

ENVIRONMENTAL JUSTICE PLAN

Project Name: Live Oak CCS Hub

Facility Information

Facility Contact: Live Oak CCS, LLC
14302 FNB Parkway
Omaha, Nebraska 68154
402-691-9500

OOB Code No.: L1135

Well Locations:

Well Name	Latitude (WGS84)	Longitude (WGS84)	Parish	State
LO-01 M ¹	Claimed as PBI		West Baton Rouge	Louisiana
LO-01 F ¹	Claimed as PBI		West Baton Rouge	Louisiana
LO-02 M	Claimed as PBI		West Baton Rouge	Louisiana
LO-03 M	Claimed as PBI		Iberville	Louisiana
LO-04 F-M	Claimed as PBI		Iberville	Louisiana
LO-05 M	Claimed as PBI		Iberville	Louisiana
LO-06 M ¹	Claimed as PBI		Iberville	Louisiana
LO-06 F ¹	Claimed as PBI		Iberville	Louisiana

¹ For shared well pads, surface hole location spacing is set to a minimum of 15 feet.

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List of Acronyms

AoR	Area of Review
CEJST	Climate and Economic Justice Screening Tool
CCS	Carbon capture and storage
CO ₂	Carbon dioxide
EJScreen	Environmental Justice Screening and Mapping Tool
EPA	U.S. Environmental Protection Agency
LDEQ	Louisiana Department of Environmental Quality
LDH	Louisiana Department of Health
LSDT	Louisiana Decision Support Tool

1. Introduction

This Environmental Justice Plan details two critical components related to community outreach in the footprint of the Live Oak CCS Hub in Iberville and West Baton Rouge parishes, Louisiana (the “project”): an Energy & Environmental Justice Assessment and a Stakeholder Engagement Strategy.

The Energy & Environmental Justice Assessment examines the communities in proximity to the project and the associated project benefits and disbenefits. The Stakeholder Engagement Strategy details the overall approach to stakeholder engagement and the community- specific considerations that will be incorporated as the project advances.

2. Environmental Justice Assessment

Community impacts from the development, construction, and operation of the project would be concentrated in and near the Area of Review (AoR), which is located in portions of Iberville and West Baton Rouge parishes. For purposes of this assessment, data was obtained for the AoR and a 2-mile buffer (the “study area”) from the Climate and Economic Justice Screening Tool (CEJST), the U.S. Environmental Protection Agency’s (EPA) Environmental Justice Screening and Mapping Tool (EJScreen), and the Carbon Action Alliance’s Louisiana Decision Support Tool (LDST) (Figure 1).

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Claimed as PBI



Figure 1: Map of the Study Area (Area of Review with 2-Mile Buffer) for the Environmental Justice Assessment.

The CEJST was developed in response to Presidential Executive Order 14008 to identify communities that are overburdened and underserved, which are defined as disadvantaged communities. The CEJST indicates that the portion of the study area located in Iberville parish is in a disadvantaged community (at or above the environmental, climate, or other burden threshold and at or above the associated socioeconomic threshold). This Iberville parish burden is categorized as climate change, specifically a high expected population loss rate from fatalities and injuries resulting from natural hazards each year (96th percentile nationally; threshold is 90th percentile), and the associated socioeconomic indicator is a comparatively high percentage of low income households where income is less than or equal to twice the federal poverty level (72nd percentile nationally; threshold is 65th percentile). The portion of the study area located in West Baton Rouge parish does not have an associated socioeconomic indicator at or above the threshold and, therefore, is not considered a disadvantaged community.

EJScreen was developed by EPA to screen environmental and demographic indicators of environmental justice issues at a geographic location. The study area, largely in Iberville parish, has a population of 10,687. The demographics of the study area reflect residents who are predominantly white or black, with 98% of residents being English speakers. Demographics from the EJScreen for the study area are shown in Figure 2, and the EJScreen report is in Appendix A.

Using EJScreen, EPA has established a starting point of the 80th percentile nationally to identify geographic areas that may warrant further consideration, analysis, or outreach. Environmental burden indicators that are near or above the 80th percentile nationally for the study area include toxic releases to air (99th percentile), Risk Management Plan facility proximity (83rd percentile), drinking water non-compliance (84th percentile), and a climate indicator for flood risk (77th percentile). There are no socioeconomic indicators that are at or above the 80th percentile for the study area. Socioeconomic indicators of specific concern to EPA for Class VI UIC permitting projects are people of color and low income households¹, for which the indicators for the study area are generally in line with the national average, in the 57th percentile and 40th percentile, respectively.

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¹ Memorandum of Agreement Addendum 3 Between the State of Louisiana and the United States Environmental Protection Agency Region 6 for the Class VI UIC Program. March 3, 2023.

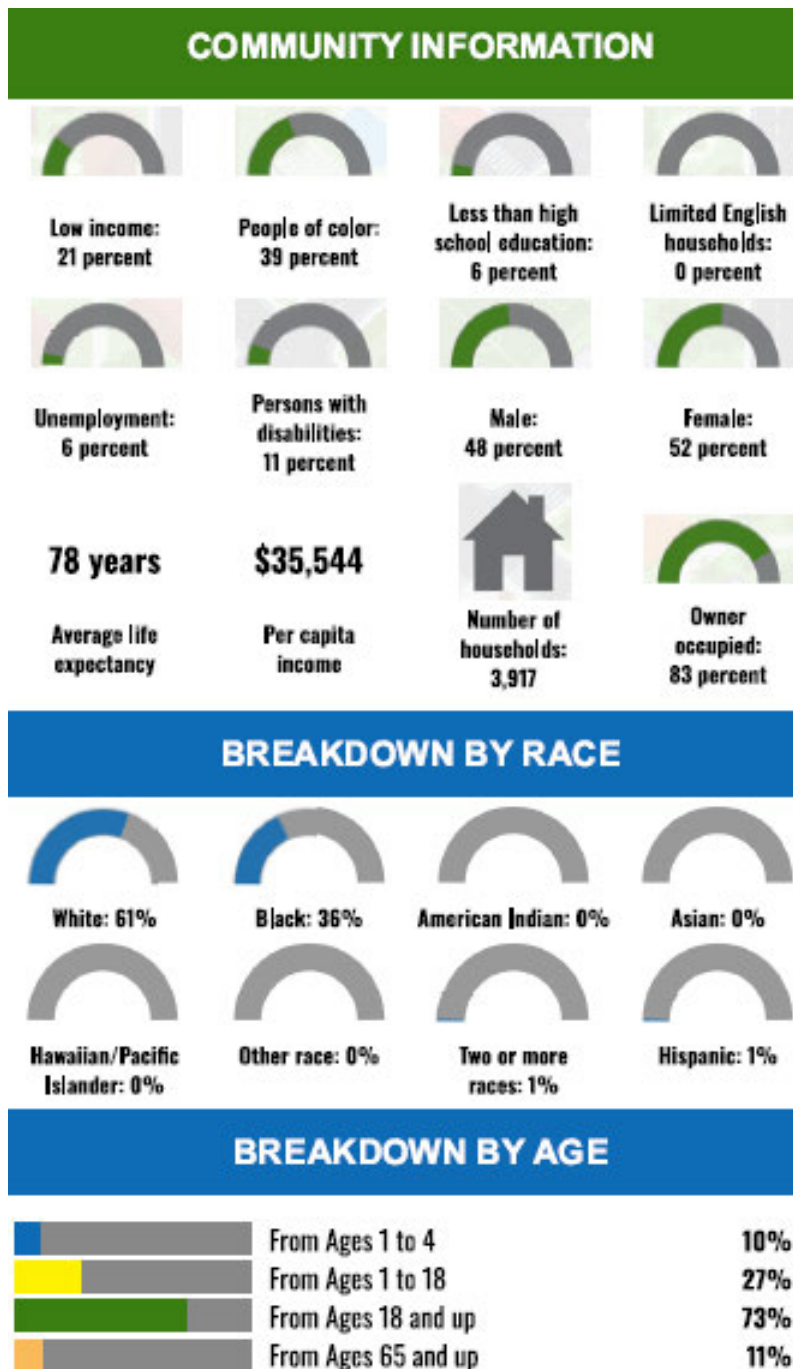


Figure 2: Demographics of the Study Area (EJScreen, August 2024).

Further review of the study area was performed utilizing the LDST, specifically the Comprehensive Social and Environmental Factors map. The LDST was designed to aid in the review of potential social and environmental impacts of a carbon management project and incorporates the preferences and priorities of the people of Louisiana. This examination showed the study area is not precluded by law or regulation from CCS development. The combined factor

score for the study area is shown in Table 1, and a results report is presented in Appendix B that shows a distribution map of the scores in the study area. The lowest score (0-50) is in the eastern portion of the study area and associated with West Baton Rouge parish, and the scores get higher going east into Iberville parish. Lower scores in West Baton Rouge parish are due to the census tract being more developed than Iberville parish, which the scoring tool equates to less development constraints and resources to protect. Social factors that increased the score in Iberville parish include the climate change indicator due to increased risk of flood and wildfire and the environmental hazards indicator due to impacts of industrial activity on air and water pollution and health. Environmental factors that increased the score in Iberville parish include the presence of flood zones and wetlands and no public protected lands or habitat.

Table 1: Combined Social and Environmental Factors Score for the Study Area. (Louisiana Decision Support Tool, August 2024)

Combined Factor Score		Portion of Study Area, Acres (%)	Indicators that Increased Study Area Scores
Higher score reflects a population that is more vulnerable to the impacts of project development and greater risk of environmental resource sensitivities and constraints.	0-50	31,238.20 (35%)	<ul style="list-style-type: none"> Social Factors: Climate change (flood and wildfire risk), environmental hazards (industrial air and water pollution) Environmental Factors: presence of wetlands, presence of flood zones, no protected lands or habitat
	50-60	19,467.38 (22%)	
	60-70	37,358.32 (42%)	
	70-80	85.87 (1%)	
TOTAL		88,149.78 (100%)	

Historically, air quality in the Baton Rouge region, including the study area, has been challenged due to its proximity to major industrial and petrochemical facilities sited in the 85-mile industrial corridor stretching between Baton Rouge and New Orleans, sometimes referred to as “Cancer Alley.” Pollutants of concern are ozone, sulfur dioxide, and particulate matter, and air toxics of concern are ethylene oxide and chloroprene emissions from petrochemical facilities in the industrial corridor. Iberville and West Baton Rouge parishes were historically designated as nonattainment for ozone but achieved attainment in 2017 and have maintained that designation. The study area and the Baton Rouge area are currently in attainment for all National Ambient Air Quality Standards due to efforts to reduce particle pollution and improve air quality among the Louisiana Department of Environmental Quality (LDEQ), industries, businesses, and the community. In 2022, EPA began an investigation into administrative complaints against LDEQ and the Louisiana Department of Health (LDH) with initial findings that action or inaction by LDEQ and LDH have and continue to result in disparate adverse health impacts on a predominantly Black population in the industrial corridor due to air toxics exposure.² Louisiana filed suit in federal court challenging the investigation in May 2023, and EPA administratively closed the investigation on June 27, 2023.

While the community impacts (both positive and negative) of the project would be centered on the AoR, cumulative impacts from the project would extend along the regional pipeline route and to

² U.S. EPA. October 12, 2022. RE: Letter of Concern. <https://www.epa.gov/system/files/documents/2022-10/2022%2010%2012%20Final%20Letter%20LDEQ%20LDH%2001R-22-R6%2C%2002R-22-R6%2C%2004R-22-R6.pdf>

CO₂ capture facilities. As the pipeline route that would connect the storage field to the emitters becomes more defined, the project team will further assess the potential indirect impact of the project on those communities.

2.1 Project Benefits

Air quality has been identified as a key concern in the study area. Operation of the project will result in de minimis fugitive emissions of air pollutants and no toxic emissions and, thus, will not exacerbate air quality issues in the study area and region. A cumulative benefit of the project on air quality is the reduction of carbon dioxide emissions from industries in the industrial corridor, which will be captured, transported, and then stored within the AoR.

The project will bring several layers of economic benefits to the host communities during construction and operation. Landowners who host the storage site – either above-ground injection or monitoring wells or underground pore space – will benefit from an additional passive income stream provided by land agreements, with little to no impact to above-ground land use. Construction of the sequestration field and the pipeline will create jobs for an estimated 400 workers, as well as opportunities for local contractors and vendors to provide goods and services to the project. Once operational, the facility will provide full-time employment for roughly 3 to 6 workers.

Projected capital costs for the project include: \$38 million for land agreements over the life of the sequestration field; \$223 million for construction of the injection infrastructure; \$20 million to \$40 million for pipeline easements; \$120 million to \$238 million for construction of the pipeline, depending on the length and size; and \$5.1 million annually for operations and maintenance.

The team will be commissioning an economic impact assessment later this year as part of the Environmental Analysis required by LRS 30:1104.1. This analysis will quantify the economic benefits of the project on the local economy, estimating the direct and indirect benefits, and encompass applicable taxes, injection fees, economic benefits payments, construction labor, and operational costs.

An additional layer of economic benefits will come from the stability that the project offers to emitters in the region. Manufacturers, industrial processors, power generating facilities, and other CO₂ emitters are facing increasing pressure from shareholders to meet climate goals and navigating stricter environmental regulations to limit their CO₂ emissions. The project offers a viable solution, allowing existing businesses to remain stable regional employers and taxpayers and helping to attract new industry.

2.2 Project Disbenefits

The project team recognizes the priority placed by the EPA and the Louisiana Department of Energy and Natural Resources on mitigation of new or existing impacts on disadvantaged populations in the project footprint. As noted in the previous section, operation of the Live Oak CCS Hub is intended to assist industrial facilities in managing their carbon emissions, thus mitigating not adding to the emissions burdens on the community.

The project acknowledges that construction of the Live Oak CCS Hub will cause disturbance, such

as increased road traffic, noise, fugitive emissions, and nuisance. The project will strive to limit this impact during this time, as well as to provide clear communication to the public about this phase of the project. As part of this effort, the project will have a road use plan that incorporates feedback from local government and other stakeholders.

Some well pads for the project will be located in the 100-year floodplain. The well pad will cover an area of approximately 1 acre and will be designed so that there is no increase in the base flood elevation as a result of the development. Thus, the project will not exacerbate flooding issues identified in the study area.

During the operations phase of the project, the potential exists – albeit rare – for the migration of CO₂ from the AoR or for a release event. In this event, the project will follow the Emergency and Remedial Response Plan approved by LDENR and Iberville and West Baton Rouge parishes. The project team intends to develop positive and proactive working relationships with local emergency responders prior to the start of operation.

Further, a key consideration in the siting of the project was to locate the sequestration field away from residences and populated areas to the extent feasible, to limit potential impact from construction and operation. Figure 3 of the Application Narrative shows the distance between injection well sites and structures.

3. Stakeholder Engagement Strategy

3.1 Background

The personnel associated with Live Oak CCS, LLC draw upon 35 years of experience in developing energy projects and understand the importance of implementing a robust stakeholder engagement plan. An effective plan must demonstrate awareness of the community and must be dynamic and responsive to the progression of the project through development and to the changing needs of the various stakeholder audiences.

Tenaska Development, which is advancing the Live Oak CCS Hub, has a dedicated Community Relations team. The team has extensive communications experience, inclusive of developing and executing strategic community engagement and communications plans (encompassing public relations, local government relations, community engagement and related communications support) that align with local development milestones, building key stakeholder relationships, and fostering a positive environment for energy development.

In 2024, Tenaska Development's Community Relations team, in collaboration with in-house environmental permitting experts, provided basic environmental justice education to the company's developers and other employees who support local development work and rolled out a framework for considering environmental justice as part of project development. Various members of the community relations team expanded their own knowledge through environmental justice education, including a Diversity, Equity Inclusions: Foundations course through Miami University and a two-day webinar from EUCI focused on environmental justice and energy development.

For the Live Oak CCS Hub, Tenaska Development's expertise is complemented by Cornerstone,

which has been contracted to provide public affairs services for the project. Cornerstone has more than 20 years of experience in government relations and strategic communications. Their expertise includes support for a variety of energy and infrastructure projects, as well as projects in the Baton Rouge area and in Louisiana. While Cornerstone provides services across the United States, the Live Oak CCS Hub is serviced by the firm's Baton Rouge office, which is in proximity to the project.

3.2 Approach

Stakeholder engagement is an important part of a successful energy development project. It is not only helpful in securing required permits and approvals for a project but also in helping the community understand and accept new (and sometimes unfamiliar) development efforts and the associated benefits and potential risks. It is understood that some previous projects in the state did not adequately respond to public concern, nor did they proactively communicate the benefits of CCS, resulting in a string of negative public reaction. In this regard, the project team understands that effective communications and a level of transparency will be key to public support.

Each stakeholder audience – participating landowners, local leaders, project neighbors, and the community at large – requires different types of information and at different points in development. Live Oak CCS, LLC intends to put significant effort into building local relationships and communicating with these audiences at the appropriate time in the development of the Live Oak CCS Hub.

The general approach is to conduct a community assessment or landscape analysis of the project area that includes both desktop and on-the-ground research. This assessment ensures the project team understands the community dynamics and level of receptiveness to our development efforts and serves as the starting point for an effective stakeholder engagement plan.

In the fourth quarter of 2023, Cornerstone performed a landscape analysis for the Live Oak CCS Hub that included Iberville and West Baton Rouge parishes. This analysis evaluated how these communities might perceive the project, identified local stakeholders, reviewed the media landscape, and recommended tactics for engaging the community.

To date, the project team has met with landowners about voluntary participation in the project and with local leaders to introduce the Live Oak CCS Hub. The reception has been largely positive, due equally to the project siting in a low-impact location and to the public awareness of CCS in this region. In general, the community is becoming increasingly familiar with CCS and the benefits these types of projects will bring to existing industry.

Through the first half of 2024, the Live Oak CCS Hub project team has engaged with a significant number of local, state, and federal stakeholders through a combination of in-person discussions, virtual meetings, and/or e-mail updates, as detailed in Table 2. This is in addition to numerous conversations with area landowners about participation in the project through land agreements and with regional industrial facilities about the use of the Live Oak CCS Hub as a CO₂ emissions solution.

Table 2: Initial Stakeholder Engagement.

Federal
Office of U.S. Sen. Bill Cassidy
Office of U.S. Rep. Garret Graves
Office of U.S. Rep. Troy Carter
State
Louisiana Gov. Jeff Landry
Louisiana Sen. Caleb Kleinpeter (District 17)
Louisiana Sen. Eddie Lambert (District 18)
Louisiana Sen. Ed Price (District 2)
Louisiana Rep. Ken Brass (District 58)
Louisiana Rep. Jeff Wiley (District 81)
Louisiana Rep. Jeremy LaCombe (District 18)
Louisiana Rep. Edmond Jordan (District 29)
Former Louisiana Sen. Rick Ward (District 17)
Louisiana Department of Energy and Natural Resources
Louisiana Association of Business and Industry
Louisiana Mid-Continent Oil and Gas Association
Local
Iberville Parish President – Chris Daigle
West Baton Rouge Parish – Jason Monola and Phillip Bourgoyne
St. James Parish – Pete Drufrasne
West Baton Rouge Chamber of Commerce
Baton Rouge Area Chamber of Commerce

Stakeholder outreach for the remainder of 2024 is anticipated to include an additional round of in-person introductions, as detailed below:

- Iberville Parish Council members
- Iberville Parish Government Office of Emergency Preparedness
- West Baton Rouge Parish Council members
- West Baton Rouge Parish Department of Homeland Security and Emergency Preparedness

Also in the first half of 2024, the project became a member of the Louisiana Association of Business and Industry, the Louisiana Mid-Continent Oil and Gas Association, and the West Baton Rouge Chamber of Commerce.

Additional stakeholder outreach and community engagement will be incorporated into the development of the Live Oak CCS Hub as activities progress. As the pipeline route from the injection wells to the emissions sources becomes firmer, stakeholder outreach will be further expanded.

Tactics that Tenaska Development typically incorporates in a stakeholder engagement strategy include: developing collateral materials (e.g., fact sheet, website); hiring a local resident to serve

as a community representative for the project; opening a project office with dedicated office hours; holding meetings or open houses targeted for specific audiences; and commissioning an economic impact study.

To date, Live Oak CCS, LLC, through Tenaska Development, has created a landowner brochure, project fact sheet, a CCS 101 video (<https://vimeo.com/693514012/529832e98f>), a CCS safety video (<https://vimeo.com/885512532>) and a project website ([Live Oak – Meeting the needs of carbon emitters through carbon capture and sequestration. \(liveoakccshub.com\)](https://liveoakccshub.com)) that is being used to explain the project to local government and business leaders, prospective landowner participants, neighbors, and the general public. Additional communications materials will be developed as the project progresses.

Opening of a local project office, hiring of a local project representative, and commissioning of an economic impact study are planned for the remainder of 2024.

4. References

American Lung Association. 2024. New Report: Baton Rouge Ranked 42nd Most Polluted City in the Nation for Ozone Pollution, Worst in Southeast. [Press Releases | American Lung Association | American Lung Association](#)

Carbon Action Alliance. Louisiana Decision Support Tool.
<https://greatplains.maps.arcgis.com/apps/webappviewer/index.html?id=5d21751f002f47cba104e6d3a732aaa0>

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<https://screeningtool.geoplatform.gov/en/#10.78/30.4008/-91.3281>

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