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20 March 2023

Office of Conservation, Engineering—Regulatory Division,
P.O. Box 94275, Baton Rouge, LA 70804-9275;
c/o F. Jonathan Rice

Re: Inactive and Future Utility Well Rule R A 2023-10

Thank you for the opportunity to comment on the Louisiana Department of Natural Resources ("LDNR") rule. This is a positive direction for the future of Louisiana, consistent with the Governor's Climate Action Plan and Louisiana Coastal Master Plan, and Healthy Gulf generally supports this measure, although we feel the department is not taking the threat and opportunity of neglected wells as seriously as they should.

The need for action is both urgent and long-awaited. **The growth of orphaned wells¹ has increased by 220% since 2012, exceeded by a 270% growth in Shut In Inactive Wells² since 2012.** We often also examine "Temporary" closed wells for methane leak potential (codes 8, 18-20), but note that their number has reduced since 2012. The number of active wells (9–11) in Louisiana has been stable, with some growth, at 116%. Plugged wells (29,30) have not increased with the increased number of wells or with the number of inactive wells, and have only grown 141%. Inactive wells may soon outnumber active wells in the state of Louisiana. **Below, unless otherwise noted, we refer to 8,233 wells of codes 31 and 33 with a status date older than five years.** This is the minimal amount of "shut-in future utility" wells affected by the rule, although there are many other inactive wells affected. These are the codes which have grown rapidly in the last decade, and are of highest concern.

The benefits to this kind of action outweigh the meager costs, given the smaller scope of the action that the department is considering; and the department risks leaving many opportunities and benefits for Louisiana on the table by not making a stronger rule. Below we outline the scope of the cost / benefit that LDNR should consider under its duties under Article IX of the Louisiana constitution, as well as its more limited departmental considerations.

LDNR should conduct an Environmental Justice analysis of this rule, and consult with Louisiana Native Tribes and Environmental Justice communities on its implementation.

Leaving aside that the majority of the wells under consideration³ are owned by companies alien to the state of Louisiana, LDNR's action is socially and economically beneficial even if all owners of these wells were state companies.

¹ Oil and Gas Wells, 8866.zip, downloaded Oct 2022 WELL_STATU = (23, 26). N = (4,615 / 2,108); Nov 2012 / Oct 2022

² Oil and Gas Wells, 8866.zip, downloaded Oct 2022 WELL_STATU = (31-34,36,37), N = (18,892 / 7,329); Nov 2012 / Oct 2022

³ Oil and Gas Wells, 8866.zip, downloaded Oct 2022. At least 5,103 of the 8,233 future utility wells under consideration, Well Status Codes 31 and 33 with status dates longer than 5 years, are owned by companies alien to the state of Louisiana.

Federal Executive Order 12898 on Environmental Justice

When we consider the 8,233 Future Utility wells with statuses older than 5 years, we find that **these wells are disproportionately located (54%) in Low-income, Non-white, or Native American block groups within Louisiana**, according to a simple Environmental Justice (EO 12898) rubric developed by the New Orleans District of the Army Corps of Engineers⁴ for land-based impact to rural populations, such as those in the state of Louisiana. We have provided a census-based worksheet on this method to the department in the past.⁵ This geographical and sociological finding is consistent with the literature on full scope of environmental hazards from oil and gas in the state of Louisiana generally.⁶

United Houma Nation Service Area and other Tribes

When we consider the 8,233 Future Utility wells with statuses older than 5 years, we find that these wells are disproportionately located within the six coastal parishes that comprise the United Houma Nation service area. **2,893 wells, or 35% of the wells, are located in these six parishes, which constitute about 9% of all parishes or 19% of the area of the state.** By either metric, the wells outstrip the ability of government to administer them, or the land to absorb their impact. As one of the largest Native American tribes in the state, LDNR would do well to consult with the United Houma Nation on this rule.

Even when we examine the most local levels, Native Americans in Louisiana bear the burden of these neglected wells. Although the census tract of the **Grand Bayou Village of Atakapas/Ishak Chawasha contains 3 percent (209 of 8,233) of these future utility wells in their census tract, and that census tract is less than 1 percent of the state's area.** Even at the smallest scale, these idle iron wells disparately impact the health, safety, environment, and culture of Native Americans in Louisiana. Grand Bayou has consistently demanded that the State of Louisiana consult with them on matters of culture, housing, oil wells and their damage to wetlands⁷.

Climate and Economic Justice Screening Tool 1.0

In January of 2021, President Biden issued Executive Order 14008. The order directed the Council on Environmental Quality (CEQ) to develop the Climate and Economic Justice Screening Tool⁸. The tool uses datasets that are indicators of burdens in eight categories: **climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development.** The tool uses this information to identify communities that are experiencing these burdens. Federal agencies will use the tool to help identify disadvantaged communities that will benefit from programs included in the Justice40 Initiative. The Justice40 Initiative seeks to deliver 40% of the overall benefits of investments in climate, clean energy, and related areas to disadvantaged communities.

⁴ See [USACE Memorandum for Record](#) Bayou Bidge Pipeline, Page 72. (12/14/17)

⁵ [Public View Copy of Environmental Justice Block Group worksheet for wetlands impact by Oil and Gas ...](#)

⁶ Tracing the Flow of Oil and Gas: A Spatial and Temporal Analysis of Environmental Justice in Coastal Louisiana from 1980 to 2010. Scott A. Hemmerling, Christine A. DeMyers, and Jessica Parfait. Published Online:16 Apr 2021
<https://doi.org/10.1089/env.2020.0052>

⁷ [2020 Louisiana Native UN Complaint Final abridged Grand Bayou.pdf](#)
https://drive.google.com/file/d/1ciM08oDm5gEPHlJK01pQGO3SnKz_uJ0V/view?usp=sharing "Hold oil and gas corporations responsible for damages they have caused to the Louisiana coast; require mitigation measures and compensation."

⁸ Climate and Economic Justice Screening Tool. About. <https://screeningtool.geoplatform.gov/en/about#3/33.47/-97.5>

When we consider the 8,233 Future Utility wells with statuses older than 5 years, we find that these wells are disproportionately (5,430, or 66%) located within disadvantaged communities, as described by the CEJST 1.0⁹, consistent with the statements on environmental justice in the Louisiana Climate Action Plan. This is well above the 40% target set by the EO 14008.

We find that, as the risks of these wells are borne by environmental justice communities in Louisiana, the majority of the benefits of the rule accrue to Low-income, Non-white, and Native American block groups within the State.

LDNR should coordinate with representatives of Tribal Nations and African American local and state government representatives in its implementation.

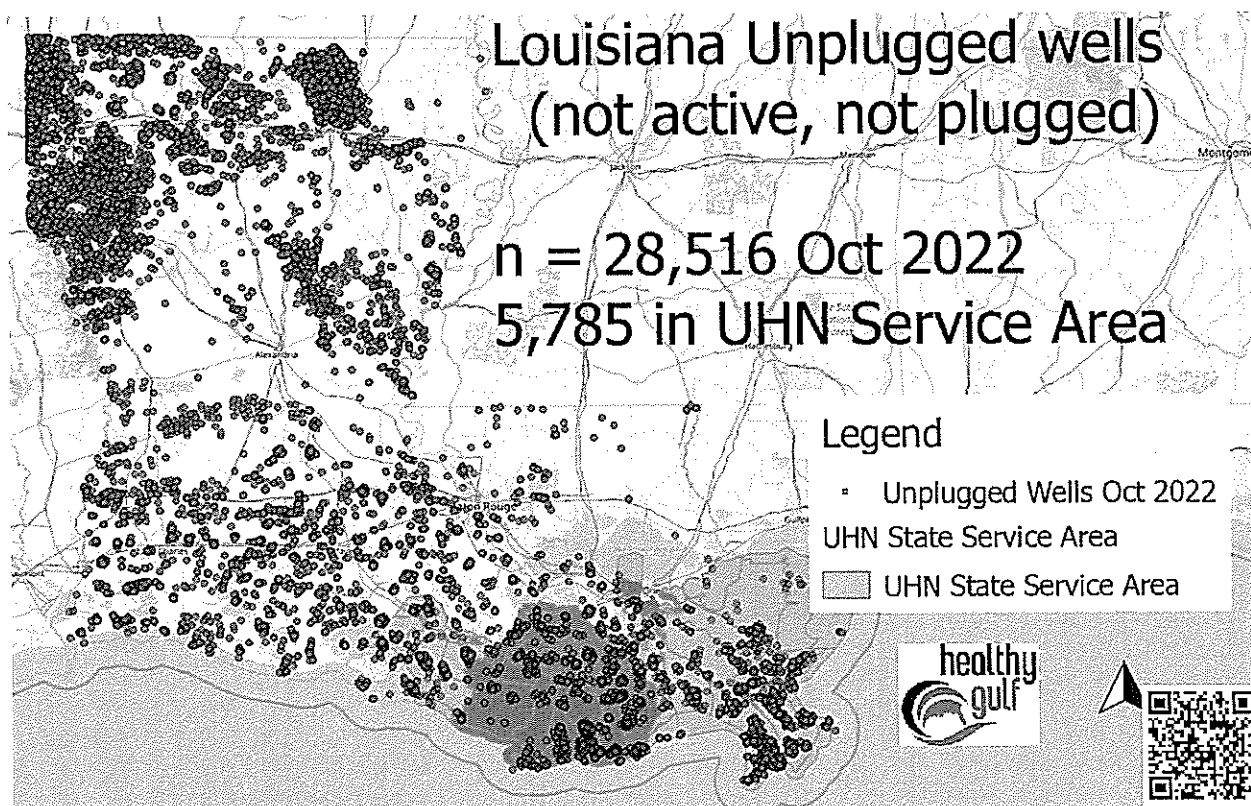


Fig 1. Louisiana Unplugged Wells, overlain with the service area of United Houma Nation.

⁹ As downloaded November 2022

LDNR must consider the environmental, health, and safety benefits of this rule, as is its duty under Article IX of the Louisiana Constitution.

As these wells produce no economic benefit, and only cost to the state, those costs disparately harm Environmental Justice communities across the state. These wells are environmental hazards, safety hazards, and health hazards.

Louisiana Constitution Article IX. 1 states " The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people." LDNR has duties to the Constitution, and duties to examine how this rule affects these qualities.

Notoriously, a tank on a future utility well detonated in Beauregard Parish¹⁰, killing 14-year old Zalee Day. The state has spent millions on groundwater contamination from a single orphan well in DeSoto Parish.¹¹

Methane emissions from these wells lower air quality by contributing to the formation of ozone and particulate matter pollution. Exposure to ozone and particulate pollution damages airways, aggravates lung diseases, causes asthma attacks, increases rates of preterm birth, cardiovascular morbidity and mortality, and heightens stroke risk. These health costs are disparately borne by environmental justice communities across the state. The costs of these health burdens likely number in the hundreds of millions of dollars annually¹².

A limited review of methane leaks¹³ from wells on the Louisiana coast found that wells within the United Houma Nation service area emitted more methane than average. **Review of their data¹⁴ reveals that the wells (n=100) within the Houma Nation service area emitted an average of 1,314.32 kg/hr, or more than twice the national (n=3097) average of 619.32 kg /hr.**

¹⁰ [Zurik: Family pushes for change after tank thought to be abandoned explodes, killing teenage girl](#) Thousands of so-called 'Shut-In Future Utility' wells litter the Louisiana landscape with little enforcement to permanently plug them By Lee Zurik and Cody Lillich Updated: Jul. 21, 2021

¹¹ [Zurik: No company held accountable after state spends millions on leaking wells threatening aquifer](#) By Lee Zurik and Cody Lillich Updated: May. 26, 2021

¹² Environmental Benefits Mapping and Analysis Program - Community Edition (BenMAP-CE). <https://www.epa.gov/benmap> BenMAP-CE is an open-source computer program that calculates the number and economic value of air pollution-related deaths and illnesses. The software incorporates a database that includes many of the concentration-response relationships, population files, and health and economic data needed to quantify these impacts.

¹³ Methane remote sensing and emission quantification of offshore shallow water oil and gas platforms in the Gulf of Mexico Citation Alana K Ayasse et al 2022 Environ. Res. Lett. 17 084039 DOI 10.1088/1748-9326/ac8566 <https://iopscience.iop.org/article/10.1088/1748-9326/ac8566>

¹⁴ <https://data.carbonmapper.org/>

Average emission rate per source

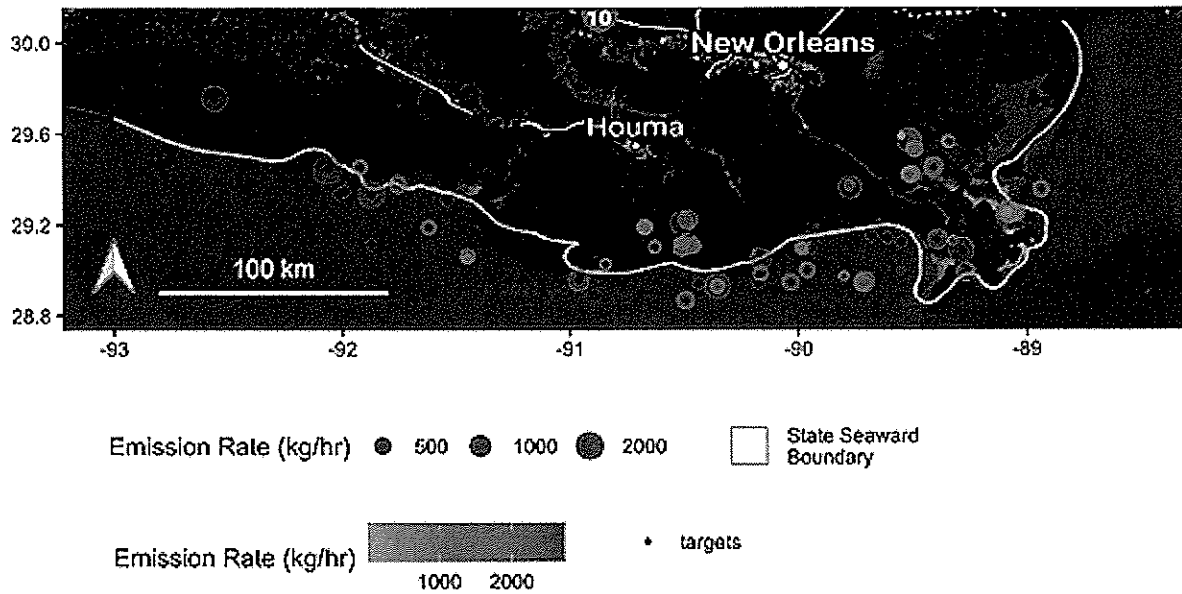
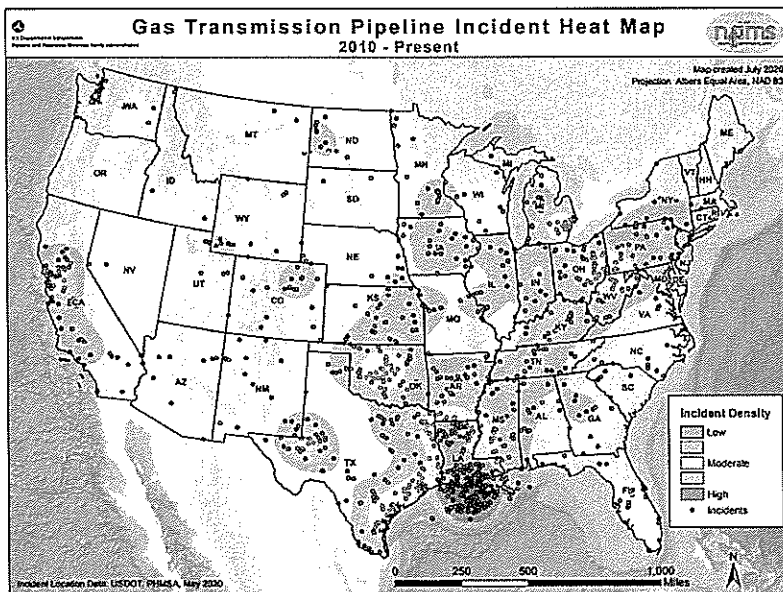


Figure from Ayasse et al, 2022

This is consistent with the finding of the PHMSA Office of Pipeline Safety, whose data reveals that methane gas transmission pipelines in Louisiana have incidents at a rate more than six times the national rate¹⁵. When the department mapped methane pipeline leaks across the nation, it assigned two categories of leak rate, Moderate-High and High, solely to Louisiana, and the OCS off Louisiana¹⁶.



¹⁵ Coastal Louisiana has a per-mile incident or "leak" rate 5.92 times the rate for the nation. This is largely driven by Gas Transmission and Gathering incidents, which happen 6.58 times the national rate. [Oil and Gas Pipeline Integrity in Texas and Louisiana, 2010-2020 Eustis, 2021](#)

¹⁶ https://www.npms.phmsa.dot.gov/Documents/NPMS_HeatMap_GTIncidents_wPipes.pdf Gas Transmission Incident Heat Map with Pipelines, July 2021 from 2020 data..

LDNR should include the costs to the state of leaks from oil spills from shut-in wells. During Hurricane Ida, Healthy Gulf reviewed aerial response photography of a large number of oil spills associated with wells. Of the wells that spilled, many were associated with shut-in future utility wells—including wells operated by Mesa Gulf Coast, S2 Energy, Cantium, and Robertson Energy. The Department confirmed in the press that it was unable to respond to these spills. It is likely that a large number of these oil spills would have been avoided had this rule been implemented, and these wells plugged. Prevention of oil spills onto a nationally significant wildlife corridor is part of the benefits of this rule—to the extent that orphan well plugging has previously been proposed for NRDA or RESTORE Council funding.



Sheens in Timbalier Wildlife Refuge from S2 Energy reported to National Response Center (report 1321271) and LOSCO by Healthy Gulf, after Hurricane Ida. There are birds wading into the oil sheen in this photograph, indicating wildlife impact. Only 9 wells of 182 are active in this field. Nearly all of the other wells are shut-in future utility (code 33). The neglected oil and gas infrastructure derailed restoration of the barrier island in this state wildlife refuge, even after the state spent millions of dollars in restoration planning, trying to avoid the abandoned infrastructure.

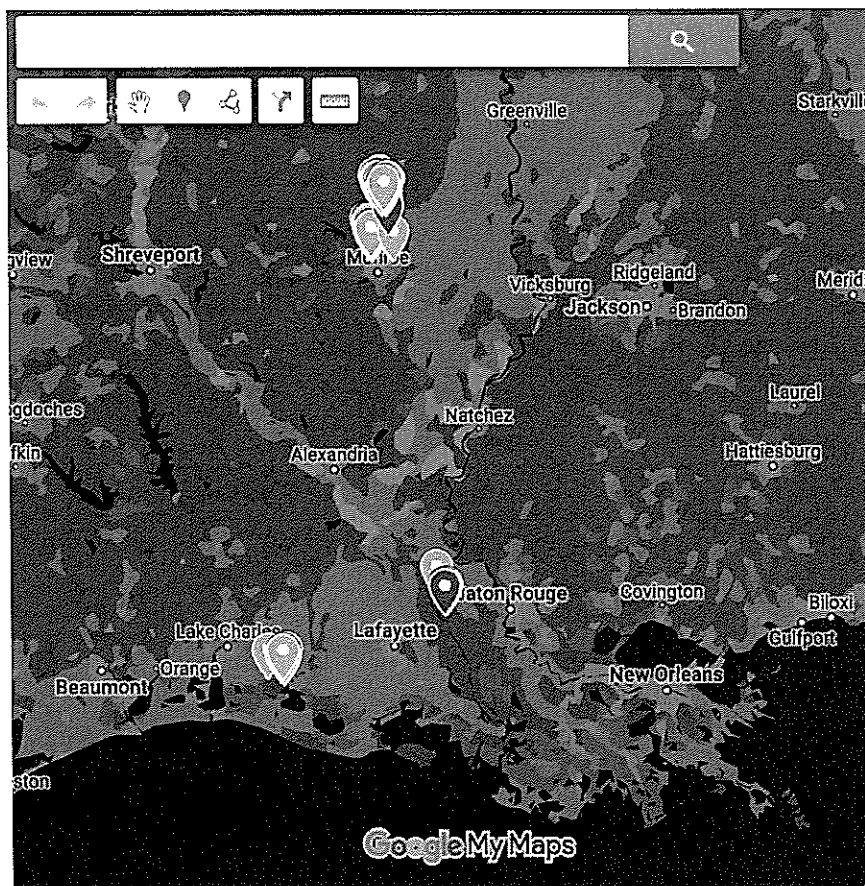
LDNR must consider the avoided costs of oil spills, lost work hours from air pollution, explosions, groundwater contamination remediation and methane leaks as benefits of the rule.

LDNR must consider the federal bias against plugging inactive wells in the coastal zone

Although the recent federal funding to plug orphaned wells represent a historic investment, the federal government rubric is biased against funding to plug orphaned wells drilled in wetlands and water. Louisiana has a significant amount of shallow water wells, compared to similar states, like Oklahoma.

Recent Bipartisan Infrastructure funds that have flowed to the state of Louisiana were supposed to have included Native Tribes, but Louisiana's Native peoples were excluded from consideration. The federal government does not recognize many of Louisiana's State Tribes, many of which are in the Louisiana Coastal Zone, as mentioned above.

Contracts let onto federal wildlife refuges in Louisiana do not seem to have considered the extraordinary ecological and cultural value repairing Louisiana's coast from these industrial injuries, although our coast is nationally unique in terms of its nature as a River-Dominated Delta, and unique even on the planet Earth.



Geography of 182 wells possibly plugged with BIL funding, based on press announcements. Around 150 wells of this set were set to be plugged. Most of these are not in Environmental Justice areas.

The federal formula also fails to consider that coastal wells, subject to large natural and climate-augmented forces, are more likely to leak methane on a well to well basis. We believe that more coastal wells than the expected 6.5% will show methane leaks if the wells were actually monitored for methane. We believe that the higher cost of plugging coastal wells is worth the added expense.

If federal rules considered State recognised Native Tribes, the propensity for coastal wells to leak methane at large volumes, or required monitoring of methane at the shut-in wellhead, more funding would flow to the state of Louisiana. In light of these policy gaps, more of the financial burden of plugging the wells will fall to the department.

LDNR must consider state and department policies that fill the gaps in federal policy that discriminate against Louisiana.

LDNR must consider the out-of-state ownership of inactive wells, compounding environmental and financial risks over time, and requiring methane monitoring for inactive wells.

When we examine the 47 companies that own the the most wells, at 80% of these 8,233 wells; only 23% of the wells in question are owned by Louisiana companies (1,520 / 6,623). 70% of the 6,233 wells are owned by Texas companies. Even if the companies of the remaining wells are all Louisiana companies, the majority of shut-in future utility wells under consideration are owned by companies outside of the state. We expect the ownership of the other categories of inactive wells follows the same pattern.

As the balance of the ownership of the wells subject to the rule are out-of-state, the rule thus has a positive cost / benefit analysis on the basis of small business impact alone.

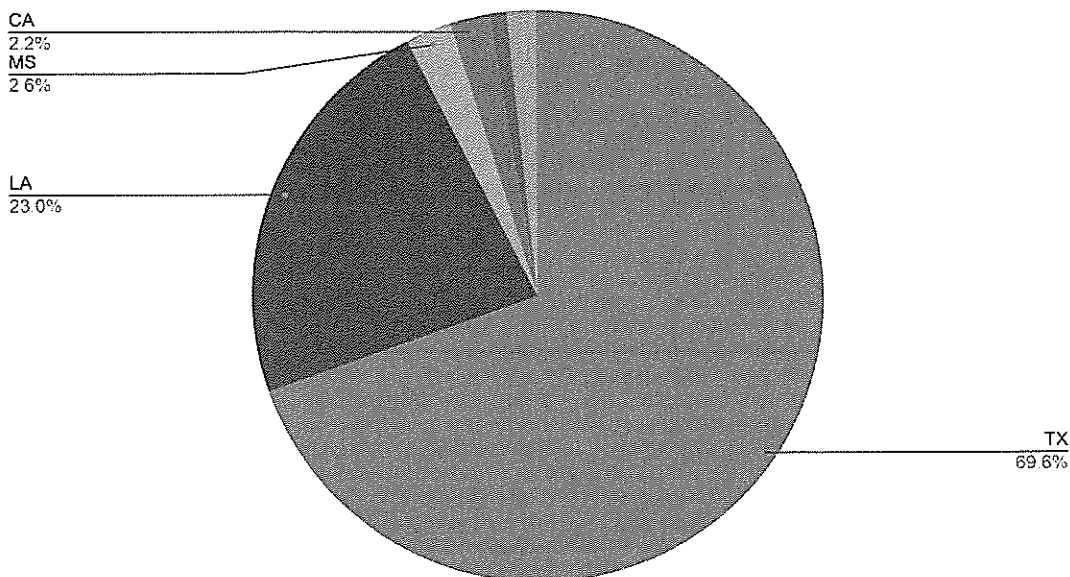
All economic activity of plugging wells will benefit Louisiana contractors. Given the more than 10,000 Louisiana residents recently laid off from the oilfield, we can assume that the benefit to small businesses from maintaining wells will employ state residents to a significant degree, resulting in many benefits to local economies.

There is benefit to groceries and local convenience stores in rural areas no matter the origin of the workforce or ownership of the wells.

There is a great benefit to local businesses from the avoidance of lost work days due to Particulate Matter pollution, explosions, and other health hazards.

Furthermore, this activity is a part of the Climate Action Plan of Louisiana, to avoid the further and more frequent loss of residents from Louisiana. Retention of residents in Parishes and the state is essential to the maintenance of Louisiana's economy, including small businesses.

State of Ownership of Owners of top 80% FU Wells shut in for over 5 years



LDNR must define "Future Utility", and create a fee structure for inactive wells that increases over time.

To date, "future utility" has been defined by the operator, which is how some "future utility" wells have apparently been shut-in for longer than the life expectancy in Louisiana. The Department must create a rationale for designating a well as future utility. There are over 1,290 wells that have been shut-in for over 15 years (codes 31. 33).

Affected landowners must be individually notified of any "future utility" designations. After being notified, landowners must have the ability to give input into any "future utility" determination.

If an operator repeatedly designates a well as "future utility" after repeatedly activating the well for 3 months, then shutting it in, the department should disallow the well from the future utility designation. We have observed that some coastal wells which leak oil into the environment in storms have received an "active" designation after having been shut-in, for the absolute minimum level of "activity." After an exceedingly brief period of activity, the well was shut-in once again.

Given that the probability of a given shut-in well being destroyed in a federal disaster increases with time, the fee structure for shut-in wells should increase over that time. The financial assurances required by wells that linger should be required to increase as least at much as the average Louisiana homeowner's insurance increases.

LDNR must require a methane leak assessment of all wells on an annual basis. LDNR must accelerate this assessment if the well is located in a Parish subject to a federal disaster declaration due to tropical cyclone, winter storm, flood, or severe storm.

In many places, it is a small minority of wells that present the methane leak risk¹⁷. Although Louisiana has a greatly different methane leak risk profile than all other states in the United States, we still believe that it is a simple minority of the wells. However, we expect the rate of wells that show methane leaks to all wells to be much higher than in previous studies. Existing data shows that leak rates from coastal unplugged wells is higher than wells in the Permian shales in Texas.

We hypothesize that coastal storms destroy wells and pipelines in Louisiana. This puts Louisiana on the map for methane leaks, nationally. Therefore, infrastructure must be inspected after a storm for methane leaks, including wells.

¹⁷ Emissions of coalbed and natural gas methane from abandoned oil and gas wells in the United States
Amy Townsend-Small, Thomas W. Ferrara, David R. Lyon, Anastasia E. Fries, Brian K. Lamb
First published: 20 February 2016 <https://doi.org/10.1002/2015GL067623>

In Summary,

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We find that, as the risks of these wells are borne by environmental justice communities in Louisiana, the majority of the benefits of the rule accrue to Low-income, Non-white, and Native American block groups within the State.

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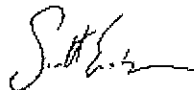
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In order to keep us and the public properly informed, we request notification of denials, approvals, and/or changes to LDNR's Proposal.

Thank you for your work and your time.

[sent via e-mail]



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