

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Standards of Performance for)
New, Reconstructed, and) Docket No. EPA-HQ-OAR-2021-0317
Modified Sources and Emissions) *Via regulations.gov*
Guidelines for Existing Sources:) *February 13, 2023*
Oil and Natural Gas Sector)
Climate Review)
)

We submit these comments on behalf of the undersigned (Joint Environmental Justice Commenters). Our comments are informed by the urgent need to address disparate impacts associated with oil and gas infrastructure and pollution, including adverse health impacts, economic impacts, and climate vulnerability impacts on low-income communities and communities of color. We strongly support the Environmental Protection Agency’s proposed New Source Performance Standards and Emission Guidelines for new and existing sources, and we urge the agency to strengthen key provisions to fully address the disparate impacts of oil and gas infrastructure and pollution on Black, Latine, tribal, and rural and low-income communities.

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I. Introduction and Executive Summary

Joint Environmental Justice Commenters submit the following comments on the Environmental Protection Agency’s (EPA) Supplemental Proposal for New Source Performance Standards and Emission Guidelines to reduce methane and volatile organic compound (VOC) emissions and other harmful air pollutants from the Crude Oil and Natural Gas Source Category (Supplemental Proposal) under the Clean Air Act. Joint Environmental Justice Commenters share an interest in addressing the adverse environmental justice impacts related to oil and gas infrastructure and pollution. These comments highlight the portions of the proposal we support and detail areas where it must be further strengthened in order to “ensure that regulatory initiatives appropriately benefit, and do not inappropriately burden disadvantaged, vulnerable, or marginalized communities.”¹

Our comments are structured as follows:

- Section II provides background on the regulatory and policy framework mandating that EPA undertake a thorough environmental justice analysis focusing on disparate impacts. This includes both the substantive obligation to identify and address disproportionately adverse human health or environmental effects, as well as the procedural obligation to ensure adequate public participation in the regulatory process and to ensure that the public’s contribution is incorporated into EPA’s final decision.
- Section III analyzes the disparate impacts associated with oil and gas infrastructure and pollution that are experienced by Black, Latine, tribal, and rural and low-income communities. In particular, adverse impacts related to health, economic well-being, and climate vulnerability are considered.
- Section IV argues that EPA’s Supplemental Proposal must be strengthened to mitigate the disparate impacts described in Section III. Key areas for improvement are identified, including: (1) providing better support for community monitoring; (2) closing loopholes in flaring requirements; (3) maintaining strong leak detection and repair (LDAR) requirements; (3) clarifying rules to prevent owners and operators from orphaning wells; and (5) maintaining strong timelines and closing loopholes for State Implementation Plans (SIPs).

II. EPA and Biden Administration Commitments to Analyzing Environmental Justice in Regulatory Actions

EPA’s obligation to identify and address environmental justice concerns is rooted in Executive Orders, implementing agency guidance, and public pronouncements of the Biden Administration. Collectively, these legal and policy documents articulate a twofold obligation.

¹ Presidential Memorandum on Modernizing Regulatory Review, 86 Fed. Reg. 7223, 7223 (Jan. 20, 2021).

First, EPA must analyze the substantive impacts of proposed regulations on disproportionately impacted communities. Second, EPA must guarantee procedural justice by ensuring that disadvantaged communities have access to decision-making processes and that community feedback can and does influence the agency’s final decisions. Below, we discuss the regulatory framework establishing these obligations and the Biden Administration’s commitment to these principles.

A. Regulatory Framework Establishing EPA’s Environmental Justice Requirements

Executive Order 12898 directs federal agencies to consider environmental justice in regulatory actions. Signed by President Clinton in 1994, Executive Order 12898 mandates that each Federal agency “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”² After collecting, maintaining, and analyzing applicable data, agencies are directed to determine whether their programs, policies, and activities have disproportionately adverse effects on low-income communities and communities of color.³ Agencies must “ensure greater public participation” in rulemakings related to public health and the environment.⁴

Consistent with executive direction, EPA has taken steps to implement its environmental justice obligations. In 2015 the agency published its Guidance on Considering Environmental Justice During the Development of Regulatory Actions, which serves as the agency’s “guide for determining when environmental justice should be considered . . . when developing regulations.”⁵ In its Guidance, EPA interprets “environmental justice” to include both substantive and procedural justice. Specifically, EPA defines environmental justice as “the *fair treatment* and *meaningful involvement* of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.”⁶ EPA defines “fair treatment” to mean “that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental and commercial operations or programs and policies.”⁷ EPA further interprets “meaningful involvement” to require that: “(1) potentially affected populations have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment

² Exec. Order No. 12898, 59 Fed. Reg. 7629, 7629 (Feb. 16, 1994).

³ *Id.* at 7631.

⁴ *Id.* at 7630.

⁵ U.S. Env’t Prot. Agency, Guidance on Considering Environmental Justice During the Development of Regulatory Actions at 2 (2015), <https://www.epa.gov/sites/default/files/2015-06/documents/considering-ej-in-rulemaking-guide-final.pdf>.

⁶ *Id.* at 10.

⁷ *Id.*

and/or health; (2) the public’s contribution can influence the regulatory Agency’s decision; (3) the concerns of all participants involved will be considered in the decision-making process; and (4) the rule-writers and decision-makers seek out and facilitate the involvement of those potentially affected.”⁸

According to this Guidance, EPA evaluates an “environmental justice concern” when the implementation or enforcement of environmental laws and regulations would result in either the actual or potential lack of fair treatment or meaningful involvement of low-income communities and communities of color.⁹ An action may involve an environmental justice concern if it has the potential to either create new, or exacerbate existing, disproportionate impacts on these communities.¹⁰ EPA must consider the following factors in identifying disproportionate impacts: (1) proximity and exposure to emission sources; (2) unique exposure pathways; (3) physical infrastructure; (4) multiple and cumulative impacts; (5) capacity to participate in decision making; and (6) higher risk in response to exposure among minority populations, low-income populations, and/or Indigenous people.¹¹

More recently, EPA has taken steps to prioritize equity and environmental justice in regulatory actions. EPA is in the process of implementing an Equity Action Plan for making equity, environmental justice, and civil rights a centerpiece of the agency’s regulatory actions.¹² As part of the Action Plan, EPA has prioritized development of a comprehensive framework for analyzing cumulative impacts in agency decisions.¹³ “Such a framework needs to incorporate the vulnerabilities and susceptibilities related to the accumulation of multiple environmental and social stressors . . . that lead to adverse health and quality of life outcomes.”¹⁴ EPA has also prioritized development of capacity to engage underserved communities and implement clear and accountable processes to act based on community input.¹⁵ EPA acknowledges that feedback and analysis without responsive action is not sufficient.¹⁶

B. The Biden Administration’s Commitment to Environmental Justice

The Biden Administration has affirmed its commitment to environmental justice and the principles advanced in Executive Order 12898. Immediately upon his inauguration, President Biden issued a Presidential Memorandum seeking to reform regulatory review of administrative

⁸ *Id.*

⁹ *Id.* at 15.

¹⁰ *Id.* at 44.

¹¹ *Id.* at 19-21.

¹² U.S. Env’t Prot. Agency, E.O. 13985 Equity Action Plan (2022),

https://www.epa.gov/system/files/documents/2022-04/epa_equityactionplan_april2022_508.pdf.

¹³ *Id.* at 3.

¹⁴ *Id.* at 4.

¹⁵ *Id.* at 3.

¹⁶ *Id.* at 5-6, 11.

actions.¹⁷ The preamble to the Presidential Memorandum clarifies that the executive action is motivated by environmental justice concerns, noting national challenges including “systemic racial inequality” and “the undeniable reality and accelerating threat of climate change.”¹⁸ Pursuant to the Presidential Memorandum, the Director of the Office of Management and Budget is tasked with developing procedures to “take into account the distributional consequences of regulations, including as part of a quantitative or qualitative analysis of the costs and benefits of regulation, to ensure that regulatory initiatives appropriately benefit, and do not inappropriately burden disadvantaged, vulnerable, or marginalized communities.”¹⁹

President Biden explicitly committed his administration to achieving environmental justice. In Executive Order 14008, President Biden established a goal that “40 percent of the overall benefits” from federal investments “flow to disadvantaged communities.”²⁰ Recognizing that “[t]he United States and the world face a profound climate crisis,” and that a just and equitable resolution to this crisis is a cross-agency policy priority, President Biden unequivocally stated that “[i]t is the policy of my Administration to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that . . . delivers environmental justice.”²¹ Likewise, through Executive Order 13985, the Biden Administration committed to advancing racial equality and support for underserved communities through federal government actions, mandating that each federal agency analyze “whether, and to what extent, its programs and policies perpetuate systemic barriers to opportunities and benefits for people of color and other underserved groups.”²²

III. The Disparate Impacts of Oil and Gas Infrastructure and Pollution

Research and lived experiences demonstrate that the adverse impacts associated with oil and gas infrastructure and pollution are disproportionately experienced by Black, Latine, tribal, and rural and low-income communities. As demonstrated in Section II, EPA must consider disparate impacts when conducting its environmental justice analysis for regulatory actions. This analysis encompasses consideration of cumulative impacts, which are disproportionately experienced by marginalized communities that face higher levels of overall environmental, health, and socio-economic burdens from the oil and gas industry. It is precisely this type of holistic analysis—incorporating cross-media and cross socio-economic indicators—that is required to articulate the true toll of oil and gas infrastructure on communities of color and low-income communities across the United States. Accordingly, this section provides an overview of some of the most

¹⁷ 86 Fed. Reg. at 7223.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ Exec. Order No. 14008, 86 Fed. Reg. 7619, 7632 (Jan. 27, 2021).

²¹ *Id.* at 7619, 7622.

²² Exec. Order No. 13985, 86 Fed. Reg. 7009, 7009 (Jan. 20, 2021).

pressing health, economic, and climate vulnerability impacts on Black, Latine, tribal, and rural and low-income communities in the context of oil and gas infrastructure and pollution.

In line with EPA Guidance, the Regulatory Impact Analysis (RIA) for the Supplemental Proposal analyzes environmental justice impacts as categorized by demographic groups.²³ This comment takes a different approach, instead analyzing first some of the impacts associated with oil and gas infrastructure and pollution,²⁴ and thereafter integrating demographic specific data and experiences. Joint Environmental Justice Commenters utilize this approach to emphasize that adverse health, economic, and climate vulnerability impacts are commonly experienced across communities.

A. Disparate Health Impacts

The adverse health impacts associated with oil and gas infrastructure and pollution have been documented extensively. Beyond merely identifying adverse health outcomes, research demonstrates that these impacts are disproportionately experienced by Black, Latine, tribal and rural and low-income communities. Here, we provide a synthesis of disparate air and water quality impacts.

1. Disparate Health Impacts Related to Air Quality

Studies have identified an array of air pollutants emitted from oil and gas extraction sites, including VOCs and at least 61 hazardous air pollutants (HAPs). These pollutants include carcinogens and poisonous gasses, such as hydrogen sulfide.²⁵ Additional HAPs, such as benzene, toluene, ethylbenzene, and total xylenes, are emitted as exhaust from equipment and vehicles used in oil and gas production.²⁶ A summary of hazardous and carcinogenic air

²³ See U.S. Env't Prot. Agency, Regulatory Impact Analysis of the Supplemental Proposal for the Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review at 106-36 (2022), <https://www.epa.gov/system/files/documents/2022-12/Supplemental-proposal-ria-oil-and-gas-nsps-eg-climate-review-updated.pdf>.

²⁴ Joint Environmental Justice Commenters note that this comment letter does not contain a comprehensive recitation of the disparate impacts that oil and gas development and pollution has on low-income communities and communities of color. Rather, this provides numerous examples of how the oil and gas industry has outsized impacts on these communities.

²⁵ Diane A. Garcia-Gonzales et al., *Hazardous Air Pollutants Associated with Upstream Oil and Natural Gas Development: A Critical Synthesis of Current Peer-Reviewed Literature*, 40 Ann. Rev. Pub. Health 283, 287 (2019), <https://www.annualreviews.org/doi/pdf/10.1146/annurev-publhealth-040218-043715> [hereinafter "Garcia-Gonzales et al., *Hazardous Air Pollutants Associated with Upstream Oil and Gas*"]; Henry Patel, Clean Air Task Force, Fossil Fumes (2022 update) at 8-9 (2022), <https://cdn.catf.us/wp-content/uploads/2016/06/14175846/fossil-fumes-report-2022.pdf> [hereinafter "Patel, Fossil Fumes"].

²⁶ Patel, Fossil Fumes, *supra* n.25, at 9 (citing Garcia-Gonzales et al., *Hazardous Air Pollutants Associated with Upstream Oil and Gas*, *supra* n.25, at 291).

pollutants emitted from oil and gas operations across the United States, as well as their associated health impacts, is provided in Table 1 below.²⁷

Table 1: List of Hazardous and Carcinogenic Pollutants Emitted From Oil and Gas Operations and Their Health Impacts

Hazardous Air Pollutants	Tons Emitted Per Year from Oil and Gas Industry	Associated Health Impacts
Formaldehyde	37,826	Cancer and respiratory symptoms
Benzene	28,021	Cancer, anemia, brain damage and birth defects, and respiratory tract irritation
Acetaldehyde	5,491	Cancer and respiratory irritant
Ethylbenzene	2,200	Respiratory irritant, and increased risk of blood and neurological disorders
1-3 Butadiene	650	Increases risk of cancer and cardiovascular diseases

Adverse health impacts associated with oil and gas production are disproportionately experienced among demographic groups. Below, we discuss disparate impacts resulting from siting practices, abandoned and orphaned wells,²⁸ and flaring.

i. Well Siting and Abandoned and Orphaned Wells

It is well documented that dangerous air emissions from oil and gas operations harm the health of people living and working near oil and gas production areas.²⁹ In large oil and gas production states, significant numbers of residents are heavily impacted by these health harms. For instance, 5 million people in Texas, 3 million people in Ohio, 1.9 million people in Pennsylvania, and nearly a half-million people in Colorado live within just one mile of an oil or gas well.³⁰ Research shows that living in close proximity—i.e., within one mile or less—of an oil and gas

²⁷ *Id.* at 6.

²⁸ As discussed throughout these comments, “orphaned wells” refers to those without an identifiable solvent owner and “abandoned wells” refers to those with an identifiable owner but are no longer producing.

²⁹ *Id.* at 7, 9 (citing Lisa McKenzie et al., *Ambient Nonmethane Hydrocarbon Levels Along Colorado’s Northern Front Range: Acute and Chronic Health Risks*, 52 *Env’t Sci. & Tech.* 4414, 4414 (2018), <https://pubmed.ncbi.nlm.nih.gov/29584423/> [hereinafter “McKenzie et al., *Nonmethane Hydrocarbon Levels Along the Front Range*”]).

³⁰ Jeremy Proville et al., *The Demographic Characteristics of Populations Living Near Oil and Gas Wells in the USA*, 44 *Population and Env’t* 1, 10 (2022), <https://link.springer.com/article/10.1007/s11111-022-00403-2> [hereinafter “Proville et al, *Demographics Near Oil and Gas Wells*”].

facility increases health risks associated with oil and gas pollution, like cardiovascular disease, respiratory disease, and cancer, increase with proximity to these facilities.³¹

Disparate air quality health impacts result from the siting of oil and gas operations and infrastructure. Disproportionately large numbers of people living near oil and gas wells across the United States are from low-income communities and communities of color.³² Of the nearly 18 million people in the United States that live within one mile of an active oil or gas well, 3.3 million are Latine, 3 million live below the poverty line, 1.8 million are Black, and 500,000 are Native American.³³ Research additionally shows that populations of color, and in particular Black populations, are disproportionately more likely than other demographics to live near fracking wells.³⁴ The cumulative impacts associated with well siting are also acutely experienced in Latine and Black communities, as baseline air quality is, on average, more polluted in these communities. A 2014 study found that majority Hispanic neighborhoods were exposed to greater and more dangerous concentrations of nitrogen oxides (NOx) and particulate matter than majority white neighborhoods in the same cities.³⁵ Likewise, Black communities are exposed to 1.54 times the amount of particulate matter than the overall population.³⁶

The disparate adverse impacts related to well siting endure beyond the useful life of a well itself. Orphaned and abandoned wells that are improperly plugged continue to leak harmful air pollutants even after they stop producing. Concentrations of hydrogen sulfide, a potentially fatal toxin, have been identified at old natural gas wells in Pennsylvania.³⁷ Because emissions from these wells are unabated and can continue indefinitely, even relatively smaller leaks can accumulate overtime into dangerous concentrations of airborne pollutants. For example, accumulation of methane from abandoned wells “can cause weakness, nausea, vomiting, and

³¹ See generally McKenzie et al., *Nonmethane Hydrocarbon Levels Along the Front Range*, *supra* n.29 (finding increased risk of health impacts with closer proximity to oil and gas wells); David J.X. Gonzalez et al., *Upstream Oil and Gas Production and Ambient Air Pollution in California*, 806 *Sci. Total Env't* 150298, 2 (2022) (collecting studies finding that residing in proximity to oil and gas wells is associated with adverse health outcomes), <https://www.sciencedirect.com/science/article/pii/S0048969721053754>.

³² Proville et al., *Demographics Near Oil and Gas Wells*, *supra* n.30, at 1; Jeremy Proville et al., *County & State Level Data* (2022) (providing breakdowns of data assessed in Proville et al., Proville et al., *Demographics Near Oil and Gas Wells*, *supra* n.30), <https://www.dropbox.com/s/gzas7g12rj3ai17/County%20%26%20State%20Level%20Data.xlsx?dl=0>.

³³ Proville et al., *Demographics Near Oil and Gas Wells*, *supra* n.30, at 1.

³⁴ Concerned Health Pros. of NY & Physicians for Soc. Resp., *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)* at 52-53 (7th ed. 2020), <https://psr.org/wp-content/uploads/2020/12/fracking-science-compendium-7.pdf>.

³⁵ Miranda Jones et. al, *Race/Ethnicity, Residential Segregation, and Exposure to Ambient Air Pollution: the Multi-Ethnic Study of Atherosclerosis (MESA)*, 104 *Am. J. Pub. Health* 2130, 2130 (2014), <https://pubmed.ncbi.nlm.nih.gov/25211756/>.

³⁶ Ihab Mikati & Adam Benson, *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status*, 108 *Am. J. Pub. Health* 480, 480-85 (2018), <https://pubmed.ncbi.nlm.nih.gov/29470121/>.

³⁷ *Town Sees Toxic Gas Leaks—Oil Wells Suspected*, *The Associated Press* (Oct. 18, 2017, 10:14 AM), <https://www.nbcnews.com/id/wbna21362059>.

convulsion,” and “long-term methane poisoning can even be fatal.”³⁸ In its 2022 Greenhouse Gas Inventory, EPA identified 3.7 million abandoned oil and gas wells in the United States.³⁹ As of 2021, an estimated 338,700 of these wells were located in Pennsylvania, making it the state with the highest number of orphaned and abandoned wells.⁴⁰ Pennsylvania also has a high concentration of orphaned wells in predominantly rural counties such as McKean, Venango, and Warren.⁴¹

“I guide tours of the gas drilling regions of Pennsylvania’s most heavily fracked county, my community, Washington County. My family and neighbors need strong federal rules to combat the negative health impacts, including cancer risks that have increased during the rapid, unregulated expansion of gas drilling in the last decade. Pennsylvania will have more residents than any other state in the country exposed to increased cancer risks caused by the gas industry.” - Lois Bower-Bjornson, Southwestern Pennsylvania Field Organizer for Clean Air Council

Although not directly related to air quality, tribal communities experience specific cumulative impacts from well siting related to human health and safety. Violence against indigenous populations, and indigenous women in particular, has a centuries long and largely ignored history.⁴² Yet, in the United States, the murder rate for indigenous women living on reservations is ten times the national average.⁴³ The rates of violence against Indigenous women has been exacerbated by oil and gas development. An analysis of 23 “hotspots” with the highest rates of missing and murdered indigenous women in the country identified a link between hydraulic fracking facilities and an increase in rates of violence committed against indigenous women.⁴⁴ The study concluded that “hydraulic fracking across the US seems to be a likely contributing factor in the rate of [missing and murdered indigenous women] cases” in 9 of the 16 “hotspots” analyzed.⁴⁵ Another review focused on violence against women on the Fort Berthold Reservation

³⁸ Jeff Turrentine, *Millions of Leaky and Abandoned Oil and Gas Wells Are Threatening Lives and the Climate*, Nat. Res. Def. Council (July 26, 2021), <https://www.nrdc.org/stories/millions-leaky-and-abandoned-oil-and-gas-wells-are-threatening-lives-and-climate> [hereinafter “Turrentine, *Millions of Leaky and Abandoned Wells*”].

³⁹ U.S. Env’t Prot. Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020* at 3-108 (2022), <https://www.epa.gov/system/files/documents/2022-04/us-ghg-inventory-2022-main-text.pdf> [hereinafter “EPA 2022 Greenhouse Gas Inventory”].

⁴⁰ Turrentine, *Millions of Leaky and Abandoned Wells*, *supra* n.38.

⁴¹ Env’t Def. Fund, *Mapping Orphan Wells in Pennsylvania* (2022), <https://www.edf.org/sites/default/files/2021-10/Orphan%20Well%20FactSheet%20PA.pdf>

⁴² A. Skylar Joseph, *A Modern Trail of Tears: The Missing and Murdered Indigenous Women (MMIW) Crisis in the US*, 79 J. Forensic & Legal Med. 102136, 1-2 (2021), <https://www.sciencedirect.com/science/article/abs/pii/S1752928X21000214?via%3Dihub> [hereinafter “Joseph, *A Modern Trail of Tears*”].

⁴³ *Id.* at 1.

⁴⁴ *Id.* at 2.

⁴⁵ *Id.* at 1, 3-5 (noting that influxes of white men in areas with indigenous populations, such as around fracking sites, is connected with documented increases in violence against indigenous women).

also concluded that “the influx of well-paid male oil and gas workers, living in temporary housing . . . has coincided with a disturbing increase in sex trafficking of Native women.”⁴⁶

ii. Flaring

Disparate air quality impacts are also associated with flaring practices at oil and gas extraction facilities. These adverse health impacts are widespread and severe. Flaring of associated gas at oil wells produces black carbon particles, more commonly referred to as soot or particulate matter. The respiratory impacts resulting from exposure to particulate matter can travel as far as 60 miles away from flaring sites.⁴⁷ Studies confirm a causal link between flaring and respiratory-related hospitalizations in North Dakota, where a recent study found that a 1 percent increase in the amount of flared natural gas in the state increases the respiratory-related hospitalization rate by 0.73 percent.⁴⁸

Communities of color are disproportionately located near flaring sites. A recent study analyzed demographics in three basins—the Permian, Western Gulf (Eagle Ford Shale), and Williston (Bakken shale)—that account for 83% of unconventional oil and gas flaring in the United States from 2012 to 2020.⁴⁹ The study unequivocally concluded that “[b]lack, indigenous, and people of color [are] disproportionately exposed to flaring.”⁵⁰ Analyzing the Permian and Western Gulf basins, the study found that “Blacks were more likely to live within 5 [kilometers] of a flare . . . than other groups.”⁵¹ Likewise, the analysis of the Williston basin found that “Native American and Hispanic populations were the most likely to live near flares.”⁵²

These findings are reflected in the experiences of Indigenous communities residing on the Fort Berthold Indian Reservation in North Dakota. The Reservation is home to the three affiliated tribes of the Mandan, Hidatsa, and Arikara (MHA Nation) and once encompassed fertile

⁴⁶ Kathleen Finn et al., *Responsible Resource Development and Prevention of Sex Trafficking: Safeguarding Native Women and Children on the Fort Berthold Reservation*, 40 Harv. J.L. & Gender 1, 2, 7-10 (2018), <https://scholar.law.colorado.edu/faculty-articles/629/>; see also Kimberly Martin et al., U.S. Bureau of Just. Stats., Nat’l Crim Stats. Exch., *Violent Victimization Known to Law Enforcement in the Bakken Oil-Producing Region of Montana and North Dakota, 2006-2012 at 7 tbl.1* (2019) (documenting increased rates of violent crimes coinciding with the oil and gas boom in the Bakken region of Montana and North Dakota), <https://www.ojp.gov/ncjrs/virtual-library/abstracts/violent-victimization-known-law-enforcement-bakken-oil-producing>.

⁴⁷ Wesley Blundell & Anatolii Kokoza, *Natural Gas Flaring, Respiratory Health, and Distributional Effects*, 208 J. of Pub. Econ. 104601, 22 (2022), <https://www.sciencedirect.com/science/article/abs/pii/S0047272722000032>.

⁴⁸ *Id.*

⁴⁹ Lara J. Cushing et al., *Up In Smoke: Characterizing the Population Exposed to Flaring From Unconventional Oil and Gas Development in the Contiguous US*, 16 Env’t Rsch. Letts. 034032, 1 (2001), <https://pubs.acs.org/doi/abs/10.1021/acs.est.8b05355> [hereinafter “Cushing et al., *Characterizing Populations Exposed to Flaring*”].

⁵⁰ *Id.*

⁵¹ *Id.* at 7.

⁵² *Id.*

agricultural lands along the Missouri River.⁵³ But the U.S. Army Corps of Engineers' construction of the Garrison Dam in the 1940s flooded significant portions of the Reservation, forcing residents to move into the higher badlands where agricultural development was not possible.⁵⁴ The MHA Nation then became reliant on oil and gas development for much needed revenues.⁵⁵



George Gillette, chairman of the Fort Berthold Indian Tribal Council, weeps as the Secretary of the Interior signs an agreement forcing the MHA Nation to sell lands for the Garrison Dam.

With this development came significant adverse impacts on Reservation residents. In 2019, North Dakota accounted for 38% of the nation's vented and flared natural gas,⁵⁶ and an outsized portion of that flaring now happens on the Fort Berthold Reservation. From 2012 to 2020, nearly 20% of all flaring in North Dakota occurred on the Fort Berthold Reservation.⁵⁷ McKenzie county, which includes part of the Reservation, has the most flares of any county nationally, and virtually all the residents of this county live within 5 kilometers (about 3.2 miles) of more than 100 flares.⁵⁸ A 2018 analysis also found that people living on the Fort Berthold Reservation are 2 times more likely to live within a half-mile of an oil and gas facility, compared to the rest of North Dakota.⁵⁹

⁵³ Jeremy Deaton, *A Tribal Nation Dependent on Fossil Fuels Was Left in the Cold When the Pandemic Hit*, The Hill (Apr. 22, 2021), <https://thehill.com/changing-america/sustainability/environment/549731-a-tribal-nation-dependent-on-fossil-fuels-was/>.

⁵⁴ *Id.*

⁵⁵ *Id.* (explaining that the MHA Nation earns 90% of its revenue from royalties and taxes on oil and gas development).

⁵⁶ Emily Geary, U.S. Energy Info. Admin., *Natural Gas Venting and Flaring in North Dakota and Texas Increased in 2019* (Dec. 8, 2020), <https://www.eia.gov/todayinenergy/detail.php?id=46176>.

⁵⁷ Isaac Stone Simonelli et al., *How One Native American Tribe is Battling for Control Over Flaring*, Gaslit (Feb. 24, 2022), <https://cronkitenews.azpbs.org/howardcenter/gaslit/north-dakota.html>.

⁵⁸ Cushing et al., *Characterizing Populations Exposed to Flaring*, *supra* n.49, at 7.

⁵⁹ Clean Air Task Force, *Tribal Communities at Risk: The Disproportionate Impacts of Oil and Gas Air Pollution on Tribal Air Quality* at 6 (2018), <https://www.catf.us/resource/tribal-communities-at-risk/>.

“Before they used to say that in North Dakota, you can see a dog run away for days. You look at the Bakken oil patch, and you see all the orange [from flaring]. They say you can see it from the space station. It looks like a Christmas tree, all the orange.” - Delvin Rabbithead, president of Fort Berthold Protectors of Water and Earth Rights

2. Disparate and Cumulative Health Impacts Related to Water Quality

Although the Supplemental Proposal does not cover water quality, a robust environmental justice analysis must address cumulative impacts incorporating cross-media effects on disproportionately impacted communities. In the context of oil and gas infrastructure and pollution, a discussion of associated water quality impacts provides crucial context for understanding cumulative impacts, including in addition to the adverse air quality impacts discussed above. Joint Environmental Justice Commenters note that EPA did not consider water quality impacts of oil and gas development in its RIA, but we consider this analysis informative for the purpose of analyzing disparate impacts associated with oil and gas infrastructure and pollution.

The extraction of oil and gas has been linked with adverse impacts on water quality. Ample evidence connects fracking with groundwater contamination.⁶⁰ Fracking also negatively impacts surface waters. A recent study identified a correlation between newly drilled wells and salt concentrations in surface waters, and noted that concentrations were highest in the aftermath of hydraulically fracturing an oil formation.⁶¹ Because salt compounds are commonly found in water coming from newly fracked wells, these findings raise concerns that more dangerous substances, such as toxic chemicals used in oil and gas extraction, could also be reaching surface waters. EPA has also identified evidence that the discharge of inadequately treated fracking wastewater has contaminated surface and drinking water resources.⁶² Outside of the context of fracking, stormwater runoff from oil and gas well pads has been found to introduce contaminants into nearby surface waters.⁶³

⁶⁰ Gayathri Vaidyanathan, *Fracking Can Contaminate Drinking Water*, *Sci. Am.* (Apr. 4, 2016), <https://www.scientificamerican.com/article/fracking-can-contaminate-drinking-water>; Dominic C. DiGiulio and Robert B. Jackson, *Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming, Field*, 50 *Env't Sci. & Tech.* 4524, 4524-36 (2016), <https://pubs.acs.org/doi/abs/10.1021/acs.est.5b04970>.

⁶¹ Pietro Bonetti et al., *Large-Sample Evidence on the Impact of Unconventional Oil and Gas Development on Surface Waters*, 373 *Sci.* 896, 896 (2021), <https://pubmed.ncbi.nlm.nih.gov/34413233/>.

⁶² U.S. Env't Prot. Agency, *Hydraulic Fracturing for Oil and Gas: Impacts From the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States: Executive Summary at 1-2* (2016), <https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990>.

⁶³ Khadeeja Abdullah et al., *Regulating Oil and Gas Facility Stormwater Discharge: An Assessment of Surface Impoundments, Spills, and Permit Compliance*, 76 *Env't Sci. & Pol'y* 139, 139 (2017), <https://www.sciencedirect.com/science/article/abs/pii/S1462901116308206>.

The disparate impacts of water quality degradation resulting from oil and gas extraction are acutely experienced by Black, Latine, tribal, and rural and low-income communities. In south Texas, researchers found evidence that areas with more than 80% population of color were twice as likely to live near fracking wastewater disposal wells than areas with less than 20% population of color.⁶⁴ Of the 217,624 people of color living less than three miles from a disposal well in southern Texas, 83.3% were Latine and 13.8% were Black.⁶⁵ A separate study analyzing the siting of fracking wells in the Marcellus shale region of Pennsylvania found evidence for income disparities in well siting.⁶⁶ Tribal communities have also faced unique threats to water quality from oil and gas infrastructure. For example, the Dakota Access Pipeline, which transports oil extracted from the Bakken oil fields in North Dakota, threatens water quality and disturbs sacred sites of the Standing Rock Sioux tribe.⁶⁷

B. Disparate Economic Impacts

Oil and gas production brings both economic benefits and burdens. However, neither the benefits nor the burdens are equitably distributed. Instead, studies and lived experiences show that low-income communities and communities of color are disproportionately left with economic burdens resulting from oil and gas development, while the wealth created by this development is exported out of the communities where resource extraction occurs. This section highlights the disparate economic impacts associated with oil and gas production as they are experienced by Latine, rural, and low-income communities.

At the outset Joint Environmental Justice Commenters note that EPA's economic environmental justice analysis in the RIA focused on the narrow issue of household energy expenditures and potential disparate impacts of increased cost due to regulation. However, as is demonstrated below, the adverse economic impacts associated with oil and gas production are broader than potential increases in energy costs. An accurate accounting of the economic impacts should consider the distribution of economic benefits and burdens, and their cumulative effects on impacted communities.

⁶⁴ Jill Johnston et al., *Wastewater Disposal Wells, Fracking, and Environmental Justice in Southern Texas*, 106 Am. J. Pub. Health 550, 554 (2016), <https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2015.303000>.

⁶⁵ *Id.* at 553.

⁶⁶ Yelena Ogneva-Himmelberger & Liyao Huang, *Spatial Distribution of Unconventional Gas Wells and Human Populations in the Marcellus Shale in the United States: Vulnerability Analysis*, 60 Applied Geography 165, 165 (2015), <https://www.ejnet.org/ej/frackingthepoor.pdf>.

⁶⁷ Alleen Brown, *Five Spills, Six Months in Operation: Dakota Access Track Record Highlights Unavoidable Reality – Pipelines Leak*, The Intercept (Jan. 9, 2018, 1:39 PM), <https://theintercept.com/2018/01/09/dakota-access-pipeline-leak-energy-transfer-partners>; Chelsey Luger, *DAPL Desecrated Sacred Sites, Took 10 Days to Tell State, as Human Rights Abuses Continue*, Indian Country Today (Sept. 13, 2018), <https://ictnews.org/archive/dapl-desecrated-sacred-sites-took-10-days-to-tell-state-as-human-rights-abuses-continue>.

1. Local Economic Growth is Overstated and Leaves Local Communities

Multiple studies have found that the local economic benefits of oil and gas production are overstated. A 2012 study of the local economic benefits associated with natural gas production across counties in Colorado, Texas, and Wyoming found that natural gas production had “modest” effects on employment and income, and that “ex-ante estimates of the number of jobs created by developing the . . . Marcellus shale gas formation[] may have been too large.”⁶⁸ Likewise, a 2014 study analyzing labor market conditions at the county level in nine states found only a “modest” impact on local employment and wage effects.⁶⁹

Furthermore, research shows that much of the wealth generated by oil and gas production leaves the communities where extraction takes place. A 2015 study analyzed the distribution of economic costs and benefits associated with shale gas development in Denton, Texas.⁷⁰ The study found that “residents own[ed] 1% of the total value extracted” from approximately 280 active gas wells between 2002 and 2013.⁷¹ After analyzing the distribution of costs and benefits, the study concluded that “there is a disproportionate distribution of [shale gas development]’s burdens and benefits in Denton, with non-mineral owners paying the environmental and health risks without receiving direct economic benefits and others reaping the benefits without being exposed to the risks.”⁷²

2. Low-Income, Rural, and Latine Communities are Burdened by Economic Costs

Economic burdens associated with oil and gas development include the cost of remediation of orphaned and abandoned wells and negative impacts on property values. As is demonstrated below, these burdens disproportionately fall on Latine, rural, and low-income communities.

i. Orphaned and Abandoned Wells

EPA estimates that, as of 2022, there existed approximately 3.7 million orphaned and abandoned oil and gas wells in the United States, of which over two million remain unplugged and continue

⁶⁸ Jeremy Weber, *The Effects of a Natural Gas Boom on Employment and Income in Colorado, Texas, and Wyoming*, 34 Energy Econs. 1580, 1580 (2012), <https://pubag.nal.usda.gov/download/56362/pdf>.

⁶⁹ Jason Brown, *Production of Natural Gas From Shale in Local Economies: A Resource Blessing or Curse?*, Econ. Rev., Jan. 2014, at 119, 120, https://www.kansascityfed.org/Economic%20Review/documents/1621/Production_of_Natural_Gas_From_Shale_in_Local_Economies_A_Resource_Blessing_or_CurseD4.pdf.

⁷⁰ Matthew Fry et al., *Fracking and Environmental (In)justice in a Texas City*, 117 Ecological Econs. 97, 97 (2015), <https://omeka.library.unt.edu/files/original/1f215096dd897cc492c3b94c157724a297193ccf.pdf>.

⁷¹ *Id.* at 97.

⁷² *Id.* at 104.

to contribute to adverse air and water quality impacts.⁷³ Although costs for remediation vary greatly depending on the characteristics of an individual well, the median cost for decommissioning an orphaned well is roughly \$20,000 for plugging, and \$76,000 when surface reclamation is also required.⁷⁴ Because these wells have no solvent owner on record, the burden of remediation falls on local, state, and federal governments and diverts resources that could otherwise be used for the public good.

The adverse economic impact imposed by remediation of orphaned and abandoned wells is disparately distributed. States with the largest Latine populations also have significant concentrations of orphaned and abandoned wells. For instance, the populations of California and Texas are both approximately 39% Latine⁷⁵ and these two states had 5,063 and 7,151 known orphaned wells in 2022, respectively.⁷⁶ And of the nearly 9 million people in the United States living within one mile of one of these wells, approximately 2.5 million are Latine.⁷⁷ In Pennsylvania, the state with the largest number of orphaned and abandoned wells, wells are concentrated in rural and low-income areas.⁷⁸



Abandoned wells in a residential neighborhood in Bradford, Pennsylvania⁷⁹

⁷³ EPA 2022 Greenhouse Gas Inventory, *supra* n.39, at 3-108 (explaining that only 41% of abandoned wells are properly plugged).

⁷⁴ Daniel Raimi et al., *Decommissioning Orphaned and Abandoned Oil and Gas Wells: New Cost Estimates and Cost Drivers*, 55 *Env't Sci. & Tech.* 10224, 10224 (2021), <https://pubs.acs.org/doi/pdf/10.1021/acs.est.1c02234>.

⁷⁵ Am. Counts Staff, U.S. Census Bureau, *California 2020 Census* (Aug. 25, 2021), <https://www.census.gov/library/stories/state-by-state/california-population-change-between-census-decade.html>;

Am. Counts Staff, U.S. Census Bureau, *Texas 2020 Census* (Aug. 25, 2021), <https://www.census.gov/library/stories/state-by-state/texas-population-change-between-census-decade.html>.

⁷⁶ Env't Def. Fund, Mapping Orphan Wells in California at 1 (2022), https://www.edf.org/sites/default/files/2022-11/EDF_FactSheet_CA.pdf; Env't Def. Fund, Mapping Orphan Wells in Texas at 1 (2022), https://www.edf.org/sites/default/files/2022-11/EDF_FactSheet_TX.pdf.

⁷⁷ GreenLatinos et al., Latino Climate Justice Framework at 15 (2022), <https://www.lcjf.greenlatinos.org/>.

⁷⁸ Bobby Magill, *Billions Spent on Abandoned Oil Wells Scratch at Ignored Problem*, Bloomberg Law (July 25, 2022, 3:30 AM), <https://news.bloomberglaw.com/environment-and-energy/states-will-get-billions-to-plug-orphan-oil-wells-is-it-enough>.

⁷⁹ *Id.*

ii. Property Values

Research has repeatedly identified a link between proximity to abandoned wells and declining values of nearby property. A recent study in southwest Pennsylvania found that, over fifty years, the two acres around orphaned wells had approximately half as much development as the area around plugged wells.⁸⁰ The study further found that “the typical unplugged well leads nearby properties to have a market value 12% less than properties near plugged wells,” resulting in wide-ranging impacts on local economic development and revenue raising for schools and basic municipal maintenance.⁸¹ A similar study conducted in Colorado found that “shale development negatively impacts house prices,” and that merely having a well in sight of a house reduces its value by approximately \$3,000.⁸² Because oil and gas wells are disproportionately located in and near low-income communities and communities of color, as discussed above, these communities are left to bear the economic burden of this infrastructure.

C. Disparate Climate Vulnerability Impacts

Black, Latine, tribal, and rural and low-income communities are disproportionately vulnerable to the effects of climate change. Although the impacts of a warming climate are global in scope, the experiences of, and adaptation to, global impacts are locally determined. Climate change vulnerability refers to the “propensity or predisposition to be adversely affected” by the impacts of climate change.⁸³ As this section demonstrates, Black, Latine, tribal, and rural and low-income communities are disproportionately vulnerable to the impacts of climate change.

1. Vulnerability to Health Impacts

Rising global temperatures are expected to trigger a cascade of adverse health-related impacts, including triggering new diagnoses and exacerbating pre-existing conditions. Below, disparate health outcomes associated with climate-driven impacts to air quality and exposure to extreme heat are analyzed as two examples.

⁸⁰ Max Harleman and Jeremy Weber, *Other Voices: Plugging Abandoned Wells Boosts Local Economies*, Pittsburgh Post-Gazette (July 18, 2021, 10:00 PM), <https://www.post-gazette.com/opinion/Op-Ed/2021/07/18/Other-Voices-Plugging-abandoned-wells-boosts-local-economies/stories/202107180012> [hereinafter “Harleman & Weber, *Plugging Abandoned Wells*”]; Max Harleman et al., *Environmental Hazards and Local Investment: A Half-Century of Evidence from Abandoned Oil and Gas Wells*, 9 J. Ass’n Env’t & Res. Econs. (2002), <https://www.journals.uchicago.edu/doi/epdf/10.1086/719383> [hereinafter “Harleman et al., *Environmental Hazards and Local Investments*”].

⁸¹ Harleman et al., *Environmental Hazards and Local Investments*, *supra* n.80, at 749; Harleman & Weber, *Plugging Abandoned Wells*, *supra* n.80.

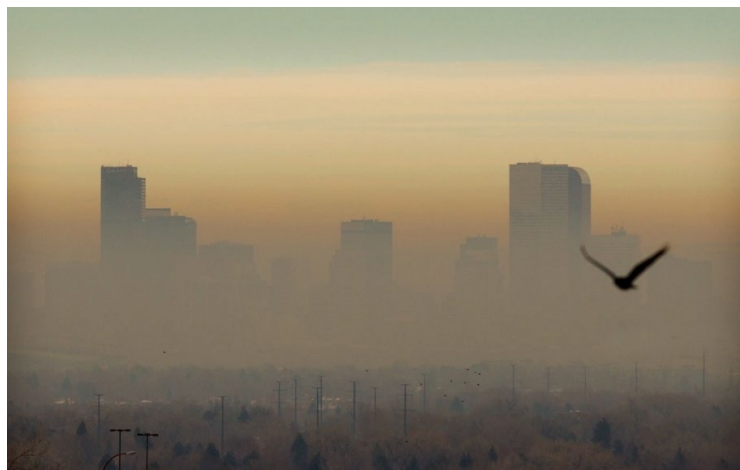
⁸² Heather Stephens and Amanda Weinstein, *Household Valuation of Energy Development in Amenity-Rich Regions*, 50 Growth and Change 1375, 1375 (2019), <https://onlinelibrary.wiley.com/doi/abs/10.1111/grow.12335>.

⁸³ Hans-O. Pörtner et al., Intergovernmental Panel on Climate Change, Summary for Policy Makers: Climate Change 2022: Impacts, Adaptation and Vulnerability at 5 (2022), https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf.

i. Air Quality Impacts

Climate-driven increases in temperature are expected to provoke a variety of adverse health impacts related to air quality. Research shows that rising temperatures will alter the chemical and physical interactions that contribute to air pollution such as particulate matter and ground-level ozone.⁸⁴ Prolonged warm seasons are projected to increase the number of days with poor air quality, in part due to increased risk of wildfires and windblown dust events. The resulting increased exposure to air pollutants is likely to have “significant respiratory and cardiovascular health effects.”⁸⁵

Multiple studies show that Latine and low-income populations are disproportionately vulnerable to these climate-related air quality health impacts. With 2°C of warming, an EPA study found that Latine and low-income populations are respectively 10% and 15% more likely than others to live in areas projected to have the highest climate-driven increases in childhood asthma.⁸⁶ Similarly, a 2021 study of the Denver Metro-North Front Range ozone nonattainment area found that, when accounting for the effect of climate change on ozone trends, ozone levels are expected to increase the most in urban majority Latine and low-income communities.⁸⁷



A brown cloud of smog shrouds Denver, including predominantly Latine neighborhoods in the downtown area

⁸⁴ U.S. Env’t Prot. Agency, *Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts at 20* (2021), https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september-2021_508.pdf [hereinafter “U.S. Env’t Prot. Agency, *Climate Change and Social Vulnerability in the United States*”].

⁸⁵ *Id.*

⁸⁶ *Id.* at 25.

⁸⁷ James L. Cooke, et al., *The Ozone Climate Penalty, NAAQS Attainment, and Health Equity Along the Colorado Front Range*, 32 *J. Exposure Sci. & Env’t Epidemiology* 545, 551-52 (2021), <https://pubmed.ncbi.nlm.nih.gov/34504294/>.

ii. Exposure to Extreme Heat

Rising global temperatures are projected to increase heat-related illnesses and deaths.⁸⁸ Increased exposure to higher temperatures impacts the human body's ability to regulate internal temperatures, and exacerbates pre-existing conditions, such as cerebral, respiratory, and cardiovascular diseases.⁸⁹ Assuming 2°C of warming, Latine, low-income, and Black populations are respectively 1%, 11%, and 41% more likely to live in areas with the highest projected increases in extreme-temperature related deaths.⁹⁰ One broad study found that Black mothers are disproportionately exposed to the overlapping risks of extreme heat and air pollution, putting them at greater risk of adverse pregnancy outcomes.⁹¹

2. Vulnerability to Labor Impacts

Climate-driven increases in the frequency and intensity of extreme heat is expected to impact labor sectors where employees work outside and where employees work inside but without access to air conditioning. Vulnerable weather-exposed industries include agriculture, forestry, fishing and hunting, mining, construction, manufacturing, and transportation and utilities. As temperatures rise to unsafe levels, workers in these industries may see their hours reduced or be unable to work at all.

Black, Latine, tribal, and rural and low-income communities are disparately vulnerable to the adverse economic impacts of these weather-exposed labor markets. Assuming 2°C of warming, Latine populations are 43% more likely than non-Latine populations to live in areas with the highest projected labor hour losses in weather-exposed industries.⁹² Low-income populations, American Indian and Native Alaska, and Black communities are respectively 25%, 37%, and 23% more likely to live in these weather-impacted areas.⁹³

3. Vulnerability to Impacts on Cultural Practices and Lands

Both the United Nations Educational, Scientific, and Cultural Organization and the Intergovernmental Panel on Climate Change recognize that “climate change represents one of the

⁸⁸ Kristie Ebi et al., Human Health, *in* Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment at 541 (2018), https://nca2018.globalchange.gov/downloads/NCA4_Ch14_Human-Health_Full.pdf.

⁸⁹ Jeffrey Berko et al., Nat'l Health Stats. Reps., No. 76, Deaths Attributed to Heat, Cold, and Other Weather Events in the United States, 2006-2010 at 1 (2014), <https://www.cdc.gov/nchs/data/nhsr/nhsr076.pdf>.

⁹⁰ U.S. Env't Prot. Agency, Climate Change and Social Vulnerability in the United States, *supra* n.84, at 36.

⁹¹ Bruce Bekkar et al., *Association of Air Pollution and Heat Exposure With Preterm Birth, Low Birth Weight, and Stillbirth in the USA Systematic Review*, JAMA Network, June 2020, at 1, <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2767260>.

⁹² U.S. Env't Prot. Agency, Climate Change and Social Vulnerability in the United States, *supra* n.84, at 41.

⁹³ *Id.*

greatest threats to culture and heritage.”⁹⁴ This is particularly true for tribal communities, as “the consequences of observed and projected climate change have and will undermine indigenous ways of life that have persisted for thousands of years.”⁹⁵ And while some indigenous resource managers “believe their cultures already possess sufficient knowledge to respond to climate variation and change,” the loss of traditional knowledge may undercut tribal community resilience to climate change.⁹⁶ Tribal communities are specifically vulnerable to climate-driven impacts on cultural practices and access to traditional lands.

Although a great diversity exists amongst tribal communities and cultural practices across the United States, many indigenous cultures entail a unique connection to, and relationship with, the natural environment. Research demonstrates that impacts of climate change, including increased frequency of wildfires, higher temperatures, and extreme changes to local ecosystems “will affect the quantity and quality of the resources tribes depend upon to perpetuate their cultures and livelihoods.”⁹⁷ For example, the Yurok Tribe in northern California culturally identify as “great fisherman” and rely upon ney-puy, the Yurok word for salmon, harvested from the Klamath River for food.⁹⁸ In recent years climate-driven hot weather and drought conditions have warmed the river’s water giving rise to parasites that have depleted salmon stocks to dangerously low levels.⁹⁹

Moreover, Climate change now threatens to accelerate indigenous displacement. Indigenous communities in the United States have already been dispossessed of nearly 99% of their historical land base.¹⁰⁰ Centuries of colonialism in the U.S. forced many tribes off their ancestral homelands and onto reservations, such as with the MHA Nation and the Garrison Dam project discussed above. These land losses will only continue as climate change progresses. In Alaska, at

⁹⁴ Press Release, UNESCO World Heritage Convention, UNESCO-IPCC-ICOMOS Meeting Strengthens Synergies Between Culture and Science for Climate Action (Feb. 3, 2023), <https://whc.unesco.org/en/news/2390#:~:text=Climate%20change%20represents%20one%20of,solutions%20to%20these%20mounting%20challenges>.

⁹⁵ T.M. Bull Bennett et al., Indigenous Peoples, Land, and Resources, *in* Climate Change Impacts in the United States: The Third National Climate Assessment at 298 (2014), https://nca2014.globalchange.gov/downloads/low/NCA3_Full_Report_12_Indigenous_Peoples_LowRes.pdf.

⁹⁶ *Id.* at 301.

⁹⁷ Garrit Voggesser et al., *Cultural Impacts to Tribes From Climate Change Influences on Forests*, 120 *Climate Change* 615, 615 (2013), https://www.fs.usda.gov/pnw/pubs/journals/pnw_2014_voggesser.pdf.

⁹⁸ The Yurok Tribe, *Our History* (last visited Feb. 3, 2023), <https://www.yuroktribe.org/our-history>.

⁹⁹ Audrey Carleton & Briana Flin, *In the Pacific Northwest, Salmon Declines Upend a Way of Life*, *The Nation* (Aug. 30, 2022), <https://www.thenation.com/article/society/salmon-oregon-yurok>; R. Adam Ray et al., *Relationship Between Temperature and Ceratomyxa shasta-Induced Mortality in Klamath River Salmonids*, 98 *J. Parasitology* 520, 520-26 (2012), https://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/marblemountain/exhibits/nat_marine_fs_exhibits/nmfs_37.pdf.

¹⁰⁰ Justin Farrell et al., *Effects of Land Dispossession and Forced Migration on Indigenous Peoples in North America*, 374 *Sci.* 578, 580 (2021), <https://www.science.org/doi/10.1126/science.abe4943>.

least 31 native communities “face imminent climate displacement from flooding and erosion.”¹⁰¹ The village of Newtok initiated complete relocation in 2019 due to shoreline erosion from thawing permafrost and storm surge.¹⁰² Likewise in Louisiana, land subsidence worsened by climate-accelerated sea-level rise forced the Biloxi-Chitimacha-Choctaw to abandon their coastline territories.¹⁰³

IV. Strengthening the Supplemental Proposal to Address Disparate Impacts

The Supplemental Proposal provides a strong framework for addressing environmental justice concerns associated with oil and gas infrastructure and pollution. Joint Environmental Justice Commenters are generally supportive of the proposed rule. However, key aspects of the rule can and should be strengthened to mitigate the disparate impacts identified above on Black, Latine, tribal, and rural and low-income communities.

Our comments incorporate by reference the legal and technical comments from the Joint Environmental Commenters submitted by Environmental Defense Fund et al. Below is a high-level summary of recommendations in that comment letter, as well as some additional recommendations, to strengthen parts of the Supplemental Proposal that would address the disparate impacts previously identified.

A. Better Definition and Additional Support for Community Monitoring

Joint Environmental Justice Commenters broadly support EPA’s proposed super-emitter response program (SERP) aimed at addressing large emission events from oil and gas facilities that significantly harm nearby communities. However, we caution EPA not to adopt overly restrictive standards that would limit community participation. Specifically, we urge EPA to use the already proposed alternative test method processes under the LDAR program to approve technologies for SERP. Third parties who are certified under SERP also should not face a higher barrier to monitoring than operators themselves, as third-party data will likely be more objective than data submitted by operators who may face conflicts of interest in accurately reporting their own emissions and violations. Additionally, EPA should adopt a streamlined process for determining and notifying responsible operators and the public about emission events. Mirroring the LDAR program, here EPA should not require multiple detections before owners and operators would be required to take responsive action. Finally, all pertinent information should be made publicly available and easily accessible on a centralized website as soon as possible.

¹⁰¹ Dalia Faheid, *Indigenous Tribes Facing Displacement in Alaska and Louisiana Say the U.S. Is Ignoring Climate Threats*, Inside Climate News (Sept. 13, 2021), <https://insideclimatenews.org/news/13092021/indigenous-tribes-alaska-louisiana>.

¹⁰² *Id.*

¹⁰³ Dalia Faheid & Katie Livingstone, *To Flee, or to Stay Until the End and Be Swallowed by the Sea*, Inside Climate News (July 18, 2021), <https://insideclimatenews.org/news/18072021/to-flee-or-to-stay-until-the-end-and-be-swallowed-by-the-sea>.

Changes to strengthen SERP will benefit Black, Latine, tribal, and rural and low-income communities that live in close proximity to oil and gas infrastructure. The improvements to SERP recommended above would require that owners and operators timely identify and take corrective action to stop harmful air emissions that disproportionately impact these communities. Streamlined operator and public notification processes will also allow members of these impacted communities to take action to protect themselves during emission events to the extent possible.

B. Maintaining Strong LDAR Requirements

Joint Environmental Justice Commenters generally support EPA's proposed LDAR standards for wellsites, centralized production facilities, and compressor stations. EPA should seek to reduce fugitive emissions to the greatest extent possible. Principally, EPA should strengthen the LDAR requirements by adding separators to the list of failure-prone equipment such that any site with a separator is subject to quarterly optical gas imaging (OGI). We further urge EPA to require bimonthly OGI at all compressor stations.

Like with the recommended changes to SERP above, maintaining a strong LDAR program will ensure that leaks from oil and gas facilities that disparately impact Black, Latine, tribal, and rural and low-income communities are addressed in a timely manner, resulting in much needed reductions of the dangerous and toxic pollutants emitted by these facilities.

C. Closing Loopholes in Flaring Requirements

We strongly support EPA's proposed requirement that owners and operators of oil wells with associated gas must capture that gas and route it to a sales line. However, EPA can and should take further steps to eliminate routine flaring. EPA should replace the broad technical infeasibility exception that would allow operators to continue routinely flaring with narrowly-defined exemptions applicable only to short-term and temporary flaring. Alternatively, EPA should revise and strengthen the certified technical infeasibility demonstration by requiring independent third parties to conduct the demonstration and requiring additional documentation to prove that no other gas recovery options are available.

Enacting these recommended improvements will reduce rates of routine flaring that disproportionately impact tribal communities, like those of the Fort Berthold Reservation in North Dakota, as well as Black and Latine communities. Action to significantly reduce dangerous air emissions from these sources will result in major air quality and health benefits for the communities of color living in close proximity to these sources.

D. Rules Preventing Owners and Operators from Orphaning Wells

EPA's proposal to require ongoing fugitive monitoring, recordkeeping, and reporting until wells are properly plugged will help to minimize emissions from orphaned wells. Likewise, requiring submission of a well closure plan, notification of changes in ownership, and verification of proper plugging through post closure OGI are necessary to addressing the problem of orphaned wells. Nonetheless, we urge EPA to strengthen these requirements by making clear that these provisions apply to all types of abandoned wells. EPA should further require owners and operators to submit final well closure plans at least 30 days *prior* to the cessation of production of *any* well located at a site, rather than requiring these plans to be submitted only after wells stop producing. Additionally, we recommend that EPA further define what is required in the financial demonstration, and suggest inclusion of an estimate of actual closure costs. Finally, we recommend that in addition to requiring a schedule for well closure, operators should submit a schedule enumerating all steps necessary to close the well along with estimating timing for each activity.

Our recommended improvements to EPA's rules will help prevent additional wells from being abandoned and orphaned in communities that already have significant numbers of these wells, like low-income communities in Pennsylvania. Strengthening the rule to cover all types of abandoned wells and require closure plans before wells stop producing will ensure that owners and operators cannot exploit cracks in the rule that would allow them to continue abandoning and orphaning wells, leaving them to continue emitting harmful chemicals into these communities.

E. Maintain Strong Timelines and Close Loopholes in SIPs

Joint Environmental Justice Commenters urge EPA to accelerate key timelines and close loopholes that would allow existing facilities to avoid EPA's proposed rules in SIPs and Tribal Implemental Plans (TIPs). In particular, EPA should only allow states and tribes 15 months, instead of the currently proposed 18, to submit SIPs and TIPs. Likewise, for standards that do not require the installation of new equipment, such as the LDAR requirements, sources should be required to come into compliance within 6 months once the relevant SIP or TIP is finalized. EPA should further consider accelerated timelines for sources that require equipment replacement. Additionally, Joint Environmental Justice Commenters urge EPA to close proposed escape hatches that allow existing sources to avoid compliance with the agency's proposed emission guidelines based on remaining useful life and other factor exemptions. Finally, Joint Environmental Justice Commenters note their support for EPA's proposed requirements for states to engage in meaningful engagement with overburdened and underserved communities and recommend that EPA clarify that those requirements also apply to development of TIPs.

The vast majority of oil and gas infrastructure covered by EPA’s Supplemental Proposal—including the infrastructure that is disproportionately located in Black, Latine, tribal, and rural and low-income communities—falls into the category of existing sources that will be addressed through SIPs and TIPS. As a result, requiring states and tribes to submit SIPs sooner and eliminating loopholes that would allow sources to avoid compliance with more stringent emission limits will ensure that states and tribes achieve more timely and greater reductions in the harmful emissions from existing sources that disparately impact low-income communities and communities of color across the U.S. Additionally, EPA’s proposed meaningful engagement obligations will ensure that impacted communities that have historically been excluded from regulatory processes will have the ability to influence the SIP- or TIP-development process.

V. CONCLUSION

The severe adverse impacts of oil and gas infrastructure and pollution on low-income communities and communities of color across the United States are well documented. For decades, these communities have borne more than their fair share of the hazardous and climate-forcing air pollution from this industry, resulting in disparate health and socio-economic impacts. In line with both EPA’s and the Biden Administration’s commitments to addressing environmental justice in regulatory actions, EPA should strengthen the Supplemental Proposal to further mitigate the disparate impacts of the oil and gas industry on low-income communities and communities of color. Namely, Joint Environmental Justice Commenters urge EPA to address many of the disparate impacts from oil and gas well-siting, abandoned wells, and flaring by finalizing stronger requirements that provide for more participation in community monitoring, eliminate routine flaring, maintain frequent LDAR, prevent orphaning of wells, and close loopholes and long timelines on compliance for existing sources, among other things. EPA should finalize strong new and existing source standards as soon as possible.

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