,

[Ben Oakley](#)

Manager, California Coastal Region



☎ 805.714.6973

boakley@wspa.org



Ben Oakley

Manager – California Coastal Region

October 26, 2020

Hon. Goran Eriksson, Mayor
City of Culver City
9770 Culver Blvd.
Culver City, CA 90232

Culver City Council
9770 Culver Blvd.
Culver City, CA 90232

Re: Opposed to Amortization Program and Five-Year Phase-Out Period (October 26, 2020 Agenda Item A-4. 21-389)

Dear Mayor and City Council,

The Western States Petroleum Association (WSPA) is strongly opposed to the proposed “amortization program” and establishment of a “five-year phase-out period” being considered by Culver City (agenda item A-4. 21-389 of the October 26, 2020 meeting of the Culver City Council). WSPA is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas, and other energy supplies in California and four other western states, with member company interests within Culver City (City).

At its August 13, 2020 special meeting, the City Council voted to “move forward with further study of the City IOF” and directed the City Council Oil Drilling Subcommittee (Subcommittee) and staff to “study and consider several factors relevant to the preparation of an Amortization Program including, but not limited to: (1) just transition of workers; (2) adequate bonding; (3) adequate plug and abandonment procedures; (4) complete remediation; (5) thoughtful implementation plan and schedule; (6) outreach to clean-energy partners; (7) cost sharing opportunities; and (8) engagement of stakeholders¹”.

Now, the City is putting the cart before the horse by considering the implementation of an “approximate five-year phase-out period” without the benefit of any information related to the eight factors listed above. If the City is in possession of information related to the above factors in support of a five-year phase-out period, it is obligated to share it with the public prior to adoption of the subject resolution. If not, the City should not move forward at this time.

Furthermore, WSPA encourages the proposed stakeholder engagement of “landowners and mineral rights holders” prior to the adoption of any phase-out period, which will provide an opportunity for our member companies to provide additional details about the significant legal issues embedded in the amortization program’s many assumptions.

As we’ve noted in previous letters to the City on this issue, amortization may work for movable property like billboards, liquor stores or cannabis shops. The City can enable those owners to

¹ October 26, 2020 Culver City City Council Agenda Item A-4. 21-389 Attachment 2020-10-26_ATT_Resolution Declaring Intent to Evaluate Phase Out Period for IOF.pdf, page 1

recoup the entire value of their businesses and, importantly, they can then move their remaining inventory to a new location. Amortization fails entirely when the property is in a fixed location – like oil and natural gas deposits. This is true with respect to the field operator, but even more so for other mineral rights owners whose entire property value is in the oil and natural gas, as is the case in the Inglewood Field with one of our member companies.

Furthermore, the proposed amortization program completely ignores the rights of mineral owners. They are treated simply as a cost to the operator, and not in their own right. The City can't deny them access to their mineral property – regardless of the field operator's plans and how much the operator has earned from its investments. The proposed amortization program also assumes that the field has reached its full development in the City and there will be no further drilling. The program doesn't address the oil and gas resources remaining in the field and the resulting productive life of those reservoirs and facilities.

And to be clear, the phasing-out of the IOF does nothing to achieve the City's stated objective to "transition to clean, renewable energy by 2045 and to reduce reliance on fossil-fuels and vehicles that utilize fossil-fuels by 2035." The City's proposed restrictions to ban local crude oil production through amortization do absolutely nothing to address petroleum demand and simply accelerate California's consumption of foreign oil. Data published by the California Energy Commission (CEC), the State's primary energy policy and planning agency, indicate that California's dependence on foreign supertankers is already growing, as illustrated by the CEC's "Oil Supply Sources to California Refineries" graph² (Figure 1), enriching foreign governments at the expense of working Californians.

² Source: California Energy Commission – Oil Supply Sources to California Refineries
<https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/oil-supply-sources-california-refineries>

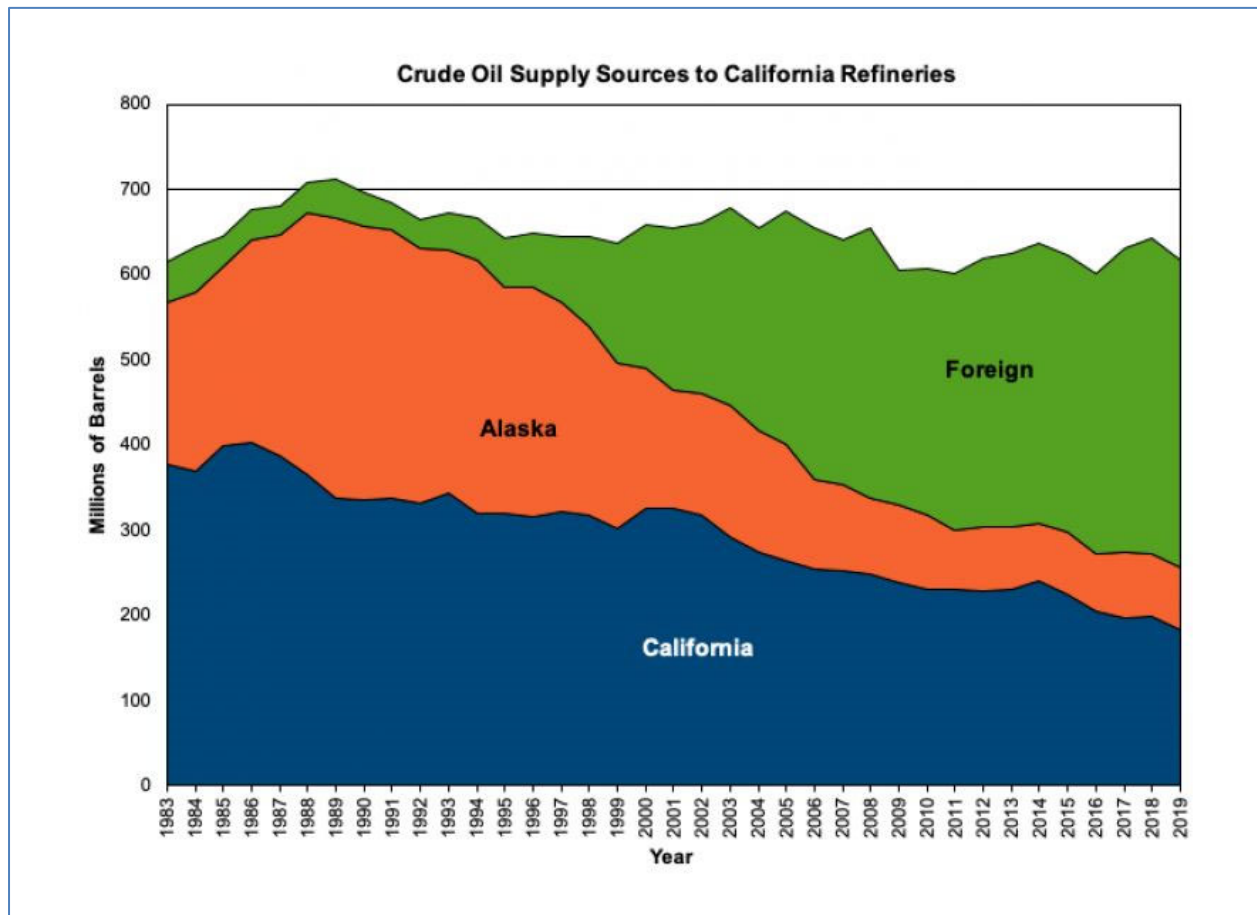


Figure 1 - Oil Supply Sources to California Refineries

Given that foreign suppliers of crude oil do not apply the world-leading safety, labor, human rights and environmental standards for oil production established by California for in-state producers, the City should not support policies that increase our dependence on foreign crude such as the proposed amortization program.

We believe that a truly sustainable energy future is one that is fact and data-driven, supports social equality, and safeguards our environment without sacrificing the economic well being of our workers and communities. Unfortunately, the City's proposed amortization program will inflict hardship on local workers, is legally flawed, and will increase Californians' dependence on foreign oil. The City has not provided any evidence in support of a five-year phase-out period nor identified how it will compensate workers, the IOF operator, local vendors and mineral owners for the property the City proposes to take over in 2025. For these reasons, we urge the City not to move forward with the proposed amortization or phase-out period.

If you have any questions, please contact me at (805) 714-6973 or boakley@wspa.org.

Respectfully,

Ferrel, Mimi

From: Nagami, Damon <dnagami@nrdc.org>
Sent: Monday, October 26, 2020 10:49 AM
To: Public Comment at Culver City
Subject: Item A-4 (Resolution re Oil and Gas Phase-Out): SUPPORT

Dear Councilmembers,

On behalf of NRDC (Natural Resources Defense Council), I am writing in **support** of the Oil Drilling Subcommittee's recommendations to phase out oil drilling at the Inglewood Oil Field and encourage the City Council to ensure that it happens as quickly as possible.

We know that neighborhood oil drilling is dangerous and poses a host of serious risks to our health and the environment. Research has found that people living near drilling sites have a higher risk for developing cancer, increased asthma attacks, higher hospitalization rates, increased upper respiratory problems, a higher risk of having babies with birth defects, and increased symptoms such as nosebleeds, headaches, and worsened asthma. Moreover, multiple studies have found that exposure to higher amounts of air pollution also increases a population's vulnerability to the novel coronavirus, which has upended society in 2020 and caused the deaths of more than 220,000 Americans to date.

In order to protect the safety and wellbeing of Culver City residents, the City Council must act boldly and swiftly to enact a just transition and managed decline away from fossil fuels and to a clean, healthy, and sustainable economy. We strongly support a **YES** vote on the Resolution declaring the City Council's intent to evaluate the establishment of an approximate five-year phase-out period for the amortization and removal of nonconforming oil and gas uses within the Culver City portion of the Inglewood Oil Field. Thank you for considering our views.

Very truly yours,
Damon Nagami
NRDC

DAMON NAGAMI
Senior Attorney, Nature Program
Director, Southern California Ecosystems Project

**NATURAL RESOURCES
DEFENSE COUNCIL**
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DNAGAMI@NRDC.ORG
NRDC.ORG

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Ferrel, Mimi

From: Hill, Alonzo E <Alonzo.Hill@crc.com>
Sent: Monday, October 26, 2020 11:01 AM
To: Ben Oakley; Public Comment at Culver City
Cc: Weiss, Charles; Smith, Adam; Patty Senecal; Bob Brown
Subject: RE: WSPA Comment Letter - Culver City Five-Year Phase-Out Period (October 26, 2020 Agenda Item A-4. 21-389)

Ben,

Thank you for your support!

Alonzo

From: Ben Oakley <boakley@wspa.org>
Sent: Monday, October 26, 2020 10:42 AM
To: public.comment@culvercity.org
Cc: Weiss, Charles <Charles.Weiss@crc.com>; Hill, Alonzo E <Alonzo.Hill@crc.com>; Smith, Adam <Adam.Smith@crc.com>; Patty Senecal <psenecal@wspa.org>; Bob Brown <bbrown@wspa.org>
Subject: [EXTERNAL] WSPA Comment Letter - Culver City Five-Year Phase-Out Period (October 26, 2020 Agenda Item A-4. 21-389)

To Whom It May Concern, please see the attached comment letter on the proposed Culver City Five-Year Phase-Out Period (October 26, 2020 Agenda Item A-4. 21-389).

Regards,

Ben Oakley

Manager, California Coastal Region



C 805.714.6973

boakley@wspa.org



Ben Oakley

Manager – California Coastal Region

October 26, 2020

Hon. Goran Eriksson, Mayor
City of Culver City
9770 Culver Blvd.
Culver City, CA 90232

Culver City Council
9770 Culver Blvd.
Culver City, CA 90232

Re: Opposed to Amortization Program and Five-Year Phase-Out Period (October 26, 2020 Agenda Item A-4. 21-389)

Dear Mayor and City Council,

The Western States Petroleum Association (WSPA) is strongly opposed to the proposed “amortization program” and establishment of a “five-year phase-out period” being considered by Culver City (agenda item A-4. 21-389 of the October 26, 2020 meeting of the Culver City Council). WSPA is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas, and other energy supplies in California and four other western states, with member company interests within Culver City (City).

At its August 13, 2020 special meeting, the City Council voted to “move forward with further study of the City IOF” and directed the City Council Oil Drilling Subcommittee (Subcommittee) and staff to “study and consider several factors relevant to the preparation of an Amortization Program including, but not limited to: (1) just transition of workers; (2) adequate bonding; (3) adequate plug and abandonment procedures; (4) complete remediation; (5) thoughtful implementation plan and schedule; (6) outreach to clean-energy partners; (7) cost sharing opportunities; and (8) engagement of stakeholders¹”.

Now, the City is putting the cart before the horse by considering the implementation of an “approximate five-year phase-out period” without the benefit of any information related to the eight factors listed above. If the City is in possession of information related to the above factors in support of a five-year phase-out period, it is obligated to share it with the public prior to adoption of the subject resolution. If not, the City should not move forward at this time.

Furthermore, WSPA encourages the proposed stakeholder engagement of “landowners and mineral rights holders” prior to the adoption of any phase-out period, which will provide an opportunity for our member companies to provide additional details about the significant legal issues embedded in the amortization program’s many assumptions.

As we’ve noted in previous letters to the City on this issue, amortization may work for movable property like billboards, liquor stores or cannabis shops. The City can enable those owners to

¹ October 26, 2020 Culver City City Council Agenda Item A-4. 21-389 Attachment 2020-10-26_ATT_Resolution Declaring Intent to Evaluate Phase Out Period for IOF.pdf, page 1

recoup the entire value of their businesses and, importantly, they can then move their remaining inventory to a new location. Amortization fails entirely when the property is in a fixed location – like oil and natural gas deposits. This is true with respect to the field operator, but even more so for other mineral rights owners whose entire property value is in the oil and natural gas, as is the case in the Inglewood Field with one of our member companies.

Furthermore, the proposed amortization program completely ignores the rights of mineral owners. They are treated simply as a cost to the operator, and not in their own right. The City can't deny them access to their mineral property – regardless of the field operator's plans and how much the operator has earned from its investments. The proposed amortization program also assumes that the field has reached its full development in the City and there will be no further drilling. The program doesn't address the oil and gas resources remaining in the field and the resulting productive life of those reservoirs and facilities.

And to be clear, the phasing-out of the IOF does nothing to achieve the City's stated objective to "transition to clean, renewable energy by 2045 and to reduce reliance on fossil-fuels and vehicles that utilize fossil-fuels by 2035." The City's proposed restrictions to ban local crude oil production through amortization do absolutely nothing to address petroleum demand and simply accelerate California's consumption of foreign oil. Data published by the California Energy Commission (CEC), the State's primary energy policy and planning agency, indicate that California's dependence on foreign supertankers is already growing, as illustrated by the CEC's "Oil Supply Sources to California Refineries" graph² (Figure 1), enriching foreign governments at the expense of working Californians.

² Source: California Energy Commission – Oil Supply Sources to California Refineries
<https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/oil-supply-sources-california-refineries>

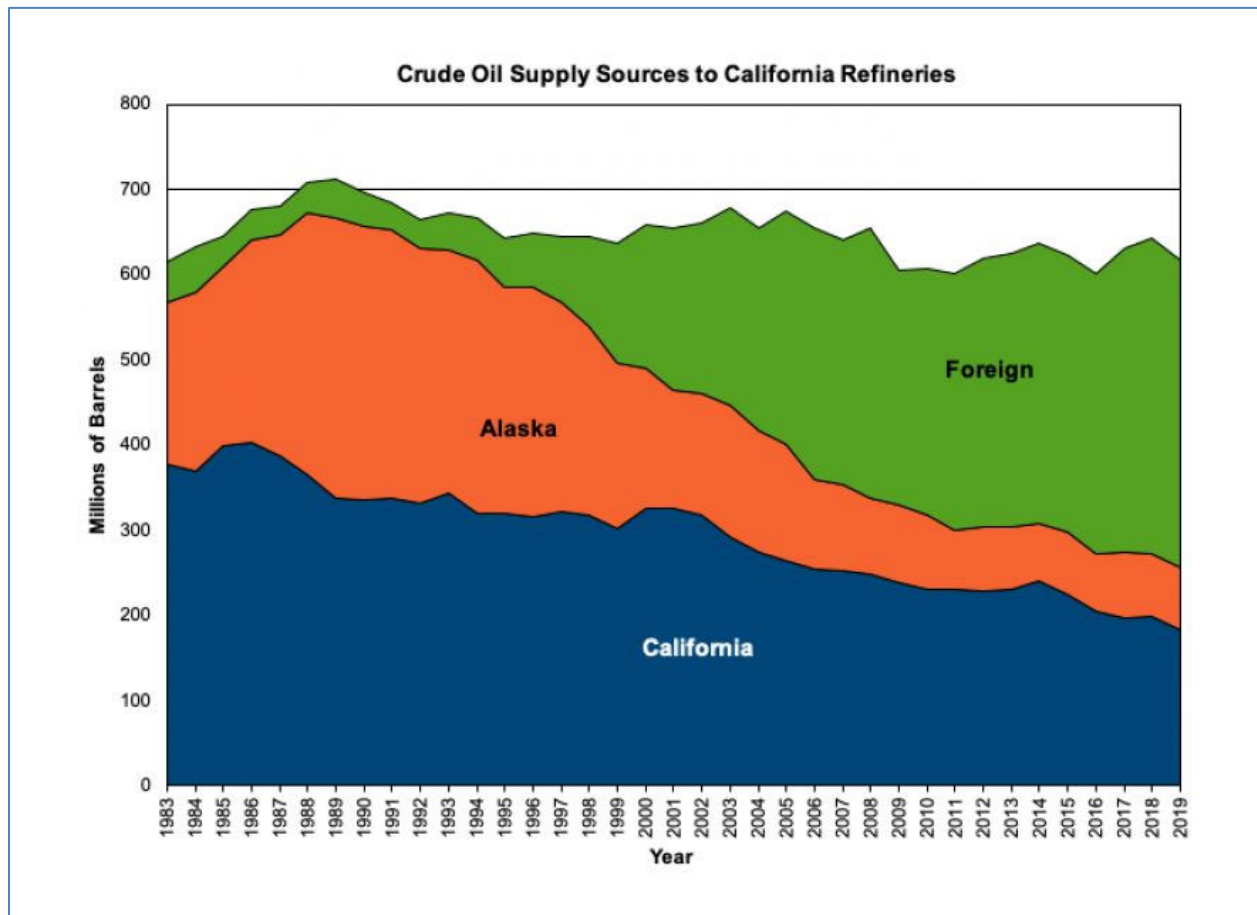


Figure 1 - Oil Supply Sources to California Refineries

Given that foreign suppliers of crude oil do not apply the world-leading safety, labor, human rights and environmental standards for oil production established by California for in-state producers, the City should not support policies that increase our dependence on foreign crude such as the proposed amortization program.

We believe that a truly sustainable energy future is one that is fact and data-driven, supports social equality, and safeguards our environment without sacrificing the economic well being of our workers and communities. Unfortunately, the City's proposed amortization program will inflict hardship on local workers, is legally flawed, and will increase Californians' dependence on foreign oil. The City has not provided any evidence in support of a five-year phase-out period nor identified how it will compensate workers, the IOF operator, local vendors and mineral owners for the property the City proposes to take over in 2025. For these reasons, we urge the City not to move forward with the proposed amortization or phase-out period.

If you have any questions, please contact me at (805) 714-6973 or boakley@wspa.org.

Respectfully,

Ferrel, Mimi

From: Andrew Reich [REDACTED]
Sent: Monday, October 26, 2020 11:05 AM
To: Public Comment at Culver City
Subject: Comment in support of oil drilling subcommittee recommendations

We can no longer pretend that the planet is not in a climate crisis. We must be taking bold steps. Therefore, I am in support of the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field and encourage the Culver City city council to do this as quickly as possible. We know that neighborhood oil drilling is dangerous and poses serious risks to our health, local environment and climate. In order to protect the safety and well being of Culver City residents, the council must act boldly and swiftly to enact a just transition and managed decline away from fossil fuels and to a clean, healthy and sustainable economy. Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field. Thank you.

Andrew Reich

Ferrel, Mimi

From: Liz Jones <ljones@biologicaldiversity.org>
Sent: Monday, October 26, 2020 11:14 AM
To: Clerk, City; Public Comment at Culver City
Cc: Maya Golden-Krasner
Subject: Comments in support of A-4. No. 21-389: Resolution of Intent to Evaluate 5 Year Phase Out of Oil and Gas Activities
Attachments: 20 10 26 CBD Comments re. 21-389 Resolution of Intent to Evaluate 5 Year Phase Out.pdf

Hello,

Please see the attached written comments in support of the City Council Oil Drilling Subcommittee's recommendation and resolution of intent to evaluate a 5 year phase out of oil and gas activities at the Inglewood Oil Field. Please contact me with any questions.

Best,

Liz Jones

Staff Attorney, Climate Law Institute
Center for Biological Diversity
660 S. Figueroa St., Suite 1000, Los Angeles, CA 90017
cell: (310) 612-1018; office: (213) 785-5400
she/her/hers



October 26, 2020

City Council for the City of Culver City
City of Culver City – City Hall
9770 Culver Boulevard
Culver City, CA 90232
city.clerk@culvercity.org
public.comment@culvercity.org
via email

Re: A-4. 21-389, Resolution Declaring Intent to Evaluate Phase Out Period for the Inglewood Oil Field

To the Honorable City Council Members:

The Center for Biological Diversity (“Center”) submits these comments in support of the City Council Oil Drilling Subcommittee’s (“Subcommittee”) recommendation to adopt a resolution “declaring the City Council’s intent to evaluate the establishment of an approximate five-year phase-out period for the amortization and removal of nonconforming oil and gas activities within the City,” and to direct the Subcommittee and staff to develop and refine an Amortization Program. We thank the City Council for demonstrating continued leadership in addressing Culver City’s dangerous oil and gas projects.

Oil drilling poses numerous health and safety risks, especially for residents who live, go to school, play, or work within 2,500 feet of operations. Research has found that people living near drilling sites have a higher risk for developing cancer, higher hospitalization rates, higher rates of preterm births and low birth rates, and more upper respiratory problems and rashes. Many Californians living near active oil and gas wells suffer from terrible symptoms such as nosebleeds, headaches, and worsened asthma. In addition, drilling hinders our state’s ability to achieve climate goals. Immediate and aggressive greenhouse gas emissions reductions are necessary to keep global warming well below 2°C rise above pre-industrial levels—the temperature rise beyond which the most catastrophic effects of climate change are projected to occur.

In order to protect the safety and wellbeing of Culver City residents, the Council must act quickly to transition away from fossil fuels to a clean and sustainable economy. By repurposing the Inglewood Oil Field for clean energy, green spaces, and natural infrastructure, Culver City can create jobs and help spur economic recovery.

California courts have long recognized amortization periods as a legal means to balance the competing interests of a landowner’s property rights and a local agency’s need to implement zoning changes that benefit public health and welfare. As explained in the Center for Biological


Diversity's earlier comments,¹ Courts have approved the use of phase out periods in a wide variety of contexts.² Sentinel Peak Resources, LLC's arguments that oil drilling is specially protected under California law have also been rejected by the Los Angeles Superior Court.³ Finally, local governments have always had authority to exercise their broad police powers to abate nuisances and protect the public from harm.⁴ In Culver City, the air, water, noise, and light pollution caused by oil and gas activities have been allowed to endanger nearby residents for far too long.

The study commissioned by Baker & O'Brien found that Sentinel Peak Resources, LLC achieved amortization of its capital investment *within four to five years* of purchasing the wells in the Inglewood Oil Field: that is, by January 2021. In addition, even if particular wells fall short of the five-year amortization mark, the study confirms that high returns from performing wells offset low returns from marginal wells. While we are disappointed that City Council and staff have not committed to phasing out drilling and fully remediating the site of oil and gas activities sooner than five years after the effective date of the proposed Amortization Program, the five year timeframe proposed in the resolution is clearly sufficient given the findings of the Baker & O'Brien study. We urge City Council to adopt the Subcommittee's recommendation.

Further, the Subcommittee and staff should work to prepare the Amortization Program as quickly as possible. City Council should also at a future date consider adopting a more specific timeline for the end of drilling at the site and for remediation. For the health and safety of City residents and in order to ensure legacy spills and other drilling activity impacts are fully cleaned-up, Sentinel Peak Resources, LLC must not be allowed to wait until the end of the five-year period to stop drilling and begin remediation. Drilling can and should be phased out starting in January 2021.

Please do not hesitate to contact me with any questions. We look forward to working together on this critical issue.

Sincerely,



Liz Jones, Staff Attorney
Center for Biological Diversity
660 S. Figueroa St., Suite 1000
Los Angeles, CA 90017
ljones@biologicaldiversity.org
(213) 785-5400

¹ The Center for Biological Diversity submitted letters on March 14, 2018; June 20, 2018; August 12, 2020; August 28, 2020. We are happy to further discuss the information contained in any of these letters.

² See, e.g., *Livingston Rock & Gravel Co. v. County of Los Angeles*, 43 Cal. 2d 121 (1954) (cement mixing plant); *Castner v. City of Oakland*, 129 Cal. App. 3d 94, 96-97 (1982) (adult bookstore); *People v. Gates*, 41 Cal. App. 3d 590, 603 (1974) (wrecking yard); *City of Los Angeles v. Gage*, 127 Cal. App. 2d 442 (1954) (commercial and industrial uses of residential buildings in residential zones).

³ *Plains Expl. & Prod. Co. v. City of Culver City* at 10-12 (L.A. Super. Ct. No. BS122799, March 26, 2010).

⁴ Cal. Const. Art. XI, sec. 7; *Richeson v. Helal*, 158 Cal. App. 4th 268, 277 (2007).

Ferrel, Mimi

From: Neena Mohan <neena@caleja.org>
Sent: Monday, October 26, 2020 11:16 AM
To: Public Comment at Culver City
Subject: October 26th Culver City City Council Mtg Comment on Item A4

Hello,

I am writing on behalf of the California Environmental Justice Alliance, a policy organization that is dedicated to uplifting the needs of environmental justice communities we work with across the state. We have witnessed the harms of fossil fuel drilling's impact on communities statewide, including harms from air pollution exposure to groundwater contamination to the dangers of explosions and leaks. We are in support of the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field and encourage the Culver City city council to do this as quickly as possible to mitigate existing harms to residents. Studies have shown (including two recent studies from Stanford and UC Berkeley) that neighborhood oil drilling is dangerous and sometimes deadly to human and environmental health, including the negative impacts on our climate. Culver City residents deserve safety and public health protections, which call on the council to act quickly to enact a just transition and managed decline away from fossil fuels and to a healthier renewable energy economy. Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field. Your decision will be an important one for other jurisdictions facing similar impacts, as well as set an example for the state in how localities can support meeting California's climate, health, and equity goals. Thank you for your consideration of these comments.

Sincerely,

--

Neena Mohan (she/they)

Climate Justice Program Associate

California Environmental Justice Alliance and CEJA Action

phone: (510) 808-5898, ext. 101

cell: (760) 960-4135

address: 1820 Jefferson St., Oakland, CA 94612

email: neena@caleja.org



Ferrel, Mimi

From: Daniel Ress <dress@crpe-ej.org>
Sent: Monday, October 26, 2020 12:59 PM
To: Public Comment at Culver City
Subject: Comment in Support of Resolution Declaring Intent to Evaluate Phase Out Period for IOF

Dear Culver City Council,

My name is Dan Ress, and I am a staff attorney with the Center on Race, Poverty & the Environment. We support the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field. Further, we encourage the City Council of Culver City to begin this phase out as quickly as possible to protect public health and the environment.

Extensive research demonstrates the risks and harms from neighborhood oil drilling, from worsening prenatal outcomes to exacerbating climate change through both direct fugitive emissions and downstream emissions. The dire situation calls for immediate and bold action. Yet, this action must also be thoughtful and realize the economic context. By allowing a five-year amortization period, the council would enable polluters time to wrap up operations, capitalize on their investments, and remediate their wells, and the council would, through job training and partnerships, empower workers to transition to sustainable jobs in the new economy. The dying oil and gas industry will soon leave Culver City on its own, but through this program, the city can manage this decline, ensure that solvent operators are available to pay the clean-up bills, and put workers and communities first. Culver City would also lead the state on a path to greater health, equity, and justice.

As the Subcommittee refines the details of the plan pursuant to the resolution, we urge that it engage frequently and extensively with environmental justice advocates, communities, and labor groups to confront past injustices and to cultivate sustainable development to replace the oil and gas industry.

Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City portion of the Inglewood Oil Field. Thank you.

Wishing you well,

Dan Ress (they/them)
Staff Attorney
Center on Race, Poverty & the Environment
1012 Jefferson Street
Delano, CA 93215
Cell: 303.437.3289
www.crpe-ej.org

Ferrel, Mimi

From: Camacho, Dana <Dana.Camacho@alston.com>
Sent: Monday, October 26, 2020 1:11 PM
To: Public Comment at Culver City
Cc: Clerk, City; Baker, Heather; Carlsen, Nicki
Subject: Inglewood Oil Field Amortization Program
Attachments: 2020-10-26 Letter to Culver City re Proposed Inglewood Oil Field Amortization Program.pdf

In connection with the above-referenced matter, attached please find Nicki Carlsen's letter dated October 26, 2020.

Best regards,

Dana Camacho | Legal Administrative Assistant

ALSTON & BIRD

Nicki Carlsen | James R. Evans | Andrea S. Warren | Maya Lopez Grasse | Kaitlin H. Owen

333 South Hope Street | Suite 1600 | Los Angeles, CA 90071

Dana.Camacho@alston.com | d:213-576-1125 | f: 213-576-1100 | m: 562-714-1197

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ALSTON & BIRD

333 South Hope Street, 16th Floor
Los Angeles, CA 90071-1410
213-576-1000 | Fax: 213-576-1100

Nicki Carlsen

Direct Dial: 213-576-1128

Email: nicki.carlsen@alston.com

October 26, 2020

Via Electronic Mail

City of Culver City
City Council for the City of Culver City
9770 Culver Boulevard
City of Culver City, CA 90232-0507
public.comment@culvercity.org

Re: October 26, 2020 City Council Meeting: Update re Future Consideration of Proposed Inglewood Oil Field Amortization Program and Proposed Resolution

Dear City Council for the City of Culver City:

We represent Sentinel Peak Resources California LLC (“Sentinel”) and have reviewed the staff report and proposed resolution regarding the “City Council Oil Drilling Subcommittee and City Staff Update Regarding the Preparation and Future Consideration of a Proposed Amortization Program for the Culver City Portion of the Inglewood Oil Field.”

Subcommittee Fails to Consider Litigation Risks or Flaws in Baker & O’Brien Report

The staff report summarizes the Subcommittee’s work since the City Council’s August 13, 2020 meeting, and apparently, the Subcommittee failed to consider the substantial litigation risks created by a potential amortization program, a factor expressly identified by the City Council at the August 2020 meeting. (Minutes of August 13, 2020 City Council meeting, p. 12.) The Subcommittee also apparently failed to consider the detailed critique of the Baker & O’Brien report provided by Robert Lang of Alvarez & Marsal, and through this proposed resolution urges the Council to continue to rely on the Baker & O’Brien report without addressing or correcting the many flaws identified by Mr. Lang.

As we advised in our August 13, 2020 letter, any “potential” amortization program, regardless of duration, is contrary to existing law and violates Sentinel’s (among other mineral owners’) constitutionally protected vested rights. We, once again, refer the City Council to our numerous letters outlining the significant legal deficiencies in the City’s contemplated actions to amortize and eliminate oil and gas uses in the City. (See letters to City dated June 3, 2020, June 17, 2019 and March 13, 2018.)

Alston & Bird LLP

www.alston.com

Atlanta | Beijing | Brussels | Charlotte | Dallas | Fort Worth | London | Los Angeles | New York | Raleigh | San Francisco | Silicon Valley | Washington, D.C.

LEGAL02/40182770v2

Proposed Resolution is Legally Ineffective and Improper

The proposed resolution itself would be legally ineffective as it is merely a declaration of intent to evaluate some ambiguous future amortization program. Further, and perhaps more importantly, the resolution seeks to speak on behalf of a “future” City Council, attempting to control that Council’s actions. While an update to the City Council on the Subcommittee’s activities might be warranted, any attempt to dictate what a future City Council should do is improper. The future City Council will exercise its own authority and make its own decisions – that is why there are elections – such that the proposed resolution is completely inappropriate.

Subcommittee Provides No Analytic Basis for Five-Year Amortization Period

This entire City Council agenda item appears to be based on the Subcommittee’s private conversations with staff, in stark contrast with the Subcommittee’s prior public meetings. According to the staff report, the Subcommittee identified various factors in a potential amortization program, and, without any further evidence, decided that a five-year amortization period is a “reasonable time period for the IOF” and that such timeframe for amortization should be evaluated by a future City Council. However, no justification or support for the five-year time period is provided; rather such time period appears to have been proposed arbitrarily based solely on the aspirations of the Subcommittee. Even if amortization was appropriate, which it is not, the Subcommittee has not developed nor presented an analytic basis to support the proposed amortization period, failing to meet minimum standards for rational action.

Further, the staff report repeats erroneous conclusions regarding Sentinel’s capital investment (again, without consideration of the Lang report previously submitted). To state the obvious, any future action by the City or the Subcommittee regarding the Inglewood Oil Field should address the evidence and information submitted by the actual operator of the Inglewood Oil Field.

City Should Recognize the Economic Benefits of Oil and Gas Industry

Culver City benefits from the oil and gas industry, and the industry’s contributions to the City, the County and the State of California should be recognized and considered. Based on a recent report prepared by Capital Matrix Consulting for the Western States Petroleum Association, the oil and gas industry contributes 590 jobs to Culver City, \$121 million in gross regional product and \$5.7 million to the City’s general fund, approximately 4.5% of its budget. (Contributions of the Oil and Gas Industry to Los Angeles County, Capitol Matrix Consulting (June 2020), p. 19.¹) The Los Angeles County Economic Development Corporation issued a 2019 Report on Oil & Gas in California: The Industry, Its Economic Contribution and User Industries at Risk², which details the significant contributions made by the oil and gas industry to the California economy, including substantial employment with a diverse workforce and a diversity of employment opportunities.

¹ <https://www.wspa.org/wp-content/uploads/Oil-and-Gas-Industry-Contributions-to-LA-County-.pdf>

² <https://laedc.org/2019/08/27/oil-and-gas-industry-in-california-2019-report/>

Overall, the Subcommittee's evaluation of some potential unknown future amortization program failed to consider the litigation risks expressly identified by the City Council, failed to consider the flaws in the City's capital investment analysis, and failed to consider important information submitted by Sentinel, the mineral owners and the property owners. The absence of any meaningful analysis of these issues should be reason enough for the existing City Council to allow the future City Council to make its own decision.

We urge the City Council to provide a written status report to the future City Council and to abandon the concept of adopting any resolution.

Sincerely,

A handwritten signature in blue ink that reads "Nicki Carlsen". The signature is fluid and cursive, with the first name "Nicki" and last name "Carlsen" clearly distinguishable.

Nicki Carlsen

NC/dtc

Enclosures

cc: Heather Baker, Assistant City Attorney

LEGAL02/40182770v1

Ferrel, Mimi

From: Sandy Emerson <sandy@fossilfreeca.org>
Sent: Monday, October 26, 2020 1:25 PM
To: Public Comment at Culver City
Subject: Comment in Support of Phasing Out Oil Drilling

On behalf of Fossil Free California, a California 501c3 nonprofit, I want to support the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field. Given that neighborhood oil drilling is dangerous and poses serious risks to our health, local environment and climate, phasing out these operations is an important step in moving away from fossil fuels and toward a just transition to a clean, healthy, and sustainable economy. Please vote yes to establish a five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field. Thank you.

/s/ Sandy Emerson
Board President, Fossil Free California

--

Sandy Emerson (she/her)

Board President

Sandy@FossilFreeCA.org

Phone: (650) 743-0524



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Your **VOTE** is your voice. Use it.

Ferrel, Mimi

From: Terry Saucier [REDACTED]
Sent: Monday, October 26, 2020 1:44 PM
To: Public Comment at Culver City
Subject: Oil Drilling in Inglewood Oil Field

To: Culver City City Council

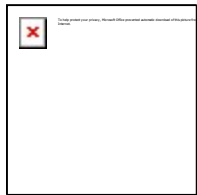
Dear Board Members:

I am writing in support of the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field and encourage the Culver City city council to do this as quickly as possible. It is well established that neighborhood oil drilling is dangerous and poses serious risks to our health, local environment and climate. In order to protect the safety and well being of Culver City residents, the council must enact a just transition away from fossil fuels and to a clean, healthy and sustainable economy. Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field.

Thank you for your consideration.

Kind Regards,
Terry Saucier

[REDACTED]



Albert Einstein "Look deep into nature, and then you will understand everything better. Try not to become a man of success, but rather try to become a man of value..."

<https://climate.nasa.gov/>

<https://www.climaterealityproject.org/>

Ferrel, Mimi

From: Kyle Ferrar <ferrar@fractracker.org>
Sent: Monday, October 26, 2020 1:59 PM
To: Public Comment at Culver City
Subject: Phase out oil drilling in Inglewood!

FracTracker Alliance is in support of the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field and encourage the Culver City city council to do this as quickly as possible. We know that neighborhood oil drilling is dangerous and poses serious risks to our health, local environment and climate. In order to protect the safety and well being of Culver City residents, the council must act boldly and swiftly to enact a just transition and managed decline away from fossil fuels and to a clean, healthy and sustainable economy. Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field.

Thank you.

--

Kyle Ferrar

Pronouns: he, him, his

Western Program Coordinator

FracTracker Alliance

p: 415-890-3722

a: 2351 Moody Ridge Road | Alta, CA, 95701-1333

w: www.fractracker.org e: ferrar@fractracker.org



[Stay up to date with FracTracker's Monthly Newsletter!](#)

Ferrel, Mimi

From: Amanda Parsons <aparsons@sentinelpeakresources.com>
Sent: Monday, October 26, 2020 2:02 PM
To: Public Comment at Culver City; Clerk, City
Subject: Comment for Amortization Program for the Culver City Inglewood Oil Field – October 26, 2020
Attachments: Mineral Owner Letter 10.26.pdf

In connection with the above-referenced matter, attached please find a letter from Culver City Mineral Owners and Mineral Owner Representatives dated October 26, 2020.

Thank you,
Amanda Parsons DeRosier
Sentinel Peak Resources
323-298-2207

October 26, 2020

City of Culver City
City Council for the City of Culver City
9770 Culver Boulevard
Culver City, CA 90230-0507
public.comment@culvercity.org

RE: Amortization Program for the Culver City Inglewood Oil Field – October 26, 2020

Dear Culver City Council,

We, the undersigned, represent a portion of the royalty owners with property interests in the form of mineral rights located within Culver City's portion of the Inglewood Oil Field. We are writing to oppose the proposed amortization of our vested property interest.

We support the Inglewood Oil Field. The oil produced in Culver City supports our livelihood. We rely on this income to support our families.

Our mineral rights are vested property rights that are not yours to arbitrarily take away.

Attempts to arbitrarily take away our property rights are unconstitutional, and we intend to defend ourselves to the fullest protection afforded by the law if we are deprived of our property through advancement of this agenda.

Representing taxpayers of Culver City, we urge you to re-direct your efforts, and our hard-earned money, to advance the numerous truly pressing needs, such as homelessness and public safety, which face the City and its constituents.

Sincerely,

Culver City Mineral Owners and Mineral Owner Representatives

David M. Smith
Thomas Bernard Crawford
Patricia Ann Crawford
John Francis Crawford
Andrew Mark Crawford
Daniel James Crawford
Christina Lovingfoss
Carolyn Michele Skvarla
Juan Carlos Lopez
Kevin Airey
Karl W. Seydler
Kelly Rowland
Lawrence H. C. Smith

Wesley T. Smith
Bruce C. Smith
Charles Moore, counsel for Sandra Nastzger
Maryanne Ekren
Jeannie Barbot
Fred Machado
David Machado
Colleen Paczkowski
Adrienne Maureen Larsen
Ralph Jerome Larsen
Marilyn Smith
Mathew Smith
Michael Smith
Martin Smith
Robert Smith
Christo Suzette Jacobs
Carole L. Milton
John Crail Freis
Pam Gustafson
Anita Atkinson
Liz Gosnell
Sandy Nafsinger
Dale Amanda Warner
Donald A. Yunker
Robert W. Yunker
George Marley
Linda Marley
Victor Marley
Social Holding, LLC
Lynne Gale
Shawn Gale
Clarence John LeLong
Richard R. Bell
Debrah D. Bell
Mary Erickson
Phillip J. Jewitt
Blair Zucker
Betty Zucker
Bryan Lord as trustee for The Lord 1995 Trust
John Patrick Kightlinger
Kevin Kightlinger
Neil Harris
Sean Machado
David Hou
Stefani Coughlin

Ferrel, Mimi

From: Dan Jacobson <djacobson@environmentcalifornia.org>
Sent: Monday, October 26, 2020 2:05 PM
To: Public Comment at Culver City
Cc: Monica Embrey
Subject: oil drilling subcommittee recommendation
Attachments: CA_dangerous_scrn.pdf

On behalf of Environment California, we support of the Oil Drilling Subcommittee recommendations to phase out oil drilling at the Inglewood Oil Field and encourage the Culver City city council to do this as quickly as possible. We know that neighborhood oil drilling is dangerous and poses serious risks to our health, local environment and climate. Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field. Thank you.

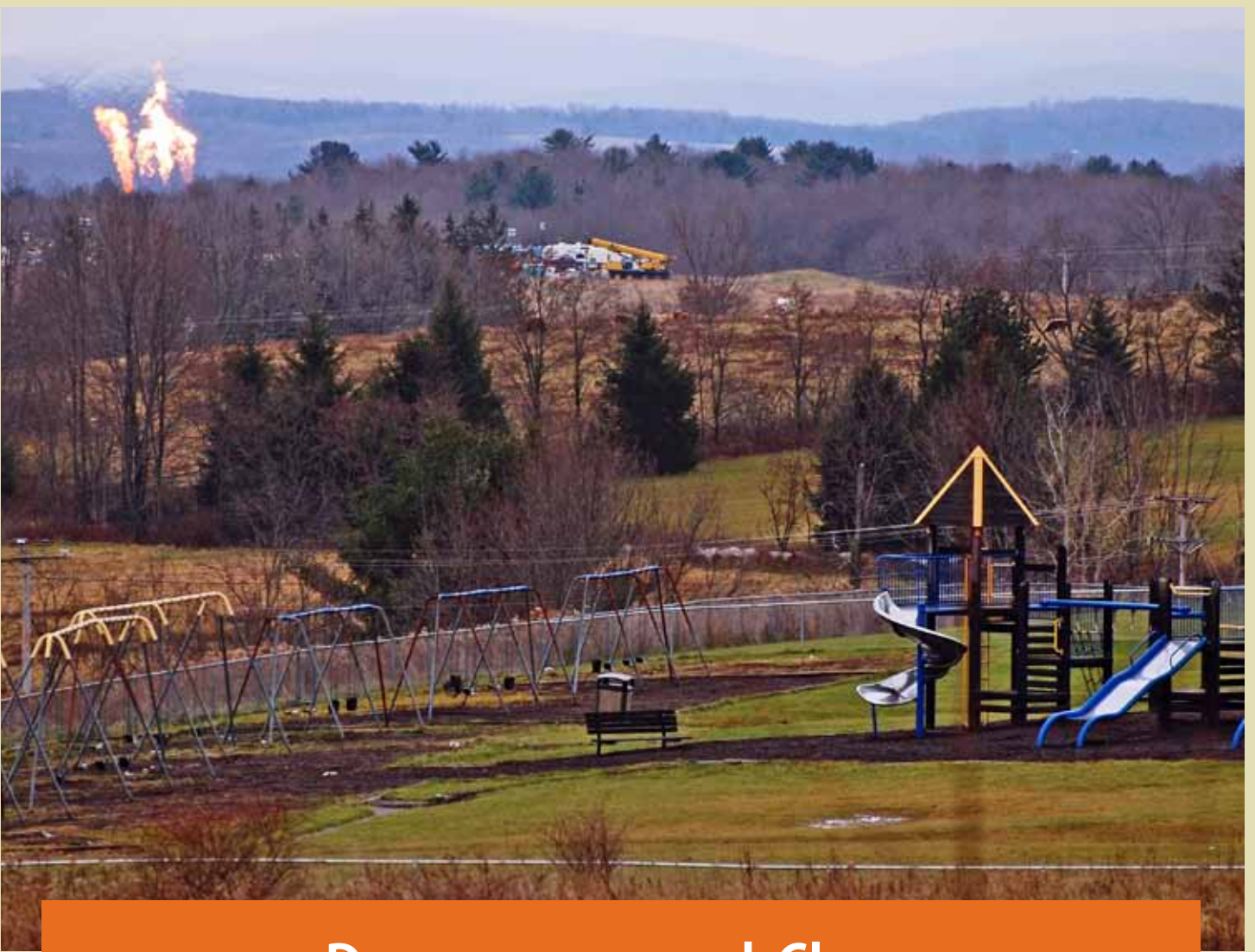
In addition, i want to formally introduce this report by Environment California Research and Policy Center that goes into details on the dangers of oil and gas drilling near homes and communities.

Thank you

Dan

--

Dan Jacobson
State Director
Environment California
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Dangerous and Close

**Fracking Puts the Nation's
Most Vulnerable People at Risk**



FRONTIER GROUP



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Table of Contents

Executive Summary	4
Introduction	7
Fracking Is Occurring Close to Vulnerable Populations	8
Where Fracking Happens	9
Proximity of Fracking to Children	10
<i>Child Care Providers</i>	11
<i>Schools</i>	12
Proximity of Fracking to the Elderly and Sick	13
<i>Nursing Care Facilities</i>	13
<i>Hospitals</i>	14
Fracking Jeopardizes the Health and Safety of Nearby Residents	15
Fracking Exposes Nearby Residents to Pollution and Safety Risks	16
Health Problems Due to Fracking	23
Policy Recommendations	25
Methodology and Data Sources	26
Wells	26
Locations of Facilities Serving Vulnerable Populations	28
Calculating Distances	31
Appendix A. Count by State	32
Notes	41

Executive Summary

Oil and gas companies are fracking near our communities, polluting our air and water, and risking the health of our children and other vulnerable populations. Fracking operations are intensive industrial activities involving diesel-powered machinery, the use of large volumes of chemicals, and the storage of vast amounts of hazardous wastewater. Fracking often is done very close to vulnerable people – infants, school children, the elderly and those with weakened immune systems – even though communities typically seek to keep industrial activities far away from facilities serving these populations, such as schools, hospitals, nursing homes and day care centers.

In nine of the most heavily drilled states – Arkansas, California, Colorado, New Mexico, North Dakota, Ohio, Pennsylvania, Texas and West Virginia – oil and gas companies have drilled at least 160,000 fracked wells since 2005. Many of those wells have been drilled close to hospitals, nursing homes, schools

and day cares. Thousands more wells have been drilled and fracked in other states.

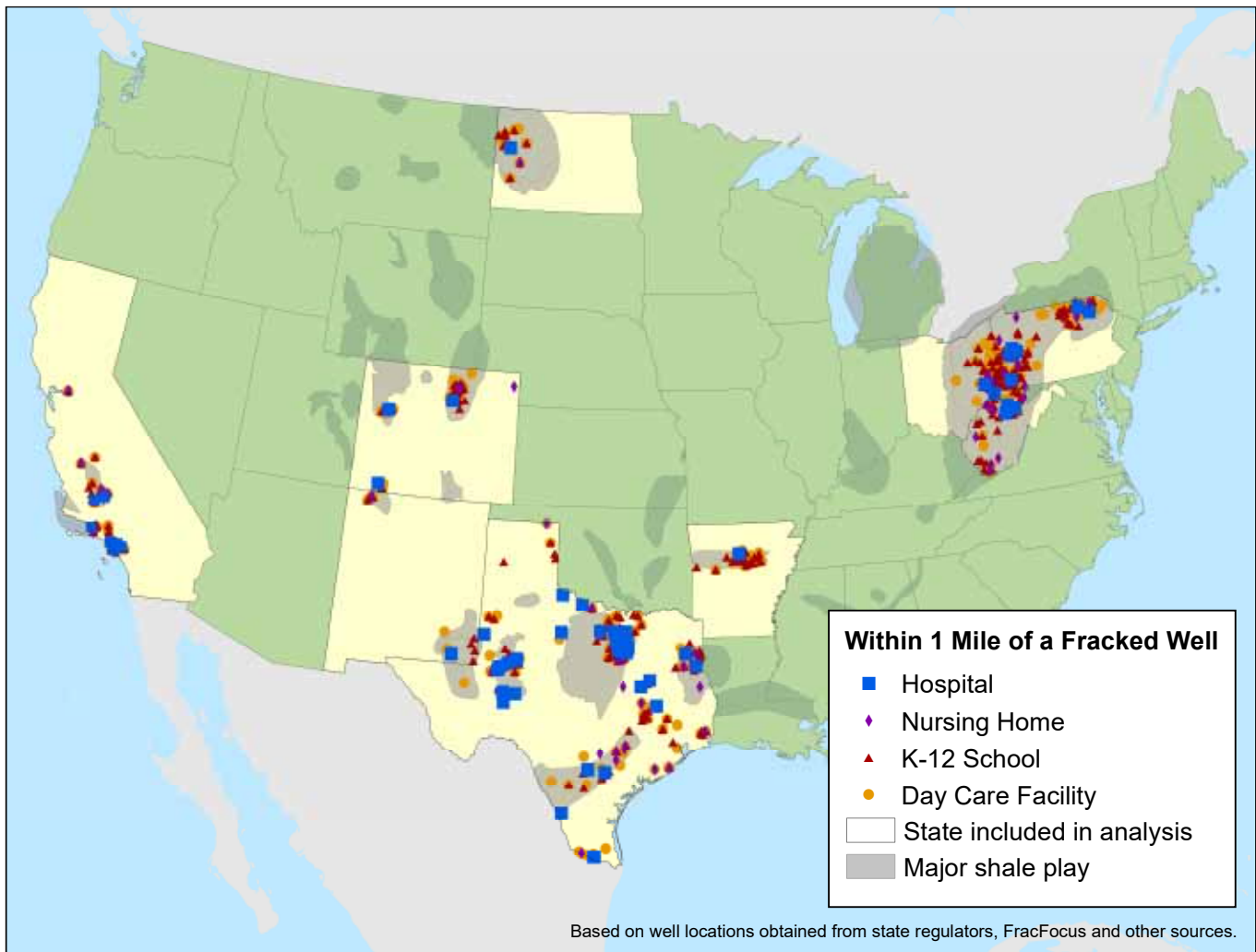
Drilling companies are fracking for oil and gas in close proximity to many vulnerable Americans.

- There are 1,947 child care facilities, 1,376 schools, 236 nursing care providers and 103 hospitals within a one-mile radius of fracked wells in the nine states examined. (See Figure ES-1.) Often, these facilities are located close to more than one well and are also near compressor stations, pipelines and other fossil fuel infrastructure with impacts on public health.
- More than 650,000 kindergarten through twelfth grade children attend school within one mile of a fracked well.
- The highest percentage of children attending school close to fracked wells is in West Virginia, where 8 percent of children spend their school days within one mile of a fracked well.

Defining “Fracking”

Throughout this report, we refer to “fracking” as including all of the activities needed to bring a well into production using high-volume hydraulic fracturing. This includes drilling the well, operating that well, processing the gas or oil produced from that well, and delivering the gas or oil to market. The oil and gas industry often uses a more restrictive definition of “fracking” that includes only the actual moment in the extraction process when rock is fractured – a definition that obscures the broad changes to environmental, health and community conditions that result from the use of high-volume hydraulic fracturing in oil and gas extraction.

Figure ES-1. Hospitals, Nursing Homes, Schools and Day Care Facilities within One Mile of a Fracked Well, 2005 through early 2016, Arkansas, California, Colorado, New Mexico, North Dakota, Ohio, Pennsylvania, Texas and West Virginia



- In Texas, 9 percent of day care centers are within one mile of a fracked well.

Fracking creates a range of threats to public health and safety.

- Explosions, fires and other incidents at well sites can present an immediate safety threat to nearby residents, occasionally resulting in evacuations of homes and businesses.
- Fracking brings with it the potential for spills, blowouts and well failures that can contaminate drinking water.
- Fracking creates health-threatening air pollution. Volatile compounds including carcinogens in oil and natural gas formations and diesel engine exhaust contribute to the formation of soot and smog pollution, which reduces lung function among healthy people, triggers asthma attacks, and has been linked to increases in school absences, hospital visits and premature death.
- Fracking also creates increased truck traffic, which in turn raises the risk of accidents, and creates excessive noise and light, which can disturb sleep patterns and increase the risk of high blood pressure, heart attacks and strokes.

Table ES-1: Proximity of Facilities Serving Vulnerable Populations to Fracked Wells

	Day Care Centers	Schools	Nursing Care Facilities	Hospitals
One-half Mile	723	484	81	37
One Mile	1,947	1,376	236	103
Two Miles	3,728	2,906	596	202

People who live near fracking sites are at an increased risk of health problems.

- Researchers at Johns Hopkins University have found that Pennsylvanians with asthma who live near fracked oil and gas wells had more asthma flare-ups that required medical care than did patients who lived farther away.
- In Colorado, residents living within one-half mile of natural gas wells were exposed to air pollutants that increased their risk of illness.

Children, the elderly and the sick are particularly vulnerable to the health risks created by fracking.

- Children’s developing respiratory, immune and nervous systems are more susceptible to damage from toxic chemicals. In addition, children tend to breathe more rapidly than adults and are also more likely to play outdoors, increasing their exposure to air pollution from fracking.

Table ES-2: Number of K-12 Students Enrolled at Schools Close to Fracked Wells

	Students Enrolled
One-half Mile	229,904
One Mile	674,044
Two Miles	1,417,369

- Older adults and the sick have weaker immune systems and more difficulty breaking down toxins in the body. In addition, people with pre-existing cardiovascular disease are more likely to suffer a heart attack or a stroke after exposure to elevated levels of soot pollution, such as that from diesel trucks or a drilling rig.

Given the scale and severity of fracking’s impacts, banning fracking is the prudent and necessary course to protect public health and the environment.

- Until fracking ends, state and federal officials must take action to protect public health and the environment from the impacts of oil and gas production.
- Existing fracked oil and gas wells should be closed, beginning with those that are closest to vulnerable populations. As documented in this report, tens of thousands of our most vulnerable residents live, play, receive health services or study very close to fracked wells. Closing those wells would help protect public health.
- The federal government should close loopholes that exempt the fracking industry from key elements of the Resource Conservation and Recovery Act, the Safe Drinking Water Act, the Clean Air Act, the Clean Water Act, and the National Environmental Policy Act.
- At the same time, all levels of government should act to accelerate our transition to 100 percent renewable energy, including investments in energy efficiency and increasing development of clean, renewable energy sources.

The legacy of hydrocarbon extraction and the rapid spread of fracking across the U.S. over the last decade has caused widespread harm to our environment and our health. By limiting fracking and ensuring that all oil and gas production is tightly regulated, the nation can take the first steps toward healing the damage.

Introduction

In 2015, at Sequoia Elementary School, in California's Kern County, bad odor assumed to come from nearby wells led teachers to sometimes keep children inside instead of sending them out for recess.¹

Odor from wastewater pits containing fracking fluids caused the temporary closure of a day care center in Lochgelly, West Virginia, in 2004.² Nearby homes were evacuated and other businesses closed. Though the wastewater pits have since been covered, reducing the smell from the pits, the site operator continues to accept fracking waste for disposal into underground wells. Tests in 2014 suggest that this fracking waste may be polluting a nearby stream that contributes to the local drinking water supply.

On the Navajo Nation, in New Mexico, pollution from nearby oil wells can be smelled in the air outside Lybrook Elementary School, which is located in the oil-rich San Juan Basin.³ Heavy trucks serving five oil wells within one-half mile of the school add additional air pollution.

Children, the sick and the elderly spending time in the shadow of fracking sites run the daily risk of exposure to the dangers of oil and gas extraction. Those dangers are not always as obvious as an explosion or blowout – even wells that operate as intended can create air pollution from leaks in infrastructure and emissions from the tailpipes of thousands of trucks, and use toxic chemicals for fracking that can contaminate drinking water.

Yet, fracking near vulnerable populations – infants, school children, the elderly and the sick – is all too common. Hundreds of schools, child care centers, hospitals and nursing homes are alarmingly close to fracking operations. This report catalogs the number of schools, child care centers, hospitals and nursing homes that now exist within a short distance of fracked oil and gas wells in states across the country in order to better illustrate the threats that fracking poses to public health.

Fracking is encroaching on the places where we live, teach and care for one another. This report serves as a reminder of the unacceptable dangers of fracking, its potential to harm, and the need to bring this risky form of drilling to an end.

Fracking Is Occurring Close to Vulnerable Populations

The combination of hydraulic fracturing and horizontal drilling has enabled drilling companies to exploit oil and natural gas deposits locked in rock formations deep underground. In little more than a decade, companies have drilled and fracked at least 160,000 oil and gas wells in Arkansas, California, Colorado, New Mexico, North Dakota, Ohio, Pennsylvania, Texas and West Virginia, as well as others in states that have experienced less-intensive fracking activity.⁴

To produce oil or natural gas from a fracking well, a drilling company must first drill a vertical well into

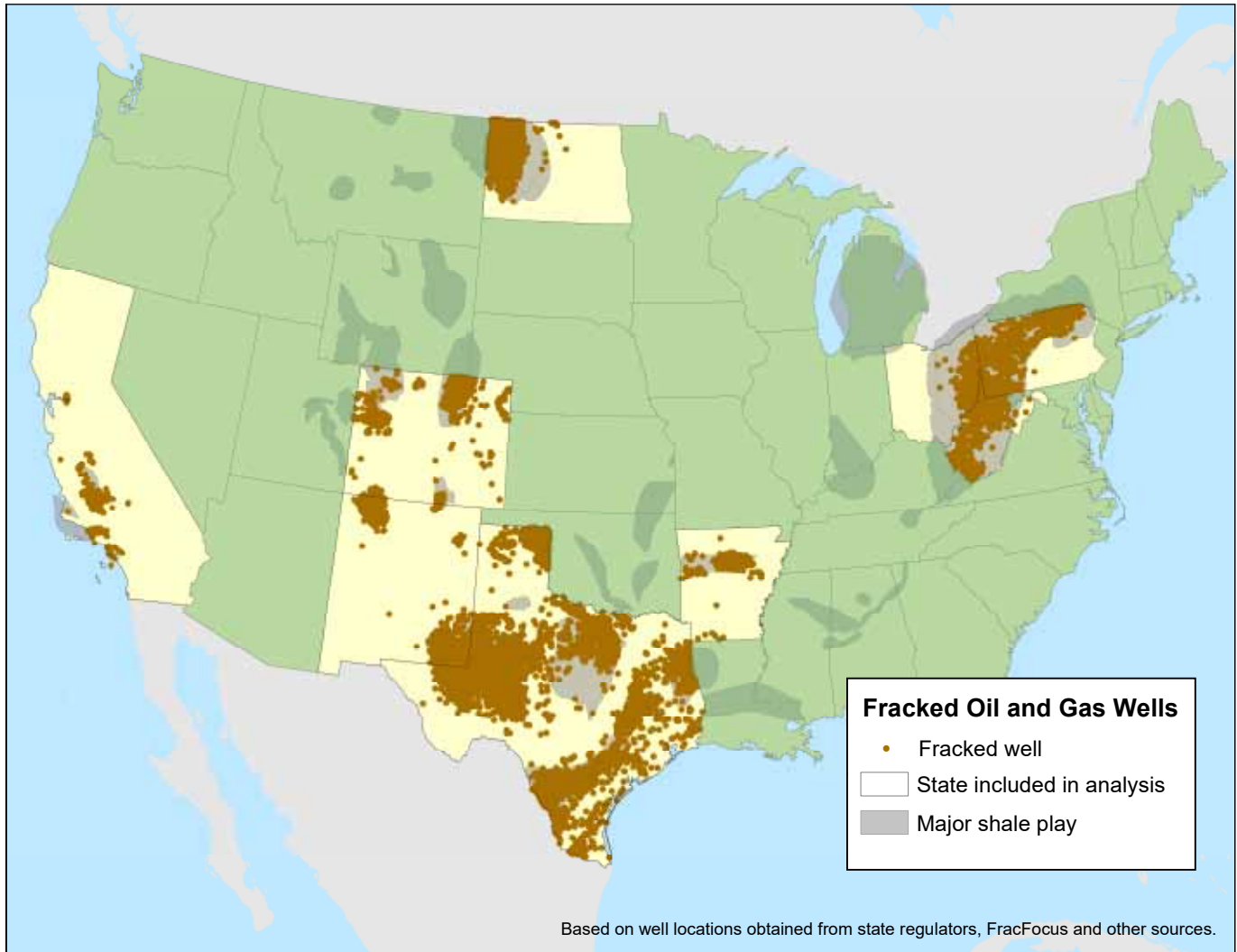
the shale formation. Then, operators' drill rigs cut horizontal branches into the shale, radiating outward thousands of feet to reach sections of rock away from the central wellbore. Once a well is drilled, operators pump water containing a proppant (typically sand) and a mixture of chemicals into the ground at high pressure. The water forces its way into cracks in the rock, widening them, and the proppant holds those cracks open wide enough for gas or oil to escape. After drilling a well, operators can repeat the process of hydraulic fracturing to boost oil and gas production anywhere from one to 10 years after the well began operation.⁵

Photo: Bill Cunningham, USGS

Fracking is an industrial activity that doesn't belong in neighborhoods, close to day care facilities, schools, nursing homes and hospitals.



Figure 1. Location of Oil and Gas Shale Plays and Fracked Wells, 2005 through Early 2016, Selected States



Where Fracking Happens

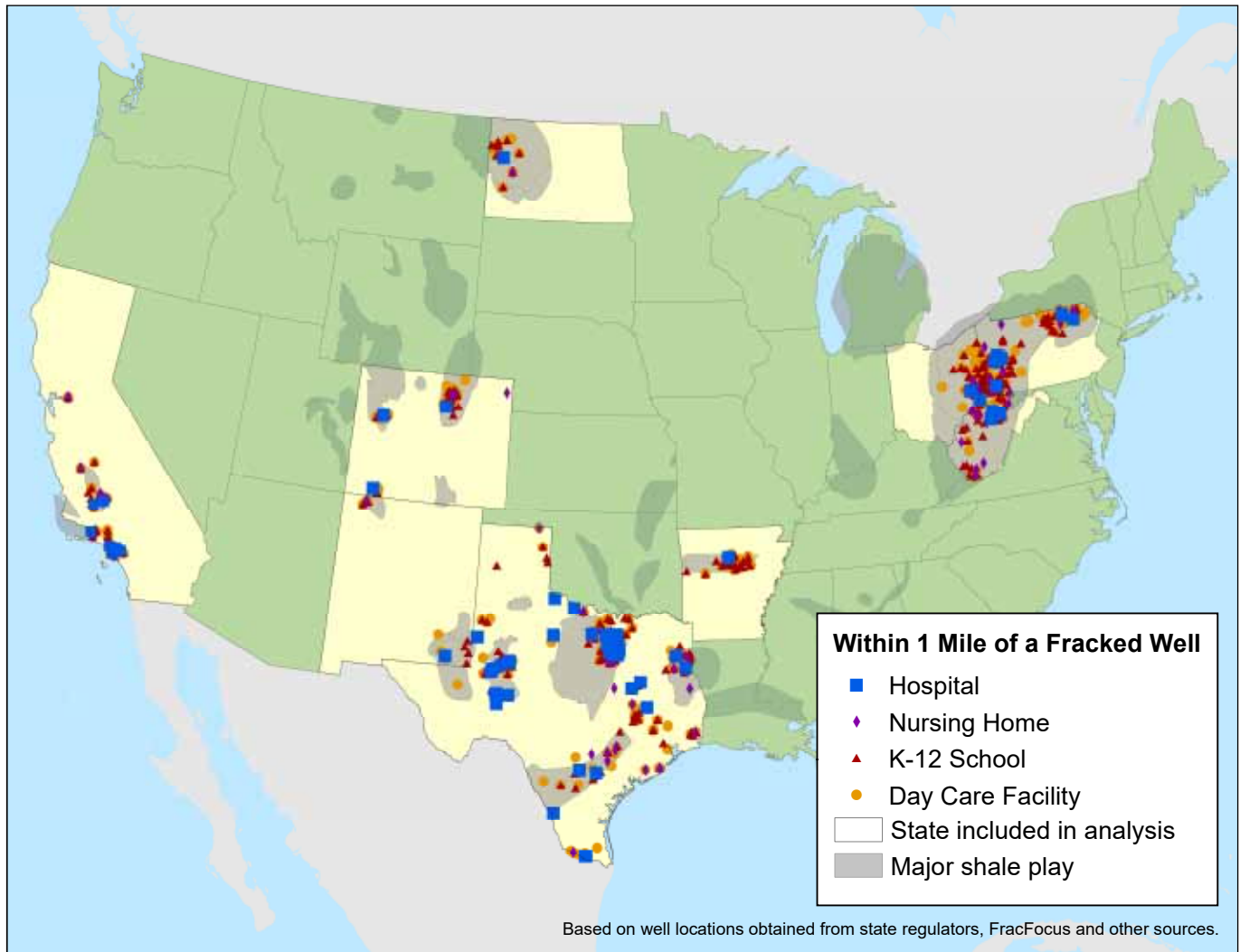
Fracking targets the oil and gas trapped in shale formations. Major shale formations include the Barnett (Texas), Marcellus (Pennsylvania, West Virginia and Ohio), Bakken (North Dakota), Monterey (California) and Niobrara (Colorado). Fracking operations target other, smaller formations, too. Figure 1 shows the location of oil and gas shale plays in the U.S., along with fracked wells in nine states.⁶

Often, the location of these wells is selected to provide the best access to oil and gas deposits. Sometimes that means wells are drilled in rural areas, such as portions of Colorado or North Dakota, and

sometimes that wells are in densely populated areas, such as Los Angeles or Dallas-Forth Worth. Wells are accompanied by additional equipment, such as processing facilities, compressor stations and pipelines, that must be located nearby.

Fracking operations are intensive industrial activities involving diesel-powered machinery, the use of large volumes of chemicals, and the storage and sometimes re-injection of vast amounts of wastewater. In most circumstances, communities seek to keep industrial activities far away from day care facilities, schools, nursing homes and hospitals due to the disruption they create and the environmental and safety dangers they pose.

Figure 2. Hospitals, Nursing Homes, Schools and Day Care Facilities within One Mile of a Fracked Well, 2005 through Early 2016, Arkansas, California, Colorado, New Mexico, North Dakota, Ohio, Pennsylvania, Texas and West Virginia



Nonetheless, drilling for oil and gas has occurred in close proximity to many vulnerable residents of the nine states examined in this analysis. The results of this analysis provide a conservative and limited snapshot of the many ways in which vulnerable populations may be exposed to risks from fracking. Other potential sources of risk, such as proximity to gas pipelines and compressor stations, must also be considered to provide a comprehensive view.

Proximity of Fracking to Children

Children are more vulnerable to the impacts of gas extraction, and indeed all pollution, because they are still developing. Their respiratory, immune and nervous systems are more susceptible to damage from toxic chemicals. Children tend to breathe more rapidly than adults and are also more likely to play outdoors, where they can be exposed to dangerous substances in the air. Finally, children have less abil-

ity to detoxify dangerous chemicals compared to adults.⁷

Short-term exposure to hazardous pollutants can cause acute distress, with symptoms including difficulty breathing, wheezing, watery or itchy eyes, rashes or headaches. Very high exposures can cause nausea, vomiting, lack of coordination or more serious impacts.⁸

Children may be exposed to sustained, low levels of mixtures of different chemicals over long periods of time, which may not produce obvious symptoms right away but may contribute to long-term health problems. Exposure to low levels of many of the chemicals used in or generated by oil and gas extraction activities can contribute to a variety of health effects, including asthma, cancer, birth defects, damage to the reproductive system and impaired brain development.⁹ For example, children’s long-term

exposure to low levels of benzene, generally classified as a carcinogen, also harms respiratory health.¹⁰

Child Care Providers

In the nine states examined in this report, there are more than 50,000 child care providers, including both day care centers and family-run day care providers in private homes.

Of these, 3,728 day care facilities – one out of every 14 in the states examined – are located within two miles of fracked wells, and 1,947 are within one mile. Within one-half mile, there are 723 day care facilities. Often, these facilities are close to more than one well. In several states, we were unable to obtain the addresses of home-based day care facilities, meaning that this estimate likely undercounts the number of day care facilities close to fracked wells.

Table 1. Count of Day Care Centers Close to Fracked Wells

State	Day care facilities within one-half mile of a fracked well	Day care facilities within 1 mile of a fracked well	Day care facilities within 2 miles of a fracked well	Total day care facilities analyzed
Arkansas	16	24	51	2,089
California	29	118	385	12,050
Colorado	157	302	466	5,480
New Mexico	5	22	61	1,031
North Dakota	5	38	86	2,080
Ohio	7	30	81	8,168
Pennsylvania	41	135	360	7,736
Texas	444	1,240	2,145	14,026
West Virginia	19	38	93	492
Total	723	1,947	3,728	53,152

Table 2. Count of Public and Private K-12 Schools Close to Fracked Wells

State	Schools within a half-mile of a fracked well	Schools within 1 mile of a fracked well	Schools within 2 miles of a fracked well	Total K-12 schools analyzed
Arkansas	18	30	60	1,031
California	38	117	332	9,989
Colorado	55	110	182	1,920
New Mexico	6	21	41	960
North Dakota	7	19	49	326
Ohio	2	28	95	4,246
Pennsylvania	27	125	326	4,387
Texas	303	850	1,644	9,274
West Virginia	28	76	177	783
TOTAL	484	1,376	2,906	32,916

Schools

More than 2,900 schools in the nine states are located within two miles of a fracked well. Total enrollment at those schools is more than 1.4 million students. Nearly 1,400 schools are located within one mile of a fracked well, and 484 schools are within one-half mile. That means that more than 200,000 kindergarten through twelfth grade children spend their school hours within one-half mile of a fracked well.

Texas has the most children, 430,000, attending school within one mile of a fracked well. Eighteen percent of the state's schools are located within two miles of a fracked well.

West Virginia has the highest percentage of children who attend school within one mile of a fracked well, at 8 percent, and also the highest percentage of schools close to fracked wells. Twenty-three percent

Table 3. Number of Public and Private K-12 Students Close to Fracked Wells

State	Students within a half-mile of a fracked well	Students within one mile of a fracked well	Students within 2 miles of a fracked well	Number of students enrolled at analyzed schools
Arkansas	5,574	8,708	22,916	503,216
California	23,135	74,566	231,690	6,223,630
Colorado	28,624	54,567	86,301	895,480
New Mexico	2,431	6,423	16,070	107,042
North Dakota	1,102	4,070	9,115	353,263
Ohio	206	7,181	29,660	1,868,879
Pennsylvania	8,613	57,667	131,817	1,894,626
Texas	151,876	436,690	827,396	5,288,709
West Virginia	8,343	24,172	62,404	291,870
TOTAL	229,904	674,044	1,417,369	17,426,715

In West Virginia, 23 percent of K-12 schools are within two miles of a fracked well.

of West Virginia’s K-12 schools are within two miles of a fracked well. (See Appendix A for details on each state.)

In addition to being near wells, these schools may also be located near other infrastructure for processing and transporting oil and gas.

Proximity of Fracking to the Elderly and Sick

The elderly and the sick have reduced tolerance for pollution exposure. Older adults have weaker immune systems and more difficulty breaking down toxins in the body, potentially increasing the risks posed by exposure to environmental pollutants.¹¹ For example, people over 60 years old who regularly breathe air polluted with benzene are more likely to become insulin resistant because their bodies cannot process toxins as easily.¹²

Those with pre-existing health problems are also at increased risk. For example, people with pre-existing cardiovascular disease are more likely to suffer a heart attack or a stroke after exposure to elevated levels of particulate matter or soot pollution, such as that from diesel trucks or a drilling rig.¹³ In one study, within hours of exposure to soot levels called “moderate” by the U.S. Environmental Protection Agency, people were 34 percent more likely to suffer a stroke.¹⁴

Nursing Care Facilities

In the nine states examined in this analysis, there were 596 nursing homes located within two miles of a fracked well. Within one mile of a fracked well, there were 236 nursing homes and there were 81 within one-half mile.

Table 4. Count of Nursing Care Facilities Close to Fracked Wells

State	Nursing homes within one-half mile of a fracked well	Nursing homes within 1 mile of a fracked well	Nursing homes within 2 miles of a fracked well	Total nursing homes analyzed
Arkansas	1	1	5	231
California	25	87	277	8,356
Colorado	1	4	13	211
New Mexico	0	1	2	70
North Dakota	0	2	5	85
Ohio	0	3	19	958
Pennsylvania	3	15	51	712
Texas	45	110	191	1,156
West Virginia	6	13	33	125
Total	81	236	596	11,904

Table 5. Count of Hospitals Close to Fracked Wells

State	Hospitals within one-half mile of a fracked well	Hospitals within 1 mile of a fracked well	Hospitals within 2 miles of fracked well	Total hospitals analyzed
Arkansas	1	1	2	171
California	3	10	16	598
Colorado	1	3	11	163
New Mexico	0	1	2	116
North Dakota	0	1	4	61
Ohio	0	3	4	412
Pennsylvania	2	6	20	389
Texas	26	72	126	843
West Virginia	4	6	17	84
Total	37	103	202	2,837

One hundred ninety-one nursing homes in Texas are within two miles of a fracked well, or 17 percent of all Texas nursing homes included in this analysis.

Hospitals

More than 200 hospitals in nine states are located within two miles of a fracked well, and

more than 100 hospitals are within one mile of a well. Thirty-seven hospitals are within one-half mile of a fracked well.

Texas has the largest number of hospitals close to fracked wells. Twenty-six of the 37 hospitals within one-half mile of a fracked well are in Texas. West Virginia is second, with four hospitals within one-half mile of a fracked well.

Fracking Jeopardizes the Health and Safety of Nearby Residents

Fracking endangers the health of all residents, but the most vulnerable among us are at an elevated risk. Drilling operations can cause fires, explosions and blowouts (an uncontrolled release of oil or gas from a well). They can pollute local water supplies with toxic chemicals, or with radioactive contaminants brought up from deep underground. They

create air pollution through emissions from diesel trucks and engines, evaporation of pollutants from wastewater storage ponds, and flaring of harmful gases. These impacts threaten public health – especially the health of vulnerable children, sick people and the elderly, who have fewer defenses against exposure to pollution.

Environmental and Safety Violations at Fracking Well Sites Near Vulnerable Populations

Fracking in close proximity to schools, day care centers, nursing homes and hospitals risks exposing vulnerable people to air and water pollution and other impacts even when well operators obey oil and gas regulations to the letter. Unfortunately, as data from Pennsylvania show, often drillers don't follow the rules and many of those violations have occurred close to vulnerable populations.

Between 2001 and March 2015, the Pennsylvania Department of Environmental Protection (PA DEP) recorded almost 5,200 violations of regulations intended to protect the environment.¹⁵ A violation implies that a drilling company was caught breaking a rule intended to protect natural resources or the health and safety of the public. Violations may indicate improper well construction, poor waste disposal, lack of preparedness for an accident, or an actual leak or spill. PA DEP only records violations at the well site, so traffic and road safety violations by chemical, water and waste haulers are not included in these figures.

Many of those violations took place in close proximity to vulnerable Pennsylvanians:¹⁶

- More than 220 violations at wells took place within one mile of a school;
- 180 violations took place within one mile of a child care provider;
- 28 violations took place within one mile of a nursing care facility; and
- 13 violations took place within one mile of a hospital.

Fracking Exposes Nearby Residents to Pollution and Safety Risks

Extracting gas or oil from shale deposits poses significant risks to public health and safety. Fires, explosions, truck traffic and noise can affect people close to the fracking site, while surface and groundwater contamination and air pollution present both a localized and more widespread regional danger.

Safety Risks from Well Blowouts, Traffic and Noise

Well Blowouts

Blowouts are the uncontrolled release of gas, oil or water from a well. Blowouts can result in fires, creating an immediate health threat for anyone in the area – including burns, smoke inhalation or exposure to especially high concentrations of air pollution. Listed below are several recent high-profile blowouts and fires that illustrate the risk.

- Methane leaking from a ruptured gas well in Bloomingdale, Ohio, in October 2014 forced the evacuation of 400 families by authorities worried about health impacts and the potential for an explosion.¹⁷
- More than 100 residents were evacuated in Arlington, Texas, in 2015 after crews struggled to plug a gas well that was leaking fracking fluid. Officials feared that natural gas could leak from the well, creating a fire hazard.¹⁸
- A March 2013 blowout in Washington Township, Pennsylvania, released natural gas and hundreds of thousands of gallons of wastewater. Authorities, worried about a potential explosion, evacuated nearby houses until Carrizo Oil and Gas could control the well.¹⁹

Explosions also can happen at other steps in the oil and gas extraction process. For example, a compressor station that moves natural gas in pipelines in

Table 6. Summary of Fracking’s Health and Safety Impacts

Safety
Well blowouts create explosion risk. Heavy truck traffic raises car crash risk. 24-hour noise and light raise health risks.
Air pollution
Diesel soot from trucks and equipment can impair lung development and worsen heart disease. Exhaust from venting or flaring natural gas increases air pollution. Hazardous air pollutants from trucks, equipment and wastewater raise cancer risk. Elevated levels of cancer-causing radon may be found in buildings. Smog can harm developing lungs. Airborne silica sand can scar the lungs.
Water pollution
Spills and leaks can dump toxic and radioactive wastewater.

western Colorado exploded in June 2012. The explosion killed one worker and injured two others, and forced a temporary highway closure.²⁰ In April 2016, a natural gas pipeline in Pennsylvania exploded, badly burning a man when his home caught fire and forcing the evacuation of nearby homes and businesses.²¹ More recently, 36 storage tanks at a fracking site in a New Mexico oil field caught fire, forcing the evacuation of 55 homes.²²

Truck Traffic

Fracking requires the transportation of massive amounts of water, sand and chemicals to and from well sites. Each fracked well requires as many as 1,650 truck trips for sand and water delivery, well pad development, well drilling, and extraction.²³

Increased traffic volume leads to more crashes and thus to more injuries and deaths.²⁴ States at the heart of the fracking boom have seen an increase in deadly traffic collisions. A May 2014 Associated Press analysis found that traffic fatalities in six drilling states had quadrupled since 2004 at a time when crashes nationwide were trending down.²⁵ In northern Pennsylvania, vehicle crash rates were significantly higher in counties where fracking took place.²⁶ Around the Eagle Ford Shale play in southern Texas, traffic fatalities increased by 48 percent from 2008 to 2013, compared with a statewide decrease of 3 percent.²⁷

Noise and Light

Well construction, drilling, fracking, the accompanying truck traffic and the ongoing operation of machinery generate significant levels of local noise and light.

Excessive amounts of noise can harm those who spend long periods of time nearby. Possible impacts of elevated noise exposure include high blood pressure, interrupted sleep, cognitive impairment and increased risk of cardiovascular health events such as strokes or heart attacks.²⁸ Drilling operations persist 24 hours per day and seven days per week, causing



Flaring of natural gas at a well in North Dakota lights up the surrounding area.

unnatural levels of light that can disrupt peoples' natural biological rhythms. Such disruptions are linked to sleep disturbances and depression.²⁹

Air Pollution

Fracking and related activities also create air pollution. Air pollutants are released during at least 15 different steps in the oil and gas development process.³⁰ From the diesel exhaust produced by trucks and equipment to gases vented from wells, compressor stations and waste ponds, this air pollution poses risks to the health of nearby residents.

Hazardous Air Pollutants from Trucks, Equipment and Gas Flaring

Hazardous air pollutants (HAPs) pose a direct threat to public health. Oil and gas extraction operations produce a variety of hazardous air pollutants, including diesel soot from trucks and pump engines, contaminants from processing the substances that come up out of the well, and fumes evaporating from wastewater ponds.

Pollution levels near wells are often high. Air quality tests at playgrounds close to fracked wells in north Texas found elevated levels of benzene at all but one location. A number of other toxic or cancer-causing compounds were also detected.³¹ In Utah, researchers from the University of Colorado, Boulder, sampled the air near oil and gas wells and found elevated levels of volatile organic compounds (VOCs). Pollution levels were consistently above background levels, with occasional short-term, localized spikes in pollution concentrations.³² Weekly tests of air quality 0.7 miles from a well pad in Colorado's Front Range detected VOCs throughout the year-long study, which spanned multiple stages of well drilling and production.³³ Another Colorado-based study found that concentrations of benzene, toluene and other pollutants were three to nine times higher within one-half mile of a gas well site than farther away.³⁴

A series of 2012 measurements by officials of the Texas Department of Environmental Quality found VOCs levels so high at one fracking location that the officials themselves were forced to stop taking measurements and leave the site because it was too dangerous for them to remain.³⁵ Earlier monitoring in Texas detected benzene – a known cancer-causing chemical – at levels that were high enough to cause immediate human health concern at two sites in the Barnett Shale region, and at levels that posed long-term health concern at an additional 19 sites.³⁶

Diesel Soot

Diesel engines that operate throughout the drilling and fracturing process produce sooty exhaust that is hazardous to health. While a well is being drilled,

diesel engines on the drilling rig operate 24 hours a day. After drilling, operators fracture the shale with millions of gallons of pressurized water, sand and chemicals. Transporting all of the equipment and material to the well pad, and then trucking away the waste, requires hundreds to thousands of trips per well by diesel-powered trucks.³⁷ This increased truck traffic contributes to air pollution.³⁸ Additionally, injecting the fracturing fluid into the well and pressurizing the system requires the operation of pumps, typically also powered by diesel engines.³⁹

Diesel particulate exhaust can remain suspended in the air for weeks. The particles can get inside buildings and conventional heating and air conditioning filters. When inhaled, they can penetrate deep into the lungs. The chemicals delivered into the body by inhaled particulates are very dangerous. Some of them cause cancer, some cause irritation to lung tissues, and some cause changes in the function of the heart.⁴⁰ As a result, particulates cause and aggravate a host of health problems, including lung cancer and cardiovascular disease.

Particulate pollution can cause irreversible damage to children, interfering with the growth and development of the lungs. For example, researchers at the University of Southern California followed the health of more than 1,000 ten-year-olds until they reached 18 years of age. Children who lived in areas with higher levels of particulate pollution were less able to breathe with normal capacity.⁴¹

Particulate pollution is also deadly, killing upwards of 50,000 Americans every year.⁴²

Air quality tests at playgrounds close to fracked wells in north Texas found elevated levels of benzene.



Generators and other heavy equipment produce diesel soot and other hazardous air pollutants.

Gas Flares, Venting and Blowouts

The drilling process can puncture underground pockets of gas, which returns to the surface in drilling fluid, and is often vented into the atmosphere, creating air pollution. A well blowout produces the same impacts but at a higher volume.

Once a well is fractured, wastewater, often containing gas, returns to the surface. Oil and gas drilling companies can dispose of the extra gases by flaring them.⁴³ When flaring takes place, incomplete combustion of the waste gas results in air pollution.

After the wastewater has stopped flowing out of the well, drilling companies connect the gas flow to a pipeline. Before the gas can be shipped to market, it must be cleaned of impurities, including water and larger hydrocarbon molecules. Gas processing units typically vent impurities to the atmosphere as air pollution.

To transport the gas from the well to market, drilling companies operate compressor stations, typically within four to six miles of a group of wells.⁴⁴ These compressor stations are typically powered by combustion engines fueled by raw or processed natural gas, which generates pollution-laden exhaust.⁴⁵

Compressor stations operate continuously as long-term sources of air pollution, as opposed to the wells themselves, which produce the greatest amount of pollution during a relatively short period of time.

Hazardous Air Pollutants from Wastewater Ponds

Impoundment ponds where fracking wastewater sometimes is stored are also sources of air pollution, as chemicals – some linked to human health problems – evaporate from the open-air pits.⁴⁶ In an assessment of the impacts of fracking, the New York Department of Environmental Conservation found that compounds of concern that could evaporate from a flowback pit in harmful amounts include formaldehyde, acrylamide, naphthalene, glutaraldehyde and methanol.⁴⁷

Wastewater pits may also contribute to elevated levels of radon in nearby homes. Radon, which can cause lung cancer, has been measured at high concentrations in fracking wastewater. Because of the health hazard created by radon, Pennsylvania has a long record of radon measurements in homes. An analysis of those radon measurements by researchers at Johns Hopkins School of Public Health found

Indoor radon levels have increased in counties with extensive fracking.

that radon levels have increased in counties with extensive fracking since 2004, and also found elevated radon levels on the first floor of houses located within 12.5 miles of a fracked well.⁴⁸ For each additional nearby well, radon measurements increased. One possible explanation is that radon released from wastewater in holding ponds increases ambient radon, which then gets trapped indoors.

Smog-Forming Emissions

Oil and gas production at fracked wells releases volatile organic compounds and nitrogen oxides that contribute to the formation of smog. When inhaled, smog can cause problems for human health by irritating the respiratory system, causing coughing, reducing lung function, aggravating asthma, and damaging the lining of the lungs.⁴⁹

Photo: Ken Skipper, USGS



Clouds of silica hang in the air over a frack site in Pennsylvania.

According to estimates by the New York Department of Environmental Conservation, constructing and operating a single well generates nearly 70,000 pounds of smog-forming emissions in the first year of operation.⁵⁰ Studies in Wyoming and Utah have shown that ozone levels in drilling regions can spike well above federal standards.⁵¹

Air pollution related to fracking can travel long distances, affecting people who live far from fracking areas, in addition to those who live near where fracking occurs.⁵² Measurements of ethane, a telltale pollutant from fracking, show increased levels near Baltimore, MD, and Washington, D.C., though the closest fracking activity is in Pennsylvania and West Virginia.⁵³ The researchers suggest that other pollutants are similarly likely to travel from fracking in the Marcellus region to major population centers. A 2014 study predicted that by 2020, drilling in the Marcellus Shale beneath Pennsylvania, Ohio and West Virginia could contribute 6 to 18 percent of the region's nitrogen oxide emissions and 7 to 28 percent of the region's anthropogenic volatile organic compounds – the two components of smog.⁵⁴

Airborne Silica

One of the key components of the fracking fluid pumped into wells is a proppant, typically silica sand. When the sand is transferred from trucks and mixed with other elements of fracking fluid, the sand can become airborne, creating a respiratory threat to workers but also potentially to others nearby.

Workers who are regularly exposed to high levels of airborne silica can develop silicosis, permanent scarring of the lungs that impairs the ability to breathe and eventually can be fatal. A 2012 study of airborne

silica at 11 fracking sites in five states found that workers at every site were exposed to unacceptably high levels of silica. At one-third of the sites, airborne silica was 10 times higher than safe levels for workers.⁵⁵

Airborne sand may present a risk to people close to well sites as the fine particles are carried on the wind.

Drinking Water Pollution

Potential Contaminants

Oil and gas extraction from shale deposits can contaminate water supplies with pollutants including methane gas, drilling fluid, hydraulic fracturing fluid, and naturally occurring contaminants forced up through the well. Many of these substances have been linked to acute and long-term health impacts.

Chemicals in Hydraulic Fracturing Fluid

A variety of toxic substances – such as hydrochloric acid, ethylene glycol (antifreeze), and benzene – are added to fracking fluid injected into wells. Researchers at the Yale School of Public Health analyzed more than 1,000 chemicals found in fracking fluid and wastewater. Toxicity data were not available for three-quarters of the chemicals. Of the chemicals for which toxicity data were available, 65 percent are potential developmental or reproductive toxins.⁵⁶

Doctors and health scientists have associated many of these pollutants with a wide variety of acute and chronic diseases, including cancer, asthma and problems with the liver, kidneys and central nervous system.⁵⁷ Evolving understanding of long-term exposure to small amounts of these types of contaminants suggests that contaminants from oil and gas extraction could have serious impacts on public health, especially near well sites.⁵⁸

Naturally Occurring Contaminants

After hydraulic fracturing of a well is completed, water flows back to the surface. That water includes

many of the chemicals that were used to frack the well. In addition, this water can contain salt and other substances from the rock formation that have been released by the drilling and fracturing process, plus the products of any chemical reactions happening in the well. These contaminants can include:

- **Heavy metals.** An analysis of flowback water from wells in Pennsylvania and West Virginia found a variety of metals, including arsenic, antimony, barium, cadmium, chromium, cobalt, copper, iron, lead, molybdenum, nickel, silver, strontium, thallium and titanium.⁵⁹ Arsenic causes cancer.⁶⁰ Very low levels of lead exposure have been linked to learning difficulties, mental and physical developmental problems and behavioral changes.⁶¹
- **Hydrocarbons.** Oil and gas deposits can sometimes contain benzene, toluene, ethylbenzene and xylene. These are chemicals associated with cancer and other serious health problems.⁶²
- **Radioactive elements.** Flowback water samples from several wells in Pennsylvania and West Virginia all contained radioactive components, including radium, a radioactive metal.⁶³ A study of radiation exposure related to oil and gas development concluded that wastewater spills could pose a risk to the environment due to the presence of radium.⁶⁴ North Dakota has encountered instances in which radioactive waste from drilling operations has been illegally dumped.⁶⁵

How Contaminants Reach Water Supplies

Contaminants can reach water supplies through faulty well construction, through surface spills, through improper wastewater disposal, or potentially through migration from the shale layer itself.

Faulty Well Construction or Abandoned Well Shafts

Shale deposits lie hundreds or thousands of feet beneath the surface. Wells drilled to reach shale formations often pass through a layer of earth that contains aquifers – underground reservoirs of water – in the first thousand feet. Many people rely upon these underground supplies for drinking water, especially in rural areas, where municipal water supplies may not be available.

Drilling a well creates a conduit that could carry contaminants into groundwater. Oil and gas drilling companies use metal casing pipes and cement to line wells. The casing pipes are intended to isolate the well from other rock layers and allow oil, gas and fluids to pass into or out of the well without contaminating drinking water supplies. If the well casings do not function properly, fracturing fluid and water in the shale formation can contaminate groundwater supplies. During fracturing, operators increase the pressure inside the well to as high as 10,000 pounds per square inch – this high pressure could force contaminants through any improperly sealed gaps in the casing.⁶⁶

Surface Contamination at the Well Site

Spills caused by tank ruptures, wastewater impoundment failures, overfills or accidents – or by sloppy handling of dangerous substances – can contaminate nearby soils, groundwater, streams or wetlands. States have documented many instances of water contamination resulting from surface spills at oil and gas well sites. For example:

- The Associated Press examined records in 11 states and counted more than 21,000 wastewater spills from 2009 to 2014.⁶⁷ Accidental and deliberate spills dumped more than 180 million gallons of salty, polluted water.
- In Pennsylvania, more than 200 holes were found in the lining of an impoundment for fracking wastewater, allowing pollution to leak out and harm streams and vegetation.⁶⁸
- Test of private wells in Pennsylvania have found diesel-like contaminants, and further analysis led researchers to conclude the pollution likely came from spills that percolated down into the water table.⁶⁹

Photo: Hanna Hamilton USGS

Fracking wastewater often is stored in open pits. Leaks can contaminate groundwater, while toxic chemicals can evaporate and create air pollution.



Examples of Water Pollution

Pennsylvania has documented many incidents of water pollution from fracking. Oil and gas development damaged the water supplies for at least 161 homes, farms, churches and businesses between 2008 and the fall of 2012. A more comprehensive analysis found 243 documented cases of contaminated drinking water supplies between December 2007 and August 2014 due to fracking activities.⁷⁰

In one case, the well of a Pennsylvania home 600 feet from a fracked well was contaminated with barium at levels 20 times higher than the maximum level considered safe.⁷¹ An analysis published in the *Proceedings of the National Academy of Sciences* found that drinking water wells at Pennsylvania residences within 1 kilometer (about 0.6 miles) of a fracking well site were more likely to be contaminated with methane and ethane gas. Homes within 1 kilometer of wells had methane and ethane levels that were six and 23 times higher than homes further away, respectively.⁷²

A leak from a gas processing plant in western Colorado in 2013 contaminated a creek and groundwater with benzene, a cancer-causing chemical.⁷³ The creek and groundwater are used for irrigation.

Recent studies have suggested that fracking may also pose a longer-term threat of groundwater contamination. One study used computer modeling to conclude that natural faults and fractures in the Marcellus Shale region underlying Pennsylvania, Ohio and West Virginia could accelerate the movement of fracking chemicals – possibly bringing these contaminants into contact with groundwater in a matter of years.⁷⁴ In addition, a study by researchers at Duke University found evidence for the existence of underground pathways between the Marcellus Shale and groundwater supplies closer to the surface.⁷⁵

Health Problems Due to Fracking

The pollution produced by fracking affects the health of workers, nearby residents and even people living far away. Residents living near fracking sites have long complained about a range of health problems, including headaches, eye irritation, respiratory problems and nausea.⁷⁶ Multiple peer-reviewed studies have documented increased health problems in people living near fracking sites.

- Pennsylvanians with asthma who live near fracked oil and gas well sites experience more problems with their asthma than people who live farther from fracking sites. Researchers examined health records of more than 35,000 patients for hospitalizations, doctor visits and other treatments for asthma.⁷⁷ Patients near fracking operations had more frequent problems than patients living farther away, and those problems occurred during all stages of production, including when the well site was being prepared, and when the well was drilled, fracked and in production.
- A study by researchers at the Colorado School of Public Health found that residents living within one-half mile of natural gas wells in one area of Colorado were exposed to air pollutants that increased their risk of illness.⁷⁸ The report noted that “health effects, such as headaches and throat and eye irritation reported by residents during well completion activities occurring in Garfield County, are consistent with known health effects of many of the hydrocarbons evaluated in this analysis.”⁷⁹
- A survey of Washington County, Pennsylvania, residents relying on well water found increased rates of adverse health symptoms – including skin conditions and upper respiratory ailments – reported by those living within 1 kilometer (0.6 miles) of a gas well site, compared with those living more than 2 kilometers (1.2 miles) away.⁸⁰

Oil and gas production using fracking is an intensive industrial activity that includes the use of toxic chemicals and produces large volumes of pollution with known links to health problems. A growing body of health research suggests proximity to fracking sites leads to a range of health problems.

This report has documented the proximity of fracking well sites to child care centers, schools, hospitals and nursing facilities that care for them. State and federal officials should take immediate action to protect these vulnerable residents – and all residents – from the health hazards posed by fracking.

Policy Recommendations

Fracking is so dangerous to public health that we should phase out the practice altogether. In the meantime, we should not allow fracking to begin in additional regions and should enact baseline protections for communities where it is already occurring.

Given the scale and severity of fracking's impacts, banning fracking is the prudent and necessary course to protect public health and the environment. At a minimum, state officials should allow cities, towns and counties to protect their own citizens through local bans and restrictions on fracking.

In addition, existing fracked oil and gas wells should be closed, beginning with those that are closest to vulnerable populations. As documented in this report, tens of thousands of our most vulnerable residents live or study very close to fracked wells. Closing those wells would help protect public health.

Until fracking ends, state and federal officials must take action to hold the oil and gas industry to the highest standards of public health and environmental protection.

- Congress should close the loopholes that exempt fracking from key provisions of federal environmental laws. These include the Safe Drinking Water Act, the Clean Water Act and the Clean Air Act, the Resource Conservation and Recovery Act, and the National Environmental Policy Act.
- Policymakers should end the most dangerous drilling practices. Fracking operators should no longer be allowed to use open waste pits, even if they are

lined, for holding wastewater. The use of toxic chemicals should not be allowed in fracking fluids.

- Federal and state governments should protect drinking water supplies from the risks of fracking. Fracking should not be allowed in watersheds that supply drinking water.
- The public has a right to know how fracking operations are affecting the environment and public health. The data currently available on fracking are inconsistent, incomplete and difficult to analyze. To remedy this, oil and gas companies should be required to report all fracking wells drilled, all chemicals used, amount and source of water used, and volume of wastewater produced and toxic substances therein. Reporting should occur into an accessible, national database, with chemical use data provided 90 days before drilling begins.

At the same time, all levels of government should act to accelerate our transition to 100 percent renewable energy. That will require prioritizing energy savings. Conserving energy and using it more efficiently can ease the transition from dirty fuels to clean, renewable energy. In addition, the nation must promote steady and swift deployment of clean renewable energy sources. Solar and wind energy are poised to play a major role in every vision of a 100 percent renewable energy system.

The rapid spread of fracking across America in the last decade has caused widespread harm to our environment and our health. By limiting fracking and ensuring that all oil and gas production is tightly regulated, the nation can take the first steps toward healing the damage.

Methodology and Data Sources

We used ESRI ArcGIS geographic information system software to plot the locations of fracked wells, child care facilities, schools, nursing care facilities and hospitals in nine states. We chose Arkansas, California, Colorado, New Mexico, North Dakota, Ohio, Pennsylvania, Texas and West Virginia because those states have experienced the most fracking activity. We then used the software to estimate the number of these facilities located within given radii of fracked well drilling sites. The methodology below explains the source of all data and provides details on the analysis.

Wells

Well location information was obtained from state agencies or from the FracFocus database managed by the Groundwater Protection Council and the Interstate Oil and Gas Compact Commission. We downloaded FracFocus data on 18 May 2016; those data were last updated by FracFocus on 26 April 2016. Whenever possible, we selected for wells drilled since 2005. Because of data entry errors in the information from FracFocus and regulators, some wells appear in the incorrect location, which may result in incorrect identification of selected day care center, schools, nursing homes and hospitals as being close to a fracked well. If these wells were plotted correctly, a different set of facilities might be affected.

Arkansas

A list of permitted wells with permit status dates since January 2005 was obtained from Arkansas Oil and Gas Commission, 3 May 2016. Horizontally drilled wells are designated by an “H” in the state-issued well number. We used permitted wells as a proxy for drilled wells, because about 99 percent of all permitted wells are drilled, per James Vinson, Webmaster, Arkansas Oil and Gas Commission, personal communication, 8 September 2015.

California

California did not track all fracked wells prior to 2015. This report counts wells as fracked if 1) they are currently producing from an oil or gas pool that requires stimulation to any extent, and 2) actively produced hydrocarbons over the period of 2013-2016.

Identification of reservoirs that typically require stimulation comes from data collected for the California Council on Science and Technology’s Senate Bill 4 study, in which researchers calculated the probability that each oil and gas pool had been fracked (in CCST, *Well Stimulation in California, Volume 2, Appendix 5E: Estimate of the Number Hydraulic Fracturing Operations by Pool in California, 2015*, available at http://ccst.us/projects/hydraulic_fracturing_public/SB4.php). A list of all oil and gas wells in California came from the

California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR), *All Wells*, accessed at www.conservation.ca.gov/dog/maps/Pages/GISMapping2.aspx, December 2015). That list of oil and gas wells was matched with production data (from DOGGR, ftp://ftp.consrv.ca.gov/pub/oil/new_database_format), allowing identification of wells with production numbers from 2013 to 2016.

Active wells identified as hydraulically fractured in other datasets were also included. Those datasets include FracFocus, South Coast Air Quality Management District, and Central Valley Regional Water Quality Control Board, through December 2015.

This method may overestimate the number of fracked wells by including all wells that tap pools that are typically fractured, though not all wells in those pools may have been fracked. However, this method may undercount fracked wells because it does not include any wells active before 2013, or wells that may have accessed multiple pools including a fracked pool before 2013.

Colorado

Data on fracked wells in Colorado come from two sources. Since April 2012, Colorado has required that well operators report fracking activity to FracFocus. Before April 2012, there is no firm data on the number of fracked wells in Colorado. Based on conversations with staff at the Colorado Oil and Gas Commission (including Diana Burn, Eastern Colorado Engineering Supervisor, Colorado Oil and Gas Commission, personal communication, 4 September 2013), we assumed wells in Weld, Boulder, Garfield and Mesa counties are fracked. A list of all wells in Colorado was obtained from Colorado Oil & Gas Conservation Commission, Colorado Oil and Gas Information System (COGIS), *2015 Production Report*, downloaded 17 October 2015, from cogcc.state.co.us/data.html#/cogis.

North Dakota

We obtained data on fracked wells in North Dakota from FracFocus.

New Mexico

New Mexico does not track which wells are fracked, nor does it require reporting to FracFocus. We identified fracked wells by using two sources: the state's list of horizontally drilled wells, and wells voluntarily reported to FracFocus.

Data on the number of horizontally drilled wells were used as a proxy for fracked wells. Data were obtained from the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division, *OCD Data and Statistics*, accessed at www.emnrd.state.nm.us/OCD/statistics.html, 4 May 2016. Horizontally-drilled wells are designated by an "H" at the end of the well name. One well with status "never drilled" was excluded from our count. From FracFocus, we identified fracked wells in New Mexico. We combined the state list of wells with the FracFocus list of wells and excluded any duplicate records.

Ohio

For Ohio, we included data for wells drilled in both the Marcellus and Utica/Point Pleasant shales from Ohio Department of Natural Resources, Division of Oil & Gas Resources, *Cumulative Permitting Activity*, accessed at oilandgas.ohiodnr.gov/shale#SHALE, 3 May 2016. We included Utica/Point Pleasant wells and Marcellus wells with a status of "drilled," "drilling," or "producing."

Pennsylvania

We obtained information about the locations of unconventionally drilled wells from the Pennsylvania Department of Environmental Protection (PA DEP) from an online public database entitled "Spud Data Report," available at www.dep.pa.gov/DataandTools/Reports/.⁸¹ These sites correspond to oil and gas wells drilled into an unconventional formation, which "is

defined as a geologic shale formation below the base of the Elk Sandstone or its geologic equivalent where natural gas generally cannot be produced except by horizontal or vertical well bores stimulated by hydraulic fracturing.⁸² The list includes only wells for which drilling dates have been reported to the PA DEP. The date range for our analysis of spud sites was 1 January 2005 through 3 May 2016.

The universe of wells considered in this report differs from that analyzed in a similar report (Elizabeth Ridlington, Tony Dutzik and Tom Van Heeke, Frontier Group; Adam Garber and David Masur, PennEnvironment Research & Policy Center, *Dangerous and Close: Fracking Near Pennsylvania's Most Vulnerable Residents*, October 2015), which measured the proximity of facilities to *permitted* unconventional well sites. In this report, to ensure consistency across multiple states, the universe of wells is limited to those that have actually been drilled. Because the list of drilled unconventional wells is significantly smaller than list of permitted unconventional wells, our count of nearby facilities in this analysis is lower than in the previous report.

Texas

Data on fracked wells in Texas were obtained from FracFocus. Texas began requiring reporting to FracFocus in 2012, though there are a few wells before that date, too. Wells with no date or with a date before 2005 were excluded.

West Virginia

Oil and gas well permitting data were downloaded in shapefile format from the West Virginia Department of Environmental Protection's Technical Applications and GIS (TAGIS) Unit.⁸³ We filtered the dataset to include only wells with a completion date after 1 January 2005 and to include permit types that explicitly involved fracking: Fracture (FRACT), Fracture/Drill Deeper (FRADD), Fracture/New Well (FRANW), Fracture/Horizontal Well (FRAHW), Frac-

ture/Gas Injection Well (FRAGI), Partial Plug Frac (FRAPP), Horizontal Deep Well (HDEEP), Rework/Horizontal 6A Well (RWH6A) and Horizontal 6A Well (HRW6A).

Locations of Facilities Serving Vulnerable Populations

We obtained the addresses of day care facilities, schools, nursing homes and hospitals from state and federal sources as described below. From these datasets, we removed locations without physical address information, including most facilities where only a post office box was listed. A subset of these facilities was manually matched to physical locations and thus included.

Most of our school and day care facility data required geocoding to translate addresses into latitude/longitude coordinates for use in mapping software. We used a geocoding service provided by Texas A&M University Geoservices.⁸⁴ Typographical mistakes in the addresses in the original sources could introduce error into the geolocation process which in turn could introduce error into our distance calculations.

From the geocoded results, we retained only those locations that were geocoded based on precise street addresses, parcel centroid points or zip code centroids. Though zip code centroids are less precise than street addresses, we included them because they do not introduce any systemic bias. We excluded locations that were geocoded to state or city centroids or other imprecise measures.

Schools

Data on public and private schools, except in California, serving kindergarten through twelfth graders were obtained from U.S. Department of Education, National Center for Education Statistics, *Search for Public Schools*, available at nces.ed.gov/ccd/schoolsearch/ and U.S. Department of Educa-

tion, National Center for Education Statistics, *Search for Private Schools*, available at nces.ed.gov/surveys/pss/privateschoolsearch/. Data were downloaded on 4 May 2016 and 5 May 2016. We excluded preschools from the search because they are captured in the day care facility data.

For public schools, including charter and magnet schools, data were from the 2014-15 academic year.⁸⁵ For private schools, data were from the 2013-14 academic year.⁸⁶ We then combined and deduplicated the datasets, and removed any schools that did not appear to serve K-12 children (e.g., pre-kindergarten, post-high school vocational training centers and community colleges).

A subset of K-12 schools with only a post office box instead of a street address were manually matched to physical locations, enabling their inclusion in the dataset for analysis. We obtained street addresses through web searches and by using data from older versions of National Center for Education Statistics that have been geocoded.⁸⁷ We were able to match school names between the two versions of the NCES data and obtain physical addresses for a subset of schools that otherwise listed only post office boxes. Table 7 shows the share of schools in each state that had sufficiently detailed geographic information to be included in our analysis.

Most schools listed included enrollment numbers, which we used to estimate how many students attended school near fracked wells. As some schools did not list enrollment numbers, our estimate of total K-12 students near fracking sites is likely an undercount.

Data for California elementary, secondary and unified school districts were downloaded from the State of California, *Geoportal*, which draws on information from the California Department of Education, *Public Schools Database* and *Private School Directory*. School locations were verified using satellite imagery and geolocation tools, including GIS data from U.S. Cen-

Table 7. Success Rate of Geocoding School Locations by State

State	Percentage of total K-12 schools included in analysis
Arkansas	85%
Colorado	90%
New Mexico	94%
North Dakota	58%
Ohio	96%
Pennsylvania	98%
Texas	93%
West Virginia	91%

sus Bureau, accessed from <ftp://ftp2.census.gov/geo/tiger/TIGER2014/> on 1 October 2014.

That list of schools was compared to enrollment data from California Department of Education, *DataQuest*, data1.cde.ca.gov/dataquest/, accessed 10/1/14. Schools in the GIS files that did not match the schools listed in the *DataQuest* files were eliminated from the analysis.

Day Care Centers

Arkansas

We obtained a list of licensed Arkansas child care centers in shapefile format using ESRI Homeland Infrastructure Foundation-Level Data (HIFLD), available at www.arcgis.com/home/item.html?id=c87c1c687e274285aeefdf88d53c8703.⁸⁸ This data set does not include home- or family-based day care centers, and thus potentially underestimates the number of child care facilities near fracked wells.

California

A list of licensed child care centers, preschools and daycares was extracted from a larger dataset of all child care facilities, from California Department of Social Services, cld.ca.gov/PG3581.htm.

Colorado

A list of licensed child care facilities in Colorado was obtained from Office of Early Childhood, Colorado Department of Human Services, *Colorado Licensed Child Care Facilities Monthly Report*, updated 4 May 2016, downloaded 13 May 2016 from www.coloradoofficeofearlychildhood.com/#!child-care-licensing--administration/c5cf. The list already included geographical coordinates, which we used to map facility locations.

New Mexico

The locations of New Mexico child care centers were obtained from ESRI, Homeland Infrastructure Foundation-Level Data, *Day Care Centers*, downloaded 17 June 2016 from www.arcgis.com/home/item.html?id=c87c1c687e274285aeefdf88d53c8703.HIFLD. This data set does not include home- or family-based day care centers. The locations of residential day care centers in New Mexico were obtained from a spreadsheet, *Registered Child Care Providers*, provided by Kathleen Hardy, Public Records Custodian, New Mexico Children, Youth and Families Department, personal communication, 24 May 2016.

North Dakota

A list of day care providers in North Dakota was obtained from Becky Eberhardt, Early Childhood Services Administrator, Division of Children and Family Services, Department of Human Services in January 2016.

Ohio

The addresses of day care facilities were obtained from the Ohio Department of Job and Family Services, Office of Family Assistance after submitting a public records request. We analyzed active full-time day care centers and family day care homes.⁸⁹

Pennsylvania

The addresses of day care facilities were obtained from the State of Pennsylvania's Office of Child Devel-

opment and Early Learning.⁹⁰ The list of providers, current as of March 31, 2016, includes child care centers, family child care homes and group child care homes.

Texas

We downloaded and combined lists of Texas-based facilities from the Texas Department of Family and Protective Services.⁹¹ Our list included all Licensed Child Care Centers, Licensed Child Care Homes and Registered Child Care Homes that serve infants, toddlers and preschool aged children.

West Virginia

We obtained a listing of addresses of child care centers from the State of West Virginia, Department of Health and Human Resources, Division of Early Care and Education.⁹² The list of providers includes only child care centers, not family or group child care homes.

Hospitals

Hospital location data, except for California, came from ESRI and United States Geological Survey, *U.S.A. Hospitals*, updated 1 March 2015, downloaded 17 June 2016 from www.arcgis.com/home/item.html?id=f114757725a24d8d9ce203f61eaf8f75. The data set includes names and locations of U.S. hospitals, generated using data from the Geographic Names Information System (GNIS), part of the U.S. Geological Survey. We excluded closed facilities but included medical centers and psychiatric inpatient facilities.

A list of California health care facilities was obtained from the California Health Care Facility Dataset (HLTHFAC), through State of California, *Geoportal*, portal.gis.ca.gov/geoportal/catalog/search/resource/details.page?uuid={2BA6C6BD-2803-4CA3-BB10-EF914B96B4A2}, accessed 1 December 2014.

Nursing Homes

Nursing home location data, except for California, were obtained from U.S. Department of Health and Human Services, *U.S. Department of Health & Human Services: Healthcare Facilities, 2012*, downloaded 17 June 2016 from www.arcgis.com/home/item.html?id=b3813b2d3a054c378247bf32bcd8d203. Nursing homes are defined as residential facilities “for people who require constant nursing care and have significant deficiencies with activities of daily living.”⁹³ The map package was created using U.S. Department of Health & Human Services (HHS) data current through 2012. To focus on nursing homes that are currently operating, we counted only those facilities that were also listed in the updated database administered by the Centers for Medicare & Medicaid Services.⁹⁴

A list of California health care facilities was obtained from the California Health Care Facility Dataset (HLTHFAC), through State of California, *Geoportal*, portal.gis.ca.gov/geoportal/catalog/search/resource/details.page?uuid={2BA6C6BD-2803-4CA3-BB10-EF914B96B4A2}, accessed 1 December 2014. The dataset was limited to residential elderly care facilities.

Calculating Distances

We used ESRI ArcGIS geographic information system software to plot the locations of fracked well sites, child care providers, schools, hospitals and nursing care facilities on a single map. All locations were converted and projected in the North America Equal Albers Conic coordinate system. We used the “Select

by Location” function to select facilities that fell within one-half mile, one-mile and two-miles of each well. Counting the relevant facilities at each distance yielded the number of facilities within the specified distance of a fracked well.

Justification for Focusing on Facilities within One-Half Mile, One Mile and Two Miles of a Well Site

This analysis examines distance from child care providers, schools, hospitals and nursing homes as a first-order approach to better understand the risk that fracking and shale oil and gas extraction poses to vulnerable populations. We chose to examine the number of facilities within one-half, one and two miles from a well site for the following reasons:

1. Studies have found elevated levels of methane and ethane in drinking water wells within one kilometer (0.6 miles) of a well site.⁹⁵
2. Researchers in Colorado have measured elevated levels of hazardous air pollutants at one-half mile distance from a well site or associated infrastructure.⁹⁶
3. Some of the effects of fracking, such as increased truck traffic volumes, are experienced at a community scale as hundreds of trucks drive on a well site’s surrounding roadways. The air pollution caused and the potential for accidents will affect all who live along their routes. The analysis does not attempt to estimate potential exposures to specific chemicals at specific distances from well sites.

Appendix A. Count by State

Arkansas

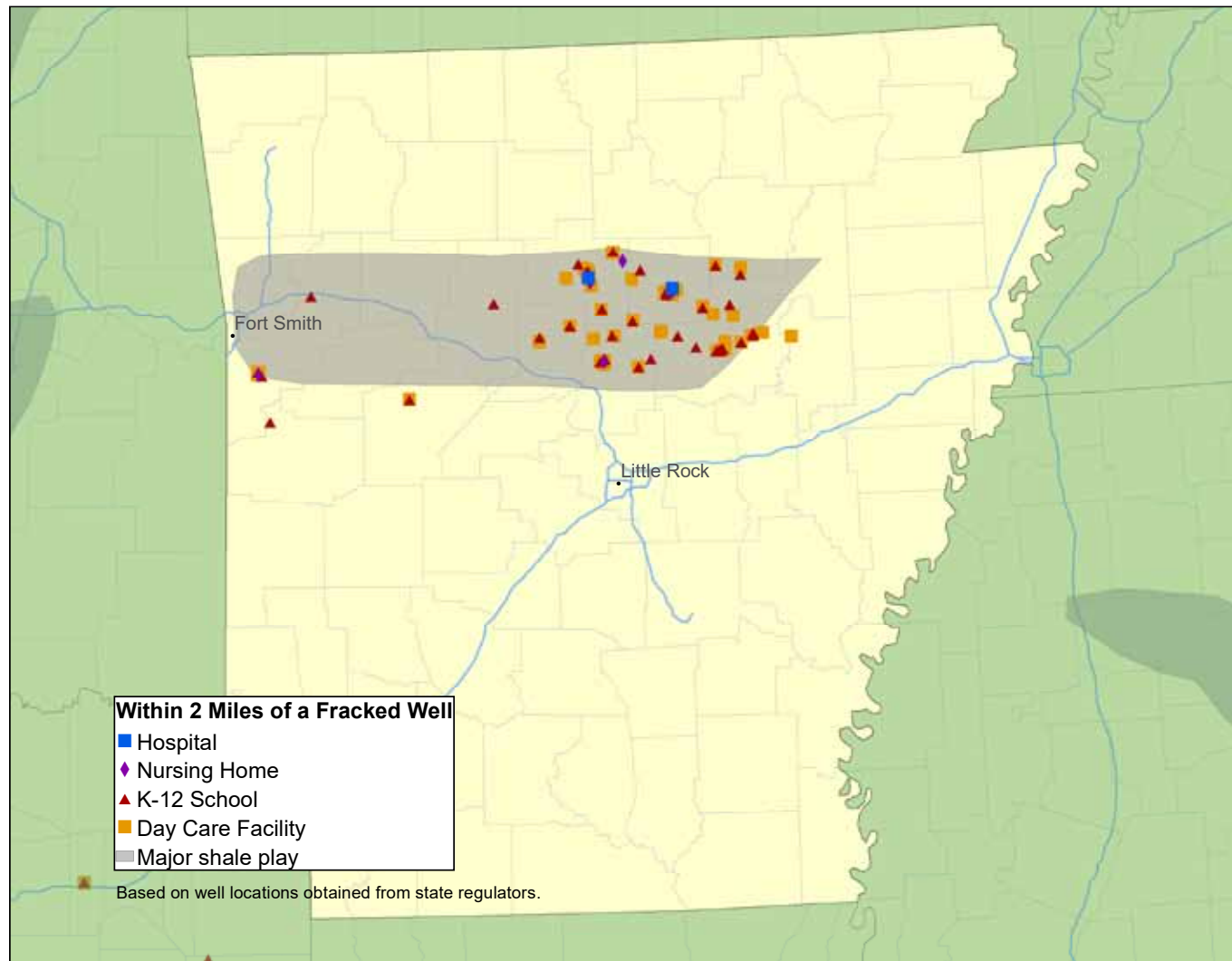


Table A-1. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Day care centers*	16	24	51
K-12 schools	18	30	60
K-12 students	5,574	8,708	22,916
Nursing homes	1	1	5
Hospitals	1	1	2

* Excludes home-based day care centers.

California

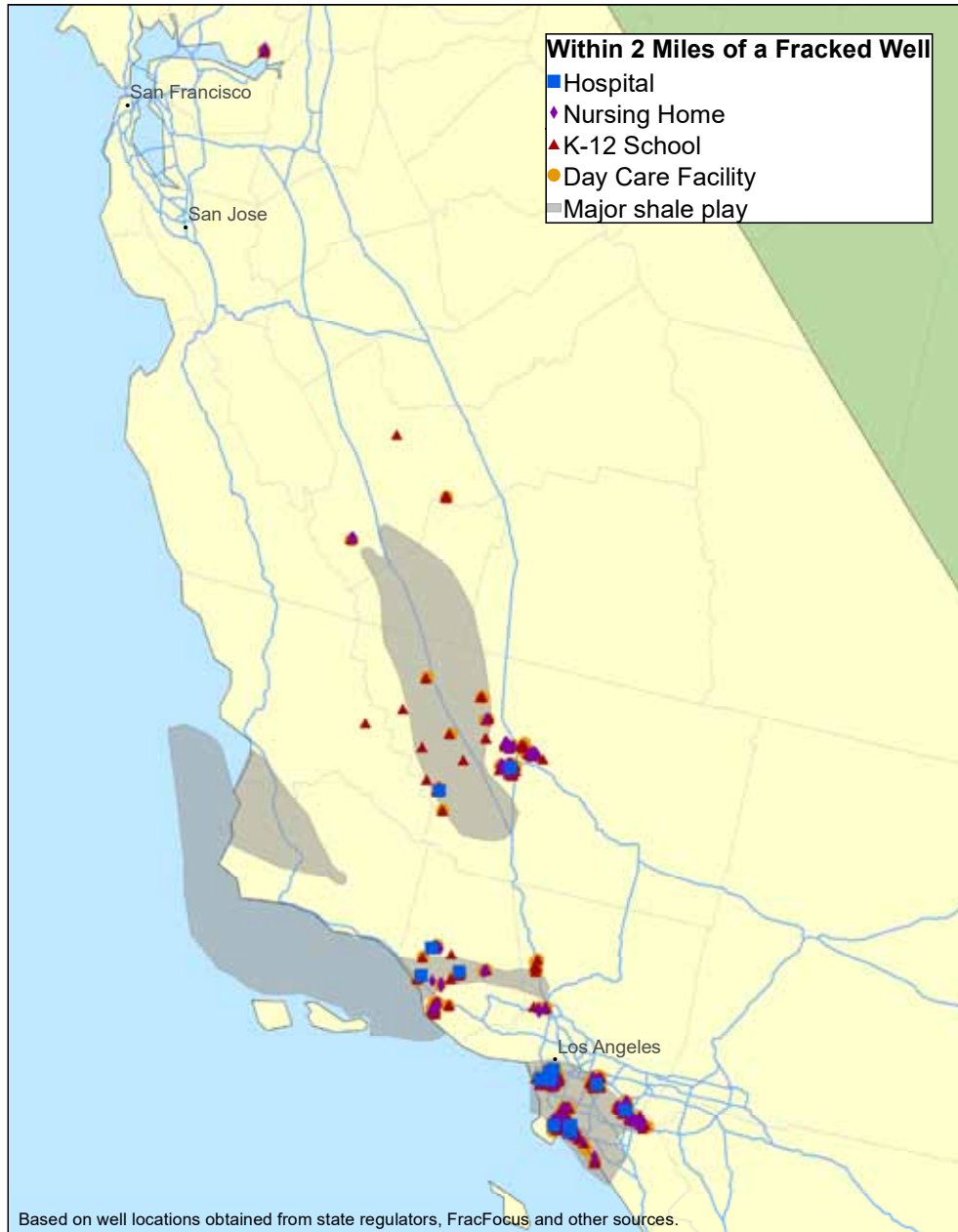


Table A-2. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Daycares*	29	118	385
K-12 schools	38	117	332
K-12 students	23,135	74,566	231,690
Nursing homes	25	87	277
Hospitals	3	10	16

* Excludes home-based day care centers.

Colorado

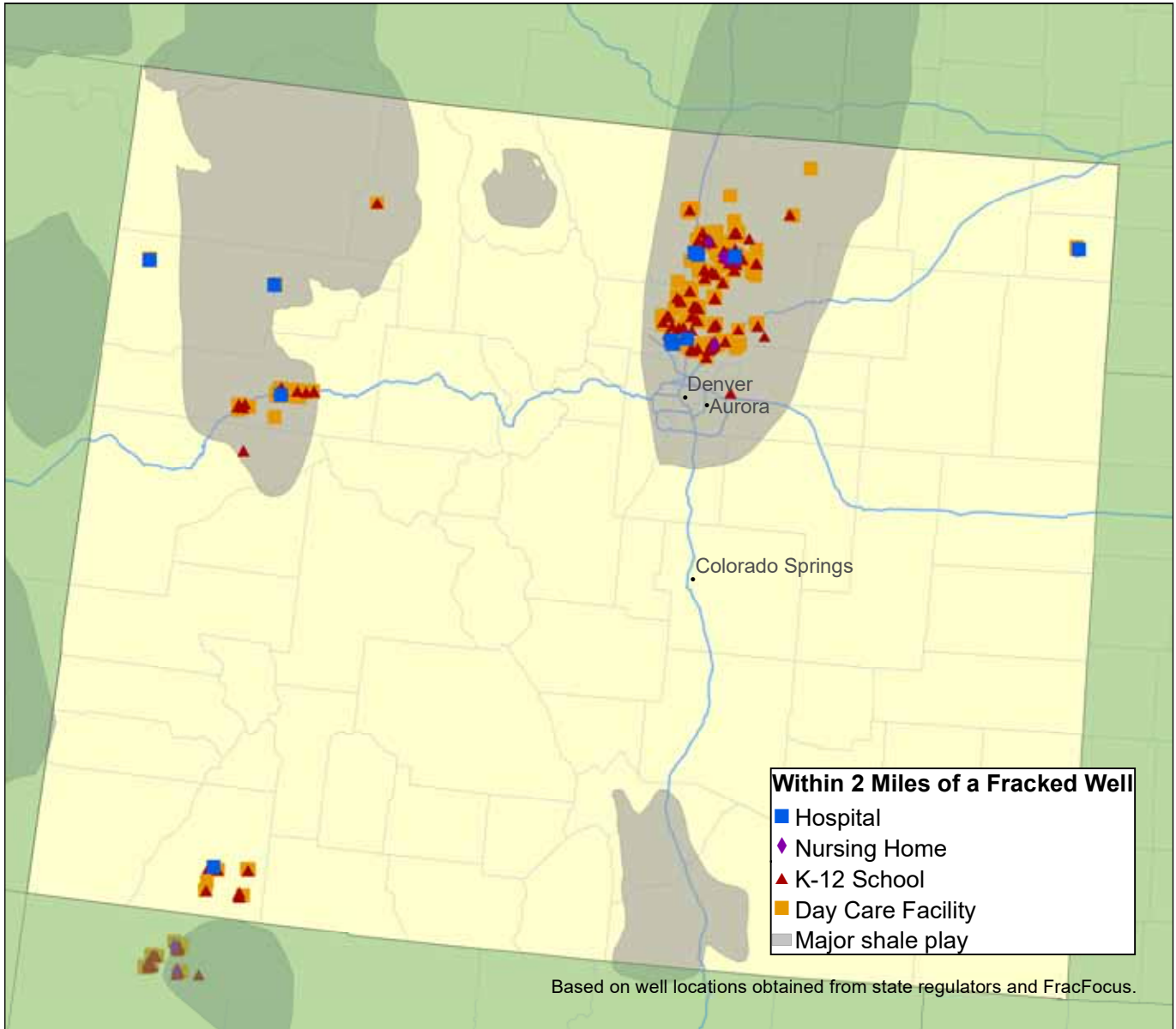


Table A-3. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Day care centers	157	302	466
K-12 schools	55	110	182
K-12 students	28,624	54,567	86,301
Nursing homes	1	4	13
Hospitals	1	3	11

New Mexico

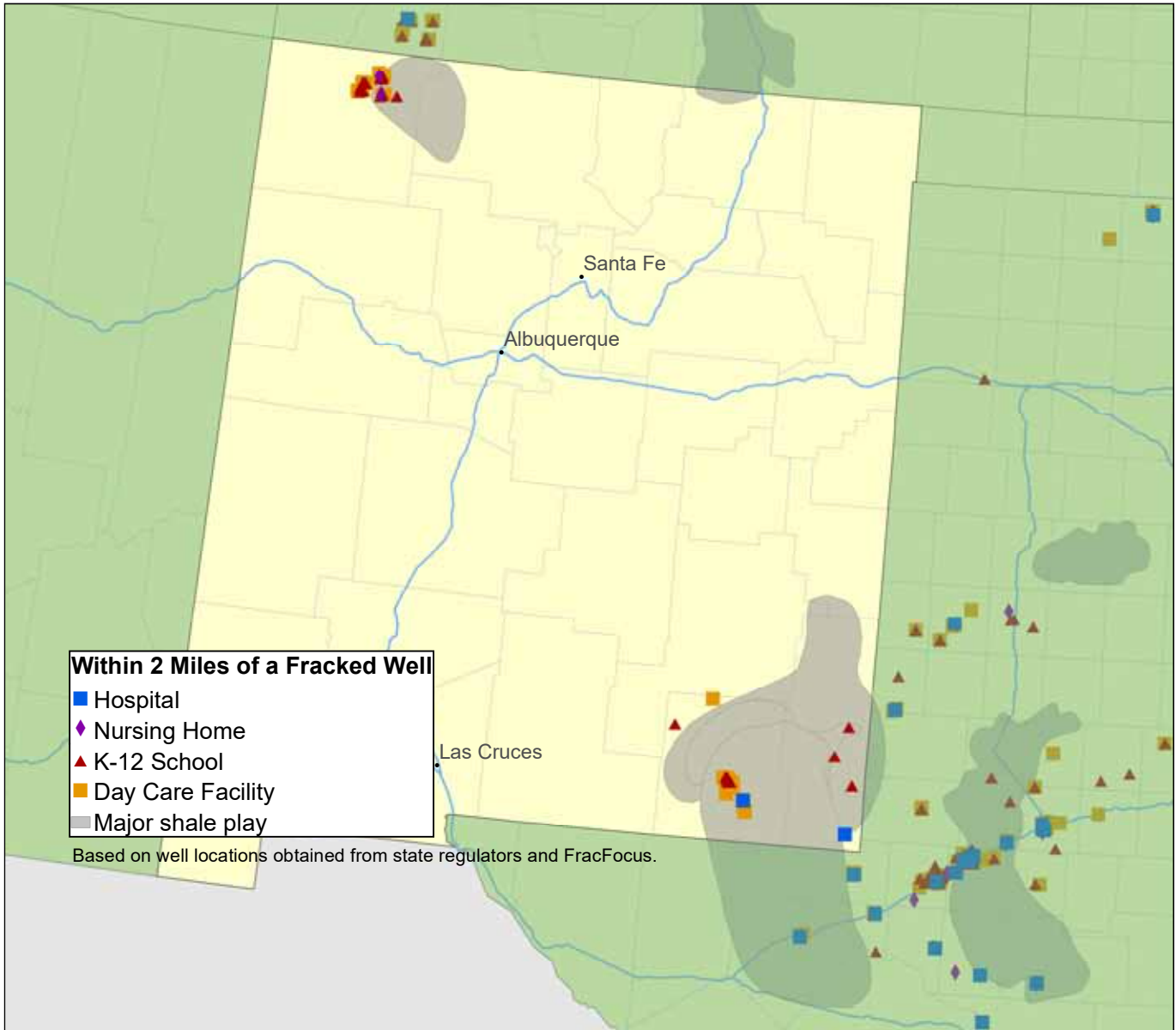


Table A-4. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Day care centers	5	22	61
K-12 schools	6	21	41
K-12 students	2,431	6,423	16,070
Nursing homes	0	1	2
Hospitals	0	1	2

North Dakota

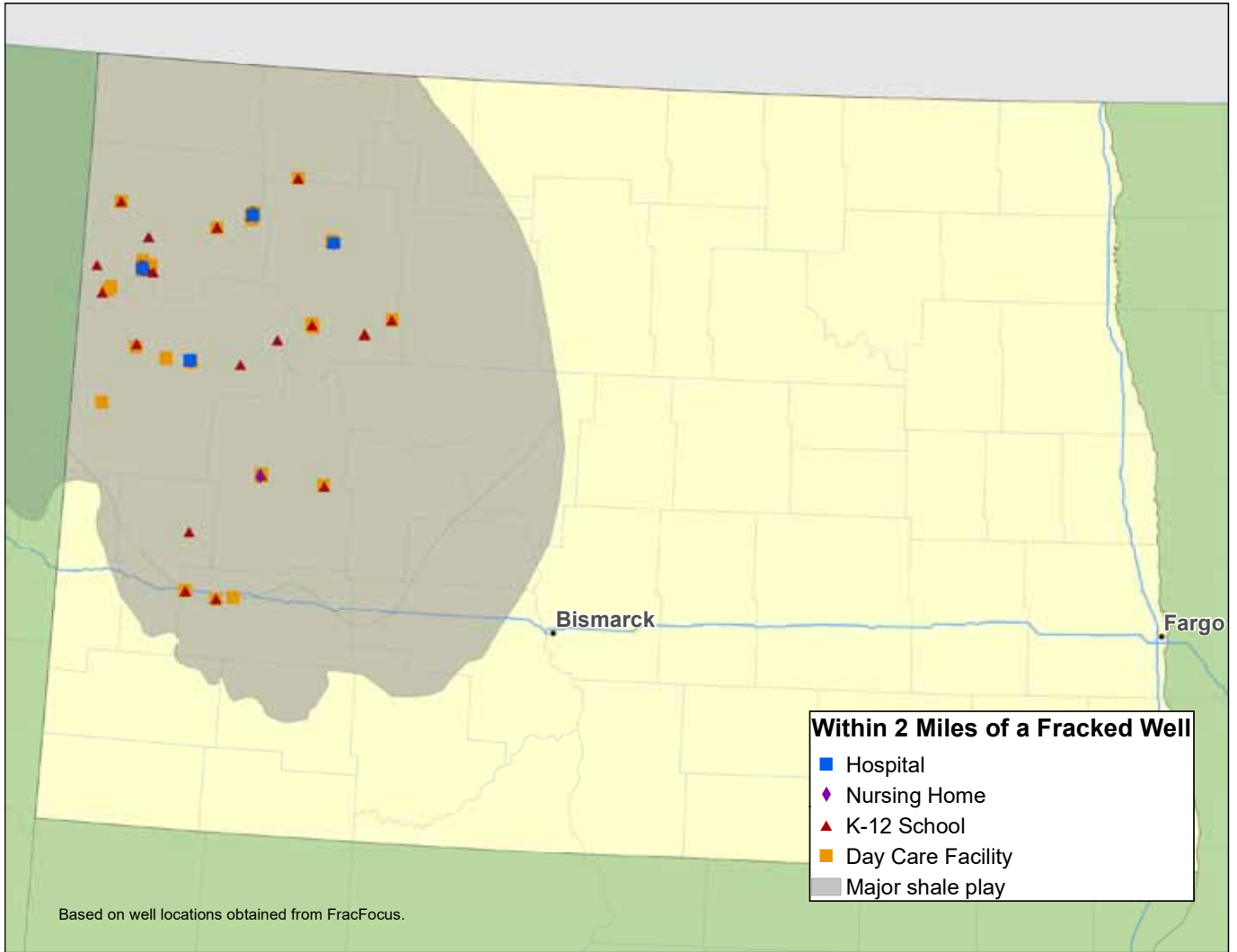


Table A-5. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Day care centers	5	38	86
K-12 schools	7	19	49
K-12 students	1,102	4,070	9,115
Nursing homes	0	2	5
Hospitals	0	1	4

Ohio

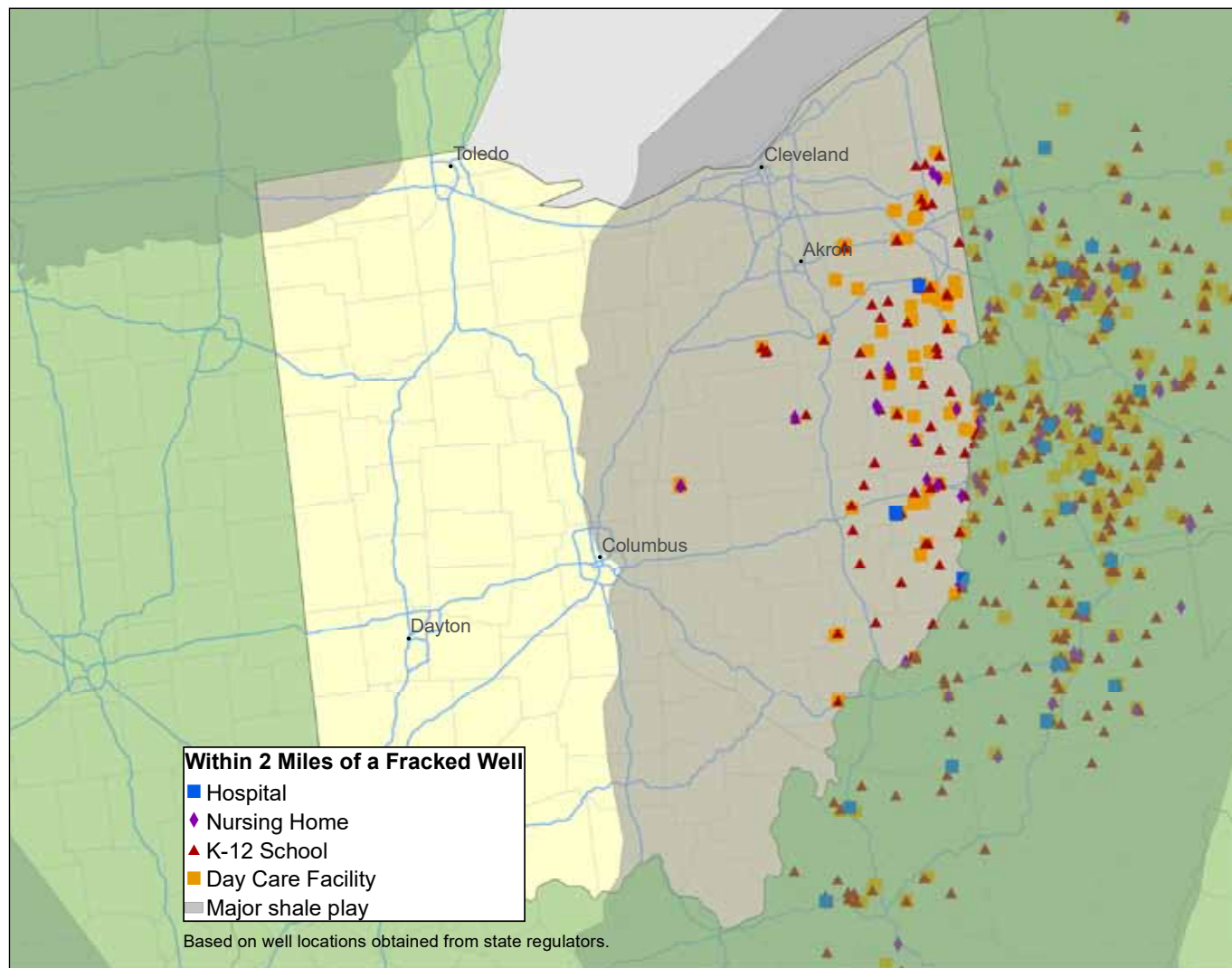


Table A-6. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Day care centers	7	30	81
K-12 schools	2	28	95
K-12 students	206	7,181	29,660
Nursing homes	0	3	19
Hospitals	0	3	4

Pennsylvania

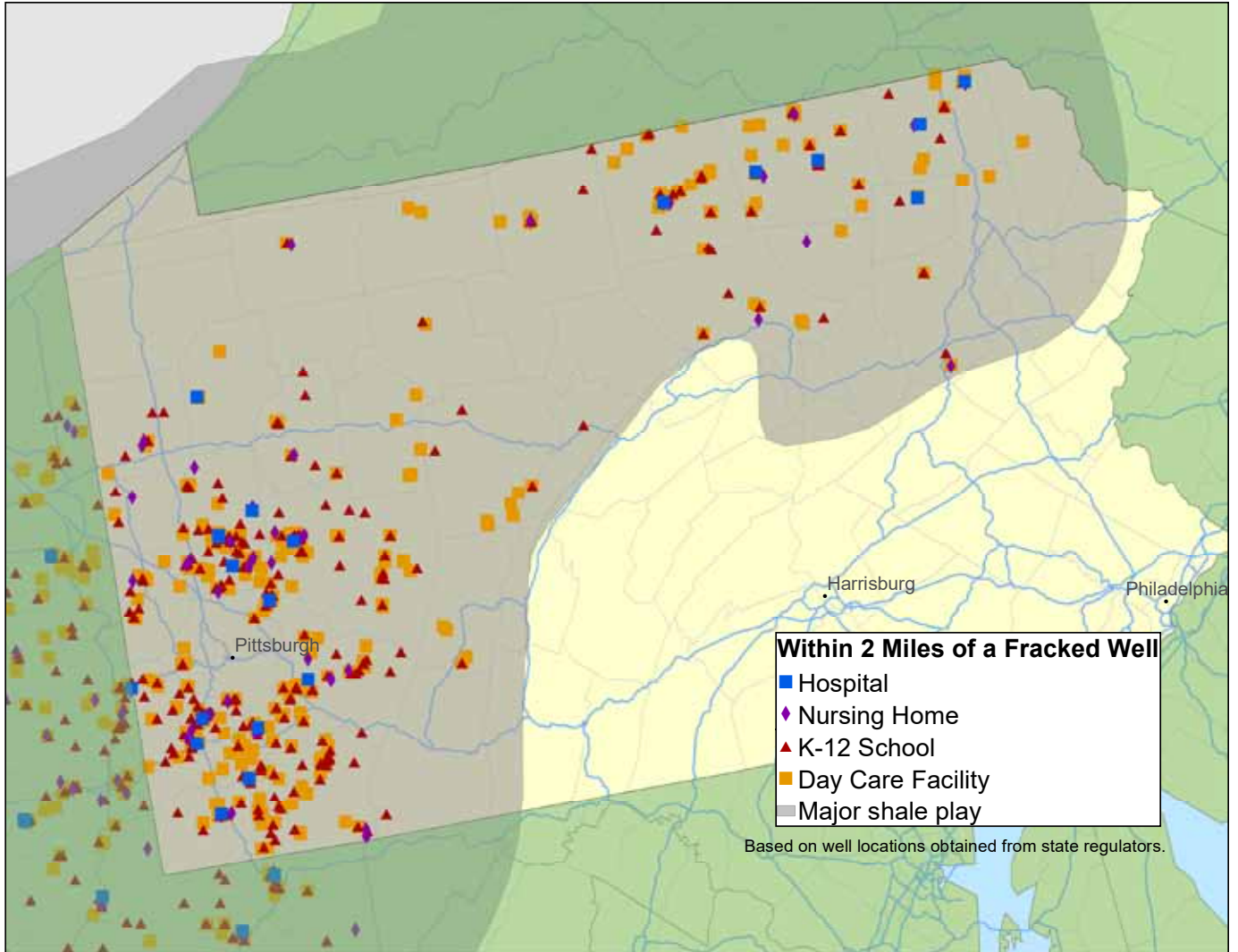


Table A-7. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Day care centers	41	135	360
K-12 schools	27	125	326
K-12 students	8,613	57,667	131,817
Nursing homes	3	15	51
Hospitals	2	6	20

Texas

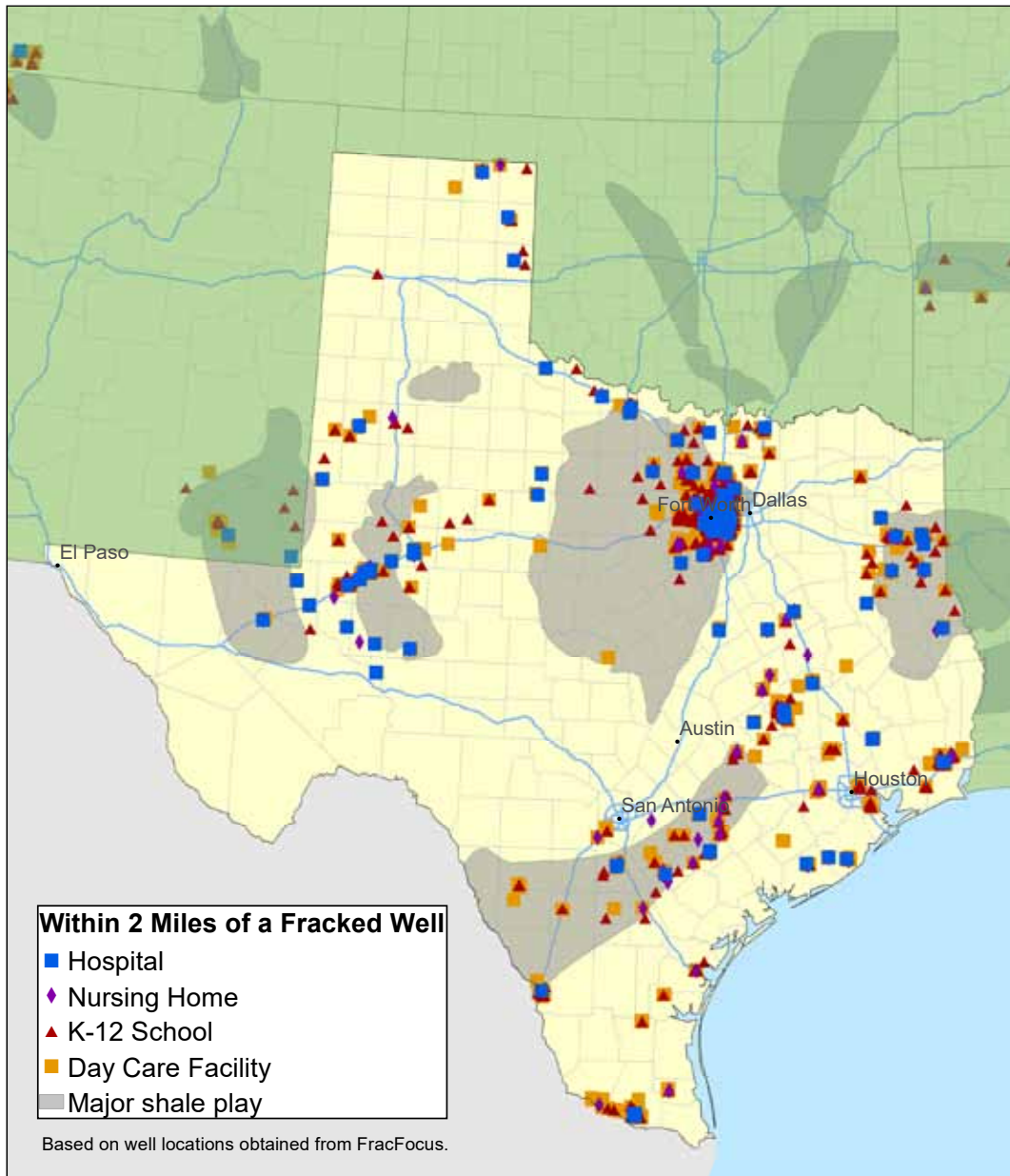


Table A-8. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Day care centers	444	1,240	2,145
K-12 schools	303	850	1,644
K-12 students	151,876	436,690	827,396
Nursing homes	45	110	191
Hospitals	26	72	126

West Virginia

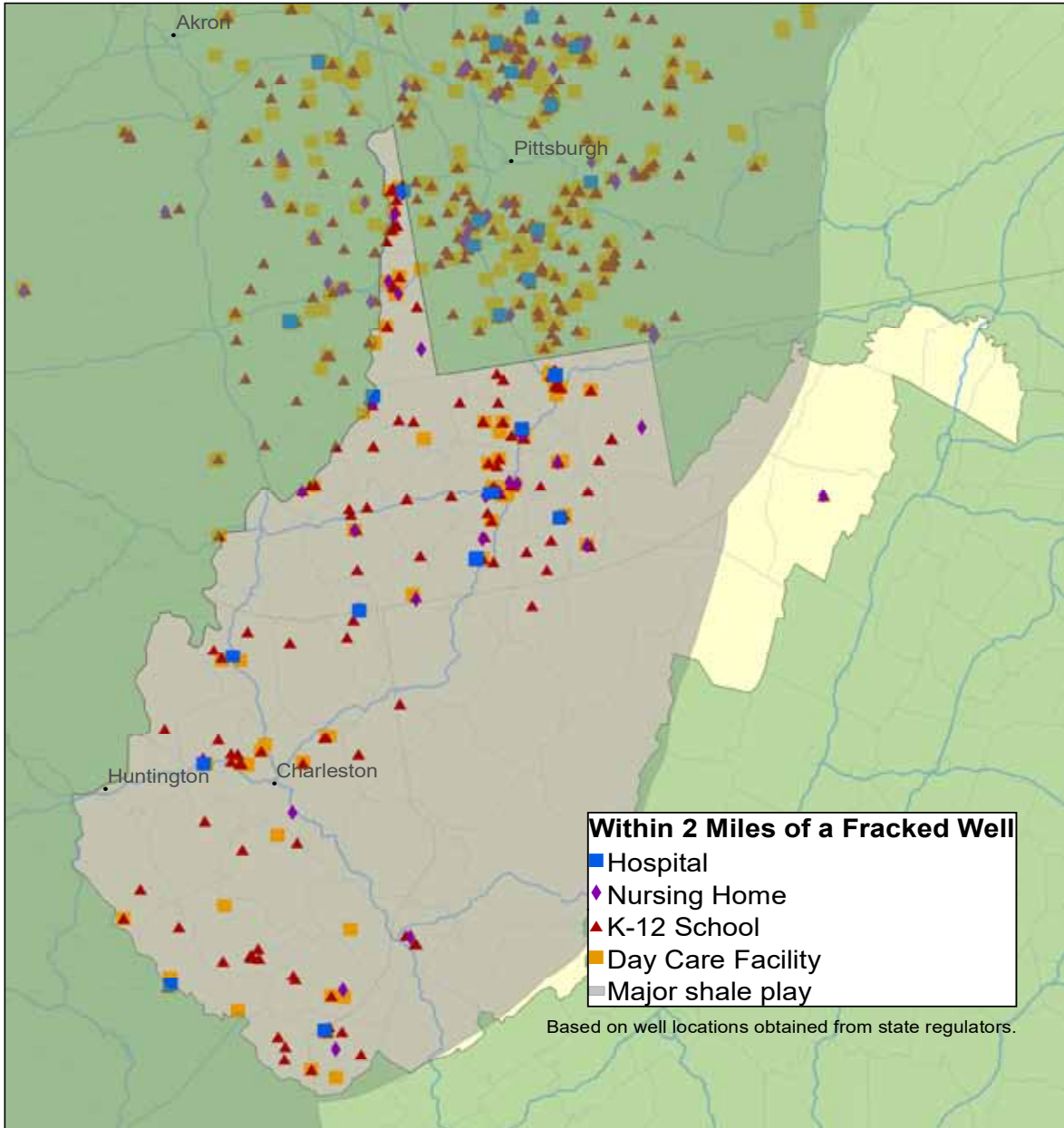


Table A-9. Number of Facilities and Students Close to a Fracked Well

Facility	Within one-half mile of a fracked well	Within 1 mile of a fracked well	Within 2 miles of a fracked well
Day care centers*	19	38	93
K-12 schools	28	76	177
K-12 students	8,343	24,172	62,404
Nursing homes	6	13	33
Hospitals	4	6	17

* Excludes home-based day care centers.

Notes

1. Nick Cahill, "Fracking Called Special Threat to Latino Kids," *Courthouse News Service*, 16 July 2015, archived at web.archive.org/web/20160831175219/http://www.courthousenews.com/2015/07/16/fracking-called-special-threat-to-latino-kids.htm.

2. Alejandro Davila Fragoso, "As Fracking Chemicals Reach a Creek, Companies Fight against a Fracking Waste Ban," *ClimateProgress*, 15 April 2016, archived at web.archive.org/web/20160803191552/http://think-progression.org/climate/2016/04/15/3768123/west-virginia-creek-fracking-pollution/.

3. Laura Paskus, "Oil Rigs near Schools Worry Some People on Navajo Nation," *Indian Country Today Media Network*, 29 October 2015, accessed at indiancountrytodaymedianetwork.com/2015/10/29/oil-rigs-near-schools-worry-some-people-navajo-nation-162243.

4. For details on how wells were counted, see methodology.

5. New York State Department of Environmental Conservation, *Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program: Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs*, Chapter 5.10, September 2009.

6. Location of shale plays is from U.S. Energy Information Administration, "Tight Oil and Shale Gas Plays," *Layer Information for Interactive State Maps*, 7 July 2016. Well locations: see methodology.

7. Irena Buka et al., "The Effects of Air Pollution on the Health of Children," *Paediatrics & Child Health*, 11(8):

513-516, October 2006, available online at www.ncbi.nlm.nih.gov/pmc/articles/PMC2528642/; Philip Landrigan and Lynn Goldman, "Children's Vulnerability to Toxic Chemicals: A Challenge and Opportunity to Strengthen Health and Environmental Policy," *Health Affairs*, 30(5): 842-850, doi: 10.1377/hlthaff.2011.0151, May 2011.

8. See Material Safety Data Sheets (MSDSs) for substances listed in Pennsylvania Department of Environmental Protection, Bureau of Oil and Gas Management, *Chemicals Used by Hydraulic Fracturing Companies in Pennsylvania for Surface and Hydraulic Fracturing Activities* (PDF), 30 June 2010, archived at web.archive.org/web/20151005134911/http://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/MarcellusShale/FracList6-30-2010.pdf. For example, the MSDS for benzene, a component of some industrial solvents and a component of diesel exhaust, is available from Fischer Scientific at fscimage.fishersci.com/msds/02610.htm.

9. Theo Colborn et al., "Natural Gas Operations from a Public Health Perspective," *International Journal of Human and Ecological Risk Assessment* 17(5): 1039-1056, November 2011.

10. Amparo Ferrero et al., "Benzene Exposure and Respiratory Health in Children: A Systematic Review of Epidemiological Evidences," *Journal of Pollution Effects & Control*, doi: 10.4172/2375-4397.1000114, 22 August 2014.

11. John F. Risher et al., "The Elderly as a Sensitive Population in Environmental Exposures: Making the Case," *Reviews of Environmental Contamination and Toxicology*, 207:95-157, doi: 10.1007/978-1-4419-6406-9_2, 2010.

12. Yoon-Hyeong Choi et al., "Urinary Benzene Metabolite and Insulin Resistance in Elderly Adults," *Science of the Total Environment*, doi: 10.1016/j.scitotenv.2014.02.121, March 2014.
13. Johanna Lepeule et al., "Chronic Exposure to Fine Particles and Mortality: An Extended Follow-up of the Harvard Six Cities Study from 1974 to 2009," *Environmental Health Perspectives* 120: 965–970, July 2012.
14. Gregory A. Wellenius et al., "Ambient Air Pollution and the Risk of Acute Ischemic Stroke," *Archives of Internal Medicine* 172:229-234, doi:10.1001/archinternmed.2011.732, February 2013.
15. See methodology of Elizabeth Ridlington, Tony Dutzik and Tom Van Heeke, Frontier Group, and Adam Garber and David Masur, PennEnvironment Research & Policy Center, *Dangerous and Close: Fracking Near Pennsylvania's Most Vulnerable Residents*, October 2015.
16. Ibid.
17. Laura Arenschiold, "Most Allowed Back Home after Fracking-Well Blowout in Eastern Ohio," *The Columbus Dispatch*, 30 October 2014, archived at web.archive.org/web/20160718233704/http://www.dispatch.com/content/stories/local/2014/10/29/well_explosion.html.
18. Susan Schrock, "Officials: Arlington Gas Well Sealed after 'Very Serious' Mishap," *Star-Telegram*, 12 April 2015.
19. Laura Legere, "Wyoming County Well Malfunction Causes Spill, Evacuation," *Times-Tribune (Scranton, PA)*, 15 March 2013.
20. CBS Denver, *Explosion Kills 1, Hurts 2 in Western Colorado*, 25 June 2012, archived at web.archive.org/web/20160722205900/http://denver.cbslocal.com/2012/06/25/explosion-kills-1-hurts-2-in-western-colorado/.
21. Marie Cusick et al., "Man Injured after Pipeline Explodes near his Home in Western Pa.," *StateImpact Pennsylvania*, 29 April 2016, archived at web.archive.org/web/20160809213840/https://stateimpact.npr.org/pennsylvania/2016/04/29/1-injured-after-gas-pipeline-explosion-in-western-pa/.
22. Frances Madeson, "Exploding Fire Consumes Oil Field in San Juan Basin; Cause Unknown," *Indian Country Today Media Network*, 14 July 2016.
23. North Carolina Department of Transportation, [DRAFT] *Report to the Joint Legislative Energy Policy Commission and the Joint Legislative Transportation Oversight Committee*, December 2014; John Murawski, "DOT: More than 1,600 Trucks Could Be Required for One NC Fracking Site," *The News & Observer* (Raleigh, NC), 8 January 2015.
24. M Penden et al., World Health Organization, *World Report on Road Traffic Injury Prevention*, 2004, available at whqlibdoc.who.int/publications/2004/9241562609.pdf.
25. Kevin Begos and Jonathan Fahey, "As Fracking Boom Continues, Increased Road Traffic Causing Uptick In Deadly Accidents," *Associated Press and Huffington Post*, 5 May 2014.
26. Jove Graham et al., "Increased Traffic Accident Rates Associated with Shale Gas Drilling in Pennsylvania," *Accident Analysis & Prevention*, 74: 203-209, doi: 10.1016/j.aap.2014.11.003, January 2015.
27. Dianne Rahm, Billy Fields and Jayce L. Farmer, "Transportation Impacts of Fracking in the Eagle Ford Shale Development in Rural South Texas: Perceptions of Local Government Officials," *Journal of Rural & Community Development*, 10(2): 78-99, 2015.
28. EEMM Van Kempen et al., "The Association between Noise Exposure and Blood Pressure and Ischemic Heart Disease: A Meta-Analysis," *Environmental Health Perspectives* 110: 307-317, March 2002; W Babisch et al., "Traffic Noise and Risk of Myocardial Infarction," *Epidemiology* 16: 33-40, 2005.
29. Ron Chepesiuk, "Missing the Dark: Health Effects of Light Pollution," *Environmental Health Perspectives* 117(1): A20–A27, January 2009.

30. Tanja Srebrotnjak and Miriam Rotkin-Ellman, Natural Resources Defense Council, *Fracking Fumes: Air Pollution from Hydraulic Fracturing Threatens Public Health and Communities*, December 2014.

31. ShaleTest Environmental Testing, *Project Playground: Cleaner Air for Active Kids*, September 2014, archived at web.archive.org/web/20160922012256/http://www.shaletest.org/wp-content/uploads/2014/09/Project-PlaygroundPatagoniaReport-5-1.pdf.

32. Carsten Warneke et al., "Volatile Organic Compound Emissions from the Oil and Natural Gas Industry in the Uintah Basin, Utah: Oil and Gas Well Pad Emissions Compared to Ambient Air Composition," *Atmospheric Chemistry and Physics*, 14: 10977-10988, doi:10.5194/acp-14-10977-2014, 17 October 2014.

33. Theo Colborn et al., "An Exploratory Study of Air Quality Near Natural Gas Operations," *Human and Ecological Risk Assessment: An International Journal*, dx.doi.org/10.1080/10807039.2012.749447, 26 November 2012.

34. Lisa McKenzie et al., "Human Health Risk Assessment of Air Emissions from Development of Unconventional Natural Gas Resources," *Science of the Total Environment*, dx.doi.org/10.1016/j.scitotenv.2012.02.018, 10 February 2012, as cited in David Brown, Celia Lewis and Beth Weinberger, "Human Exposure to Unconventional Natural Gas Development: A Public Health Demonstration of Periodic High Exposure to Chemical Mixtures in Ambient Air," *Journal of Environmental Science and Health*, dx.doi.org/10.1080/10934529.2015.992663, 3 March 2015.

35. Earthworks, *Reckless Endangerment While Fracking the Eagle Ford*, September 2013.

36. Shannon Ethridge, Texas Commission on Environmental Quality, *Memorandum to Mark R. Vickery Re: Health Effects Review of Barnett Shale Formation Area Monitoring Projects*, 27 January 2010.

37. New York State Department of Environmental Conservation, *Final Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program: Regulatory Program for Horizontal*

Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs, Chapter 6, May 2015.

38. Seth Shonkoff, Jake Hays and Madelon Finkel, "Environmental Public Health Dimensions of Shale and Tight Gas Development," *Environmental Health Perspectives*, August 2014.

39. See note 37.

40. J. Pekkanen et al., "Daily Variations of Particulate Air Pollution and ST-T Depressions in Subjects with Stable Coronary Heart Disease: The Finnish ULTRA Study," *American Journal of Respiratory Critical Care Medicine* 161: A24, 2000.

41. W.J. Gauderman et al., "The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age," *The New England Journal of Medicine* 351: 1057-67, 9 September 2004.

42. C. Pope et al., "Lung Cancer, Cardiopulmonary Mortality, and Long-Term Exposure to Fine Particulate Air Pollution," *Journal of the American Medical Association* 287: 1132-1141, 2002.

43. Don Hopey, "Gas Flare to Light Up Part of Washington County," *Pittsburgh Post-Gazette*, 1 December 2014.

44. See note 5, Chapter 5.16.

45. Assuming year-round operation, plus emission factors, per New York State Department of Environmental Conservation, *Revised Draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program: Well Permit Issuance for Horizontal Drilling And High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs*, Chapter 6.5, 7 September 2011.

46. U.S. House of Representatives, Committee on Energy and Commerce, *Chemicals Used in Hydraulic Fracturing*, April 2011; See note 38.

47. See note 5, Chapter 6.5.

48. Joan Casey et al., "Predictors of Indoor Radon Concentrations in Pennsylvania, 1989–2013," *Environmental Health Perspectives*, 123 (11): 1130-1137, dx.doi.org/10.1289/ehp.1409014, November 2015.
49. U.S. Environmental Protection Agency, *Smog – Who Does it Hurt? What You Need to Know About Ozone and Your Health*, n.d.
50. See note 45.
51. See note 30.
52. Timothy Vinciguerra et al., "Regional Air Quality Impacts of Hydraulic Fracturing and Shale Natural Gas Activity: Evidence from Ambient VOC Observations," *Atmospheric Environment* 110: 144-150, doi:10.1016/j.atmosenv.2015.03.056, June 2015.
53. Ibid.
54. Anirban A. Roy, Peter J. Adams and Allen L. Robinson, "Air Pollutant Emissions from the Development, Production, and Processing of Marcellus Shale Natural Gas," *Journal of the Air & Waste Management Association* 64(1): 19-37, 2014.
55. Eric Esswein et al., "Worker Exposure to Crystalline Silica During Hydraulic Fracturing," *NIOSH Science Blog*, 23 May 2012, accessed at blogs.cdc.gov/niosh-science-blog/2012/05/23/silica-fracking/.
56. Elise G. Elliott et al., "A Systematic Evaluation of Chemicals in Hydraulic-Fracturing Fluids and Wastewater for Reproductive and Developmental Toxicity," *Journal of Exposure Science and Environmental Epidemiology*, doi: 10.1038/jes.2015.81, 6 January 2016.
57. For example, see Materials Safety Data Sheets for Diesel Fuel (CAS No. 68476-34-6), Benzene (CAS No. 71-43-2), and 2-butoxyethanol (CAS No. 111-76-2).
58. See note 9.
59. See note 37, Chapter 5.11.
60. International Agency for Research on Cancer, *Overall Evaluations of Carcinogenicity to Humans: Group 1: Carcinogenic to Humans*, accessed at monographs.iarc.fr/ENG/Classification/index.php, 12 April 2013.
61. U.S. Environmental Protection Agency, *Learn About Lead*, accessed 5 October 2015, archived at web.archive.org/web/20151005135504/http://www2.epa.gov/lead/learn-about-lead.
62. S.A. Gross et al., "Analysis of BTEX Groundwater Concentration from Surface Spills Associated with Hydraulic Fracturing Operations," *Journal of the Air & Waste Management Association* 63: 424-43, January 2013.
63. See note 37, Chapter 5.11.
64. Perma-Fix Environmental Services, Inc., and Pennsylvania Department of Environmental Protection, *Technologically Enhanced Naturally Occurring Radioactive Materials (Tenorm) Study Report*, January 2015.
65. Alex Nussbaum, "Radioactive Waste Booms with Fracking as New Rules Mullied," *Bloomberg*, 16 April 2014.
66. See note 37, Chapter 5.9.
67. John Flesher, "Fracking Boom Linked to Increasing Wastewater Spills," *Claims Journal*, 9 September 2015, archived at web.archive.org/web/20160720201050/http://www.claimsjournal.com/news/national/2015/09/09/265627.htm.
68. "Pennsylvania Seeks Record \$4.5m Fine on 'Leaking' Fracking Waste Site," *The Guardian*, 7 October 2014.
69. Brian Drollette et al., "Elevated Levels of Diesel Range Organic Compounds in Groundwater near Marcellus Gas Operations Are Derived from Surface Activities," *PNAS*, 112 (43): 13184-13189, doi: 10.1073/pnas.1511474112, 16 September 2016.
70. The Pennsylvania Department of Environmental Protection has confirmed 243 cases of water supply contamination as a result of fracking activities; due to

redactions in the supporting documents, it is not possible to tell how many were due to failures of fracking wells, as opposed to other potential causes such as wastewater spills or wells going dry. Pennsylvania Department of Environmental Protection, *Water Supply Determination Letters*, 29 August 2014, archived at web.archive.org/web/20151005135003/http://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/OilGasReports/Determination_Letters/Regional_Determination_Letters.pdf.

71. Laura Legere, "Sunday Times Review of DEP Drilling Records Reveals Water Damage, Murky Testing Methods," *Times Tribune* (Scranton, PA), 19 May 2013.

72. Robert B. Jackson et al., "Increased Stray Gas Abundance in a Subset of Drinking Water Wells near Marcellus Shale Gas Extraction," *PNAS*, doi:10.1073/pnas.1221635110, 24 June 2013.

73. Bruce Finley, "Parachute Creek Benzene Value Exceeds Safe Federal Level," *Denver Post*, 2 May 2013, archived at web.archive.org/web/20160722211224/http://www.denverpost.com/2013/05/02/parachute-creek-benzene-value-exceeds-safe-federal-level/.

74. Tom Myers, "Potential Contaminant Pathways from Hydraulically Fractured Shale to Aquifers," *Ground Water*, doi: 10.1111/j.1745-6584.2012.00933.x, published online 17 April 2012.

75. Nathaniel R. Warner et al., "Geochemical Evidence for Possible Natural Migration of Marcellus Formation Brine to Shallow Aquifers in Pennsylvania," *PNAS*, 109 (30): 11961-11966, doi: 10.1073/pnas.1121181109, 24 July 2012.

76. Pennsylvania Alliance for Clean Water and Air, *List of the Harmed*, updated 17 June 2016, available at pennsylvaniaallianceforcleanwaterandair.wordpress.com/the-list/.

77. Sara Rasmussen et al., "Association between Unconventional Natural Gas Development in the Marcellus Shale and Asthma Exacerbations," *JAMA Internal Medicine*, doi:10.1001/jamainternmed.2016.2436, 18 July 2016.

78. L.M. McKenzie et al., "Human Health Risk Assessment of Air Emissions from Development of Unconventional Natural Gas Resources," *Science of the Total Environment*, 424: 79-87, 1 May 2012.

79. Ibid.

80. Peter M. Rabinowitz et al., "Proximity to Natural Gas Wells and Reported Health Status: Results of a Household Survey in Washington County, Pennsylvania," *Environmental Health Perspectives*, 123(1): 21-26, doi: 10.1289/ehp.1307732, January 2015.

81. Pennsylvania Department of Environmental Protection, *Spud Data Report*, accessed 23 May 2016 at www.dep.pa.gov/DataandTools/Reports/.

82. Pennsylvania Department of Environmental Protection, Office of Oil and Gas Management, Division of Compliance and Data Administration, *Oil and Gas Reports Data Dictionary*, 16 May 2016, available at files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/OilGasReports/HelpDocs/SSRS_Report_Data_Dictionary/DEP_Oil_and_GAS_Reports_Data_Dictionary.pdf.

83. West Virginia Department of Environmental Protection, Technical Applications and GIS Unit, *Oil and Gas Permits* (shapefile), accessed 31 May 2016 at tagis.dep.wv.gov/home/node/21.

84. Texas A&M University Geoservices, processed June 2016, available at www.geoservices.tamu.edu/.

85. U.S. Department of Education, National Center for Education Statistics, *Search for Public Schools*, accessed 5 May 2016 at nces.ed.gov/ccd/schoolsearch/. Original data comes from the NCES Common Core of Data, Public School Data, for the 2014-2015 school year.

86. U.S. Department of Education, National Center for Education Statistics, *Search for Private Schools*, accessed 5 May 2016 at nces.ed.gov/surveys/pss/privateschoolsearch/. Original data comes from the Private School Universe Survey for the 2013-2014 school year.

87. Department of Homeland Security, Homeland Infrastructure Foundation-Level Data, *Public Schools* (shapefile), 2 February 2015, available at hifld-dhs-gii.opendata.arcgis.com/datasets/1f74a16c80e949c0adfd7866684b83c5_0, and Department of Homeland Security, Homeland Infrastructure Foundation-Level Data, *Private Schools* (shapefile), 3 February 2015, available at hifld-dhs-gii.opendata.arcgis.com/datasets/36695bf035fb4e98a88dbdcbaca2c40d_0.
88. ESRI, Homeland Infrastructure Foundation-Level Data (HIFLD) to the Regions (HTTR) Staff (Mid-Atlantic, Southeast, Midwest, Northeast, New England), *Day Care Centers*, downloaded 17 June 2016 from www.arcgis.com/home/item.html?id=c87c1c687e274285aeefdf88d53c8703.
89. Public Records Coordinator, Ohio Department of Job and Family Services, personal communication, 12 May 2016.
90. Pennsylvania Office of Child Development and Early Learning, Research Department, downloaded 4 May 2016 from www.ocdelresearch.org.
91. Texas Department of Family and Protective Services, Child Care Licensing, *Texas Child Care Search* webpage, downloaded 10 May 2016 from www.dfps.state.tx.us/Child_Care/Search_Texas_Child_Care/ppFacilitySearchResults.asp.
92. Lisa Ertl, Division of Early Care and Education, Department of Health and Human Services, State of West Virginia, personal communication, 7 June 2016.
93. U.S. Department of Health and Human Services, *U.S. Department of Health & Human Services: Healthcare Facilities*, 2012, downloaded 17 June 2016 from www.arcgis.com/home/item.html?id=b3813b2d3a054c378247bf32bcd8d203.
94. Centers for Medicare & Medicaid Services, *Nursing Home Compare Datasets: Provider Info*, accessed 4 May 2016 at data.medicare.gov/Nursing-Home-Compare/Provider-Info/4pq5-n9py.
95. See note 72.
96. See note 78.

Ferrel, Mimi

From: Monica Embrey <monica.embrey@sierraclub.org>
Sent: Monday, October 26, 2020 2:08 PM
To: Public Comment at Culver City; Sahli-Wells, Meghan; Fisch, Alex; Melanie Traxler
Cc: David Haake
Subject: 10/26/2020 A-4: Vote Yes on Oil Drilling Subcommittee Recommendations
Attachments: Sierra Club - Culver City Amortization Letter - October 26 2020.pdf

Dear Honorable Mayor and Culver City Councilmembers,

Please see our comment letter on the Oil Drilling Subcommittee Recommendations attached. We are writing on behalf of the 63,000 Sierra Club members and supporters across Los Angeles County in support of the Oil Drilling Subcommittee's recommendations to pass a resolution declaring the City Council's intent to establish an approximate five-year phase-out period for the amortization and removal of nonconforming oil and gas activities within the City's portion of the Inglewood Oil Field. We further encourage the City Council to ensure that it happens as quickly as possible to protect our health, safety, environment and economy.

Much thanks,
Monica and David

--



Monica Mariko Embrey (*Pronouns: she/her/hers*)
Associate Director
Beyond Dirty Fuels Campaign
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[773-419-0963](tel:773-419-0963) (C)

"If you have come here to help me, you are wasting your time. But if you have come because your liberation is bound up with mine, then let us work together." -Aboriginal Australian activists



Submitted electronically via email

Culver City City Council
9770 Culver Blvd,
Culver City, CA 90232

Re: City Council to Consider Oil Drilling Subcommittee Recommendation to Evaluate the Establishment of an Approximate Five-Year Phase-Out Period for the Amortization of Nonconforming Oil and Gas Uses within the Culver City Portion of the Inglewood Oil Field

October 26, 2020

Dear Honorable Mayor and Culver City Councilmembers,

We are writing on behalf of the 63,000 Sierra Club members and supporters across Los Angeles County **in support of the Oil Drilling Subcommittee's recommendations** to pass a resolution declaring the City Council's intent to establish an approximate five-year phase-out period for the amortization and removal of nonconforming oil and gas activities within the City's portion of the Inglewood Oil Field. **We further encourage the City Council to ensure that it happens as quickly as possible to protect our health, safety, environment and economy.**

The City Council's recently commissioned [Capital Investment Amortization Study](#) by Baker and O'Brien indicates that the City could direct Sentinel Peak Resources to end oil and gas production at the Inglewood Oil Field as soon as January 2021. This should be completed in a manner that ensures previous and current operators are responsible for the full costs of well plugging, abandonment, and full remediation of the site, not Culver City taxpayers. Furthermore, the agreement covering the costs of well plugging and abandonment should include living wage compensation for a properly trained and unionized workforce with preference for hiring local workers. This could be part of a just transition for the oil field workforce. We understand the intention of the Oil Drilling Subcommittee recommendation is for all of these processes to be completed within an approximate five-year timeframe.

Health Threats of Neighborhood Oil Drilling

We know that neighborhood oil drilling is dangerous and poses a host of serious risks to our health and the environment. Many peer-reviewed studies link exposure to oil and gas drilling to a host of health impacts, including nose bleeds, headaches, eye irritation, increased risk of asthma and other respiratory illnesses, preterm births and high-risk pregnancies, cancer and premature death. The majority of these studies noted more hazards, risks and health impacts

due to increase in exposure from both closer proximity and higher well density. The proximity and density of oil and gas development in Culver City and the surrounding area is often as high or higher than that of oil and gas development associated with health impacts in studies outside of the region.¹

Oil and gas extraction produces toxic air pollutants, such as volatile organic compounds (VOCs) like benzene, toluene, ethylbenzene and xylene (BTEX), formaldehyde, fine and ultra-fine particulate matter, hydrogen sulfide, crystalline silica, methanol, and hydrofluoric acid. Other potential harms from urban oil drilling include water contamination, light and noise pollution, spills of toxic chemicals, and explosions. Ending drilling operations near sensitive places is necessary to avoid these serious public health risks.

As COVID-19 continues to spread across California, early research is showing the disproportionate impact the virus is having in communities burdened by air pollution and pre-existing health conditions. People sheltering in place in close proximity to oil and gas facilities are facing increased health risks by staying home. Preliminary research from Harvard University indicates that COVID-19 mortality rates are higher in areas with elevated levels of fine particulate matter air pollution over the long term. Now more than ever, California must act to reduce exposure to pollution and improve public health – particularly in communities most impacted by COVID-19.

Oil and gas production in the Inglewood Oil Field has a long history of incidents that have adversely affected the health and safety of surrounding communities. This includes the 1963 Baldwin Hills Dam failure that resulted in the deaths of five individuals and destruction of 277 homes. More recently on November 22nd, 2018 - as families in the Greater Baldwin Hills region sat down for Thanksgiving dinner, a containment tank spilled in the Inglewood Oil Field, releasing a cloud of toxic benzene into the air that exposed residents to a known carcinogen. The exposure reached close to seven times the legal limit set by the EPA at the oil field fence line and reached over 4,100 feet from the spill. Roughly four months later, on April 1, 2019, another spill occurred at the Inglewood Oil Field, causing a hazardous oil-water overflow that leaked into a community dog park, blocked traffic on Jefferson Avenue, and spilled into a storm drain. If not for the valiant efforts of the Culver City Fire Department, the spill could have contaminated the Ballona Creek, which empties into Santa Monica Bay.

End Production In January 2021 and Keep Communities Safe

For this reason, **we request that oil and gas operations be phased out as expeditiously as possible and by January 2021 as indicated in the Capital Investment Amortization Study**, while we understand the site remediation and just transition processes may take more time to do properly and comprehensively.

¹ Shonkoff, S.B.C., et al. Human health and oil and gas development: A review of the peer-reviewed literature and assessment of applicability to the City of Los Angeles (2019), available at <https://www.psehealthyenergy.org/wp-content/uploads/2019/08/Literature-Review.pdf>.

While oil and gas operations continue, there should be an adequate Emergency Response Plan (ERP) in place that includes a public information and education program to ensure that residents have appropriate personal protective measures and supplies in place to protect their safety in the event of an incident affecting public health. The ERP should also include the development of site-specific spill and release plans for all oil production and transportation operations in and around the oil field.

In addition, although a Community Alert Notification (CAN) system is in place to alert residents of the most serious incidents, ensuring that all impacted residents would be contacted in the event of any spill, even those that do not require evacuation, is critical to protect public health. As an example, the November 22, 2018 spill exposed residents to toxic benzene emissions almost seven times the EPA legal limit and no public announcement was made to inform the community about this spill. We support the call of local residents who have testified at public meetings to ask for notification to include exposure to known carcinogens and other toxins from oil operations. A system of enhanced communication, such as online real-time web-based alerts or Reverse 911, for risky operations and incidents should be implemented to empower residents to take health protective measures. This issue of transparency and fair access is of primary environmental justice concern.

We applaud the recent actions taken by the Culver City City Council to put the health and well-being of its citizens and the environment over the interests of large fossil fuel companies. By spearheading the initiative to phase out oil drilling within city limits, this city council is in the process of transforming Culver City from an oil town into a nationwide leader in environmental justice. But that process is not complete. We are at a critical juncture where swift and decisive action must be taken to achieve the promise of a better, safer and greener Culver City.

In order to protect the safety and wellbeing of Culver City residents, the City Council must act boldly and swiftly to enact a just transition and managed decline away from fossil fuels and to a clean, healthy, and sustainable economy. **We strongly support a YES vote on the Oil Drilling Subcommittee's recommended resolution.**

Thank you for your consideration and continued leadership for our health, economy and environment.

Sincerely,

David Haake, Chair, Angeles Chapter - Clean Break Committee, Sierra Club

Moncia Embrey, Associate Director, Beyond Dirty Fuels, Sierra Club

Ferrel, Mimi

From: Jessalyn Waldron [REDACTED]
Sent: Monday, October 26, 2020 2:30 PM
To: Public Comment at Culver City
Subject: Inglewood Oil Field public written comment

Good afternoon, and hi there!

*I am commenting to express my full support of the Oil Drilling Subcommittee recommendations to **phase out oil drilling at the Inglewood Oil Field. I encourage the Culver City city council to act on this quickly as it is proven that oil drilling is extremely dangerous to the health of folks who live in the vicinity of oil drilling, especially for children's development and lung issues. Additionally, the environmental impact of oil drilling is putting humanity on a dire time frame with the impending climate crisis.***

As a stakeholder and active community member of Culver City, and a resident in the nearby neighborhood of Palms, I am invested in the well being of this community and it's residents, as well as the future of our planet.

*You have an opportunity to lead by example here, in showing your neighboring cities in California how to do the right thing. **Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field.***

Thank you so much!

Best,
Jessalyn Waldron
[REDACTED]

Ferrel, Mimi

From: Ethan Senser <esenser@fwwatch.org>
Sent: Monday, October 26, 2020 2:37 PM
To: Public Comment at Culver City
Subject: Public Comment for Item A-4 - SUPPORTING the phase out of the Inglewood Oil Field

Councilmembers,

On behalf of Food & Water Action and our members living in Culver City, I would like to offer my full support of the recommendation prepared by the Oil Drilling Subcommittee in regards to phasing out oil drilling at the Inglewood Oil Field.

Across the County we have seen a wave of bankruptcies and mergers within the oil industry. Time and time again we see that the corporations involved have consistently failed to prepare for change. The pandemic and economic crisis that has come with it have only accelerated a process which was already in motion. We cannot trust the oil industry to plan ahead for workers, community, or taxpayers – which is why it is so crucial that elected officials like yourselves ensure a real plan is put in place.

Doing so ensures that we are able to meet both the goal of rapidly transitioning off of fossil fuels, while at the same time creating the space and opportunity for workers and community members to be at the front of that transition.

Workers doing the meaningful work of decommissioning these sites should be local, unionized, and paid family sustaining wages. On the community's end, we can begin having a real discussion about what the future of this site should look like, and how those who have been most harmed by the pollution and extraction of these sites can be engaged and empowered in determining what the future of this site should hold.

Thank you for continuing to demonstrate for the rest of the County, State and Country what leadership on a just transition can look like. Please vote yes on the establishment of an approximate five-year phase-out period for the amortization of nonconforming oil and gas uses within the Culver City Portion of the Inglewood Oil Field.

Sincerely,

Ethan Senser (he/him)
Southern California Organizer
[Food & Water Watch](#) and [Food & Water Action](#)

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915 Wilshire Blvd, Suite 2125
Los Angeles, CA 90017

Writing from the traditional, ancestral, and unceded territory of the Tongva People.

Fight like you live here.