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U.S. Army Corps of Engineers
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Submitted via email

Re: Application No. SWG-2015-00110, Section 404 Clean Water Act Application of Annova LNG Common Infrastructure, LLC

Defenders of Wildlife, Save RGV from LNG, Shrimpers and Fisherman of the RGV, Sierra Club, and Vecinos para el Bienestar de la Comunidad Costera submit these comments regarding the December 27, 2018 Public Notice for the application submitted to the U.S. Army Corps of Engineers (“Corps”) pursuant to Section 404 of the Clean Water Act (“CWA”) and Section 10 of the Rivers and Harbors Act of 1899. The applicant, Annova LNG Common Infrastructure, LLC (“Annova LNG”) proposes to construct and operate a liquid natural gas (“LNG”) export terminal in Cameron County, Texas, and a 9-mile-long, 36-inch-diameter pipeline with associated facilities (collectively, the “Project”).

The undersigned urge the Corps to deny this application because the Project does not comply with the Clean Water Act and Endangered Species Act (“ESA”) standards.

I. The project fails to comply with the Clean Water Act.

The CWA is designed to “restore and maintain the chemical, physical and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The CWA generally prohibits the discharge of pollutants, including dredged or fill material, into the waters of the United States unless authorized by a permit. *See id.* § 1311(a). Section 404 of the CWA authorizes the Corps to issue permits for the discharge of dredge or fill material into waters of the United States. *Id.* §

1344. The Corps adopted regulations, known as the “public interest” factors, to implement this permitting authority. 33 C.F.R. §§ 320 *et seq.* The Corps “must weigh the benefits that reasonably may be expected to accrue from the proposal against its reasonably foreseeable detriments, considering all relevant factors.” *Alliance to Save the Mattaponi v. U.S. Army Corps of Engineers*, 606 F. Supp. 2d 121, 124 (D.D.C. 2009) (citing 33 C.F.R. § 320.4). The Corps must consider a broad range of potential impacts as part of its public interest review, including “conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.” 33 C.F.R. § 320.4(a)(1). Moreover, in the evaluation of every permit, the Corps must consider:

- (i) The relevant extent of the public and private need for the proposed structure or work; (ii) Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and (iii) The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.

Id. § 320.4(a)(2).

In addition, the Environmental Protection Agency (“EPA”) promulgated regulations, known as the “404(b)(1) Guidelines,” for Section 404 permits. 33 U.S.C. § 1344(b)(1); 40 C.F.R. § 230 *et seq.* The Corps reviews all proposed Section 404 permits under both the Corps’ public interest factors and EPA’s 404(b)(1) guidelines. 33 U.S.C. § 1344(b)(1); 33 C.F.R. § 320.2(f). A permit must be denied if it is contrary to the public interest or does not comport with the Section 404(b)(1) Guidelines. 33 C.F.R. §§ 320.4, 323.6; 40 C.F.R. §§ 230.10, 230.12.

To ensure these mandatory CWA requirements are satisfied, the Corps must fully evaluate the direct, secondary, and cumulative impacts of the activity, including impacts to endangered or threatened species, the aquatic environment, fish and wildlife, and human impacts. *See, e.g.*, 33 C.F.R. §§ 320.4(a)(1), 336.1(c)(5) (endangered or threatened species), 336.1(c)(8) (fish and wildlife); 40 C.F.R. §§ 230.11(a)-(h), 230.20-23 (aquatic ecosystem), 230.30 (threatened and endangered species), 230.31 (fish and wildlife), 230.51 (recreational and commercial fisheries), 230.52 (water-related recreation), 230.53 (aesthetics). The 404(b)(1) guidelines also set forth particular restrictions on discharges, described more fully below. 40 C.F.R. § 230.12. The Corps must set forth its findings in writing on the short-term and long-term effects of the discharge of dredge or fill activities, as well as compliance or non-compliance with the restrictions on discharge. *Id.* §§ 230.11, 230.12(b).

EPA's 404(b)(1) guidelines prohibit the Corps from authorizing an application for dredge and fill activities if any one of numerous circumstances are applicable, including:

- (1) if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem (40 C.F.R. §§ 230.10(a), 230.12(a)(3)(i));
- (2) if the proposed discharge jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act or results in likelihood of the destruction or adverse modification of critical habitat (40 C.F.R. §§ 230.10(b)(3), 230.12(a)(3)(ii));
- (3) where the proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem (40 C.F.R. § 230.10(d), 230.12(a)(3)(iii)); or
- (4) there is not sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the COE's Guidelines for permit issuance. (40 C.F.R. § 230.12(3)(iv)).

See also Utahns for Better Transp. v. U.S. Dep't of Transp., 305 F.3d 1152, 1163 (10th Cir. 2002), as modified by 319 F.3d 1207 (10th Cir. 2003) (citing 40 C.F.R. § 230.12(a)(3)(i-iv)). The

Corps must document its findings of compliance or noncompliance with the restrictions on discharge set forth in these guidelines. 40 C.F.R. § 230.12(b).

To the extent the Corps intends to rely on the NEPA documentation related to the LNG export terminal and associated supply pipeline completed to date by the Federal Energy Regulatory Commission, these documents do not address the effects of this project under the appropriate CWA standards. For the reasons described below, the available NEPA documents are also insufficient to fully evaluate the direct, secondary and cumulative impacts of this proposal as required by the Corps' public interest factors and EPA's 404(b)(1) guidelines and determine whether this project complies with CWA standards. In addition, even under the available analysis, the Corps must deny authorization of the project because it violates several CWA standards.

A. The Corps must provide additional information related to the Annova LNG gas supply pipeline to satisfy the 404(b)(1) guidelines.

Under EPA guidelines, the Corps may not permit a dredge and fill activity if there is a practicable alternative to the discharge which would have less adverse impact on the aquatic ecosystem (40 C.F.R. §§ 230.10(a), 230.12(a)(3)(i)), if the proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem (40 C.F.R. § 230.10(d), 230.12(a)(3)(iii)), or if there is insufficient information to make a reasonable judgment as to whether the discharge will comply with the Corps' guidelines for permit issuance (40 C.F.R. § 230.12(3)(iv)). Annova LNG will need an approximately 9-mile-long gas supply lateral ("pipeline") leading from the Valley Crossing Pipeline to the terminal. The pipeline will impact at least 110 acres, including over 42 acres of wetlands.¹ FERC's DEIS treats the pipeline as non-jurisdictional and only superficially mentions it in the summary of cumulative impacts.²

¹ FE CP16-480, Accession No. 20181214-3018 at 371.

² FE CP16-480, Accession No. 20181214-3018 at 371.

Similarly, the December 2018 revision of Annova LNG's Conceptual Mitigation Plan asserts, "the lateral pipeline is not discussed in detail in this mitigation plan because wetland impacts from pipeline construction will be temporary and are not expected to require compensatory mitigation." The few details about the pipeline contained in Annova LNG's documentation, however, do not support the Corps' conclusion—and are likewise insufficient to support a determination that construction of the pipeline satisfies the 404(b)(1) Guidelines.

Annova LNG's, the Corps', and FERC's failure to adequately disclose and evaluate the potential effects of the pipeline is evident for several reasons. First, the Corps has not issued a jurisdictional determination for the proposed pipeline, and the Public Notice provides no description of any avoidance, minimization, or mitigation related to the construction and operation of the pipeline. The project's documentation contains no description of critical features of the pipeline, including the *type* of land cleared for construction and permanently maintained as a cleared right of way. According to the Corps' Public Notice, the pipeline will have a permanent right of way impacting 49.4 acres, but nothing discloses how many of the permanently impacted acres are wetlands—despite the project plan drawings showing wetlands within the right of way. Second, the Corps makes the conclusory assertion that "all impacts [from the pipeline] would be temporary" and that any wetlands "would be restored following the completion of construction." This assertion is refuted by the fact that the plan drawings show wetlands within the permanent right of way. Third, the Guidelines are concerned with impacts on the *aquatic ecosystem*, but the scant documentation regarding the pipeline mentions only wetland impacts. Given the pipeline's proximity to wildlife refuges, among other things, there will likely be impacts on sensitive/listed species in terms of loss of habitat and other effects requiring conservation measures or mitigation. Moreover, aside from the likely direct destruction of habitat, the Annova pipeline could also be

expected to require a proliferation of temporary access roads, which can increase dispersal of weeds and fire danger. Without the disclosure and consideration of such information, it is impossible for the Corps or the public to evaluate the effects on wildlife or the human environment, or the need for mitigation arising from construction of the pipeline.

There are many steps that still must be taken in order to fulfill the obligations of the Clean Water Act. The Corps should publicly disclose the current status of its jurisdictional review of the pipeline. Additionally, the public should have the opportunity to comment on the application for Annova LNG's pipeline *following* the Corps' jurisdictional determination. The Corps must, moreover, consider measures to avoid and minimize impacts related to the pipeline construction, including installation using the horizontal directional drill (HDD) method to avoid additional impacts instead of conventional open-cut construction.³ If, following this consideration, there is determined to be a practicable alternative with fewer impacts, then the Corps must deny Annova LNG's application. *See* 40 C.F.R. § 230.10(a) ("Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."); *id.* § 230.10(a)(4) (explaining that in many cases, the analysis of alternatives required to fulfill this requirement will coincide with the alternatives analysis the Corps must conduct under NEPA). Finally, the Corps must consider mitigation for any other unavoidable impacts.

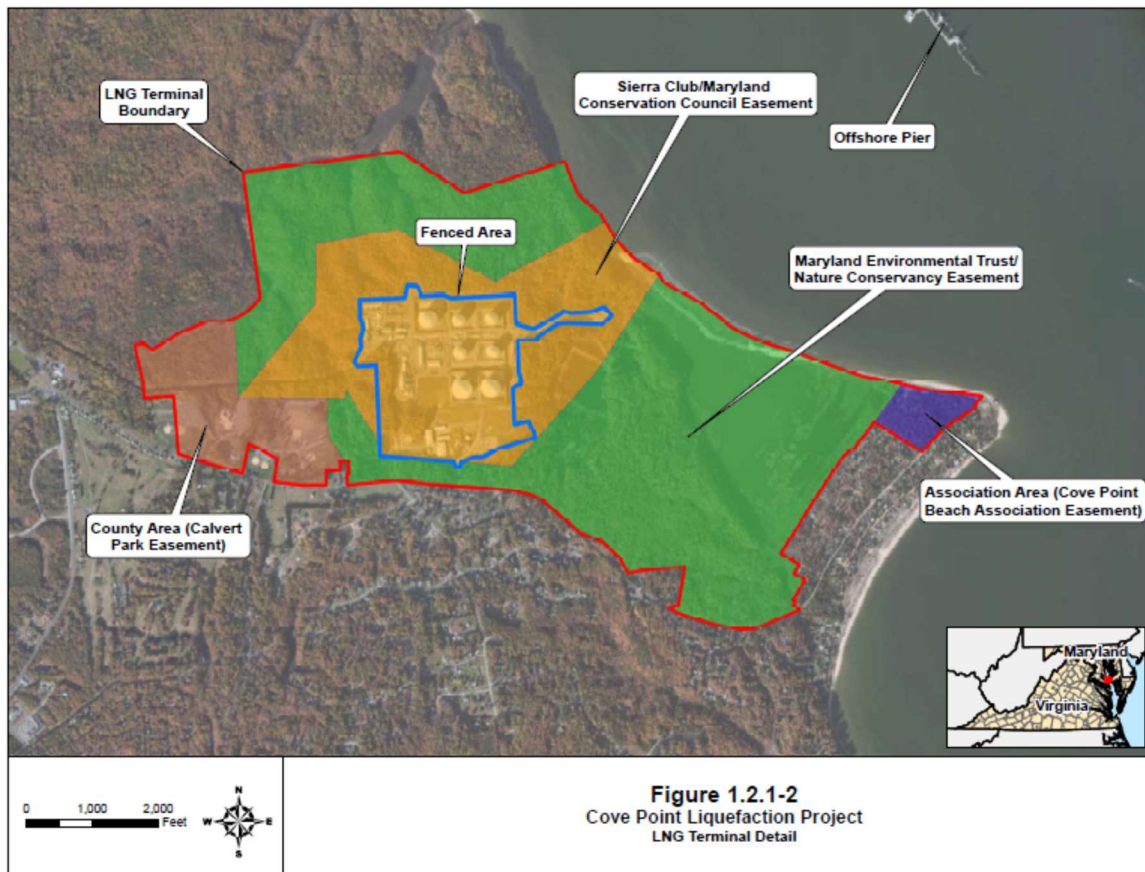
³ We understand that the lateral will be installed using the HDD method at one location, but additional impacts were avoided, for example, by Enbridge related to its Valley Crossing Pipeline installation along the same route.

B. Many of the facilities Annova proposes are not water dependent and are not justified in being sited in wetlands.

The United States has a strong public policy of protecting wetlands, and destruction of wetlands is plainly an impact contrary to the public interest. The Annova project will harm the public interest by permanently disturbing 52.8 acres of wetlands. DEIS 4-29. Moreover, Annova has not shown that this proposed harm is necessary: the majority of the facilities Annova proposes to site in wetlands are liquefaction, pretreatment, and storage facilities. As Annova's resource reports recognize, vessel loading is conceptually and procedurally distinct from natural gas pretreatment, liquefaction, and storage. As the existing Cove Point, Maryland, terminal demonstrates, these vessel loading can be separated from other activities by at least a mile. These facts are grounds for the Army Corps of Engineers to deny the proposed fill, and they demonstrate that the NEPA review must consider alternative site configurations that would minimize these wetland impacts from non-water dependent activities. The DEIS fails to consider such alternatives.

Annova explains that its proposed project "includes two principal parts," which are conceptually distinct: "the LNG facilities and the associated marine transfer projects." Accession No. 20160713-4004, Resource Report 1-7 (July 13, 2016). Although most export facility proposals site these "parts" in close proximity, adjacency is not required. The Freeport, Texas project separated pretreatment facilities from the remainder of the project by a five-mile pipeline. *Freeport LNG Development*, 148 FERC ¶ 61,076 P22 (July 30, 2014). The Cove Point, Maryland project, which was constructed as an import facility more than 40 years ago, separates marine transfer facilities from gas storage and liquefaction facilities by more a mile, connected by a pipeline that transports natural gas in liquid form. FERC, *Environmental Assessment for the Cove*

Point Liquefaction Project, Docket CP13-113, at 2 (May 2014).⁴ The following figure illustrates the Cove Point site configuration. Notably, onshore facilities are set back from the shoreline.



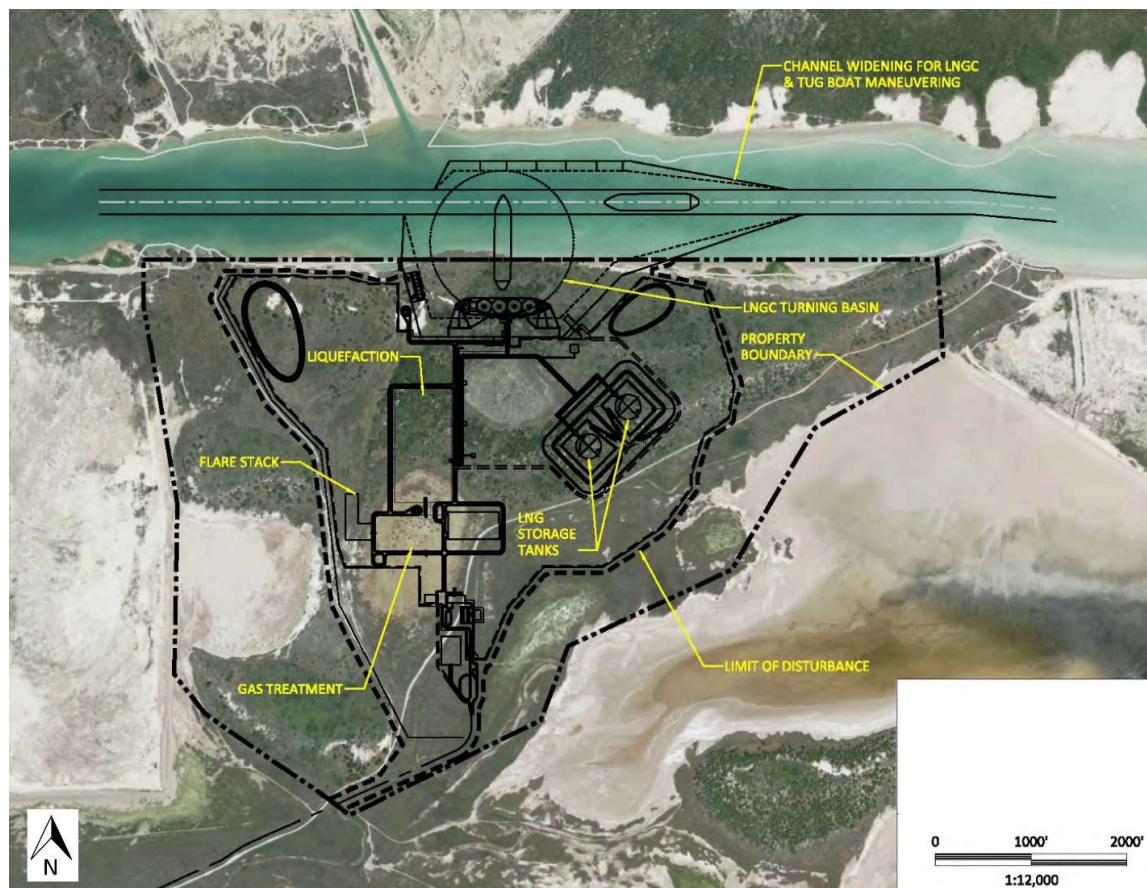
Source: FERC, *Environmental Assessment for the Cove Point Liquefaction Project*, Docket CP13-113 (May 2014)

Here, Annova's primary permanent wetland impacts will be caused by pretreatment and storage, rather than marine transfer, facilities. Annova predicts that the project will permanently disturb 40 acres of wetlands, primarily "estaurine emergent". DEIS 4-29 to 4-300. The majority of these wetlands are at the terminal site, as shown in DEIS figures 4.4.2-1 reproduced below.

⁴ Available at <http://elibrary.ferc.gov/IDMWS/common/OpenNat.asp?fileID=13546236>.



The proposed Annova facility design would fill these wetlands, as illustrated by DEIS figure 1-2, reproduced below (note the change in orientation):



In the proposed design, wetlands will be impacted by gas pretreatment facilities (which the Freeport project demonstrates can be located at a site miles away) and by liquefaction equipment (which Cove Point demonstrates can be a mile from marine loading facilities).

Regulations implementing the Clean Water Act provide that where the activity to be sited in the wetland “does not require access or proximity to or siting within” the wetland “to fulfill its basic purpose (i.e. is not water dependent),” the Corps must presume that a less environmentally damaging practicable alternative exists. 40 C.F.R. § 230.10(a)(3). Natural gas pretreatment, liquefaction, and storage are not water dependent, as the Cove Point and Freeport facility designs illustrate. That is, Annova does not need to locate “locate the project in water to achieve [the]

basic purpose” of these facilities. *Sierra Club v. Van Antwerp*, 362 Fed. Appx. 100, 106 (11th Cir. 2010); see *In the matter of Oregon LNG*, Final Order of the Lands Use Hearings Officer for the City of Warrenton, CUP14-3, VAR 14-1, CUP14-4, & VAR 14-2, at 30-31 (Mar. 6, 2016)⁵ (holding, in review of a liquefied natural gas export project, that liquefaction and storage facilities were not water dependent). An analogous situation arises when a project proponent seeks to build houses with boat docks. The basic purpose of such a project is to build housing, and the boat docks are incidental to this basic purpose. Accordingly, the proposed housing project is not water-dependent. See *Shoreline Assoc. v. Marsh*, 555 F. Supp. 169, 179 (D. Md. 1983), *aff’d*, 725 F.2d 677 (4th Cir. 1984) (holding, in such a circumstance, that the “primary aspect of the proposed project is the construction of a townhouse community, not the construction of a boat storage facility and launch, which are incidental to it”); *Korteweg v. Corps of Eng’rs of the U.S. Army*, 650 F. Supp. 603, 606 (D. Conn. 1986) (finding a project not water dependent because it was “not made unique for environmental purposes by including a slip for each unit. In certain quarters, the ability to tie one’s boat at an adjacent dock would make the units more valuable and thus more marketable. However, the docks are neither essential to the units nor are they integral to their residential use.”).

Here, several commenters identified the alternative of reducing impacts to wetlands by relocating non-water-dependent facilities in a protest of Annova’s FERC application. FERC Accession No. 20160817-5441. Annova responded by arguing, without any supporting evidence, that the Freeport and Cove Point facilities were different, and that designs successfully employed in these projects could not be used here. FERC Accession No. 20160831-5379. These unsupported assertions fall short of Annova’s burden of providing “detailed, clear, and convincing

⁵ Attached as Exhibit A.

information proving that an alternative with less adverse impact is impracticable.” *Greater Yellowstone Coalition v. Flowers*, 359 F.3d 1257, 1269 (10th Cir. 2004)). Similarly, the DEIS entirely fails to explore alternatives that would avoid siting liquefaction, pretreatment, and other non-water-dependent facilities outside of wetlands. This omission both violated the NEPA obligation to take a hard look at all reasonable alternatives and fails to demonstrate that the requested wetland fill is lawful here.

C. The applicant has not provided an adequate mitigation plan for wetlands.

The DEIS states that Annova LNG’s Conceptual Mitigation Plan is still under review by the Corps.⁶ It is difficult for the public to meaningfully comment on whether mitigation will be adequate or effective in the absence of a Corps-approved draft mitigation plan. Certainly, failure to discuss pipeline mitigation in the Conceptual Mitigation Plan makes it impossible to evaluate its effects. Nevertheless, one can still draw the conclusion that the Conceptual Mitigation Plan is deficient.

Annova proposes to restore wetlands at Little San Martín Lake, 1.2 miles northwest of the project site.⁷ While this is an improvement over Texas LNG’s and Rio Grande LNG’s plans, which propose to mitigate impacts by acquiring conservation easements in the Loma Ecological Preserve (LEP)—an area owned by the Brownsville Navigation District and already protected by a lease to the U.S. Fish and Wildlife Service—the Clean Water Act and implementing regulations require that *all* impacts to wetlands be mitigated. The DEIS and Annova LNG’s Conceptual Mitigation Plan, however, improperly only addresses *permanent* impacts from the *terminal*

⁶ FE CP16-480, Accession No. 20181214-3018 at 25.

⁷ FE CP16-480, Accession No. 20181214-3018 at 134.

site/access road.⁸ A broader scope of impacts must be mitigated, including temporary impacts. For example, a significant amount of impacts to aquatic resources will likely occur as a result of the pipeline. Construction of the pipeline will directly disturb an estimated 42 acres of wetlands.⁹ It is not clear how long these wetlands will be disrupted during construction and restoration activities. It is also possible that these wetlands may be permanently degraded because restoration of vegetation can be imperfect, creating a risk of permanent degradation. Even if restoration is successful, wetlands within the operational right-of-way may be permanently and deliberately transformed: Annova LNG will presumably conduct vegetation maintenance within a 50-foot-wide permanent right-of-way. The Corps cannot approve the project unless these additional impacts are adequately mitigated.

Moreover, the Corps, EPA, and other federal agencies have recognized “the longstanding national goal of ‘no net loss’ of wetland acreage and function.” Compensatory Mitigation Rule, 73 Fed. Reg. 19,594 (Apr. 10, 2008). Mitigation must be of a kind and amount to compensate for the loss of services and functions provided by the impaired wetlands. 40 C.F.R. §§ 230.93(e), (f). Compensatory mitigation is inherently imperfect and therefore always requires a greater than 1:1 ratio. In this circumstance, the ratio must be further increased because of the temporal difference between when impacts will occur (*i.e.*, start of construction) and if/when the proposed mitigation actually becomes functional. 40 C.F.R. § 230.93(m), *accord* 73 Fed. Reg. at 19,610.

According to the DEIS issued by FERC, nearly 100 acres of wetlands in total will be impacted by the project. As proposed, construction and operation of the terminal site and access

⁸ See generally FE CP16-480, Accession No. 20181207-5060 (Annova’s Revised Conceptual Mitigation Plan, December 2018).

⁹ FE CP16-480, Accession No. 20181214-3018 at 371

road will permanently impact approximately 52.8 acres of wetlands with 4.9 more acres impacted temporarily (57.7 acres total).¹⁰ An additional 42.1 acres will be disturbed or destroyed—at the very least in the short-term—by construction of the 9-mile-long pipeline.¹¹ Yet Annova proposes only to restore or enhance a total of 171-192 acres of estuarine wetlands through its work at the Little San Martin Mitigation Site.¹² This means Annova is proposing compensatory mitigation at a low ratio (ranging from 1.7:1 to 1.9:1). In contrast, the nearby SpaceX project mitigated at a greater than 10:1 ratio.¹³ Annova’s own mitigation plan acknowledges that its 50-acre re-establishment plan may not fully replace the Plant Biomass Production function at the proposed mitigation site.¹⁴ Without more, Annova is not meeting its mitigation obligations and its application must be denied.

Finally, the Conceptual Mitigation Plan appears to misrepresent the current conditions at Little San Martin Lake. The undated “Recent Aerial Photograph provided by Annova suggests that the marsh (and corresponding aquatic resources) is completely absent from the southwest section of the proposed mitigation site.¹⁵ However, more recent Google Maps satellite imagery shows that this is not the case, depicting aquatic resources throughout almost the entirety of the proposed mitigation site, including the southwest corner.¹⁶ Individuals from one of the

¹⁰ FE CP16-480, Accession No. 20181214-3018 at 132.

¹¹ FE CP16-480, Accession No. 20181214-3018 at 371.

¹² FE CP16-480, Accession No. 20181207-5060 at 9 (Annova Conceptual Mitigation Plan, Dec. 2018 at 6).

¹³ SpaceX FEIS at 4-44, Appendix M, available at <https://cdxnodengn.epa.gov/cdx-enepa-II/public/action/eis/details/downloadEisDocuments?eisId=88519>.

¹⁴ FE CP16-480, Accession No. 20181207-5060 at 20 (Annova Conceptual Mitigation Plan, Dec. 2018 at 17).

¹⁵ FE CP16-480, Accession No. 20181207-5060 at 10 (Annova Conceptual Mitigation Plan, Dec. 2018 at 7).

¹⁶ See Ex. B.

undersigned groups (Save RGV from LNG) recently visited the proposed mitigation site and were surprised to see more open water, more vegetation, and more black mangrove on the site than Annova's Conceptual Mitigation Plan represented.¹⁷ The Corps should undertake a site visit and must independently assess the baseline information for the aquatic resources on the proposed mitigation site. Based on the available information, Annova is underrepresenting the existing wetlands at the proposed mitigation site, may be overestimating the restoration and enhancement of wetlands at the site, and is not meeting its compensatory mitigation obligations.

D. The Project may jeopardize the continued existence of listed species.

Under EPA's 404 Guidelines, the Corps may not permit a dredge and fill activity that "jeopardizes the continued existence" of an endangered or threatened species or "results in the likelihood of destruction or adverse modification of [critical] habitat"—the standard for prohibiting federal activities under Section 7 of the ESA, 16 U.S.C. § 1536. 40 C.F.R. § 230.10(b)(3). To ensure that agencies do not violate this substantive standard, Section 7 of the ESA requires that federal agencies proposing an action that "may affect" a listed species—such as the construction and operation of an LNG export terminal and associated supply pipeline—complete consultations with the Services. 16 U.S.C. § 1536(a)(2). According to U.S. Fish and Wildlife Service and National Marine Fisheries Service (together, "Services") regulations, jeopardy results when it is reasonable to expect that a federal action would "reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02. "Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species." *Id.*

¹⁷ See *id.* (picture from site visit depicting black mangrove).

As an initial matter, the Corps has not completed the procedures required by the Guidelines and the ESA to determine the impacts of Annova's terminal and pipeline on various species, including ocelot (*Leopardus pardalis*); red knot (*Calidris canutus rufa*); piping plover (*Charadrius melodus*); Kemp's ridley (*Lepidochelys kempii*), hawksbill (*Eretmochelys imbricate*), leatherback (*Dermochelys coriacea*) and loggerhead sea turtles (*Caretta caretta*); or Aplomado falcon (*Falco femoralis*). The Corps appears to believe that it is not required to complete consultation with the Services because, "[a]s the lead federal agency, the FERC is consulting with [the Services] to assess the effect of the proposed project on endangered species." However, FERC's consultation obligations do not relieve the Corps of its *independent* obligations under the Clean Water Act (or the ESA as discussed in further detail below).

Even if the Corps could rely on FERC's consultation under the ESA to satisfy its Clean Water Act obligations, that process is still on-going. The analysis and the results of the consultation must be made available for the public to review as part of the Section 404 permitting process. Without a completed consultation with the Services, the Corps cannot conclude that the Annova LNG's project will not result in jeopardy of a listed species or that critical habitat will not be destroyed or adversely modified. Finally, the information furnished by Annova LNG does not support the conclusion that this project will not jeopardize the listed species above or destroy or adversely modify critical habitat in any event. Accordingly, the Corps cannot determine that this project will comply with 40 C.F.R. § 230.10(b)(3), and thus cannot approve Annova LNG's project.

i. Species-Specific Concerns

The 404(b)(1) Guidelines direct the Corps to deny a permit where a project would jeopardize the continued existence of listed species, or where there is not sufficient information to

make a reasonable judgment as to whether the project would jeopardize listed species. 40 C.F.R. §§ 230.10(b)(3), 230.12(a)(3)(ii), 230.12(a)(3)(iv). A review of FERC's DEIS and the materials provided by Annova LNG reveal insufficient information to determine the extent of adverse effects on listed species, or to determine whether proposed mitigation measures are sufficient to prevent jeopardizing those species.

a. *Endangered Ocelot*

The ocelot (*Leopardus pardalis*) is an endangered species with two nearby U.S. populations, one at the Laguna Atascosa National Wildlife Refuge and the other some 20 miles north of the refuge on private ranchland in Kenedy and Willacy Counties. The ocelot is also considered endangered in Mexico by the Secretariat of the Environment and Natural Resources. The Fish and Wildlife Service and nongovernmental organizations have been working for decades to protect and restore the ocelot in the U.S.—and to make progress toward restoring connectivity between the two U.S. ocelot populations and the larger Mexican population. Habitat loss is the primary reason ocelots have largely disappeared from the U.S./Mexico borderlands. There are two predominant reasons that the DEIS and supporting documentation provide insufficient basis to approve Annova's project.

First, the impact of the project on the north-south ocelot movement corridor is largely dismissed or mischaracterized. For decades, FWS and partner organizations have been purchasing land and arranging easements with the goal of protecting habitat and wildlife corridors that would maintain connections between ocelot populations in the U.S., including habitat north and south of shipping channel, with the ultimate vision of restoring connectivity to the population in Tamaulipas, Mexico.¹⁸ The effects of the Annova LNG's proposed export terminal project along

¹⁸ See, e.g., Ex. C (KVEO.com 2018), available at <https://www.kveo.com/news/local-news/-11-million->

the shipping channel—and particularly in light of the combined effects of this project with the proposed Rio Grande LNG and Texas LNG terminals—would be to greatly reduce the width of (if not basically eliminate) the currently existing corridor. The corridor would be restricted, at best, to a band that varies from approximately 700 to 1,800 feet wide very close or adjacent to LNG terminals that ocelots are likely to avoid because of light, noise, and human activity.

Once the terminals are under construction or completed, an ocelot seeking to move north or south would have to approach the lighted, noisy facilities, locate and travel through a narrow easement adjacent to a terminal, swim the channel, and then exit the channel via a second easement, again in close proximity to a lighted and noisy industrial area. In addition, ocelots would have to use culverts to cross access roads or risk being killed by a vehicle strike. It is unlikely that ocelots would successfully run this gauntlet—and therefore likely that the three terminals would permanently cut the connection between ocelots north and south of the channel. The stark and likely impact is a loss of connectivity that may jeopardize long-term viability of the U.S. ocelot population by substantially reducing the area available to ocelots and ending hope of eventual natural gene flow from the Mexican population.

Annova LNG's documentation fails to acknowledge the three terminals' combined role in cutting this vital corridor. In its Revised Sensitive Species Report, Annova LNG excludes the Rio Grande LNG and Texas LNG terminals from its cumulative effects analysis based on those projects' separate ESA consultations.¹⁹ Nevertheless, the combined impacts of the three terminals cannot be ignored entirely. The Corps and the Services must evaluate the other two terminals'

[for-conservation-projects/1614349403](https://www.federalregister.gov/publications/for-conservation-projects/1614349403).

¹⁹ FE CP16-480, Accession No. 20170316-5069 at 140-41.

effects on the ocelot (as well as other listed species) as part of the *environmental baseline*.²⁰ The Corps and the Services must disclose and evaluate the combined effects of the three LNG Projects to determine likelihood of jeopardizing the ocelot via destruction of habitat and corridors. Absent that evaluation, approval of the Annova LNG project would not comply with Section 404(b)(1).

The second reason that the DEIS and other documentation do not permit approval of Annova LNG's project is that there is insufficient mitigation to ensure continued existence of the ocelot. The DEIS discloses three conservation measures Annova LNG may take to reduce impacts on ocelot: (1) consideration of funding off-site conservation lands, (2) shifting its project site east to accommodate a wildlife corridor, and (3) funding an extension of the Redhead Ridge Conservation Easement on the opposite shore of the shipping channel.²¹ The latter two conservation measures are likely insufficient to avoid jeopardizing the ocelot because it is unlikely the ocelot will utilize these corridors, for the reasons discussed above. Moreover, Annova does not propose to protect those corridors in perpetuity which undermines the entire purpose of reestablishing connectivity. Regarding off-site conservation lands, the DEIS assumes that it would contribute to the Project minimizing impacts on ocelot. But without more information, the assumption is all there is. The proposed conservation measure cannot be evaluated to determine the extent—if any—that it would address the loss of connectivity, loss of habitat, as well as other adverse effects (e.g., noise and lights). Indeed, Annova has not committed to purchase land or easements, but is simply “evaluating” doing so.²² Moreover, a

²⁰ 50 C.F.R. § 402.02 (definition of effects of the action); U.S. Fish and Wildlife Service and National Marine Fisheries Service, *Endangered Species Consultation Handbook*, at xiv, 4-23 (1998).

²¹ FE CP16-480, Accession No. 20181214-3018 at 169-70.

²² FE CP16-480, Accession No. 20181214-3018 at 169-70.

conclusion that the conservation measures are sufficient to prevent jeopardizing the continued existence of the U.S. populations of ocelots is unwarranted where the DEIS concludes that funding for conservation lands only “may” benefit ocelots.²³

b. *Threatened Piping Plover and Threatened Red Knot*

Annova LNG’s Revised Sensitive Species Assessment and the Annova DEIS note that there is typical wintering habitat for both the endangered piping plover (*Charadrius melodus*) and threatened red knot (*Calidris canutus rufa*) on the project site itself²⁴, as well as wintering critical habitat for piping plover²⁵ on part of the project site. The assessment states that the red knot and the piping plover will lose wintering/foraging habitat and that human activity associated with the terminal may prevent both species from using additional habitat adjacent to the site. However, Annova LNG does not anticipate adverse effects on either bird because “there is abundant high-quality wintering habitat in the vicinity.”²⁶ The implication, for which no evidence is presented, is that there is underutilized feeding habitat available for refugee birds to use.²⁷ The validity of this assumption is biologically questionable. These birds are likely imperiled because of the *cumulative* effects of habitat loss that, in turn, results in inadequate food supplies. For example, the large decline in red knot that led to its listing as threatened in 2015 was caused primarily by a decline in food availability when the birds arrived on migration in Delaware Bay.²⁸ If food is similarly limiting piping plover and red knot along the South Texas coast, there is reason to

²³ *Id.*

²⁴ *E.g.*, FE CP16-480, Accession No. 20181214-3018 at 174.

²⁵ *Id.* at 173.

²⁶ FE CP16-480, Accession No. 20170316-5069 at 124 (Revised Sensitive Species Assessment, p. 85).

²⁷ FE CP16-480, Accession No. 20181214-3018 at 175.

²⁸ *See generally* U.S. Fish and Wildlife Service, Red Knot (2018), *available at* <https://www.fws.gov/northeast/redknot/>.

assume that alternative habitat with adequate food is not available, and accordingly, the Annova LNG project and other industrial projects nearby may have cumulative impacts to the piping plover and red knot that jeopardize those species' continued existence.

Moreover, cumulative loss of habitat by the LNG plants and other development in the area may decrease feeding effectiveness by altering the distribution of wetland habitat. Shorebirds have been found to be more effective at feeding with lower search costs and exploit more feeding sites when distance between wetlands decreases and the percentage of the landscape occupied by wetlands increases.²⁹ In other words, the habitat that would be affected may be part of a web of nearby lands that together increase overall feeding efficiency. Thus, the Annova LNG terminal may contribute to what is effectively an overall loss in available food in the general area. Neither the DEIS nor the 404 application adequately evaluate this issue or determine whether mitigation is necessary to offset the loss of feeding habitat for piping plover and red knot. Moreover, there is no evaluation of whether the proposed wetland restoration at Little San Martín Lake would create habitat for these birds that would offset the loss of feeding habitat for piping plover and red knot.

The DEIS finds that the project “would not significantly destroy or adversely modify” designated critical habitat for piping plovers located on the east side of the Project site” because “only one acre of habitat would be removed and there is abundant high-quality wintering habitat in the vicinity of the Project site.”³⁰ As discussed above, neither the DEIS nor the assessment provides scientific evidence that nearby “high-quality wintering habitat” is underutilized and therefore available to birds displaced from the site. Moreover, by focusing on the “one acre of habitat” that would be permanently removed, the DEIS understates the potential effects of the

²⁹ Ex. D (Farmer, 1996).

³⁰ FE CP16-480, Accession No. 20181214-3018 at 389.

project for two reasons. First, plovers may be excluded not only from the one acre where habitat will be removed, but also from the other estimated 12.4 acres of critical habitat by human activity.³¹ Indeed, the DEIS notes that human activity may flush birds from habitat near but not on the site, with the clear implication that birds may be displaced from habitat on the site. The EIS should clarify impacts on all piping plover critical habitat.

A second way the focus on destroyed critical habitat understates the effects is that it overlooks habitat that has not been designated as critical. Table 5 in the Revised Sensitive Species Assessment indicates that there is a total of 31 acres of suitable habitat for piping plover on the site³², and impacts on these acres should be analyzed with respect to survival of the plover and red knot. Habitat in the vicinity that is undesignated may nevertheless be optimal and similarly important for the survival of the species. Moreover, depending on a species' sensitivity to disturbance from human activities, the loss of those 31 non-designated acres may also represent a loss of a buffer around the designated habitat, in turn resulting in the adverse modification of the critical habitat.

c. *Endangered and Threatened Species of Sea Turtles*

The project documentation also contains insufficient information to determine whether there are sufficient conservation measures to minimize the project's impacts on listed sea turtles. Sea turtle species that may be present within the project's general area include Kemp's ridley, hawksbill, leatherback, loggerhead, and the green sea turtle. All of these species are endangered except for the green, whose population off the Texas coast is classified as threatened. Critical habitat for the loggerhead turtle has been mapped offshore.

³¹ Total acres of CH given as 13.4. FE CP16-480, Accession No. 20181214-3018 at 173.

³² FE CP16-480, Accession No. 20170316-5069 at 10 (Revised Sensitive Species Assessment, p. 61, T. 5).

Annova LNG does not adequately evaluate the potential for collision with ships as a significant risk to sea turtles associated with the project, both directly and in conjunction with the increased traffic resulting from the two other terminal projects.³³ Turtles are vulnerable because they surface to breathe; often bask, feed, and mate near the surface where they are struck; and are more vulnerable during cold spells when they are unable to move as effectively. They are also more vulnerable when ships travel at high speed because the turtles cannot take effective evasive action.³⁴ The bodies of most struck turtles are not recovered, but dead and injured turtles that wash up on shore include turtles clearly struck by ships. NOAA collects statistics on turtle strandings off the Texas coast, although these statistics are not broken down by cause of death. In Zone 21 of NOAA's Gulf of Mexico sea turtle coastal habitat zoning, the number of strandings of all threatened or endangered species of sea turtles from 2010 to 2018 was 3,390. This includes the area of Padre Island and South Padre Island (offshore and in-shore strandings).³⁵ Some proportion are likely due to collision and could increase as a greater number of ships enter the Brownsville ship channel arriving at the three new LNG terminals.

Turtles are known to be present in high density in this area, as shown in the map below, so many ship-turtle collisions are likely.³⁶ The Annova LNG terminal project and other LNG projects planned along the shipping channel will significantly increase the amount of ship traffic in the area, thereby increasing the probability of collision and turtle death. This may especially

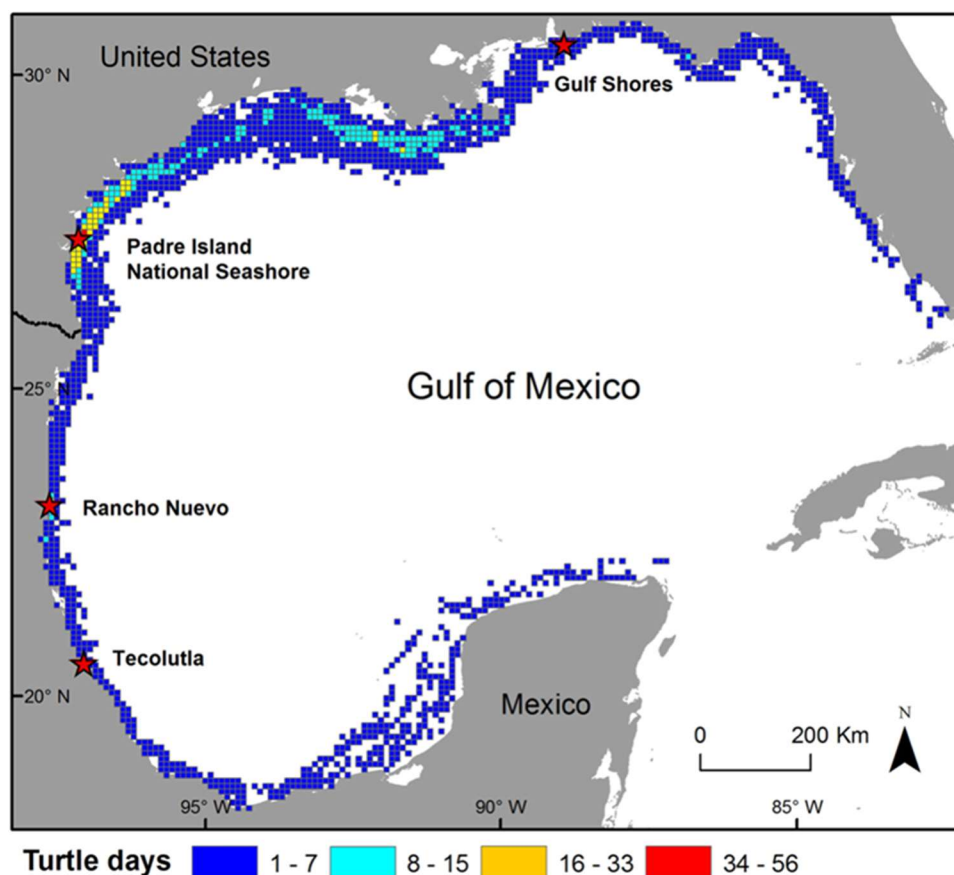
³³ See, e.g., Ex. E (Loggerhead Recovery Plan) and Ex. D (Denkinger 2013).

³⁴ Ex. F (Hazel 2007).

³⁵ Data from NOAA Southeast Fisheries Science Center, available at <https://grunt.sefsc.noaa.gov/stssnrep/SeaTurtleReportI.do?action=reportquery>. Zone 21 covers roughly 60 miles of Texas coastline from slightly north of Port Mansfield through the border with Mexico.

³⁶ Ex. G (Shaver 2016).

negatively impact nesting beaches for the Kemp's ridley, which nest along Boca Chica beaches in South Padre island at the entrance to the ship channel. The project documentation fails to quantify the increased vulnerability to vessel strikes, and it therefore is impossible to determine whether vessel strikes associated with the project are jeopardizing any of the listed sea turtle species' continued existence, violating the substantive requirements of the 404(b)(1) Guidelines.³⁷



Moreover, the documentation shows insufficient evaluation of mitigation measures related to sea turtles. Turtle mortality from collisions can be reduced if ships travel more slowly and if ships avoid turtles. Such avoidance guidelines have been promulgated by the National Marine

³⁷ FE CP16-480, Accession No. 20181214-3018 at 181.

Fisheries Service (NMFS).³⁸ Though the Annova DEIS refers to these guidelines, stating that the increase in vessel strikes due to the project “would be small due to implementation of the NOAA Fisheries’ guidance,”³⁹ it provides no evidence that these purely voluntary guidelines would be followed or that the effects would indeed be “small.” Indeed, there is reason to believe the guidelines would not be followed—there are additional costs when ships travel slowly, as has been calculated for the right whale seasonal management areas off the east coast near Boston, Massachusetts.⁴⁰ Based on these increased costs, ships have an economic incentive not to comply with the voluntary NMFS guidelines, and there is little reason to believe they would do so. Based on the information available in the DEIS, it appears unlikely that Annova LNG’s proposed conservation measures would prevent significant impacts to listed species of sea turtles due to increased vessel strikes.

Other measures are available that may mitigate impacts such as vessel strikes. For example, a speed control area such as the one set for right whales is precedent for a mandatory vessel speed limit.⁴¹ Because increased ship traffic due to the LNG sites would likely increase mortality of endangered and threatened turtles, the Corps and Texas LNG should evaluate all such measures to avoid causing jeopardy to listed sea turtles, including creation of a mandatory ship speed control area in the vicinity of the mouth of the shipping channel sufficiently large to significantly reduce turtle mortality.

ii. Need for species-specific evaluations

³⁸ Ex. H (NOAA Fisheries Service, Southwest Office 2008).

³⁹ FE CP16-480, Accession No. 20181214-3018 at 191.

⁴⁰ NOAA Fisheries Service, Compliance Guide for Right Whale Ship Strike Reduction Rule (2018), available at <https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-ship-strikes-north-atlantic-right-whales>.

⁴¹ *See id.*

The DEIS and Annova LNG's supporting documentation fail to provide sufficient species-specific analyses that would allow the Corps to determine whether Annova LNG's other proposed conservation measures will ensure that the project does not jeopardize the continued existence of the listed species above. Because the terminal site includes a mosaic of different habitat types that support different species, effects on species supported by these habitat types need to be specifically evaluated. For example, thorn scrub is ocelot habitat, while Gulf Coast salty prairie is habitat for Aplomado falcon. Other types of habitat on the site include loma grassland (potential ocelot hunting ground), loma evergreen shrubland, loma deciduous shrubland, as well as significant acreage of varying types of wetlands and open water. Annova LNG is taking a species-specific approach to ocelot mitigation but has not done a similar analysis or developed conservation measure alternatives specific to Aplomado falcon, piping plover, red knot or sea turtles, which it should do. Without evaluating lost habitat for each listed species, the Corps will be unable to determine whether Annova LNG's conservation measures will prevent jeopardy to any individual listed species (or that critical habitat will not be destroyed or adversely modified), and therefore cannot approve the project. 40 C.F.R. § 230.10(b)(3).

II. The Corps has failed to comply with the ESA's consultation requirements.

Pursuant to Section 7(a)(2) of the ESA, the Corps may not take an action—here, authorizing the construction of an LNG export terminal and associated supply pipeline—that is “likely to jeopardize the continued existence” of listed species or may destroy or adversely modify critical habitat. 16 U.S.C. § 1536(a)(2); *see* 50 C.F.R. §§ 402.02, 402.03. To ensure that it meets this substantive obligation, Section 7(a)(2) requires the Corps to complete consultation with the Services when proposing an action that “may affect” an endangered or threatened species or may destroy or adversely modify critical habitat. 16 U.S.C. § 1536(a)(2). As a result, the Corps

must complete a formal consultation *before* making a determination on this project under CWA Section 404. The consultation must include an analysis of the effects of building the LNG export terminal and supply pipeline, including the effects on the various listed species and critical habitat discussed above. *See, e.g.*, 50 C.F.R. §§ 402.02, 402.12, 402.14; *see also* 33 C.F.R. § 336.1(c)(5) (Corps regulation requiring the Corps to initiate discussions with the Services where an action “may affect” a listed species or critical habitat).

The Services have not evaluated whether Annova LNG’s project jeopardizes the listed species or destroys/adversely modifies the critical habitat discussed above. Although the Public Notice states that FERC is consulting with the Services “to assess the effect of the proposed project,” the Corps may not rely on a future consultation (in which it is not involved) with an unknown outcome to authorize this project. Thus, the Corps and the Services must complete a formal ESA Section 7(a)(2) consultation regarding this proposal before the Corps makes a decision about whether to authorize this project. Moreover, as described above, even absent a consultation, the best available science demonstrates that the construction of this project may “jeopardize” the listed species discussed above, thereby violating the Corps’ substantive ESA section 7(a)(2) obligation to avoid jeopardizing endangered and threatened species and to avoid destroying or modifying critical habitat.

III. Conclusion

Thank you for the opportunity to comment on this matter. For the reasons stated above, and for additional reasons we will provide in comments on the draft EIS, the Annova LNG application is contrary to the Clean Water Act, the ESA, and other applicable law, and must be denied.

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Attached Exhibits:

- A. *In the matter of Oregon LNG*, Final Order of the Lands Use Hearings Officer for the City of Warrenton, CUP14-3, VAR 14-1, CUP14-4, & VAR 14-2 (Mar. 6, 2016).
- B. Google Earth satellite imagery (2019) and site visit photograph (January 24, 2019).
- C. KVEO.com, *\$11 Million for Conservation Projects* (November 23, 2018).
- D. Farmer, A.H. and A.H. Parent. 1997. Effects of the Landscape on Shorebird Movements at Spring Migration Stopovers. *The Condor* Vol. 99, No. 3 (Aug., 1997), pp. 698-707.
- E. NOAA Fisheries Service & U.S. Fish and Wildlife Service. 2008. Recovery Plan for the NW Atlantic Population of the Loggerhead Sea Turtle.
- F. Hazel et al. 2007. Vessel speed increases collision risk for the green turtle *Chelonia mydas*. *Endangered Species Research* Volume 3, pp. 105-113.
- G. Shaver D. et al. 2016. Migratory corridors of adult female Kemp's ridley turtles in the Gulf of Mexico. *Biological Conservation*, Vol. 194, pp 158-167.
- H. NOAA Fisheries Service, Southeast Regional Office. 2008. Vessel Strike Avoidance Measures and Reporting for Mariners.