UNITED STATES OF AMERICA

DEPARTMENT OF ENERGY

FEDERAL ENERGY REGULATORY COMMISSION

IN THE MATTER OF		
	)	
Venture Global Plaquemines LNG, LLC	)	Docket No. CP22-92-000
	)	

Comments of Sierra Club and Healthy Gulf in Response to Notice of Scoping Comments on Environmental Issues

In response to the Federal Energy Regulatory Commission's ("FERC") May 11, 2022, notice of scoping period requesting comments on the expansion of peak capacity for the Venture Global Plaquemines LNG, LLC project and related environmental issues in the above-captioned docket, Sierra Club and Healthy Gulf submit the following regarding the appropriate scope of the National Environmental Policy Act ("NEPA") review and request that FERC: (a) prepare an Environmental Impact Statement ("EIS") for the expansion; (b) reopen the prior 2019 EIS to include the proposed Amendment and associated infrastructure like the Evangeline Pass Expansion and East Lateral Xpress Expansion Project; (c) prepare a supplemental environmental impact statement ("SEIS") for FERC's 2019 EIS to address significant new information; and (d) comply with the Endangered Species Act ("ESA") and analyze the impacts of the expansion, and initiate consultation and reconsider its previous ESA analysis concerning the project. In addition, Sierra Club and Healthy Gulf incorporate by reference the arguments and issues raised in their Motion to Intervene and Protest ("Protest"), filed in this docket on April 15, 2022. Sierra Club and Healthy Gulf also support the arguments raised in comments submitted by Earthjustice on behalf of the Louisiana Bucket Brigade.

Venture Global Plaquemines LNG, LLC, ("Plaquemines LNG") filed an application for Authorization under Section 3 and Section 7 of the Natural Gas Act with FERC on February 28, 2017 for the construction and operation of a liquification plant, two on-site 710-megawatt gas-

fired power plants, an LNG export terminal, and associated facilities along with the Gator Express pipeline project involving two new pipelines that will supply feed gas (hereinafter referred to as the "Plaquemines LNG Project" or "project").[1] This project will provide for the export of up to 24.0 MTPA to the global market.[2]

After issuing a final EIS in May 2019, FERC granted Plaquemines LNG's application in September 2019. On March 11, 2022, Plaquemines LNG applied for a Limited Amendment of Authorization under Section 3 of the Natural Gas Act (the "Amendment" or "the expansion"). The Amendment requested authorization to "increase the Export Terminal's authorized peak liquefaction capacity achievable under optimal conditions from 24.0 MTPA to 27.2 MTPA of LNG."[3] Plaquemines LNG implies that such an expansion is appropriate due to the "the extraordinary current demand for the export of U.S. LNG around the world"—but it fails to acknowledge that Russia's unprovoked invasion of Ukraine is a factor for the Department of Energy, not FERC to consider. Moreover, for the reasons described in our April 15, 2022 Protest, such capacity expansion is not needed, or even helpful, for decreasing Europe's reliance on Russian gas.

In its attempt to rush this Amendment to approval, Plaquemines LNG has not provided any information regarding the environmental impacts of the proposed export increase, wrongly

[1] *Application of Venture Global Plaquemines LNG, LLC and Venture Global Gator Express, LLC for Authorizations under Sections 3 and 7 of the Natural Gas Act under CP17-66, et al.*, Dkt No. CP17-66 (Feb. 28, 2017) (eLibrary No. 20170228-5352).

[2] *See Final Environmental Impact Statement for the Venture Global Plaquemines LNG, LLC's et al Plaquemines LNG and Gator Express Pipeline Project under CP17-66 et al. "See [20190503-3020] for reissued FEIS to correct the control number*, at 2-7, Dkt No. CP17-66 (May 3, 2019) (eLibrary No. 20190503-3011) (hereinafter "Plaquemines LNG 2019 FEIS"). When the plant operates at the lower "design capacity" of 20.0 MTPA, the produced LNG would emit 121 million metric tons of carbon dioxide equivalent (MMT CO2e) per year, which is equivalent to the annual emissions from 31 coal plants. At the current peak capacity of 24.0 MTPA, the produced LNG would represent 145 million metric tons of carbon dioxide equivalent (MMT CO2e) per year, which is equivalent to the annual emissions from 37 coal plants or 31.6 million cars. GHG equivalency calculations are based on the 20-year global warming potential equivalency estimates from *Life Cycle Greenhouse Gas Emissions from U.S. Liquified Natural Gas Exports: Implications for End Uses*, available at https://pubs.acs.org/doi/suppl/10.1021/es505617p/suppl_file/es505617p_si_001.pdf (attached as Exhibit A) (hereinafter "GHG Emissions from U.S. LNG Exports") and *Greenhouse Gas Equivalences Calculator*, EPA, available at https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator (hereinafter "GHG Equivalencies Calculator").

[3] *Venture Global Plaquemines LNG, LLC submits Abbreviated Application for Limited Amendment of Authorization under Section 3 of the Natural Gas Act under CP22*-92, Dkt No. CP22-92 (Mar. 11, 2022) (eLibrary No. 20220311-5096).

claiming that prefiling information is not necessary for an increase in output.[4] The proposed Amendment is a new, major federal action in itself, which if granted, allows for a significant increase in natural gas liquefaction of 3.2 MTPA—additional LNG that, if produced and burned, will result in the same greenhouse gas emissions of **over 5 coal plants**.[5] As discussed in detail in our April 15, 2022 Protest and below, increasing export volumes will cause a wide range of environmental impacts—including concerns about climate change, air pollution, the proximity of the proposed Amendment to environmental justice communities, and the impact that this will have on vulnerable species in the area—which are not discussed in the application. Moreover, in the three years since FERC granted the Applicant's initial Section 3 and Section 7 Authorizations and conducted its initial ESA analysis, significant new information regarding climate risks and endangered species in the project area has come to light, necessitating further environmental and ESA analysis.

FERC should deny the Applicants' request because: (1) the Amendment itself will have substantial environmental impacts without demonstrated need; (2) significant developments since the issuance of the Order undermine FERC's prior findings; and (3) FERC must prepare an EIS for the Amendment, reopen the 2019 EIS to incorporate the Amendment and other related infrastructure; conduct an SEIS for the 2019 EIS on the project; and prepare a new and/or renewed ESA analysis.

I. NEPA AND THE ESA CREATE ONGOING OBLIGATIONS FOR FERC

NEPA is America's "basic national charter for protection of the environment."[6] NEPA requires federal agencies to take a "hard look" at the environmental consequences of their actions before taking action.[7] In this way, NEPA ensures that federal agencies "will have available, and will carefully consider, detailed information concerning significant environmental impacts" and that such information "will be made available to the larger [public] audience that may play a role in both the decision making process and the implementation of that decision."[8] To that end, NEPA requires federal agencies to prepare a detailed EIS for any "major federal action significantly

[4] *Id*. at 3 n.7. For the reasons discussed in Section II.B of our April 15 Protest, Plaquemines LNG's assertion is incorrect and environmental review is required.
[5] *See supra* note 2.
[6] *Ctr. For Biological Diversity v. Bernhardt*, 982 F.3d 723, 734 (9th Cir. 2020) (citation omitted).
[7] *Kleppe v. Sierra Club*, 427 U.S. 390, 410, n.21 (1976); 40 C.F.R. § 1500.1(a).
[8] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 322, 349 (1989).

affecting the quality of the human environment."[9] Under NEPA, a "major federal action" is "an activity or decision subject to Federal control and responsibility" including "approval of specific projects, such as construction or management activities" and encompassing " new and continuing activities."[10] Expansion of the Project's peak LNG production capacity is a major Federal Action subject to NEPA.

The agency's NEPA obligations do not end with the preparation of an initial EIS. In particular, NEPA requires agencies to prepare a supplemental analysis if a major Federal action has yet to occur,[11] and "(i) the agency makes substantial changes to the proposed action that are relevant to environmental concerns; or (ii) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[12] An agency may also prepare "supplements when [it] determines that the purposes of the Act will be furthered by doing so."[13] An agency must prepare, circulate, and file a SEIS "in the same fashion (exclusive of scoping) as a draft and final statement."[14] Expanding the peak capacity is a substantial change to the project and, therefore, FERC has a duty to ensure that an SEIS is completed prior to taking action on the Applicant's Amendment.

Regarding the ESA, Congress enacted it in 1973 "to provide a program for the conservation of . . . endangered species and threatened species."[15] Federal agencies play the central role in species protection under the act. Section 7—which courts have described as the "heart of the ESA"—contains both substantive and procedural provisions with which all federal agencies must comply.[16] Substantively, Section 7(a)(2) requires that "[e]ach Federal agency shall . . . insure that any action authorized, funded, or carried out by such agency. . . is not likely to jeopardize the continued existence of any endangered species or threatened species" or adversely modify their designated critical habitat.[17]

[9] 42 U.S.C. § 4332(2)(C).
[10] 40 C.F.R. §§ 1508.1(q), 1508.1(q)(3)(iv).
[11] 40 C.F.R. § § 1502.9(d).
[12] 40 C.F.R. § 1502.9(c)(1).
[13] 40 C.F.R. § 1502.9(c)(2).
[14] 40 C.F.R. § 1502.9(c)(4).
[15] 16 U.S.C. § 1531(b).
[16] *Karuk Tribe of Cal. V. U.S. Forest Serv.*, 681 F.3d 1006, 1019 (9th Cir. 2012); *Forest Guardians v. Johanns*, 450 F.3d 455, 457 (9th Cir. 2006).
[17] *Karuk Tribe*, 681 F.3d at 1020 (quoting 16 U.S.C. § 1536(a)(2)).

To meet these substantive obligations, the ESA and its implementing regulations have several procedural requirements. Fulfillment of each stage of this process is the only means by which an agency ensures that its substantive duty to ensure against species jeopardy under Section 7(a)(2) is satisfied. Specifically, the ESA requires each agency, referred to as the "action agency," to "consult" with the Fish and Wildlife Service ("FWS") or the National Marine Fisheries Service ("NMFS," collectively, "Services") to obtain the Services' "expert opinion" on species impacts.[18] Under these procedural obligations, the action agency "shall . . . request" information from the Services regarding whether any listed species "may be present" in the area, and if so, the action agency must prepare a "biological assessment" or engage in "informal consultation" with the Services to determine whether listed species will be adversely affected by the proposed action.[19] If the biological assessment or informal consultation concludes that a proposed action "may affect" any listed species or critical habitat, the agency must engage in formal consultation with the Services.[20] The "may affect" standard is a low one: "[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character, triggers the formal consultation requirement."[21]

Formal consultation is not required, however, if through a biological assessment or informal consultation, the action agency determines its action is "not likely to adversely affect" any listed species and the Services issue a written concurrence in that determination.[22] If the Services do not agree that the agency action is not likely to adversely affect the protected species, formal consultation must occur.[23]

The action agency's ESA duties do not end with the completion of the initial consultation. The agency must review the ongoing impacts of the action and reinitiate consultation when: (a) the amount or extent of taking specified in the incidental take statement is exceeded; (b) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (d) if a new species is listed or critical habitat designated that may be affected

[18] 16 U.S.C. § 1536(a)(2). Generally, the FWS is responsible for terrestrial species, and NMFS is responsible for marine species. *See* 50 C.F.R. § 402.01(b).
[19] 16 U.S.C. § 1536(c); 50 C.F.R. §§ 402.12(c), (d), 402.13(a).
[20] 50 C.F.R. § 402.14.
[21] *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 496 (9th Cir. 2011) (citation omitted).
[22] 50 C.F.R. § 402.14(b).
[23] 50 C.F.R. § 402.14(a).

by the identified action.[24] When reinitiation is required, "the original opinion loses its validity" and the action agency can no longer rely on it to satisfy its substantive duty to ensure its actions do not jeopardize listed species.[25] In this case, after FERC's previous consideration of impacts on ESA-listed species, the Rice's whale has been listed under the ESA, and this requires a re-evaluation of the impacts of this project and re-initiation of consultation with the FWS and NMFS.

II. FERC must Prepare an EIS on the Expansion; Re-Open the 2019 EIS; and Prepare a SEIS on the 2019 EIS.

Because it is a major federal action, FERC must conduct an entirely new EIS on the expansion, and include the Plaquemines LNG project and associated infrastructure. Increasing the peak LNG production capacity is a major federal action because FERC must approve the Amendment and supervise construction and implementation of the Amendment. The Amendment also poses an increased risk to human health in Southeast Louisiana. If FERC does not reopen consideration of the prior EIS, FERC should conduct a new EIS of the entire Plaquemines LNG facility that encompasses the changes made by the Amendment and related projects along with the latest information on the facility's environmental impacts.

As stated in our April 15, 2022 Protest, FERC violated NEPA by segmenting review of this Amendment from review of prior related actions. The proposed Amendment and prior related actions are all located within the same region impacting the same resources and are all directly tied to the Plaquemines LNG facility. Under NEPA an agency cannot separate similar federal actions into separate projects because it would fail to address the true impact and scope of the activities.[26] The Amendment is an integral part of the Plaquemines LNG export terminal facility and Gator Express pipeline (FERC Docket No. CP17-66 and CP17-67). Thus, segmenting review of these actions would violate NEPA. FERC should therefore reopen the prior 2019 EIS to include the proposed Amendment and associated infrastructure like the Evangeline Pass Expansion and East Lateral Xpress Expansion Project.

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[24] 50 C.F.R. § 402.16.
[25] *Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 698 F.3d 1101, 1108 (9th Cir. 2012). During the consultation process and until the requirements of section 7(a)(2) are satisfied, section 7(d) provides that an agency "shall not make any irreversible or irretrievable commitment of resources" toward an action that would foreclose "the formulation or implementation of any reasonable and prudent alternative measures." 16 U.S.C. § 1536(d).
[26] *Delaware Riverkeeper Network v. FERC*, 752 F.3d 1304, 1313 (D.C. Cir. 2014) ("Actions are 'connected' if they trigger other actions, cannot proceed without previous or simultaneous actions, or are 'interdependent parts of a larger action and depend on the larger action for their justification.'").

FERC should also prepare a supplemental EIS for the project. A supplemental EIS is appropriate when there remains a major Federal action left to occur and there are significant new circumstances or data that the original EIS did not consider.[27] The Amendment is an ongoing federal action because it requires approval and oversight by FERC.[28] Moreover, since the issuance of the prior EIS in 2019, significant new data regarding the sea-level rise, climate change, and species has become available.

III. NEPA requires that FERC consider climate change when identifying environmental issues

Pursuant to its obligations under NEPA, FERC must consider the environmental impacts of climate change on and from this Amendment. Additionally, it is consistent with the purposes of NEPA for the Commission to also assess the indirect impacts of this Amendment on upstream and downstream activities and to disclose the greenhouse gas emissions associated with them.[29] The impacts from this Amendment from and to climate change may also affect other issues already identified and previously analyzed by FERC as pertinent to its environmental review, such as endangered and threatened species, cumulative impacts, environmental justice impacts, and public safety.

In addition to NEPA requirements, complementary legal authorities and policies support consideration of climate impacts. Louisiana state law also supports consideration of climate change adaptation in the environmental analysis. In response to hurricanes Katrina and Rita, the Louisiana Legislature passed Act 8 of the First Extraordinary Session of 2005 ("Act 8"). Act 8 established the Coastal Protection and Restoration Authority ("CPRA"). The CPRA is legally required to develop and implement a comprehensive coastal protection plan, consisting of a master plan (revised every five years) and annual plans.[30] These plans are used to identify and develop responses to protect Louisiana from increasing impacts from climate change. Additionally, under

[27] 40 C.F.R. § 1502.9; *see also Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989).
[28] *See Sierra Club v. Bosworth*, 465 F.Supp.2d 931 (N.D. Cal., 2006); *see also Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989); *Oregon Natural Resources Council Action v. U.S. Forest Service*, 293 F.Supp.2d 1200, 1210 (D. Or. 2003) (Forest Service improperly relied on Supplemental Information Reports, Court held that Forest Service violated NEPA and needed to perform a SEIS).
[29] 40 C.F.R. § 1508.1(g)(2); *see also Food & Water Watch v. FERC*, 28 F.4th 277, 281, 289 (D.C. Cir. 2022); *Vecinos para el Bienestar de la Comunidad Costera v. FERC*, 6 F.4th 1321, 1328 (D.C. Cir. 2021) (finding that FERC "failed to adequately analyze the impact of the project's greenhouse gas emissions" because FERC dialed to evaluate "such impacts based upon theoretical approaches or research methods generally accepted in the scientific community" such as the social cost of carbon protocol.).
[30] LA. STAT. ANN. §49:214.5.2-3.

Louisiana Executive Order JBE2016-09, signed by Governor John Bel Edwards in April 2016, all state agencies, departments, and offices must carry out their regulatory programs, practices, grants, and contracts "in a manner consistent with the Coastal Master Plan and the public interest to the maximum extent possible." These measures undertaken by Louisiana underscore the need to consider climate change when permitting and amending projects in this region.

Moreover, increasing the peak LNG capacity runs contrary to President Biden's Executive Orders which prioritize tackling the climate crisis head on through the actions and decisions of federal agencies.[31] As noted, Plaquemines LNG's proposed increase of 3.2 MMTPA will emit approximately 9 million metric tons of carbon dioxide equivalent (MMT CO2e) per year, which is equivalent to the annual emissions from 5 coal plants or 4.2 million cars.[32] This increase in emissions is significant and will contribute to greenhouse gases and the climate crisis. The Sierra Club and Healthy Gulf urge FERC to take a hard look at the impacts of climate change on the proposed Amendment and the Amendment's greenhouse gas emissions as part of the Commission's environmental review.

In addition, this increase in GHG emissions must be added to the GHG emissions of the existing, underlying project. At the current peak capacity of 24.0 MMTPA,[33] the exported LNG would represent 145 million metric tons of carbon dioxide equivalent (MMT CO2e) per year, which is equivalent to the annual emissions from 37 coal plants or 31.6 million cars.[34] Thus, the total GHG emissions from burning the produced LNG by the facility and the expansion (a total of 27.2 MTPA) is roughly equivalent to the greenhouse gas emissions from **42 coal plants or 35.8 million cars**. [35]

A. FERC must consider the impacts of sea level rise and subsidence

Consideration of the effects of sea-level rise (relative sea-level rise) is well within the scope of FERC's environmental impacts analysis. As outlined by the CPRA since 2016,[36] Louisiana's

[31] Exec. Order 14008, Tackling the Climate Crisis at Home and Abroad (Jan. 27, 2021), 86 Fed. Reg. 7619 (Feb. 1, 2021); *see also* Exec. Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 86 Fed. Reg. 7037 (Jan. 25, 2021).
[32] *See supra* note 2.
[33] *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 2-7.
[34] GHG Emissions from U.S. LNG Exports, *supra* note 2.
[35] GHG Emissions from U.S. LNG Exports, *supra* note 2.
[36] Governor's Advisory Commission on Coastal Protection, Restoration, and Conservation August 3, 2016 - 2017 Coastal Master Plan Planning for an Uncertain Future, available at https://cims.coastal.louisiana.gov/recorddetail.aspx?root=0&sid=18787.

coastal wetlands are vulnerable to sea-level rise as a result of its low-lying shorelines and adjacent coastal environments. The CPRA has stated that 75 percent of Louisiana's land loss will be attributed to rising seas through 2067.[37] The sea-level is rising more rapidly along the Gulf Coast because coastal lands are sinking, compounding the impacts of sea-level rise in these areas. Louisiana has been losing roughly 25 square miles of land per year in recent decades.[38]

Coastal Louisiana also faces some of the world's highest rates of relative sea-level rise, at 12±8 mm per year.[39] The myriad of problems associated with sea-level rise will only get worse as the National Ocean and Atmospheric Administration's ("NOAA") 2022 *Sea Level Rise Technical Report* projects that "sea levels along the coastline will rise an additional 10-12 inches by 2050[.]"[40] The report also predicts an "increase in the frequency of coastal flooding, even in the absence of storms of heavy rainfall."[41] This combined with a subsidence rate of over 22 mm per year—the highest rates along the western Gulf states—makes sea level rise a climate and safety problem that FERC must address in all environmental analyses for projects in this region.[42]

B. FERC must consider the impacts of hurricanes

FERC must also evaluate the effects climate change will have on the project, including the proposed Amendment. Climate-fueled storms heighten the risk of damage to LNG and pipeline infrastructure, like that proposed by the Applicant. In the last few years, the Atlantic has had above-average hurricane seasons. In 2019, five tropical cyclones formed in the Gulf of Mexico, tying the records from 2003 and 1957. Twenty tropical cyclones made landfall in the United States in 2020,

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[37] "Haase said state land-loss modeling concluded that 75% of the marsh loss [modeled from 2017 to 2067] was attributed to rising water levels." *See* Mark Schleifstein, *'We're screwed': The only question is how quickly Louisiana wetlands will vanish, study says*, NOLA.com (May 22, 2020), available at https://www.nola.com/news/environment/article_577f61aa-9c26-11ea-8800-0707002d333a.html (attached as Exhibit B).

[38] EPA, *What Climate Change Means for Louisiana*, Aug. 2016, available at https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-la.pdf.

[39] Jankowski, K., Tornqvist, T. & Fernandes, A., *Vulnerability of Louisiana's coastal wetlands to present-day rates of relative sea-level rise*, Nat. Commun. 8, 14792 (2017). http://dio.org/10/1038/ncomms14792.

[40] *U.S. coastline to see up to a foot of sea level rise by 2050*, NOAA, available at https://www.noaa.gov/news-release/us-coastline-to-see-up-to-foot-of-sea-level-rise-by-2050 (Feb. 15, 2022) (attached as Exhibit C); *see also Global and Regional Sea Level Rise Scenarios for the United States*, NOAA, available at https://aambpublicoceanservice.blob.core.windows.net/oceanserviceprod/hazards/sealevelrise/noaa-nos-techrpt01-global-regional-SLR-scenarios-US.pdf (Feb. 2022) (attached as Exhibit D) (hereinafter "NOAA Report").

[41] *U.S. coastline to see up to a foot of sea level rise by 2050*, NOAA, available at https://www.noaa.gov/news-release/us-coastline-to-see-up-to-foot-of-sea-level-rise-by-2050 (Feb. 15, 2022).

[42] Dokka, R., Shinkle K., *Rates of vertical displacement at benchmarks in the lower Mississippi Valley and the North Gulf Coast*, NOAA, http://geodesy.noaa.gov/heightmod/NOAANOSNGSTR50.pdf (July 2004).

breaking a record set in 1916. The 2021 hurricane season produced 21 named storms, four of which were major hurricanes.[43] NOAA has already predicted 2022 to be another above-average hurricane season, with up to six major hurricanes.[44] Scientists at Colorado State University similarly predicted "an above-normal probability for major hurricanes making landfall along the continental United States coastline and in the Caribbean" in 2022.[45]

As a result of hurricanes, Louisiana also has drastically higher pipeline leak rates than other states. In fact, in a recent evaluation conducted by Healthy Gulf, Louisiana's Coastal Zone is shown to be among the worst places in the entire nation for gas leaks from gas transmission pipelines.[46] Pipeline leakage is all but guaranteed in this area. FERC should take into consideration the effects of compounding disasters like those seen in recent years which could damage portions of the pipeline infrastructure, construction, and operations.[47] FERC must take a hard look at the impacts hurricanes—particularly climate-driven, more intense storms—will have on Plaquemines LNG.

C. Significant new information regarding climate change impacts must be considered in the NEPA analysis on the expansion and also requires the preparation of a supplemental EIS.

As noted, over three years have passed since FERC conducted its 2019 EIS for the Plaquemines LNG facility. In the interim, substantial new information has emerged that FERC must consider in a new EIS or supplemental EIS. FERC should consider the 2022 NOAA report

[43] *Active 2021 Atlantic hurricane season officially ends*, NOAA, available at https://www.noaa.gov/news-release/active-2021-atlantic-hurricane-season-officially-ends (Nov. 30, 2021).
[44] *NOAA predicts above-normal 2022 Atlantic Hurricane Season*, NOAA, available at https://www.noaa.gov/news-release/noaa-predicts-above-normal-2022-atlantic-hurricane-season (May 24, 2022) (attached as Exhibit E).
[45] Erwin Seba, *New U.S. hurricane outlook sees five major storms*, Reuters, available at https://www.reuters.com/world/us/new-us-hurricane-outlook-sees-five-major-storms-2022-06-02/?utm_medium=email&_hsmi=215322598&_hsenc=p2ANqtz-_IyM0UxJuvv5IIDFYgJDYPGDv5zCumjKrPgICnwaJIZLsO_NvS3mhp6dRjTNRTFxwRxPUJBBPrI8MLo0vdAkxz-Cjmte8JVkQh5MaTYqxd85zLIBY&utm_content=215322598&utm_source=hs_email (June 2, 2022) (attached as Exhibit F).
[46] Scott Eustis, *Oil and Gas Pipeline Integrity in Texas and Louisiana, 2010-2020*, Healthy Gulf (July 2021) available at https://uploads-ssl.webflow.com/5c6dfd87a0f418f496062988/61685fcda972272a16972ea9_Oil%20and%20Gas%20Pipeline%20Integrity%20in%20Texas%20and%20Louisiana%2C%202010-2020%20(1).pdf (attached as Exhibit G).
[47] Zahra Hirji and Brianna Sacks, *This Louisiana Town Is A Bleak Forecast Of America's Future Climate Crisis*, BuzzFeedNews.com (June 21, 2021), available at https://www.buzzfeednews.com/article/zahrahirji/lake-charles-hurricane-disaster-recovery-climate-change.

on sea level rise[48] and the new Sixth Assessment Report from the Intergovernmental Panel on Climate Change ("IPCC"),[49] as these reports show changes in the baseline and new information on climate change impacts that would impact the site itself since it is near or below sea level and located in the Gulf Coast in the hurricane zone. In addition, a recent study by Ivor van Heerden prepared for the Sierra Club, attached as Exhibit H, provides a critical analysis of the risks at the Plaquemines LNG facility, and concludes that there are severe risks the project site will flood during a major hurricane or other extreme weather event, risking contamination leaking well past the site footprint and into surrounding communities and ecosystems.[50] FERC must take a hard look at these three new reports, both in a new or supplemental EIS and in any evaluation of Venture Global's Application for increased peak LNG production capacity.

A. 2022 NOAA sea-level rise report

As noted, NOAA issued a new study—the *Sea Level Rise Technical Report*—in February 2022, which addresses the latest data regarding sea level rise risks in the U.S.[51] This new data represent significant new information because Louisiana has the highest relative rise in sea level of anywhere in the U.S.[52]; storms and hurricanes are common in Louisiana and could happen at any time, as aptly demonstrated by the 2021 and 2020 Hurricane Seasons; and Plaquemines LNG is at risk of serious flooding. Sea level rise makes the risk of flood waters inundating the site worse by increasing the height of both storm surge and waves.[53] The NOAA report discusses sea level rise as a factor in analyzing the intensity and extent of impacts (e.g. height of waves and storm

[48] *S*ee *U.S. coastline to see up to a foot of sea level rise by 2050*, NOAA, available at https://www.noaa.gov/news-release/us-coastline-to-see-up-to-foot-of-sea-level-rise-by-2050 (Feb. 15, 2022).
[49] *See Climate Change 2021: The Physical Science Basis*, IPCC, available at https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/ (hereinafter "2021 IPCC Physical Science Basis"); *Climate Change 2022: Impacts, Adaptation and Vulnerability*, IPCC, available at https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/.
[50] Ivor van Heerden, PhD, *Safety and environmental review of Plaquemines LNG*, *Critical analysis of risks from climate-driven hurricanes, extreme weather events, and sea level rise*, (June 10, 2022) (attached as Exhibit H) (hereinafter "van Heerden Report").
[51] *U.S. coastline to see up to a foot of sea level rise by 2050*, NOAA, available at https://www.noaa.gov/news-release/us-coastline-to-see-up-to-foot-of-sea-level-rise-by-2050 (Feb. 15, 2022); *see also* NOAA Report, *supra* note 40.
[52] van Heerden Report, *supra* note 50, at 2.
[53] *U.S. coastline to see up to a foot of sea level rise by 2050*, NOAA, available at https://www.noaa.gov/news-release/us-coastline-to-see-up-to-foot-of-sea-level-rise-by-2050 (Feb. 15, 2022) ("[T]he sea level rise expected by 2050 will create a profound increase in the frequency of coastal flooding, even in the absence of storms or heavy rainfall.").

surge) and the need for mitigation (i.e. height of docks, levees, etc.).[54] This also bears on the increasing number and severity of storms, which in turn bears on the project design and the need to preserve wetlands as storm buffers and for flood control, which are critical wetlands functions.[55]

B. IPCC 6th Assessment Report

Two documents from the IPCC's 6th Assessment Report ("AR6") also paint a staggering picture of a climate-destabilized future absent urgent and aggressive carbon emission reductions, highlighting the severe need to curb GHG emissions now and the substantial risk of extreme weather events facing infrastructure like Plaquemines LNG along the Gulf Coast.

First, the IPCC's August 2021 *The Physical Science Basis* report confirms that "[h]uman-induced climate change is already affecting many weather and climate extremes in every region across the globe."[56] Evidence demonstrating the link between human GHG emissions and "changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones . . . has strengthened since" the prior IPCC report.[57] In addition to exacerbating extreme weather, "[h]eating of the climate system has caused global mean sea level rise through ice loss on land and thermal expansion from ocean warming."[58] The IPCC forecasts with *high confidence* that flooding will become more likely in coastal cities due to "the combination of more frequent extreme sea level events (due to sea level rise and storm surge)."[59] Even under deep emission reductions scenarios that keep global warming to within 1.5°C, the report finds that "heavy precipitation and

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[54] *See* NOAA Report, *supra* note 40, at xiii, 2, 41, 60.
[55] *See* Louisiana's *Comprehensive Master Plan for a Sustainable Coast*, Coastal Protection and Restoration Authority of Louisiana, available at http://coastal.la.gov/wp-content/uploads/2017/01/DRAFT-2017-Coastal-Master-Plan.pdf (last visited June 6, 2022); *see also Wetlands: Protecting Life and Property from Flooding*, EPA, available at https://www.epa.gov/sites/default/files/2016-02/documents/flooding.pdf (May, 2006); *see also Incorporating Wetland Restoration and Protection into Planning Documents,* EPA, *available* at https://www.epa.gov/wetlands/incorporating-wetland-restoration-and-protection-planning-documents; *see also*, Shepard *et al.*, *The Protective role of Coastal Marshes: A Systemic Review and Meta-analysis*, PLOS ONE, available at https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0027374 (Nov. 23, 2011) (discussing three ecosystem services associated with coastal wetlands: *wave attenuation, shoreline stabilization,* and *floodwater attenuation.).*
[56] *See Climate Change 2021: The Physical Science Basis, Summary for Policymakers*, IPCC, available at https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_SummaryForPolicymakers.pdf (Oct. 2021) (attached as Exhibit I) (hereinafter "IPCC Physical Science Summary").
[57] *Id.* at 8, A.3.
[58] *Id*. at 11, A.4.3.
[59] *Id*. at 25, C2.6.

associated flooding are projected to intensify and be more frequent in most regions," including North America (*medium to high confidence*).[60]

Looking to the future, *The Physical Science Basis* also concludes that cutting GHG emissions now is critical because "there is a near-linear relationship" between human-caused GHG emissions and related global warming, meaning that each additional increment of global warming exacerbates changes in extreme weather events. For example, the IPCC forecasts that each additional 1°C of global warming will cause about a 7 percent increase in the intensity of extreme daily precipitation events (*high confidence*).[61] Based on this demonstrated relationship, the IPCC concludes that "reaching net zero anthropogenic CO2 emissions is a requirement to stabilize human-induced global temperature increase at any level." [62]

Second, the IPCC's February 2022 report—on *Impacts, Adaptation, and Vulnerability*—highlights the increasing climate-related risks to coastal infrastructure like Plaquemines LNG. Because "[c]limate change impacts and risks are becoming increasingly complex and more difficult to manage," it is increasingly likely that "multiple climate hazards will occur simultaneously, . . . compounding overall risk[.]"[63] Noting that "[w]idespread, pervasive impacts to ecosystems, people, settlements, and infrastructure have resulted from observed increases in the frequency and intensity of climate and weather extremes," [64] the IPCC also predicts, with high to very high confidence, that climate change will cause increasing adverse impacts from flood/storm damages in coastal areas, damage to key infrastructure, and damage to key economic sectors in

[60] 2021 IPCC Physical Science Basis, *supra note* 49, at 19, B.3.2. With 2°C or more of global warming, changes in droughts and heavy and mean precipitation will be even more dramatic. *Id.*

[61] *Id*. at 16, B.2.4. The IPCC reports that "every additional 0.5°C of global warming causes clearly discernible increases in the intensity and frequency of hot extremes, including heatwaves (*very likely*), and heavy precipitation (*high confidence*), as well as agricultural and ecological droughts in some regions (*high confidence*)." *Id*. at 15, B.2.2.

[62] *Id*. at 28, D.1.1.

[63] *See Climate Change 2022 Impacts, Adaptation and Vulnerability, Summary for Policy Makers*, IPCC, at 8, A.3, available at https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf (Feb. 2022) (attached as Exhibit J) (hereinafter "IPCC Impacts Summary").

[64] *Id.* at SPM.B.1.1; *see also id.* at SPM.C.2.5 ("Natural river systems, wetlands and upstream forest ecosystems reduce flood risk by storing water and slowing water flow, in most circumstances (high confidence). Coastal wetlands protect against coastal erosion and flooding associated with storms and sea level rise where sufficient space and adequate habitats are available until rates of sea level rise exceeds natural adaptive capacity to build sediment (very high confidence).").

North America.[65] Moreover, "[u]navoidable sea level rise will bring cascading and compounding impacts resulting in losses of coastal ecosystems and ecosystem services, groundwater salinisation, flooding and damages to coastal infrastructure that cascade into risks to livelihoods, settlements, health, well-being, food and water security, and cultural values in the near to longterm (high confidence)." [66]

The IPCC again concludes, with *very high confidence*, that "[t]he magnitude and rate of climate change and associated risks depend strongly on near-term mitigation and adaptation actions, and projected adverse impacts and related losses and damages escalate with every increment of global warming." [67] If overall global warming reaches 1.5°C in the near-term, there would be "unavoidable increases in multiple climate hazards" that would "present multiple risks to ecosystems and humans (very high confidence)." Although "[n]ear-term actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages related to climate change in human systems and ecosystems," the IPCC confirmed that, at this point, those actions cannot eliminate all of the harms (very high confidence). [68]

Because climate change impacts cannot be eliminated entirely, the IPCC also highlights critical adaptation strategies, including restoring wetlands to "further reduce flood risk (medium confidence)."[69] Noting that "siting of infrastructure" and other factors have "contributed to the exposure of more assets to extreme climate hazards increasing the magnitude of the losses (high confidence)," [70] the IPCC also concludes that "[a]ctions that focus on sectors and risks in isolation and on short-term gains often lead to maladaptation if long-term impacts of the adaptation option and long-term adaptation commitment are not taken into account (high confidence)."[71] For example, although seawalls like that proposed by Plaquemines LNG might "effectively reduce impacts to people and assets in the short-term," the IPCC warns they "can also result in lock-ins and increase exposure to climate risks in the long-term unless they are integrated into a long-term

[65] *Id.* at Figure SPM.2. Risks from climate change to "key infrastructure will rise rapidly in the mid- and long-term with further global warming, especially in places . . . along coastlines, or with high vulnerabilities (high confidence)." *Id.* at SPM.B.4.5.
[66] *Id.* at SPM.B.5.2.
[67] *Id.* at SPM.B.4.
[68] *Id.* at SPM.C.2.
[69] *Id.* at Figure SPM.2. Notably, the Plaquemines LNG facility will destroy over 368 acres of existing coastal wetlands. *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 4-41.
[70] IPCC Impacts Summary, *supra* note 63, at SPM.B.1.6.
[71] *Id.* at SPM.C.4.1.

adaptive plan (high confidence)."[72] "Climate resilient development is already challenging at current global warming levels (high confidence)" and "is most constrained in regions/subregions in which climate impacts and risks are already advanced, including low-lying coastal cities and settlements" (high confidence).[73]

In short, both AR6 reports add to the mounting evidence demonstrating the dual climate risks associated with the Plaquemines LNG facility: (1) that the facility's staggering GHG emissions will fuel climate change, and (2) that the climate-driven hazards at the project site will increase the risk of significant contamination being released into the surrounding communities and ecosystems. FERC must consider this significant new information in a new and supplemental EIS.

C. Plaquemines safety and environmental report from van Heerden

While the NOAA and IPCC reports are generally applicable, a recent study by Ivor van Heerden, attached as Exhibit H, demonstrates that the Plaquemines LNG facility *specifically* poses substantial risk to surrounding communities and the coastal zone, for several reasons.

First, the van Heerden report reiterates the increasing risk of climate-driven intense storms, including severe rainfall events and major hurricanes, at the project site. The project site flooded during Hurricane Ida,[74] and as van Heerden explains, "recent hurricane seasons emphasize the extreme risk posed by constructing such a facility at the proposed site."[75] Climate change results in warmer oceans, which in turn "supplies the energy for hurricanes to metastasize and research has shown there will be more intense, stronger hurricanes than in the past."[76] For example, several studies have linked climate-driven rises in sea surface temperature to increased probability of higher sustained winds per tropical storm circulation.[77] Moreover, climate change will also increase the magnitude of extreme rainfall events,[78] further exacerbating the risk of flooding at the project site.[79]

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[72] *Id.* at SPM.C.4.1.
[73] *Id.* at SPM.D.5.1.
[74] van Heerden Report, *supra* note 50, at 13; *NWS New Orleans/Baton Rouge Hurricane Ida Post Tropical Cyclone Report*, National Weather Service, available at https://www.weather.gov/lix/pshhurricaneida.
[75] van Heerden Report, *supra* note 50, at 2.
[76] *Id*. at 3.
[77] *Id*. at 3 (citing Emanuel 1987; Knutson et al 1998). Sea surface temperature has increased significantly in the main hurricane development region of the North Atlantic during the past century (Bell et al., 2007) as well as in the Gulf of Mexico. *Id.* (citing Smith and Reynolds, 2004).
[78] 2021 IPCC Physical Science Basis, *supra* note 49 at 24, C2.3.
[79] van Heerden Report, *supra* note 50, at 4.

Second, Plaquemines' proposed 26-foot storm wall—which it claims will protect the site from flooding—will likely suffer from overtopping with water during major storm surges, posing significant risk that the site will be inundated. Not only will sea level rise increase the base level from which storm waters will rise, it also exacerbates the depth of potential storm surge—which is "highly sensitive" to sea levels in "broad, shallow, wetland areas" like the project site—and exacerbates the risk that the planned 26 ft. levees will not protect the site.[80] For example, a simplistic linear model suggests that an additional one foot of sea level rise could translate into three to five feet of additional storm surge height.[81] Other studies suggest an additional one foot of sea level rise could increase storm surge height by up to 23 feet (7 m).[82] Wave heights on top of the storm surge will also increase with sea level rise and surge height, with one study suggesting that waves alone would increase by nearly 1.5 m (5 ft) for a 1 m rise in sea level.[83] Moreover, as wetlands deteriorate, water depths will continue to increase, exacerbating the impact of rising sea levels on surge heights.[84] Given the impacts of sea level rise and subsidence combined with climate-driven increasing storm surge and wave heights, the van Heerden report concludes that "[t]here is a high probability that the LNG site will be flooded by a hurricane in the foreseeable future, even if the proposed ring dike levee is constructed."[85]

Hurricane Ida—which occurred after the 2019 EIS—provides additional evidence that the project site will flood. Hurricane Ida's center crossed the coast near Port Fourchon, Louisiana, at 11:55 a.m. CDT on Aug. 29, 2021. Maximum sustained winds were 150 mph, making Ida a high-end Category 4 hurricane.[86] Storm surge predictions showed that vast areas of the coast would be flooded by more than 9 ft. above land, including the Plaquemines LNG site.[87] In fact, Hurricane Ida topped the levees and completely submerged it for approximately one month.[88] After the storm, the Coastal Emergency Risk Assessment group at LSU produced hindcast surge data for Plaquemines Parish in the vicinity of the proposed Plaquemines LNG facility. The data revealed

[80] *Id*. at 34, 39.
[81] *Id*. at 39.
[82] *Id*.
[83] *Id*. at 34.
[84] *Id*.
[85] *Id*. at 1, 3.
[86] *Id*. at 11.
[87] *Id*. at 12 & Fig. 6.
[88] *See* photographs of Plaquemines LNG site after Hurricane Ida taken on September 9, 2021 by Naomi Yoder (attached as Exhibit K).

that the surge elevation was in the range of about 8.8 ft. to 12 ft. NAVD88, so in some places water depths would have been at least 15 ft.[89] Winds at landfall were up to 150 mph, so "a very destructive wave field would have covered its surface, and waves would have been up to 12 ft. high."[90] So, the proposed storm wall "would have to have been 27 ft. high NAVD88 for no overtopping to occur [during Hurricane Ida], assuming it held."[91] If a future hurricane hit on a different track with more surge, the combined surge and wave height could reach a maximum water level of 37 ft., well over Plaquemines' proposed 26-ft. storm wall.[92] Thus, FERC cannot assume the storm wall is sufficient and must scrutinize Plaquemines' assertions that the site will not be flooded.

Third, if the facility site floods during a major hurricane or other extreme weather event, the results could be catastrophic. There "would be a high probability of runoff of landfill (during construction) and chemicals (during operation) of Plaquemines LNG being carried off the site and into homes, businesses, farmland, and fragile coastal wetlands."[93] For example, flooding during Hurricane Katrina's surge resulted in the Murphy Oil USA refinery oil spill in August 2005.[94] The refinery was flooded with up to 18 ft. of water, and a 250,000-barrel-above-ground storage tank was punctured after floating off its moorings, releasing approximately 25,110 barrels (1,055,000 U.S. gallons) of oil into surrounding waters and contaminating the residential areas of Chalmette and Meraux.[95] The contaminated water impacted approximately 1,700 homes in adjacent residential neighborhoods of Chalmette and several canals. [96] Rather than oil, with Plaquemines LNG, the largest potential contaminant is the initially-approved 1,200,000 m^3 of LNG that will processed and stored at the facility.[97] In order to maintain gas in its liquid form, LNG must be stored at cryogenic temperature below −260°F.[98] If leaked, LNG of this temperature would freeze and kill any wetland plants and organisms that come into direct contact.[99] Risks from spilled LNG

[89] van Heerden Report, *supra* note 50, at 28.
[90] *Id*.
[91] *Id*.
[92] *Id*.
[93] *Id*. at 17.
[94] *Id*. at 40.
[95] *Id*.
[96] *Id*.
[97] *Id*. at 43. Notably, that quantity will increase if the proposed Amendment is approved, as discussed below.
[98] *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 2-7; *see* van Heerden Report, *supra* note 50, at 41.
[99] van Heerden Report, *supra* note 50, at 49.

would also extend well beyond the spill location, especially during an extreme weather event with high winds. If an LNG tank is punctured, LNG could spill onto or into an LNG ship/dock, flow into surface waters, or both.[100] Depending on when ignition occurs, LNG could spread as liquid on the water surface or as a vapor cloud if the LNG volatilizes from contact with water.[101] Even if unignited, a methane cloud resulting from an LNG spill can result in asphyxiation and death to surrounding organisms, including humans. [102] If ignited, LNG can burn as a pool fire or a vapor fire. [103] Data shows that the minimum hazard distance during normal weather conditions for a vapor fire is at least 1536 m (0.95 miles) for an accidental leak and about 3614 m (2.25 miles) for an intentional puncture of LNG tanks.[104] A small, accidental puncture of a single LNG tank would cause major injuries and severe structural damage within 10 minutes up to 177 m (0.1 miles) away, potentially exacerbating a disaster via damaging other, initially-unharmed LNG tanks. [105] People or organisms within 554 m (.35 miles) would suffer second-degree burns on exposed skin within about 20 seconds.[106] Moreover, LNG contacting water can also result in rapid phase transition (RPT) or physical explosions.[107] Undoubtedly, such catastrophic impacts cannot be dismissed as insignificant, and FERC must take a hard look at these risks.

Even if LNG and other chemicals related to the liquefaction process remain fully contained during a major storm, flooding at the project site would undoubtedly release oil, grease, heavy metals, and other toxic chemicals into the surrounding ecosystem. For example, the two on-site combined-cycle gas plants will contain motors, generators, flares, and other industrial equipment, and there will be a substation and transformer yard nearby. Any of these components would cause extensive contamination with oil, grease, heavy metals, and other chemicals if submerged.[108] Similarly, cranes, pump trucks, flatbed trucks, dump trucks, excavators, front end loaders—all of which will be purchased as permanent equipment —could each leak oil, grease, heavy metals, and

[100] *Id*. at 46.
[101] *Id*.
[102] *Id*. at 46-48.
[103] *Id*.
[104] *Id*. at 46-48 & Table 2.
[105] *Id*. at 47 & Table 1.
[106] *Id*. at 47 & Table 1.
[107] *Id*. at 48.
[108] *See* excerpts of *Venture Global LNG Stormwater Pollution Prevention Plan Phase 2*, at p. 26 § 8.1 (Doc. No. PQ-000-HSE-PLN-KBR-02000) (KBR Project No. M019) (Feb. 10, 2021) (attached as Exhibit L) (hereinafter "Plaquemines SWPPP").

other toxic chemicals if they are submerged in even a few feet of water.[109] The warehouse and maintenance shop and oily water treatment unit will also likely contain contaminants that, if submerged, could enter floodwaters and rapidly pollute the surrounding environment.[110] Leaks of LNG or other contaminants at the site also risk impeding Louisiana's water quality standards.[111] FERC must take a hard look at the risk of potential contamination in the likely event that the site floods.

Finally, the proposed capacity expansion will exacerbate the risk and impact of such a catastrophic event. For example, by definition, there will be up to 3.2 MTPA of additional LNG processed at and transported from the facility.[112] While the Application does not specify how much additional pipeline gas, refrigerants, or other chemicals will be required to process the increased LNG, at a minimum, increased LNG production also necessarily requires additional pipeline gas and presumably operations at the site will also require additional other chemicals. For example, the adsorbent required for H_2S removal during pretreatment is presumably used in proportion to the amount of feed gas being input; additional feed gas will require use of additional adsorbent, producing incremental volumes of spent adsorbent that must be transported from the facility.[113] Similarly, acid gas removal produces amines that will be collected in an on-site solvent storage

[109] *Id*.; Plaquemines SWPPP, *supra* note 108, at p. 21 § 6.5.
[110] *Plaquemines LNG and Gator Express Pipeline Project Joint Permit Application Narrative*, LDNR OCM and USACE New Orleans District, at 9-11 (June 2017) (attached as Exhibit M) (hereinafter "Joint Permit Application Narrative").
[111] Louisiana's water quality policy dictates that "all state waters should be protected for recreational uses and for the preservation and propagation of desirable species of aquatic biota and indigenous species of wildlife."[111] To that end, Louisiana's general water quality standards require all state waters to "be free from such concentrations of substances attributable to wastewater or other discharges sufficient to . . . (b) float as debris, scum, oil, or other matter to form nuisances or to negatively impact the aesthetics . . . [or] (d) injure, be toxic, or produce demonstrated adverse physiological or behavioral responses in humans, animals, fish, shellfish, wildlife, or plants." L.A.C. 33.IX.11 § 1113.B.1(b) & (d). The standards also prohibit any substances in state waters or underlying sediments "that alone or in combination will be toxic to human, plant, or animal life or significantly increase health risks due to exposure to the substances or consumption of contaminated fish or other aquatic life." *Id.* § 1113.B.4. Moreover, "[t]here shall be no substances present in concentrations sufficient to produce distinctly visible solids or scum."[111] The standards also prohibit "[f]ree or floating oil or grease" and "emulsified oils" from "interfer[ing] with the designated water uses." *Id.* § 1113.B.6. As noted, a leak of LNG could cause catastrophic damages to the surrounding ecosystem via its freezing temperatures, suffocating vapors, or fire and explosion hazards. Moreover, oil, grease, heavy metals, and other toxic chemicals released when the site floods would likely negatively impact the aesthetics, harm wildlife and aquatic organisms, contaminate currently-productive oyster leases, leave behind oily deposits or scum, and interfere with designated uses in surrounding water bodies. Thus, flooding during a major storm surge could violate Louisiana's general water quality standards.
[112] Joint Permit Application Narrative, *supra* note 110, at 2.
[113] *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 2-6.

tank.[114] These chemicals will also be stored on site, in many cases,[115] and FERC must take a hard look at whether the additional pipeline gas, LNG, and associated storage of processing chemicals will pose an increased environmental risk when the site is flooded during a major hurricane or other extreme weather event. Moreover, as noted, the capacity expansion will result in increased vessel traffic, placing additional LNG vessels at risk of being hit during an extreme storm event. FERC must therefore critically evaluate the impacts of such flooding, including the substantial risk posed to surrounding communities and the coastal zone if contaminants are released from the site. FERC must take a hard look at these environmental risks, both with respect to the proposed peak capacity increase and with respect to the existing project.

Overall, the latest data on climate change and sea level rise exacerbates the risk that the proposed construction and operation of the Plaquemines LNG facility will cause significant harm to the surrounding communities and ecosystem. Over the project's lifetime, the site will be at increasing risk of being flooded due to extreme storm events, including but not limited to hurricanes, and the consequent escape of pollution into coastal waters and adjacent wetlands from petro-chemicals, construction materials, vehicles, and other sources of pollution on-site, which will severely stress coastal wetlands and endanger neighbors. And the known likelihood and severity of this risk has increased drastically since FERC issued the initial EIS in 2019, as demonstrated by site flooding during Hurricane Ida, highlighted in the IPCC's August 2021 report, and forecasted in the latest sea-level rise data from NOAA. Thus, FERC must revisit that EIS, including its evaluation of impacts and mitigation measures, in light of these subsequent developments.

IV. FERC must consider air emissions associated with the proposed Amendment and add these to the Emissions from the Project.

A. FERC must scrutinize whether the proposed Amendment will increase air pollution.

FERC must scrutinize Plaquemines' assertion that increasing peak export capacity will not increase air pollution for the reasons discussed in our April 15 Protest. Even if the emissions from the facility itself do not increase—which, as discussed in more depth in our Protest is implausible, especially for pre-treatment—the indirect air emissions will increase dramatically. For example,

[114] *Id*.
[115] *Id*.

using the 20-year global warming potential greenhouse gas emissions equivalency estimates for LNG production from a recent study,[116] the emissions from burning the produced LNG at requested 27.2 million metric ton per annum (MMTPA) peak capacity is roughly equivalent to the greenhouse gas emissions from **42 coal plants**. The increase in peak capacity from 24.0 to 27.2 MMTPA alone would result in about 19 million metric tons of additional carbon dioxide equivalent (MMT CO2e) per year from the exported LNG—equivalent to the annual emissions from over **5 coal plants**.[117] Thus, as noted, FERC cannot dismiss these added downstream greenhouse gas emissions as insignificant, and FERC must consider these impacts from the broader LNG lifecycle for the reasons discussed in our Protest.[118]

FERC must also consider the emissions that will result from an additional 46 LNG carriers per year which equates to about one additional LNG carrier per week. Neither the prior FEIS nor the Amendment provide sufficient information to inform the public regarding air pollution from LNG carriers. The prior FEIS estimated that 310 vessels would emit 140 tons per year ("tpy") of NOx, 72 tpy of CO, 22 tpy of VOC, and 31,942 tpy of CO2e.[119] For the reasons discussed in our Protest, Sierra Club and Healthy Gulf urge FERC to reopen consideration of the prior EIS, conduct an entirely new EIS, and conduct a SEIS.

B. FERC must conduct an EIS to evaluate projected NO_2 NAAQS exceedances.

FERC must also conduct an EIS to ensure that the air emissions associated with the proposed Amendment do not violate the Clean Air Act and the National Ambient Air Quality Standards ("NAAQS") for nitrogen dioxide in the area. Based on modeling provided as part of Plaquemines LNG's air permitting process, the attached Klafka report demonstrates clear and persistent exceedances of the maximum 1-hour NO_2 standard in Acadiana, Jefferson, Lafourche, Plaquemines, and St. Bernard Parishes.[120] Indeed, the attached modeling, which was conducted

[116] GHG Emissions from U.S. LNG Exports, *supra* note 2.
[117] *See supra* note 2. When the plant operates at the lower "design capacity" of 20.0 MMTPA, the exported LNG would emit 121 million metric tons of carbon dioxide equivalent (MMT CO2e) per year, which is equivalent to the annual emissions from **31 coal plants or 26.3 million cars**. At the current peak capacity of 24.0 MMTPA, the exported LNG would represent 145 million metric tons of carbon dioxide equivalent (MMT CO2e) per year, which is equivalent to the annual emissions from 37 coal plants or 31.6 million cars.
[118] April 15 Protest at § II.D.4.
[119] Plaquemines LNG 2019 FEIS, *supra* note 2, at 4-180.
[120] The 1-hour NO2 NAAQS takes the form of a three-year average of the 98th percentile of the annual distribution of daily maximum 1-hour concentrations, which cannot exceed 100 parts per billion (ppb).120 Compliance with this standard was verified using USEPA's AERMOD air dispersion model, which produces air concentrations in units of µg/m3. The 1-hour NO2 NAAQS of 100 ppb equals 188 µg/m3, and this is the value used for determining

according to agency protocol and used recent actual and proposed emissions for several permitted sources, demonstrates that parts of Plaquemines, Jefferson, and St. Bernard Parishes are predicted to exceed ***500 µg/m³*** including background, well above the 188 µg/m^3 standard.[121] The maximum projected 1-hour NO_2 impact is nearly **20 times the NAAQS**.[122]

It is critical for FERC to evaluate the environmental and health impacts of these NAAQS exceedances for several reasons. **First**, FERC should not assume the air permitting process is sufficient to ensure NAAQS compliance because Louisiana lacks sufficient air monitors in the area and because redesignating an area to nonattainment can be challenging. EPA regulations require Louisiana's air monitoring network to capture the peak predicted emissions concentrations, in part to ensure the monitors can support ensuring compliance with the NAAQS. [123] However, the attached air dispersion modeling demonstrates that LDEQ's NO_2 monitor placement for the New Orleans metro area does not do so. Instead, as shown in Figure 1, the modeling demonstrates that the highest NO_2 concentrations are in significantly different areas than the existing monitors. *See* Ex. N at 8, Figure 3 (comparing predicted 1-hour NAAQS exceedances with locations of current monitors).

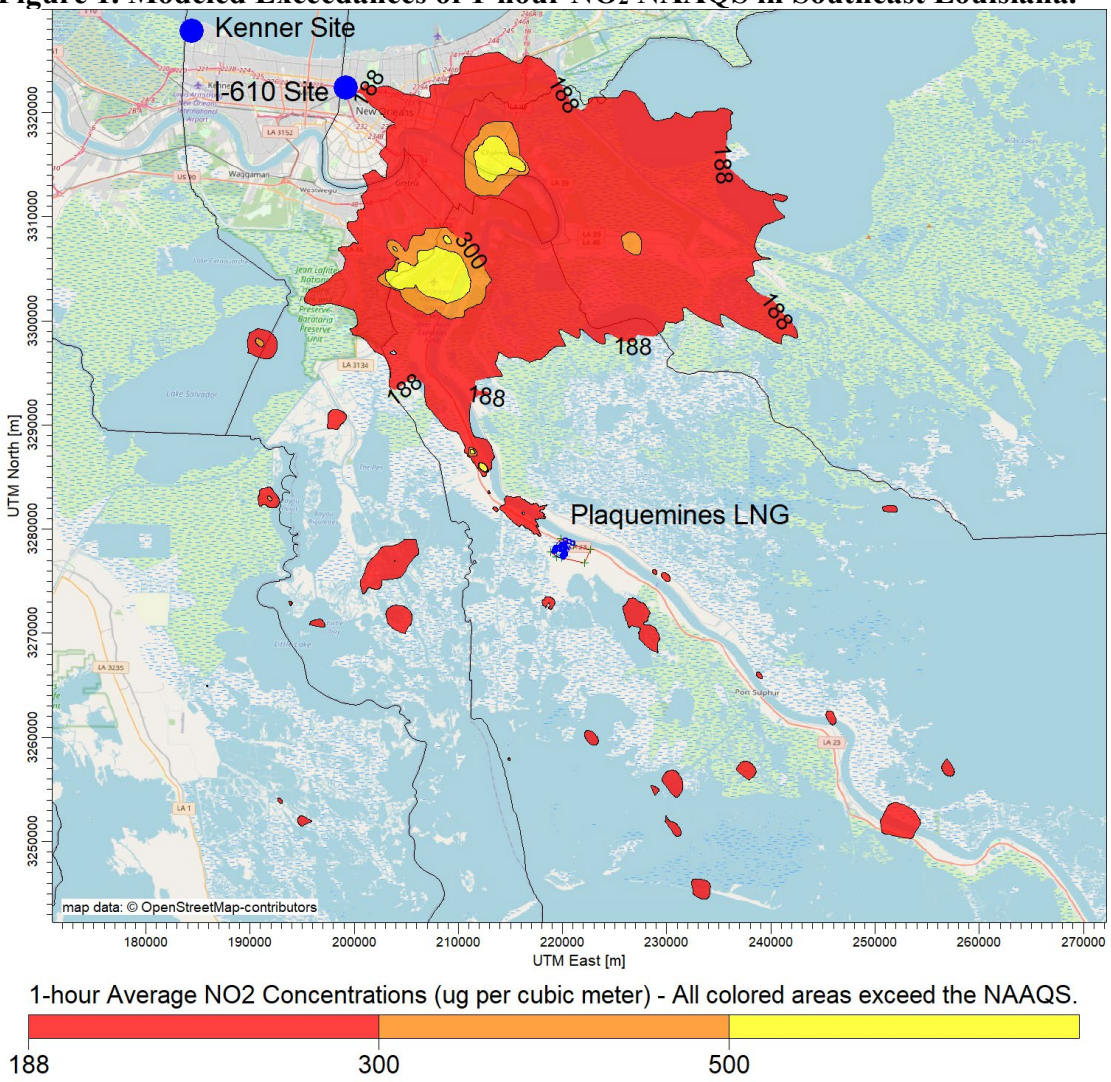
whether modeled impacts exceed the NAAQS. The 98th percentile of the annual distribution of daily maximum 1-hour concentrations corresponds to the eighth-highest value at each receptor for a given year.

[121] Steven Klafka, *et al*., *Plaquemines LNG Plaquemines Parish, Louisiana, Evaluation of Compliance with the 1-hour NAAQS for NO2* (May 22, 2022) (attached as Exhibit N) (hereinafter "Klafka Plaquemines Report").

[122] *Id*. at 6 (reporting a maximum projected 1-hour NO_2 concentration of 3,692.8 µg/m3 including background).

[123] 40 C.F.R. Pt. 58 App. D ¶ 1.1.

Figure 1. Modeled Exceedances of 1-hour NO_2 NAAQS in Southeast Louisiana.[124]



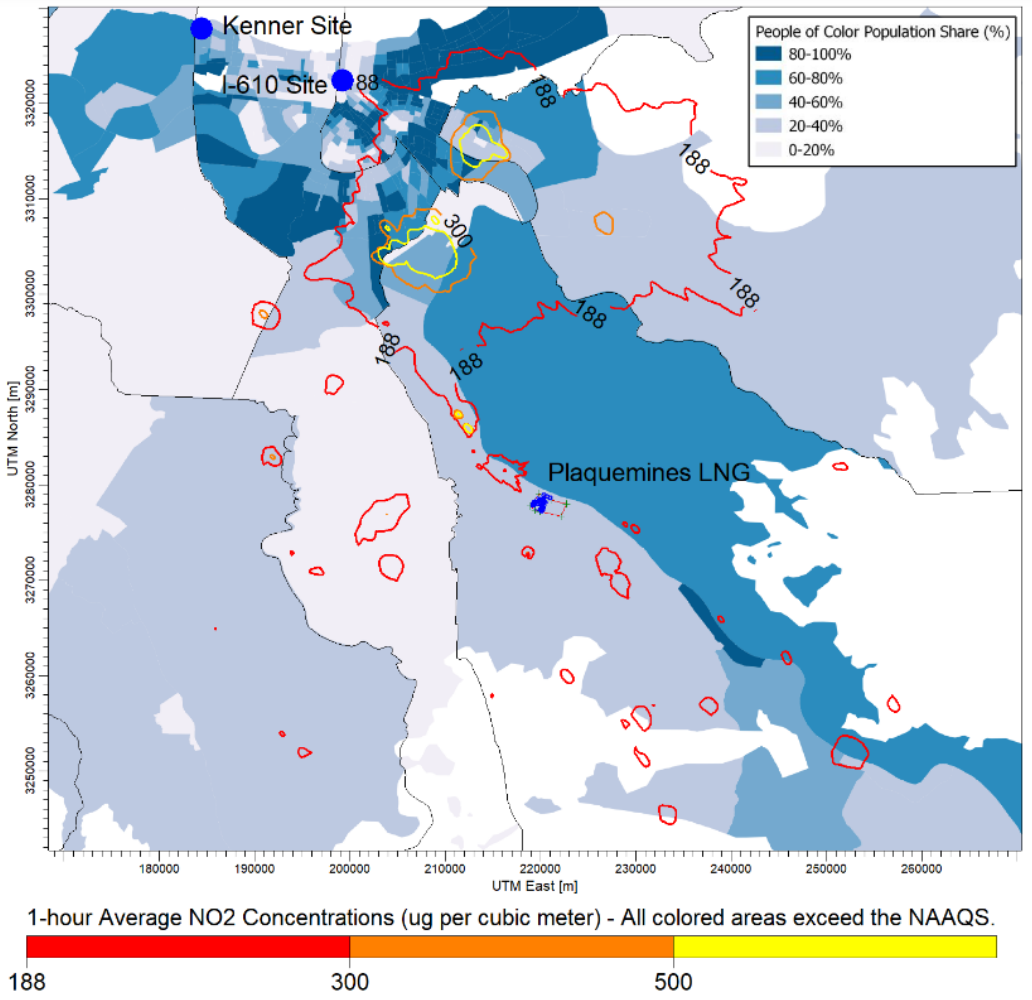
Even if the state had sufficient monitors in the correct locations, there are significant obstacles to redesignating the areas as nonattainment that limit the ability of the air permitting process to reflect these projected NAAQS exceedances. For example, three full years of data are required to support redesignation for NO_2 nonattainment[125]—after the monitors are installed and operating. And even then, redesignation is not automatic. If EPA opts to redesignate, the agency would have to provide the state at least 120-day notice before doing so. So, at a minimum, this redesignation will take years, and FERC cannot use the air permitting process to justify ignoring

[124] Figure excerpted from Klafka Plaquemines Report at 8, Fig. 3.
[125] The 1-hour average NO2 NAAQS takes the form of a three-year average of the 98th percentile of the annual distribution of daily maximum 1-hour concentrations, which cannot exceed 100 parts per billion (ppb). U.S. Envt'l Protection Agency, Additional Clarification Regarding Applicability of Appendix W Modeling Guidance for the 1-hour NO2 NAAQS, March 2, 2011.

potential health impacts from NAAQS exceedances in the interim.

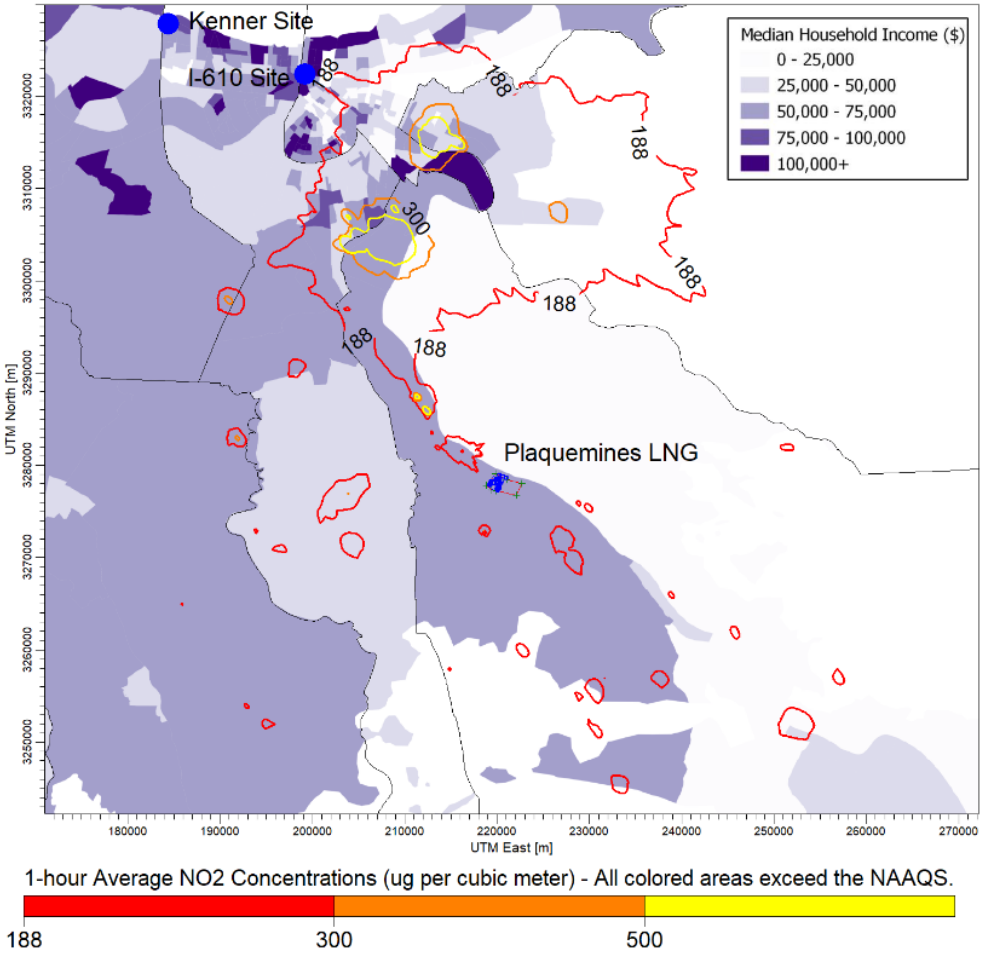
Second, these NAAQS exceedances will exacerbate the pollution burden facing environmental justice communities in Southeast Louisiana. As demonstrated in the Klafka report and shown in Figure 2 below, the projected NO_2 exceedances will primarily occur in communities of color. Many of the same communities most heavily impacted by the projected NO_2 exceedances are also economically disadvantaged, as shown in Figure 3 below.

Figure 2. Modeled exceedances of 1-hour NO_2 NAAQS in Southeast Louisiana overlapping with communities of color.[126]



[126] Figure excerpted from Klafka Plaquemines Report at 9, Fig. 4.

Figure 3. Modeled exceedances of 1-hour NO_2 NAAQS in Southeast Louisiana overlapping with low income communities. [127]



Thus, as part of its environmental review, FERC must take a hard look at these projected exceedances and the disparate impact they will place on already overburdened communities. As part of that process, FERC must conduct a supplemental EIS to evaluate this new evidence demonstrating NAAQS exceedances in the context of the 2019 EIS. To the extent that FERC seeks to rely on the 2019 EIS regarding the air impacts of this peak capacity expansion, FERC must take a hard look at whether the underlying air pollution and health impacts are still valid.

As part of its environmental review, FERC must also consider the cumulative impacts of air emissions in Southeast Louisiana as Plaquemines LNG is not the only LNG terminal site proposed for the region. Other proposed LNG facilities include Port Fourchon LNG in Lafourche Parish, Delta LNG an offshore LNG facility, New Fortress Louisiana FLNG off Grande Isle, and West Delta FLNG. All of these facilities will emit air pollutants, including NO_2, that cause

[127] Figure excerpted from Klafka Plaquemines Report at 10, Fig. 5.

environmental justice communities further harm.

V. FERC must consider the impacts that this Amendment will have on environmental justice communities.

FERC's environmental analysis must consider environmental justice impacts, including the human health, economic, and social effects of the proposed Amendment on minority and low-income communities. Executive Order 14008 directs federal agencies to develop "programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts."[128]

Moreover, FERC has made consideration of environmental justice a priority. When announcing plans to better incorporate environmental justice and equity concerns by creating a new senior position to coordinate that work, Chairman Glick explained that "the Commission should more aggressively fulfill its responsibilities to ensure [that] decisions don't unfairly impact historically marginalized communities."[129] Following Executive Order 14008, FERC opened a Notice of Inquiry to take a fresh look at FERC's Certificate Policy Statement, seeking public input on identification of "any disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on environmental justice communities and the mitigation of those adverse impacts and burdens."[130]

The CEQ has also issued guidance on incorporating environmental justice considerations in the NEPA process. The guidance states in part:

> In preparing an EIS or an EA, agencies must consider both impacts on the natural or physical environment and related social, cultural, and economic impacts. Environmental justice concerns may arise from impacts on the natural and physical environment, such as human health or ecological impacts on minority populations, low-income populations, and Indian tribes, or from related social or economic impacts.

The Plaquemines LNG facility will be in close proximity to several predominantly Black and low-income communities, including Ironton and West Pointe a la Hache. The facility is also

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[128] Exec. Order No. 14008, 86 Fed. Reg. 7,619 (Jan. 27, 2021).
[129] *FERC Chairman Acts to Ensure Prominent FERC Role for Environmental Justice*, FERC, available at https://www.ferc.gov/news-events/news/ferc-chairman-acts-ensure-prominent-ferc-role-environmental-justice (Feb. 11, 2021).
[130] Notice of Inquiry, 174 FERC ¶ 61,125 (Dkt No. PL18-1-000), available at https://www.ferc.gov/sites/default/files/2021-02/C-1-PL18-1-000.pdf (Feb. 18, 2021).

near several other communities referred to jointly as Lake Hermitage.[131] The prior EIS states that the closest residential communities are within 2.3 and 2.6 miles of the terminal site.[132]

In order to ensure that these communities are not being disproportionately impacted FERC must either reopen consideration of the previous EIS, conduct a new EIS, and conduct a supplemental EIS. The proposed Amendment will not only increase vessel traffic in the Mississippi River (as discussed in Section D.2 and our April 15 Protest), but will also contribute to an increase in air emissions and safety risks to the environmental justice communities surrounding the facility and south of the facility that rely on LA-23 for ingress and egress. Additionally, the proposed Amendment would further impact commercial fishing due to the increase in vessel traffic in the Gulf of Mexico.

FERC must ensure that the Amendment which proposed to increase peak export capacity will not also increase air pollution that will disproportionately burden environmental justice communities. As noted, the Klaftka report demonstrates exceedances of the maximum 1-hour NO_2 standard in Acadiana, Jefferson, Lafourche, Plaquemines, and St. Bernard Parishes with projected NO_2 exceedances occurring primarily in communities of color, many of which are also economically disadvantaged. Figures 4 through 6 present parish-wide and census block-level data from justicemap.org to demonstrate how the census block groups compare to Plaquemines Parish (for race and income). These figures further demonstrate that lower Plaquemines Parish is an environmental justice area of concern, particularly around Ironton and West Point a la Hache nearest the project site. The Amendment will contribute to these exceedances and worsen the pollution burden experienced by environmental justice communities in Southeast Louisiana.

[131] *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 4-153 (Deer Range neighborhood and the Suzie Bayou Campsites are locally referred to as Lake Hermitage).
[132] *Id*.

Figure 4. Plaquemines Parish racial data from justicemap.org.

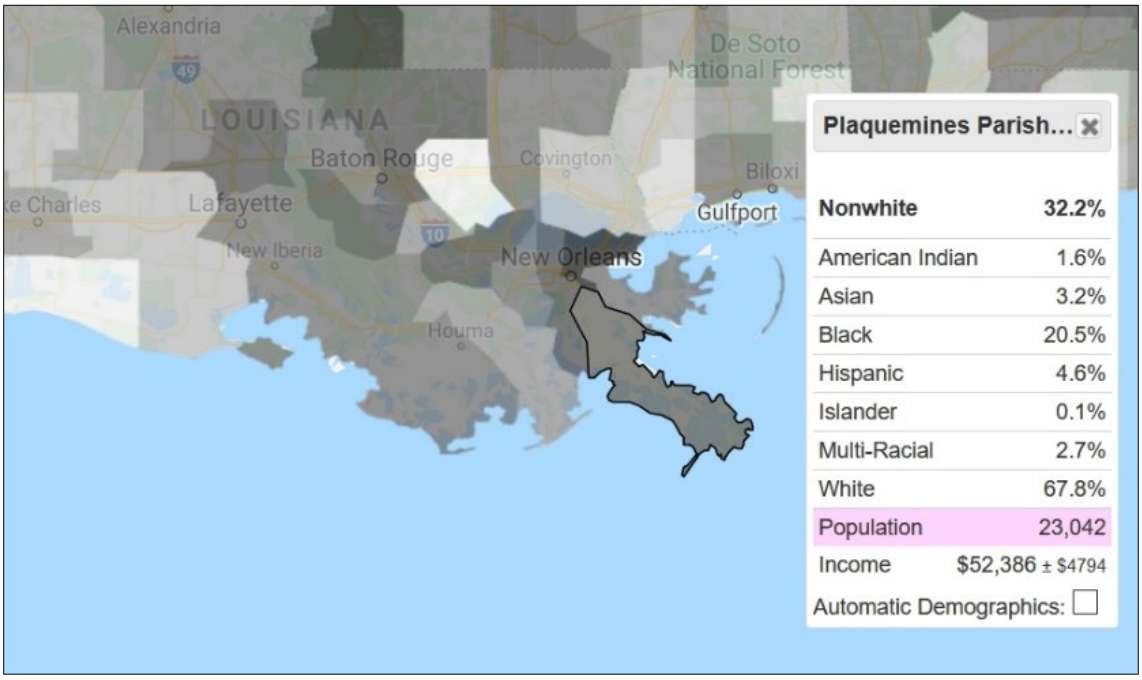


Figure 5. Justicemap.org map showing race by census block. The highlighted Block Group 1 encompasses the Plaquemines LNG site.

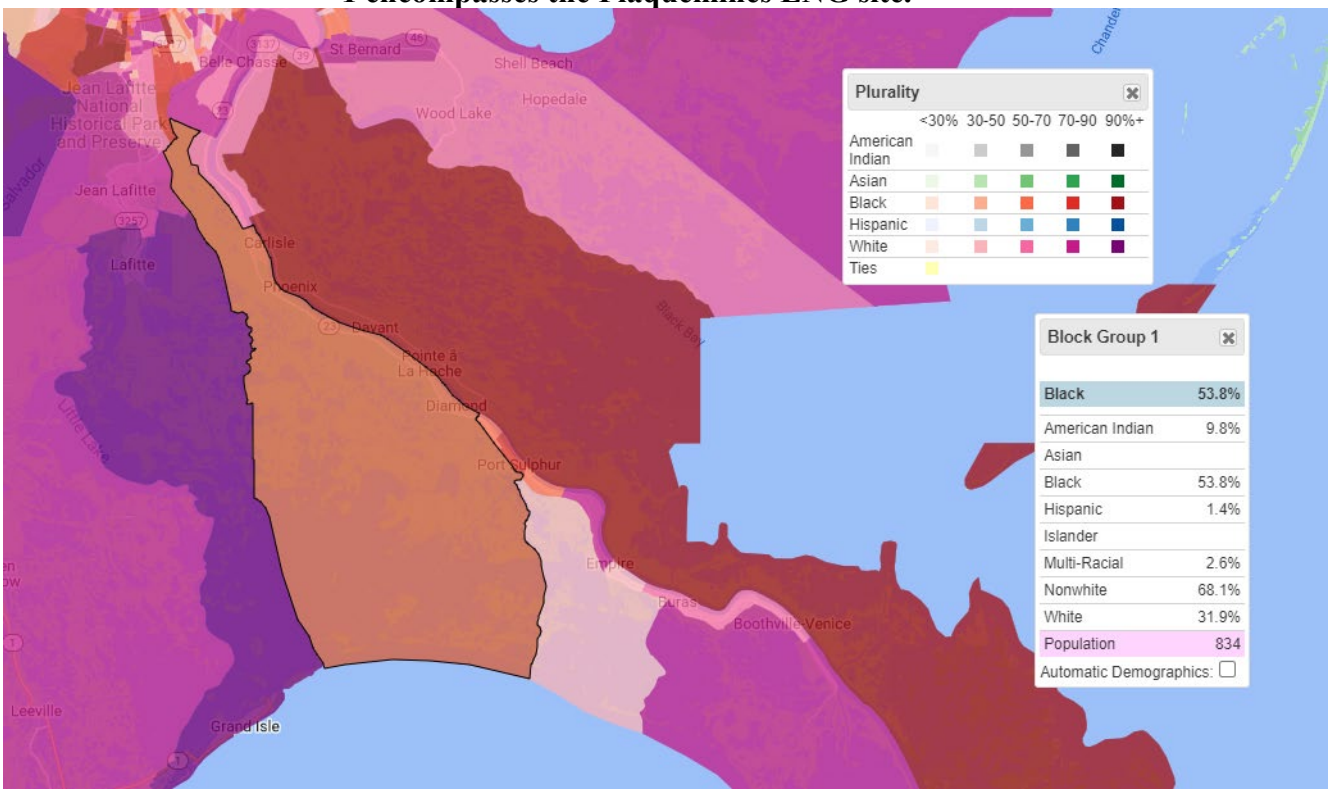
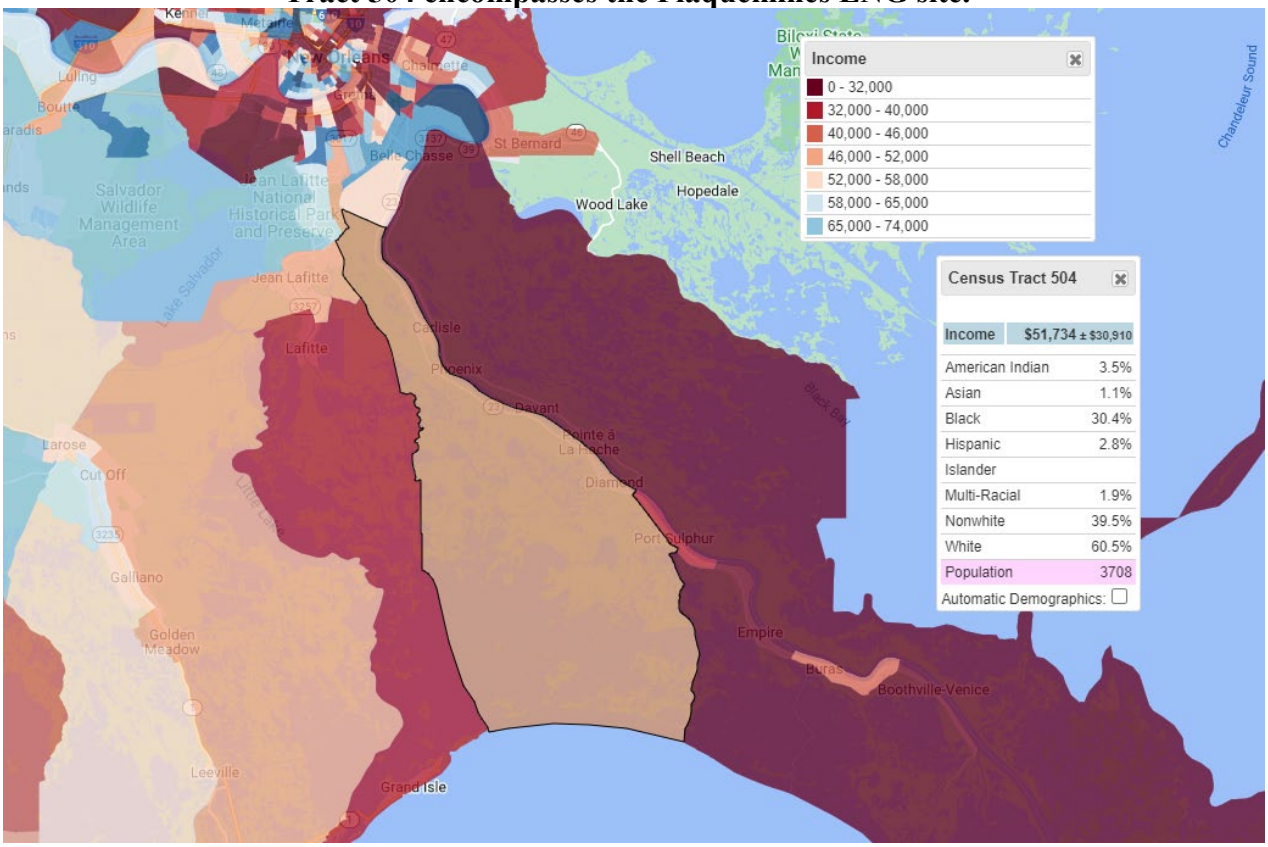


Figure 6. Justicemap.org map showing income by census block. The highlighted Census Tract 504 encompasses the Plaquemines LNG site.



FERC must also evaluate the safety risks associated with the proposed Amendment. Increasing the peak export capacity will increase the potential for safety risks and disasters that will ultimately harm human health and the environment surrounding the facility and even limit access to ingress and egress on LA-23. Sierra Club and Healthy Gulf incorporate and rely upon the Louisiana Bucket Brigade's comments on safety risks.

The proposed Amendment will also impact Indigenous peoples in the region. The increase in air pollution, the inherent safety risks associated with operating an LNG terminal and export facility, as well as the additional greenhouse gas emissions that will ultimately contribute to the climate crisis, place Indigenous peoples in Southeast Louisiana at heightened risk. As stated in the Louisiana Climate Action Plan, Indigenous peoples are more "vulnerable to the physical challenges brought on by climate change because of historical and ongoing social, political, and economic factors with tangible impacts on human health."[133] Indigenous people are also "48%

[133] *See Louisiana Climate Action Plan*, Climate Initiatives Task Force, at 25 (Feb. 2022) (attached as Exhibit O).

more likely than others to currently live in areas where the highest percentage of land is projected to be inundated due to sea level rise."[134] Moreover, Indigenous peoples' ability to carry on traditional activities are impacted by hurricanes, sea level rise, subsidence, and manmade problems such as the destruction and fracturing of wetlands.[135] As a result of these struggles, four non-federally recognized tribes from Louisiana along with another tribe from Alaska have submitted a protest to the United Nations in 2020 to address these concerns and many others.[136]

Lastly, the increase in vessel voyages will directly impact the commercial fishing fleet in Plaquemines Parish, which "is one of the largest in the lower 48 states[.]"[137] As noted in FERC's 2019 EIS, any commercial fishing vessels traveling or passing in the waterway north of the Mississippi Delta would be delayed or experience increases in fuel costs from increased idle time as a result of the LNG carriers entering the Mississippi.[138] Those delays will only increase with Plaquemines LNG's proposed capacity expansion: at the time the EIS was conducted it anticipated approximately six LNG carriers per week[139], however, the proposed Amendment would increase this to seven LNG carriers per week. This additional carrier traffic will increase delays and fuel costs on commercial fishing vessels and contribute to the hardships already faced by this industry.

FERC must take a hard look at the impacts to environmental justice communities and ensure that the proposed Amendment does not disproportionately burden the already identified environmental justice communities and those communities that were overlooked in the 2019 EIS. Thus, FERC must reopen consideration of the final EIS, conducting a new EIS, or conducting a SEIS.

VI. FERC must consider the impacts from this Amendment on the Vulnerable Species of this Region and reinitiate Section 7 consultation due to significant developments regarding endangered species since issuance of the 2019 Order.

To consider significant new information, FERC must reopen consideration of the original EIS, conduct a SEIS, and consider in its NEPA analysis for the proposed Amendment impacts on vulnerable species in the area. It must also update any biological assessments, findings of no effect,

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[134] *Id*.
[135] *Id*. at 26.
[136] *Id*.; *see also Rights of Indigenous People in Addressing Climate-Forced Displacement* (Jan. 15, 2020) (attached as Exhibit P).
[137] *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 4-130.
[138] *Id*. at 4-131.
[139] *Id*.

not likely to adversely affect (NLAA) and re-initiate (or initiate) ESA Section 7 consultation to analyze the impacts of the Amendment on the Rice's whale, a recently-listed endangered species. Because it was listed after 2019, it was not considered by FERC in its prior ESA actions.[140] And, this species must be considered in the ESA analysis for the expansion in its own right. For example, if approved, the proposed increase in liquefaction capacity would result in an increase of 46 LNG carrier trips per year which is approximately one additional LNG carrier visiting the terminal per week.[141] This increase in carrier trips may affect the Rice's whale and several other species in the Gulf of Mexico.

A. FERC must initiate Section 7 consultation and take a hard look at impacts to the Rice's whale.

The Amendment has the potential to adversely affect the Rice's whale, which is one of the most endangered whales in the world.[142] It is the only resident baleen whale in the Gulf of Mexico and is closely related to the Bryde's whale.[143] The Rice's whale was listed as endangered in 2019, after FERC completed its Section 7 analysis and issued its 2019 FEIS for the Plaquemines LNG facility.[144] The Rice's whale faces a myriad of threats, with the most significant threats being "energy exploration and development, oil spills and spill response, vessel strikes, ocean noise, ocean debris, aquaculture, and entanglement in fishing gear."[145] Thus, FERC must take a hard look at the Rice's whale's vulnerability to these threats, including vessel strikes and noise pollution, which will increase if the Amendment is approved.

The Rice's whale's habitat, the northern Gulf of Mexico, already experiences a high amount of vessel traffic.[146] Vessel traffic coupled with the "size and speed of transiting vessels, the overlap between key habitats and shipping lanes, and the animal's behavior and time spent

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[140] *See* Aaron N. Rice, Ph.D., *Possible Environmental Impacts of Plaquemines LNG Project to Marine Mammals in the Gulf of Mexico* (attached as Exhibit Q) (hereinafter "Impacts of Plaquemines LNG Project to Marine Mammals").
[141] *Venture Global Plaquemines LNG, LLC submits Responses to FERC April 29, 2022 Engineering Information Requests under CP22-92*, Dkt No. CP22-92 (May 18, 2022) (eLibrary No. 20220518-5168).
[142] Rice's Whale, NOAA, https://www.fisheries.noaa.gov/species/rices-whale (last visited June 2, 2022).
[143] *Id*.
[144] *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 4-88, 4-89; *see also* Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140.
[145] Rice's Whale, NOAA, https://www.fisheries.noaa.gov/species/rices-whale (last visited June 2, 2022); *see also* Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140.
[146] Rice's Whale, NOAA, https://www.fisheries.noaa.gov/species/rices-whale (last visited June 2, 2022).

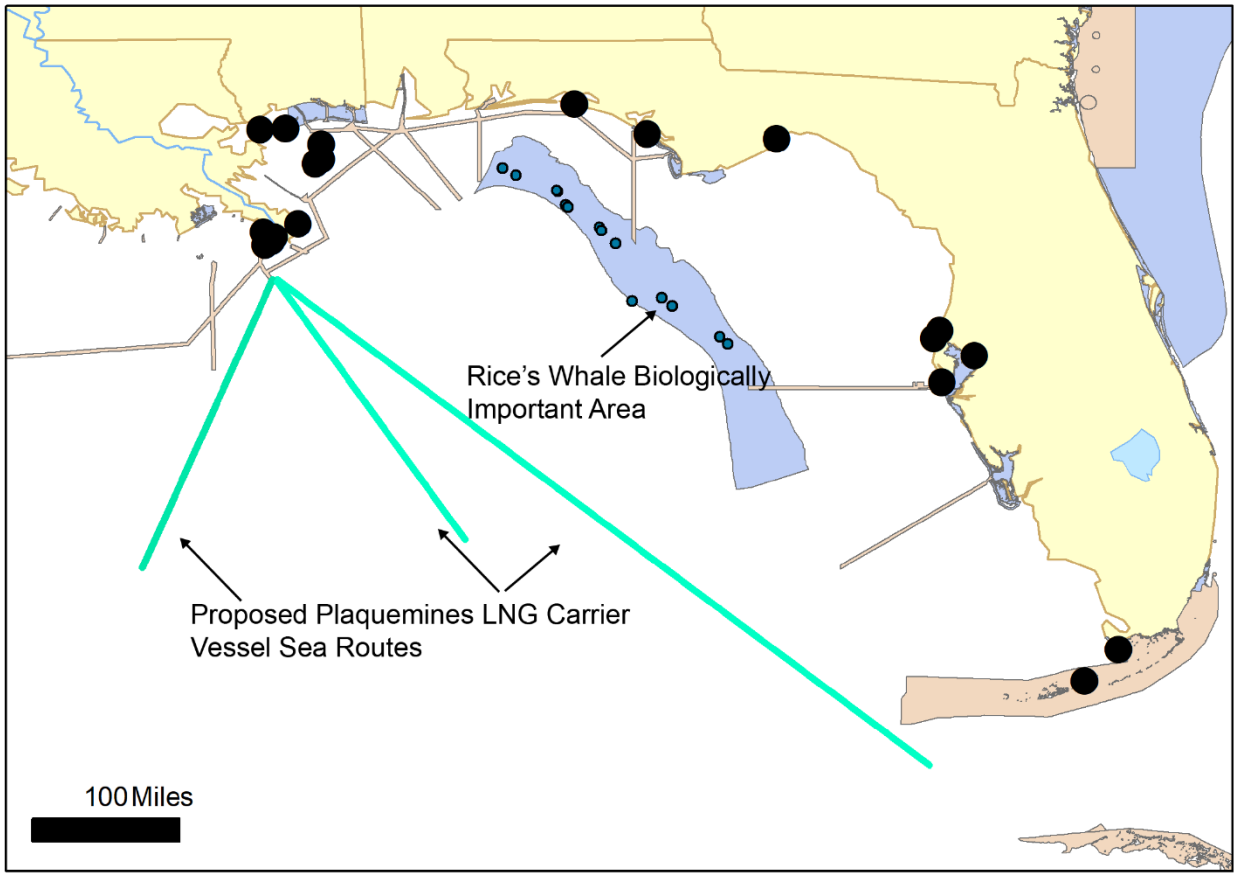
near the surface" all contribute to the probability of ship strikes.[147] Rice's whales are particularly vulnerable to ship strikes given that results from a tagged Rice's whale individual shows that it spent 70% of its time within 15 m of the surface.[148] Moreover, there has been at least one documented ship strike fatality of a Rice's whale.[149] In addition to being at risk of vessel strikes, the Rice's is also negatively impacted by noise pollution. The increase in vessel traffic will create low frequency noise which overlaps with the hearing range of the Rice's whale and likely inhibits its performance of critical life functions such as "communication, navigation, finding a mate, locating prey, and predator avoidance."[150]

In the Plaquemines LNG FEIS, Figure 2.1-3 shows the LNG Carrier Sea Routes for vessels leaving the LNG terminal.[151] As depicted by Figure 7 below, the sea route extending to the southeast is within 65-100 km of critical habitat for the Rice's whale.[152] FERC must consider the proximity of the vessel routes to the Rice's whales' habitat as well as the fact that the Rice's whale may venture closer to shore and outside of their core area.[153] FERC must also ensure the implementation of adequate mitigation measures to avoid vessel strikes at night and increases in noise near the Rice's whale core habitat. Plaquemine LNG's current mitigation measures include: maintaining watch for protected species, maintaining buffer zone if species are sighted, reducing engine speed, and reporting collisions or any sightings of injured or dead protected species.[154] However, these measures are insufficient because visual observations are not effective at night or

[147] Aaron N. Rice, *Possible Risks to Marine Protected Species from the Construction and Operation of the Delfin LNG Offshore Terminal*, at 23 (Feb. 2, 2022) (attached as Exhibit R) (hereinafter "Possible Risks to Marine Protected Species"); *see also* Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140 ("Both anthropogenic noise and ship strikes have been identified as threats to Rice's whales[.]").
[148] Possible Risks to Marine Protected Species, *supra* note 147, at 23.
[149] *Id*. (Cetacean fatalities from vessel strikes are often difficult to document); *see also* Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140 ("[I]dentifying five stranding events of Rice's whales/Bryde's whales or "Bryde's-like whales" near the Plaquemines LNG terminal site, suggesting that Rice's whales may venture closer to shore and outside of their core area putting them at risk of both elevated noise exposure and ship strikes.").
[150] Rice's Whale, NOAA, https://www.fisheries.noaa.gov/species/rices-whale (last visited June 2, 2022) ("As ocean noise levels increase, the resulting habitat degradation and disruption to these life functions can result in adverse physical and behavioral effects to Rice's whales."); *see also* Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140 ("[w]here anthropogenic noise represents a chronic stressor impacting social cohesion, communication and other aspects of life history[.]").
[151] *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 2-10.
[152] Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140.
[153] *Id*.
[154] *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 4-96; Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140.

during poor-visibility (e.g., fog, rain). Moreover, the mitigation measures associated with operational noise impacts does not consider underwater noise mitigation.[155]

Figure 7. Map of Plaquemines LNG Project showing the carrier vessel transit routes proximity to the Rice's whale Biologically Important Area.[156]



[155] *See* Plaquemines LNG 2019 FEIS, *supra* note at 4-208 – 4-212; Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140.
[156] Figure excerpted from Impacts of Plaquemines LNG Project to Marine Mammals, Fig. 1.

B. FERC must take a hard look at impacts to bottlenose dolphin, West Indian manatee, and other marine animals.

In addition to the now-federally listed Rice's whale, the proposed Amendment will also negatively impact numerous marine species. FERC must analyze the effects that increased noise and vessel traffic will have on bottlenose dolphin in the vicinity of the project. For example, Sierra Club and Healthy Gulf urge FERC to analyze the increased noise effects of the Amendment in conjunction with the already-occurring noise resulting from pile driving. Sierra Club, Healthy Gulf, and Center for Biological Diversity submitted a letter to NMFS on March 18, 2022 regarding the potential Level B harassment of bottlenose dolphin populations in Barataria Bay,[157] which Sierra Club and Healthy Gulf incorporate by reference into these comments. For the reasons described in that letter, pile driving during facility construction will cause significant harm to dolphins in the project's vicinity—impacts which were not properly characterized in the 2019 EIS. Moreover, if the Amendment is approved, those noise impacts will be compounded by increased vessel strikes resulting from the additional vessel traffic. FERC must consider how the Amendment will impact the bottlenose dolphin,[158] both individually and cumulatively with other planned activities in the area.

Similarly, FERC must consider how the increase in vessel traffic and noise will impact other marine species, including the West Indian manatee, the Blue whale, the Fin whale, the Sperm whale, and the Sei whale.[159] FERC should analyze the cumulative impacts of noise pollution and vessel traffic on these species and consider the effects of already existing disturbances on them. FERC must initiate Section 7 consultation with the National Marine Fisheries Service as the Rice's whale was not included in Plaquemines LNG's 2019 FEIS and the proposed Amendment provides significant new information that must be analyzed. FERC should also reopen the original EIS and conduct a SEIS due to the significant changes proposed by the Amendment.

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[157] Letter from Karimah Shoenhut, Staff Attorney, Sierra Club, *et al.* to David Bernhart, Assistant Regional Administrator, Protected Resources Division, NOAA, *et al.* (Mar. 18, 2022) (attached as Exhibit R).
[158] Impacts of Plaquemines LNG Project to Marine Mammals, *supra* note 140 ("[W]hile this population is not listed under the Endangered Species Act, it is considered a Strategic Stock, warranting closer monitoring.").
[159] These effects are not just limited to marine mammals. Impacts of increased vessel traffic can also impact the Gulf Sturgeon, the Pallid Sturgeon, and various sea turtle species that utilize the waterways within or around the Mississippi River, Mississippi River Delta, and the Northern Gulf of Mexico. *See* Plaquemines LNG 2019 FEIS, *supra* note 2, at 4-89 – 4-106.

VII. Conclusion

Sierra Club and Healthy Gulf oppose the Amendment because it is against the public interest and will exacerbate the already-severe environmental risks posed by the Plaquemines LNG facility without providing additional benefit. As noted in our April 15 Protest, the proposed peak capacity increase will do nothing to address the immediate needs of Europe—nor could it because the facility itself will not be operation until 2025, years after Europe's present need.

Regardless, if Plaquemines LNG's Amendment plans are going to proceed, it should do so in a way that minimizes harm to the environment and public health to the greatest extent practicable. Doing so necessitates a full EIS for the expansion and re-evaluating and supplementing the 2019 EIS—as well as FERC's 2019 approval—in order to fully capture the full scope of impacts from the Plaquemines LNG facility. Significant new information has also come to light since the 2019 EIS, and FERC must either take a hard look at that information in a new, comprehensive EIS or in a SEIS for the project as well as the expansion.

Thank you for the opportunity to submit comments on Plaquemines LNG's Amendment. Please feel free to contact the Sierra Club or Healthy Gulf with any questions.

Respectfully submitted June 10, 2022.

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CERTIFICATE OF SERVICE

I hereby certify that on this 10th day of June 2022, I caused to be served the foregoing Scoping Comments electronically on all parties on the Commission's electronic service list in this proceeding, in accordance with the Commission's regulations.

/s/ Lisa M. Diaz

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