

Via E-mail and Certified Mail

May 28, 2026

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Re: Notice of Intent to Sue for Violations of the Endangered Species Act Related to Port Everglades Sand Bypass Project

Dear Sirs:

On behalf of Miami Waterkeeper, the Center for Biological Diversity, the Florida Wildlife Federation and the Diving Equipment and Marketing Association, this letter serves as a sixty-day notice of our intent to sue the United States Army Corps of Engineers (“Corps”) and the National Marine Fisheries Service (“NMFS”) for violations of the Endangered Species Act (“ESA”), 16 U.S.C. § 1531 *et seq.*, relating to the Port Everglades Inlet Sand Bypassing Project (“Project”) currently under construction. As described further below, the Corps has violated and is violating ESA Section 7 by failing to reinitiate consultation after 1) the Project was subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the

biological opinion and 2) the Corps learned of new information revealing that the effects of the Project may affect listed species and critical habitat in a manner or to an extent not previously considered. Subsequent changes to the project design and new information render key assumptions in the biological opinions that NMFS used to determine no jeopardy and no adverse modification for coral and conch erroneous and invalid, and the Corps' continued reliance on these opinions, without reinitiation, violates ESA Section 7. In addition, even absent new information, the Corps' reliance on the 2020 and 2025 biological opinions violates ESA Section 7 because NMFS's analyses and conclusions in the opinions are arbitrary, irrational, and not based on the best available science. Finally, the Corps is violating ESA Section 9 because the Project is likely taking staghorn coral and the incidental take statement is invalid and cannot shield the Corps from liability.

The Project design described in the 2025 biological opinion includes a commitment to prohibit overflow—a construction practice that minimizes sediment impacts to the surrounding reef—but this commitment has been subsequently modified and overflow is clearly occurring. Because the Project was modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion, reinitiation of consultation is required.

In addition, new evidence reveals that the effects of the Sand Bypass Project far exceed the predicted scope and degree of impact that was analyzed in the biological opinions for the Project.¹ Satellite imagery and sediment monitoring show that the Project has increased sedimentation across a larger area than predicted and that sediment accumulation is greater than predicted. This new information undermines the jeopardy and adverse modification determinations for coral and conch, which were predicated on lower levels of sedimentation.

New evidence also shows that the 2023 marine heatwaves caused a widespread mortality event for two threatened coral species, staghorn and elkhorn coral, such that the distribution and abundance of these species are now much smaller than what was assumed in the biological opinions. The same month that the Project commenced, a study was published in the journal *Science* that declared staghorn and elkhorn corals functionally extinct in Florida. Another recent study found that the Project area is home to some of the last naturally occurring populations of staghorn coral in Florida and therefore may be an important site for the recovery of the species following disease outbreaks and marine heatwaves. Together, these studies demonstrate that the conservation status of elkhorn and staghorn coral is much more dire than federal agencies considered during the ESA consultation, and the effects of the Project may therefore have greater

¹ National Marine Fisheries Service, Biological Opinion for the Sand Bypass Construction and Beach Renourishment Project in Fort Lauderdale, Broward County (Aug. 28, 2025) [hereinafter 2025 Sand Bypass Project BiOp]; National Marine Fisheries Service, Biological Opinion for the Sand Bypass Construction and Beach Renourishment Project in Fort Lauderdale, Broward County (Mar. 3, 2020) [hereinafter 2020 Sand Bypass Project BiOp].

impact on the survival and recovery of these species than previously considered. Indeed, even seemingly small impacts could have outsized effects on species that are clinging to survival and have been extirpated in large parts of Florida’s Coral Reef.

Recent studies also show that dredging likely played a significant role in the 2014 outbreak of Stony Coral Tissue Loss Disease (SCTLD) and that sediment is a likely vector of coral disease, but this information was not included or considered in the biological opinions.

Moreover, even setting aside this new information, the biological opinions concerning this Project are inaccurate and arbitrary, underestimating impacts to coral and conch, ignoring critical information, relying on a mitigation strategy to offset coral critical habitat loss that is unlikely to yield benefits to the listed coral species at issue, and relying on new regulations to conduct the requisite ESA analyses that have been invalidated as inconsistent with the ESA’s statutory requirements.

Finally, the Corps is violating ESA Section 9 because the Project is likely taking staghorn coral colonies and the incidental take statement is invalid and cannot shield the Corps from liability.

I. FACTUAL BACKGROUND

The National Marine Fisheries Service (“NMFS”) listed *Acropora cervicornis* (staghorn coral) and *Acropora palmata* (elkhorn coral) as “threatened” under the ESA in 2006,² and designated critical habitat for these species in 2008.³ NMFS also promulgated regulations prohibiting take of staghorn and elkhorn coral in 2008.⁴ In an effort to further reverse the rapid loss of coral reefs, on September 10, 2014, NMFS added pillar coral (*Dendrogyra cylindrus*), rough cactus coral (*Mycetophyllia ferox*), lobed star coral (*Orbicella annularis*), mountainous star coral (*Orbicella faveolata*), and boulder star coral (*Orbicella franksi*) to the ESA list as “threatened.”⁵ In 2023, NMFS designated critical habitat for these remaining coral species.⁶

The area around Port Everglades is designated critical habitat for all of these listed corals and is home to some of the highest remaining densities of staghorn coral in Florida’s Coral Reef.⁷ In addition to listed coral, Port Everglades is also home to one of only two known breeding

² 71 Fed. Reg. 26852 (May 9, 2006).

³ 73 Fed. Reg. 72210 (Nov. 26, 2008).

⁴ 50 CFR 223.208(a).

⁵ 79 Fed. Reg. 53852 (Sept. 10, 2014).

⁶ 88 Fed. Reg. 54026 (Aug. 9, 2023).

⁷ Ross Cunning et al., *Integrated Analysis of Coral Density and Community Structure Across Reef Habitats Near Port Everglades in Advance of Dredging Operations* 1, 19 (2025), https://www.ncei.noaa.gov/data/oceans/coris/library/NOAA/CRCP/NMFS/SERO/Projects/31329/Serrano2025_Port_Everglades_CoralDensity_CommunityStructure_Analysis.pdf.

aggregations of queen conch in the continental United States.⁸ NMFS listed queen conch (*Aliger gigas*) as threatened under the ESA in 2024.⁹

Sedimentation from dredging and other underwater construction activities pose significant harm both to listed coral species and the threatened queen conch. For corals, these activities can directly destroy coral colonies during construction. In addition, dredging can indirectly harm corals and habitat by producing fine sedimentation, which can smother coral and coral habitat, shade access to light and food, interfere with reproduction, and contribute to and potentially spread disease.¹⁰ Sedimentation also has severe effects on the queen conch. NMFS describes sedimentation as “one of the largest contributors to queen conch mortalities from anthropogenic activities.”¹¹ As little as 0.1 *millimeter* of sediment accumulation can negatively affect conch embryos and larvae.¹² Sediment can also compromise gill function and ruin foraging habitat for juveniles and adults of the species.¹³

On August 7, 2020, the Army Corps issued a permit to Broward County for the Sand Bypass Project, authorizing the County to “create and modify inlet infrastructure at Port Everglades to facilitate the collection, temporary storage, and transfer of sand to the beaches south of the inlet.”¹⁴ The Project involves the construction of a 10.8-acre sediment impoundment basin (“sand trap”) north of the Port Everglades Inlet in Fort Lauderdale, FL. The purpose of the sand trap is to create a pit that will fill with beach-compatible sand that can be used to renourish nearby beaches. In addition to the construction of the sand trap, the Project includes the removal of a rubble spoil shoal and the excavation of boulders, periodic maintenance dredging and sand bypassing following construction, and disposal of dredged material from the construction site to a waste disposal site.¹⁵ Broward County commenced the initial phase of dredging in October 2025; this initial phase of dredging is expected to continue until June 2026, with permission to occur twenty-four hours a day and seven days a week, notwithstanding inclement weather.¹⁶ The

⁸ Letter from Andrew Strelcheck, Administrator for the Southeast Regional Office of the National Marine Fisheries Service, to Larry D. McCallister, Director of Programs for the United States Army Corps of Engineers, South Atlantic Division (May 22, 2024).

⁹ 89 Fed. Reg. 11208 (Feb. 14, 2024).

¹⁰ National Marine Fisheries Service, Biological Opinion for the Sand Bypass Construction and Beach Renourishment Project in Fort Lauderdale, Broward County (Mar. 9, 2020) at 31 [hereinafter 2020 Sand Bypass Project BiOp].

¹¹ 2025 Sand Bypass Project BiOp at 47.

¹² *Id.* at 47, 60, citing Doerr et al. *in prep.*

¹³ *Id.* at 60.

¹⁴ Department of the Army Permit, No. SAJ-2008-02034 (SP-SLR) (Aug. 7, 2020) at 1.

¹⁵ 2025 Sand Bypass Project BiOp, Section 2.1.1 at 8-15.

¹⁶ See Sand Bypass Project at Port Everglades Vimeo Presentation by Broward County (July 9, 2025), <https://vimeo.com/1101319629>; Also email communication between Miami Waterkeeper and Stephanie Roche, Beach Program Manager, on May 4, 2026, confirming dredging is expected to be complete by approximately February.

second phase of the dredging is expected to occur in October 2026 and continue until January or February 2027.¹⁷

Many of the Project components, including the construction of the sand trap, removal of the rubble shoal, maintenance dredging, and disposal of dredge material, produce sediment that can harm, kill, and otherwise take species listed under the ESA and adversely modify critical habitat. Recognizing these impacts, the Corps initiated formal consultation under the ESA on November 7, 2014, and NMFS completed a biological opinion assessing the Project’s impacts in 2020.¹⁸ The Corps requested reinitiation of consultation on September 4, 2024, to assess impacts on the newly listed queen conch as well as impact to newly designated critical habitat for five Caribbean coral species.¹⁹ NMFS completed a biological opinion assessing impacts on this additional species and habitat in 2025.²⁰ The Project currently operates under two biological opinions: the 2020 biological opinion assessed the Project’s impacts on staghorn, elkhorn, pillar, rough cactus, lobed star, mountainous star, and boulder star coral, as well as elkhorn and staghorn critical habitat (which was the only coral critical habitat designated at the time). Subsequently, NMFS designated critical habitat for the remaining listed coral species and listed the queen conch as threatened. The 2025 biological opinion assessed the Project’s impacts on the newly designated critical habitat for pillar, rough cactus, lobed star, mountainous star, and boulder star coral as well as the Project’s impacts on the threatened queen conch. The 2025 biological opinion did not amend or update any of the analyses or conclusions made in the 2020 biological opinion.

II. THE ENDANGERED SPECIES ACT

Congress enacted the ESA to conserve endangered and threatened species and the ecosystems upon which they depend.²¹ “The plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost.”²² The ESA reflects “‘an explicit congressional decision to require agencies to afford first priority to the declared national policy of saving endangered species’ and ‘a conscious decision by Congress to give endangered species priority over the “primary missions” of federal agencies.’”²³

For federal actions, the heart of the ESA is section 7(a)(2), which requires every agency to ensure, in consultation with the relevant federal wildlife agency—here, NMFS—that “any action authorized, funded, or carried out” by the agency is not likely to “jeopardize” a species that has

¹⁷ *Id.*

¹⁸ 2020 Sand Bypass Project BiOp at 7.

¹⁹ 2025 Sand Bypass Project BiOp at 8.

²⁰ *Id.*

²¹ 16 U.S.C. § 1531(b).

²² *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978).

²³ *Fla. Key Deer v. Stickney*, 864 F. Supp. 1222, 1226 (S.D. Fla. 1994) (quoting *Hill*).

been listed as threatened or endangered under the ESA.²⁴ Consultation requires the action agency (here the Corps) to prepare a biological assessment, which “evaluate[s] the potential effects of the action on listed and proposed species and designated and proposed critical habitat and determine[s] whether any such species or habitat are likely to be adversely affected by the action.”²⁵

If the biological assessment indicates that the action is likely to adversely affect listed species or critical habitat,²⁶ NMFS must draft a biological opinion that determines whether the action is likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat.²⁷

In determining whether an action jeopardizes a species or adversely modifies critical habitat, the ESA requires NMFS to consider impacts to the species in the context of the species’ current status and the existing environmental baseline. Specifically, ESA regulations require NMFS to “[e]valuate the current status and environmental baseline of the listed species or critical habitat,” as well as “the effects of the action and cumulative effects on the listed species or critical habitat.”²⁸ “Effects of the action” includes “direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline.”²⁹ The environmental baseline includes “past and present impacts of all Federal, State, or private actions and other human activities in the action area” as well as “the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early Section 7 consultation.”³⁰ NMFS must then “[a]dd the effects of the action and cumulative effects to the environmental baseline and in light of the status of the species and critical habitat, formulate the Service’s opinion as to whether the action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.”³¹ “Jeopardize the continued existence” means “to engage in an action that reasonably would be expected, directly or indirectly, to 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.”³² “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. Such alterations

²⁴ 16 U.S.C. § 1536(a)(2).

²⁵ 50 C.F.R. § 402.12(a).

²⁶ *Id.* § 402.14(a), (b)(1).

²⁷ 16 U.S.C. § 1536(a)(2), (c), (g); 50 C.F.R. § 402.14(h).

²⁸ 50 C.F.R. § 402.14(g)(2)–(3).

²⁹ *Id.* § 402.02 (2018). In March 2026, a federal district court vacated the definition of “agency action” set forth by the Trump administration in 2019 and reinstated the version of the regulation that existed before the 2019 revisions. *Ctr. for Biological Diversity v. U.S. Dep’t of the Interior*, No. 24-cv-04651-JST, 2026 U.S. Dist. LEXIS 68386, at *72 (N.D. Cal. Mar. 30, 2026).

³⁰ 50 C.F.R. § 402.02 (2025).

³¹ *Id.* § 402.14(g)(4).

³² *Id.* § 402.02.

may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features.”³³

If NMFS concludes that the proposed action is likely to jeopardize a listed species, it must propose reasonable and prudent alternatives (RPAs), if available, that will sufficiently mitigate the action to avoid jeopardy.³⁴ If NMFS relies on mitigation measures to find no jeopardy, those mitigation measures “must be reasonably specific, certain to occur and subject to deadlines or other forcible obligations.”³⁵ Moreover, the benefits of those mitigation measures to the species and habitat at issue must also be “‘reasonably certain’ to occur.”³⁶

Section 9 of the ESA prohibits the “take” of any listed species,³⁷ which is defined in relevant part to mean “harass, harm, . . . wound, [or] kill.”³⁸ NMFS’s regulations further define “harm” as “significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering.”³⁹ Section 7 requires NMFS to determine whether the action will incidentally take listed species, and include an incidental take statement (“ITS”) if incidental take will occur.⁴⁰ “Incidental take refers to takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant.”⁴¹ The ITS must specify the amount of incidental take and measures required to limit take.⁴²

Throughout the process described above, NMFS and the Corps must “use the best scientific and commercial data available.”⁴³ And even after consultation is completed, both agencies’ duty to ensure no jeopardy continues where, as here, the action agency has retained discretionary involvement or control. In particular, the Corps “is required” to reinitiate consultation in certain circumstances, including “[i]f 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” or if the “action

³³ 50 C.F.R. § 402.02 (2018); see *Ctr. for Biological Diversity v. U.S. Dep’t of the Interior*, 2026 U.S. Dist. LEXIS 68386 at *72 (vacating the definition of “destruction or adverse modification” and reinstating the version in effect “before the problematic revisions were made in 2019”).

³⁴ 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.02, 402.14(h)(2).

³⁵ *Fla. Key Deer v. Brown*, 364 F. Supp. 2d 1345, 1355 (S.D. Fla. 2005), *aff’d sub nom. Fla. Key Deer v. Paulison*, 522 F.3d 1133 (11th Cir. 2008).

³⁶ *Ctr. for Biological Diversity v. Haaland*, 87 F.4th 980, 987 (9th Cir. 2023); see also *Ctr. for Biological Diversity v. U.S. Dep’t of the Interior*, 2026 U.S. Dist. LEXIS 68386 at *72 (invalidating a portion of the 2019 ESA regulations where they “d[id] not satisfy [the Services’] obligation to insure against harm to species or habitat by resting [their] conclusions on ‘plans’ that are merely proposed and non-binding.”).

³⁷ 16 U.S.C. § 1538(a)(1)(B).

³⁸ *Id.* § 1532(19).

³⁹ 50 C.F.R. § 222.102.

⁴⁰ 16 U.S.C. § 1536(b)(4).

⁴¹ 50 C.F.R. § 402.02.

⁴² *Id.* § 402.14(i)(1).

⁴³ 16 U.S.C. § 1536(a)(2).

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.”⁴⁴

III. ESA VIOLATIONS

The Corps is violating the ESA by failing to reinitiate consultation after the Project was subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion. The Corps is also violating the ESA by failing to reinitiate consultation after learning of new information that reveals that the effects of the dredging may affect listed species and critical habitat in a manner or to an extent not previously considered. The subsequent change to the project design and the new information render key assumptions in the biological opinions that NMFS used to determine no jeopardy and no adverse modification for coral and conch erroneous and invalid, and the Corps continued reliance on these opinions, without reinitiation, violates ESA Section 7. In addition, even absent new information, the Corps’ reliance on the biological opinions violates ESA Section 7 because NMFS’s analyses and conclusions in the opinions are arbitrary, irrational, and not based on the best available science. The Corps is also violating ESA Section 9 because the Project is likely causing take of staghorn coral colonies and the incidental take statement is no longer valid nor shields the Corps from liability.

A. The Corps is violating ESA Section 7 by failing to reinitiate consultation after the Project was subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion.

The 2025 biological opinion includes a commitment to prohibit overflow during Project construction as part of the Project design. Specifically, paragraph 9 of the Project details section states, “[n]on-beach-compatible sediments dredged from the rubble shoal removal area and from the initial excavation of the sand trap will be loaded into scows, transported from the dredge location along the shipping channel past the reefs, and placed in the Port Everglades [disposal site] ... [t]he permittee confirmed ... that there will be no overflow of loading scows during dredging operations.”⁴⁵ Overflow occurs when dredged material is loaded into the top of the disposal scow, and excess water containing fine sediments is simultaneously drained through valves into the surrounding environment. Overflow has contributed to significant sedimentation impacts during previous dredging projects, including during the PortMiami Deep Dredge Project, which killed more than 560,000 corals.⁴⁶ Despite the prohibition of overflow in the Project description, however, overflow has occurred during construction of the sand trap. In a letter from NMFS to the Corps, NMFS stated that “the project appears to have been subsequently modified in a manner that causes effects to listed species and critical habitat that was not considered in the

⁴⁴ 50 C.F.R. § 402.16(a)(2).

⁴⁵ 2025 Sand Bypass Project BiOp at 15.

⁴⁶ Ross Cunning et al., *Extensive coral mortality and critical habitat loss following dredging and their association with remotely-sensed sediment plumes*, 145 MARINE POLLUTION BULLETIN 185 (2019).

previous Opinions. The 2025 Opinion is based on no overflow of loading scows during dredging operations, a construction practice affirmed by the permittee on two occasions. However, overflow is clearly occurring.”⁴⁷ The letter includes a photo showing overflow occurring.⁴⁸ Because the Project was subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion, the Corps is required to reinstate consultation. The Corps’ failure to do so violates Section 7 of the ESA.

B. The Corps is violating ESA Section 7 by failing to reinstate consultation in light of new information showing effects of the action may affect listed species and critical habitat in a manner or to an extent not previously considered.

The Corps is required to reinstate consultation with NMFS if “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.”⁴⁹ As an initial matter, NMFS has already notified the Corps that “new information reveals effects of the [Sand Bypass Project] that may affect listed species or critical habitat in a manner or to an extent not previously considered in” the biological opinions for the Project.⁵⁰ The law therefore requires the Corps to reinstate consultation.⁵¹

As explained further below, three new sources of information reveal that the Project’s impacts are likely affecting species to an extent not previously considered. First, new sediment monitoring and satellite imagery demonstrate that effects from the Sand Bypass Project exceed what was analyzed in the biological opinions, which demonstrates the effects of the Project may affect listed species and critical habitat in a manner or to an extent not previously considered. Second, new information demonstrates that the conservation status of elkhorn and staghorn coral is much more dire than what NMFS evaluated in the biological opinions for the Project, which indicates the Project may affect the species to an extent not previously considered. Third, new evidence shows that dredging likely played a role in the worst outbreak of coral disease in Florida’s history and that sediment is likely a vector of disease pathogens, again indicating the Project may affect the species in a manner or to an extent not previously considered. Because the Corps has failed to reinstate after learning of this new information, the agency is violating the ESA.

1. Satellite imagery and sediment monitoring demonstrate impacts from the Sand Bypass Project are greater than NMFS anticipated in its biological opinions.

⁴⁷ Letter from Andrew Strelcheck, Regional Administrator of the Southeast Regional Office of the National Marine Fisheries Service to Colonel Brandon L. Bowman, U.S. Army Corps of Engineers, Jacksonville District at 3 (April 17, 2026) [hereinafter 2026 Letter from Andrew Strelcheck].

⁴⁸ *Id.* at 5, fig. 1.

⁴⁹ 50 C.F.R. § 402.16 (emphasis added).

⁵⁰ 2026 Letter from Andrew Strelcheck at 2.

⁵¹ 50 C.F.R. § 402.16(a)(2).

The biological opinions for the Sand Bypass Project assumed sediment and turbidity impacts would stay within a defined area of impact. The 2025 biological opinion also assumed most of the critical habitat within the Project area would receive 1.5 mm or less of sediment accumulation.⁵² But as explained below, the Project’s impacts already exceed these predictions, even though the project is only partially complete.

a. Satellite imagery shows sedimentation impacts exceed the anticipated area of impact.

The biological opinions for the Sand Bypass Project predicted increased sedimentation and turbidity from the project would remain within an area of impact that extended “up to 500 m to the east, 300 m to the north, 150 m to the south, and 1,000 m to the west from the proposed activities.”⁵³

However, increased sedimentation from the Project is occurring well beyond this predicted area of impact, as illustrated in the satellite image below, as well as the images contained in Appendix A. Figure 1 shows sediment traveling at least 2,000 meters north of the predicted area of impact, which is depicted with a dashed red line.⁵⁴

⁵² 2025 Sand Bypass Project BiOp at 58, 69.

⁵³ 2020 Sand Bypass Project BiOp at 16.

⁵⁴ Mixing zone boundary GIS shapefile retrieved from the Florida Department of Environmental Protection.

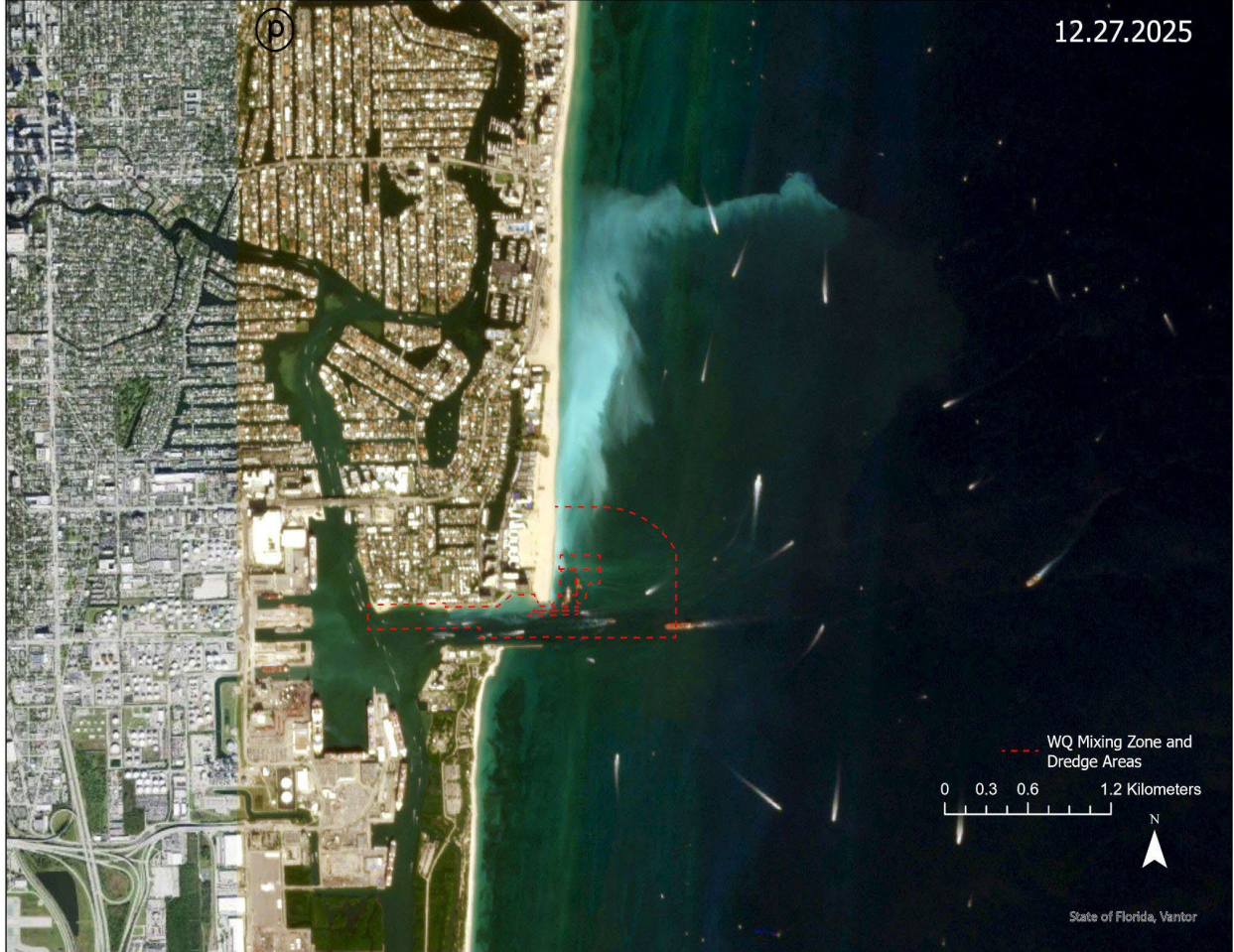


Figure 1. Satellite showing extent of sediment plume relative to the Sand Bypass project initial construction mixing zone, taken on December 27, 2025 at 11:30 am ET. Imagery is derived from SuperDove true-color data. The visible northern edge of the plume extends approximately over 2,000 meters from the northern edge of the mixing zone.

As noted in NMFS’s letter to the Corps, sediment plumes traveling north outside the area of predicted impact are especially concerning for staghorn, because staghorn colonies exist in high abundance along the reef in that location.⁵⁵ One of the only known eklhorn colonies left in the state is also located north of the area. The figures in Appendix A show at least seven instances of plumes exceeding the bounds of the biological opinions’ predicted area of impact, and these examples do not represent all exceedances that occurred.

Figure 1 and the Appendix A images demonstrate that the predicted area of impact—that is, the area where NMFS determined “increased turbidity and sedimentation is likely to occur”⁵⁶—was

⁵⁵ 2026 Letter from Andrew Strelcheck at 5, fig. 2.

⁵⁶ 2020 Sand Bypass Project BiOp at 16.

erroneously defined. Increased sedimentation is occurring beyond the bounds of that area. Because this new data demonstrates effects of the Project “may”—and indeed likely—affect listed species and critical habitat to an extent not previously considered, the Corps must reinitiate consultation.

b. Sediment monitoring data shows sedimentation within the predicted area of impact exceeds that anticipated in the 2025 biological opinion.

The 2025 biological opinion assumes that 6.03 acres of critical habitat will be permanently destroyed due to sediment accumulation of 0.5 cm (5 mm) or more.⁵⁷ Of the remaining 39.6 acres of critical habitat within the Project area,⁵⁸ NMFS determined that 10.13 acres would receive up to 1.5 mm of sediment total—a level NMFS concluded would have insignificant and temporary effects on coral critical habitat—and the remaining 23.44 acres would receive no sediment accumulation at all.⁵⁹ But sediment monitoring shows these assumptions are not accurate and that sediment accumulation has already exceeded predicted levels.

The County is monitoring sediment accumulation at 50-m to 150-m long transects at 13 monitoring stations within the Project area, as depicted in Figure 14 below.

⁵⁷ 2025 Sand Bypass Project at 69.

⁵⁸ *Id.*

⁵⁹ *Id.* at 66 (stating that sedimentation will be limited to the 1.5 mm contour and that this level of sediment accumulation “will be temporary and insignificant.”).

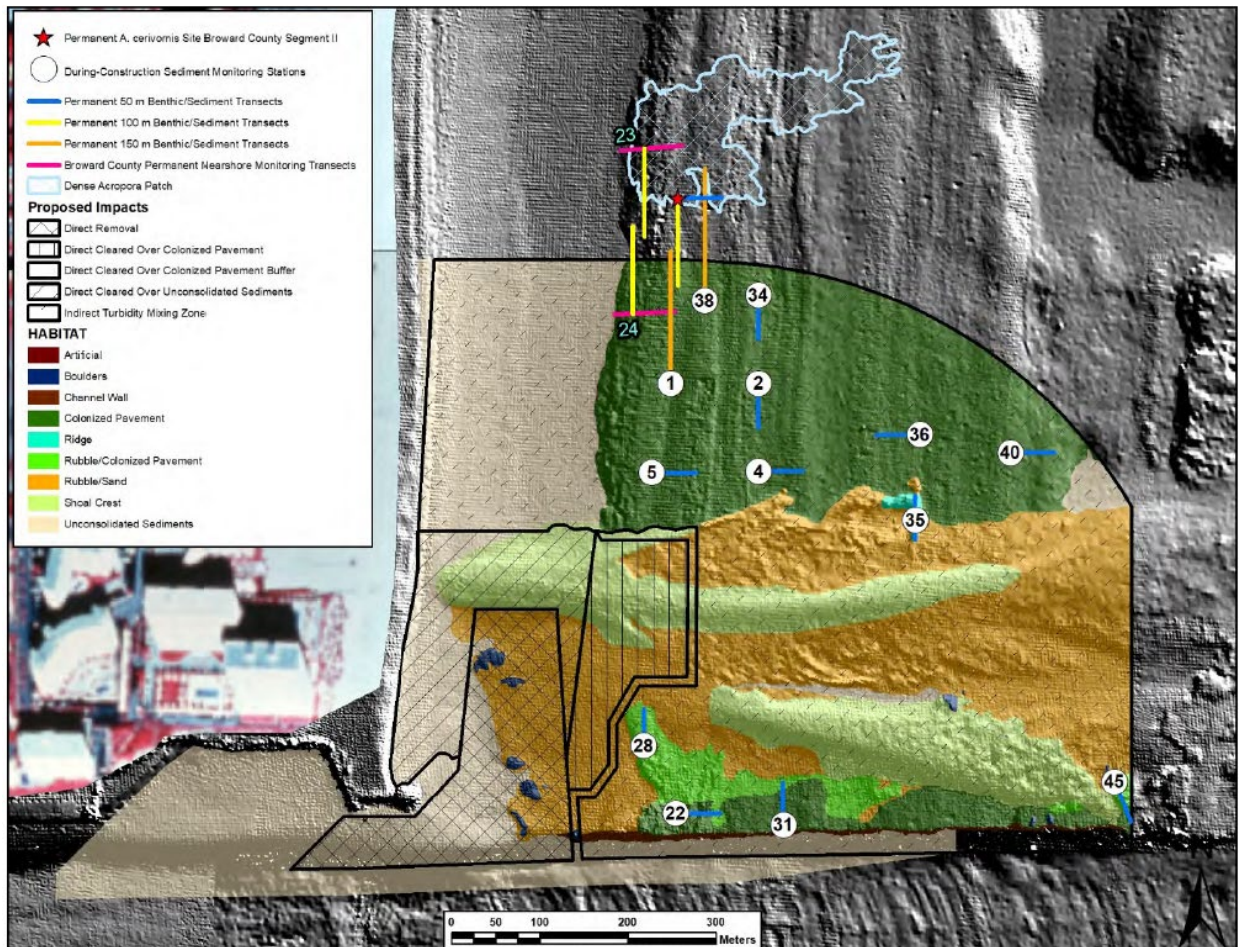


Figure 14 from page 56 of the Minimization, Mitigation, and Monitoring Plan for the Port Everglades Sand Bypassing Project (2020) [hereinafter Minimization, Mitigation, and Monitoring Plan], depicting *monitoring* stations and transects.

Station Transect 34 is located outside the 1.5 mm contour line, in an area where the 2025 biological opinion assumed critical habitat would receive no sediment accumulation.⁶⁰ However, during a monitoring event on January 24, 2026, Station Transect 34 had accumulated an average of 0.4 cm (4 mm) sediment depth along its 50 m length compared to baseline levels,⁶¹ more than double the level NMFS determined would have only a temporary and insignificant impact.⁶² Localized meter-level measurements at Station Transect 34 repeatedly documented substantially higher average increases in sediment accumulation than the entire transect average value increase

⁶⁰ 2025 Sand Bypass Project BiOp at 58; Sand Bypass Biological Monitoring Plan at 56.

⁶¹ These measurements were calculated by the monitoring firm at each survey event by first averaging three sediment depth measurements taken at each meter along the respective transect, and then computing an overall average from each per-meter value. This final during-construction value was then subtracted from the respective transect's baseline average. In doing so, localized sedimentation exceedances are obscured.

⁶² See Attachment 1, mean difference sediment depth measurements for Transect 34 (Tab SedimentDepth_MeanData), downloaded from the Florida Department of Environmental Protection, https://dep-file-portal.dep.state.fl.us/public/folder/4carqwyoduirml0wtowvg/0289308_PE_Sand_Bypass, password provided to Miami Waterkeeper.

of 0.4 cm suggests. Multiple monitoring events recorded meter-level average sediment increases exceeding 40 -50 mm, including approximately 50 mm at meter 35 during the January 7, 2026 survey, approximately 48 mm at meter 35 during the November 17, 2025 survey, and approximately 47 mm at meter 39 during the December 5, 2025 survey.⁶³ This level of sediment accumulation substantially exceeds the sediment accumulation levels predicted in the 2025 biological opinion. For example, localized average increases approaching 50 mm are more than 30 times higher than the 1.5 mm sediment accumulation contour discussed in the 2025 biological opinion, and ten times higher than the 5 mm sediment depth NMFS determined could result in permanent loss of critical habitat.

Due to inconsistencies between the descriptions of sediment modeling in the 2020 biological opinion and the 2025 biological opinion, it is difficult to ascertain the location of the monitoring stations in relation to the areas expected to receive 1 cm, 0.5 cm, and 1.5 mm of sediment accumulation.⁶⁴ However, based on the contour lines depicted in Figure 21 of the 2025 biological opinion, it appears that Station Transect 28 and Station Transect 5 are within the area that was predicted to receive no more than 1.5 mm of sediment.⁶⁵ If so, these transects have also experienced more sediment accumulation than was predicted in the 2025 biological opinion. Station Transect 28 repeatedly documented transect-average sediment accumulation exceeding the 1.5 mm sediment depth predicted in the biological opinion, including approximately 0.4 cm (4 mm) in November 2025, approximately 1.5–1.6 cm (15–16 mm) during January 2026 monitoring events, approximately 0.3–0.8 cm (3–8 mm) during February 2026 monitoring events, and approximately 0.5 cm (5 mm) in March 2026.⁶⁶ These transect-average measurements ranged from approximately two to ten times higher than the 1.5 mm sediment accumulation predicted in the 2025 biological opinion. In some locations, surveyors observed raw sediment depths of up to 16 centimeters (160 mm), including areas where hardbottom habitat had become buried under sediments, as shown in Figure 1 below.⁶⁷ If Station Transect 28

⁶³ *Id.*

⁶⁴ In particular, figs. 12 & 14 in the 2020 Sand Bypass Project BiOp and fig. 21 in the 2025 Sand Bypass Project BiOp show the 1 cm contour and the 1.5 mm contour in different locations. The sediment modeling that generated these contours, however, are not different between the two opinions. Likewise, the estimates of critical habitat permanently lost based on the modeling does not change between the biological opinions. The 2025 Sand Bypass Project BiOp also states that fig. 21 is an “updated” version of the figure originally provided by the consulting group that conducted the modeling (*see* 2025 Sand Bypass Project BiOp at 61). We therefore believe that fig. 21 is the accurate version of the sediment contours. However, unlike fig. 14 in the 2020 Sand Bypass Project BiOp, fig. 21 does not appear to depict the 0.5 cm contour line and therefore we cannot determine with certainty which monitoring stations are located inside or outside the 0.5 cm contour line.

⁶⁵ *Compare* 2025 Sand Bypass Project BiOp at 58, fig. 21 (sediment contours) *with* Minimization, Mitigation, and Monitoring Plan at 56, fig. 14 (location of the monitoring stations).

⁶⁶ *See* Attachment 1, downloaded from the Florida Department of Environmental Protection, https://dep-file-portal.dep.state.fl.us/public/folder/4carqwyoduirml0wtowvg/0289308_PE_Sand_Bypass, password provided to Miami Waterkeeper.

⁶⁷ *See id.* Attachment 2, photos of sediment monitoring at Transect 28, downloaded from the Florida Department of Environmental Protection, <https://dep-file->

is within the 1.5 mm contour, then these measurements are **ten to 100 times** higher than the maximum level NMFS predicted in the 2025 biological opinion.

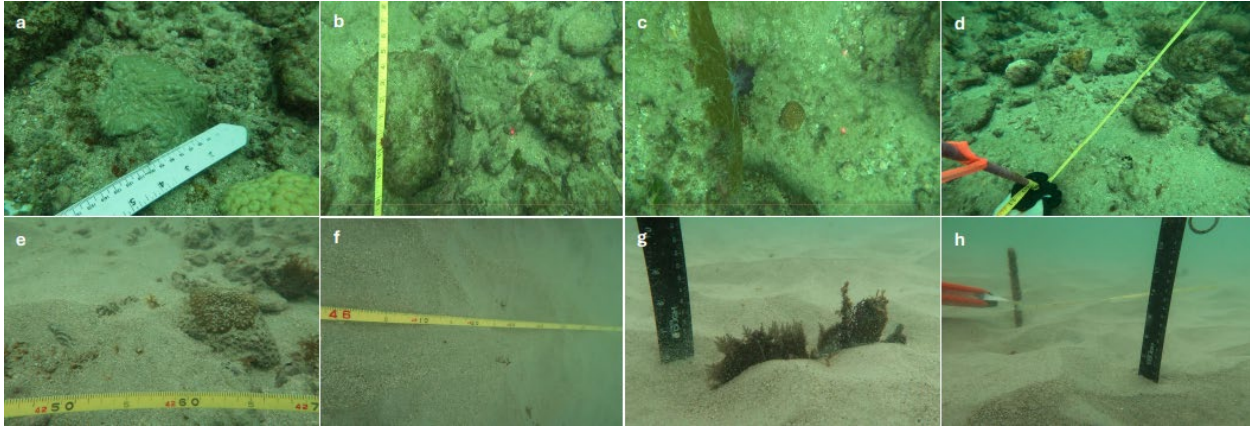


Figure 2: Photos from Sedimentation Monitoring at Transect 28. Panels a-d show hardbottom during pre-construction survey events on September 17, 2025. Panels e-h show hardbottom at the same locations on January 17, 2026, during-construction monitoring. Partial burial and tissue loss is evident on coral colonies in panel e, and mean sediment depth across this range of the transect (42 – 50 meters) increased by approximately 7.0 cm between the baseline and during-construction survey.

Station Transect 5 also exhibited average increases in sediment depths above 1.5 mm, with measurements on January 15, March 10, and April 30, 2026 showing transect-average increases of 0.2 cm (2 mm), 0.2 cm (2mm), and 0.3 cm (3mm), respectively.⁶⁸ Localized meter-level average sediment increases were substantially higher, including approximately 2.3 cm (23 mm) at meter 24 of the transect on January 15, 2026, and approximately 2.2 cm (22 mm) at meter 6 of the transect on March 10, 2026.⁶⁹ The highest localized meter-level average increase documented at Station Transect 5 was approximately 3.7 cm (37 mm), occurring on December 5, 2025, at meter 34 of the transect.⁷⁰ Once again, these depths greatly surpass those predicted in the 2025 biological opinion.

In addition, the Florida Department of Environmental Protection recently released a Site Inspection Report for the Sand Bypass Project, documenting at-site inspections for 10 of the monitoring stations within the Project area to see if the hardbottom was experiencing dredge-related sediment impacts. The Site Inspection Report was published on May 12, 2026, but the inspection dates occurred on March 24-25, 2026. The Site Inspection Report found that “[t]he current condition at” Station 5, Station 1, Station 2, and Station 4 “indicates likely dredging-

portal.dep.state.fl.us/public/folder/4carqwyoduirml0wtowvg/0289308_PE_Sand_Bypass, password provided to Miami Waterkeeper.

⁶⁸ See Attachment 1, downloaded from the Florida Department of Environmental Protection, https://dep-file-portal.dep.state.fl.us/public/folder/4carqwyoduirml0wtowvg/0289308_PE_Sand_Bypass, password provided to Miami Waterkeeper.

⁶⁹ *Id.*

⁷⁰ *Id.*

related sedimentation in the form of very thin to thin layers of mud.”⁷¹ At Stations 1 and 5, the Report found that organisms were exhibiting signs of sediment related stress “such as closed polyps and excessive mucous production.”⁷² Three of these monitoring stations (Station 1, 2, and 4) appear to be located outside the 1.5 mm contour line, and the 2025 biological opinion therefore assumed these areas would receive no sedimentation impacts at all.⁷³

This data demonstrates that even within the predicted area of impact, impacts are greater than federal agencies analyzed or anticipated in the 2025 biological opinion, and therefore the Project may—and is—affecting listed species and their critical habitat in a manner and to an extent not previously considered. Reinitiation is therefore required.

2. New science demonstrates that the 2023 heatwaves caused the functional extinction of elkhorn and staghorn coral in large portions of Florida’s Coral Reef and that recovery depends on survivors, some of which exist near Port Everglades.

New evidence reveals the abundance levels, geographic range, and environmental baseline for staghorn and elkhorn coral are far different now than what NMFS analyzed in the 2020 biological opinion. (And NMFS did not update any of its analyses for staghorn or elkhorn coral in the 2025 biological opinion). Due to the 2023 heatwaves and a resulting widespread coral mortality event, the status of these species is much more dire than what was assumed or analyzed in the biological opinions, and the effects of the Sand Bypass Project on the survival and recovery of these species are likely much greater than what NMFS determined, as the staghorn corals near Port Everglades are some of the last populations left in the State. Therefore, the Corps must reinitiate consultation on the Project’s effects on staghorn and elkhorn coral and their critical habitat.

In 2023, massive marine heatwaves occurred along Florida’s coast, causing severe coral bleaching and mortality. Heat exposures for the reef tract during these heatwaves “were unprecedented.”⁷⁴ Manzello et al., 2025 documented losses to both wild and restored populations of elkhorn and staghorn coral along Florida’s Coral Reef during the marine heat wave. They found these species experienced mortalities of 97.8-100% in the Florida Keys and Dry Tortugas,⁷⁵ and determined that the “2023 heatwave has extirpated *Acropora* from most of” Florida. Manzello et al., 2025 also found that the few *Acropora* survivors surveyed in 2024

⁷¹ Florida Department of Environmental Protection, Site Inspection Report for the Port Everglades Inlet Sand Bypassing Project (May 12, 2026) at 5, 11, 20, 22.

⁷² *Id.* at 5, 11.

⁷³ See 2025 Sand Bypass Project BiOp at 58, 69; compare 2025 Sand Bypass Project BiOp at 58, fig. 21 (sediment contours) with Minimization, Mitigation, and Monitoring Plan at 56, fig. 14.

⁷⁴ Derek Manzello et al., *Heat-driven functional extinction of Caribbean *Acropora* corals from Florida’s Coral Reef*, 390 SCIENCE 361 (2025). This study was submitted for publication on March 27, 2025, and accepted on August 8, 2025.

⁷⁵ *Id.*

following the heat wave were primarily located in the northern region of the reef tract “in the Biscayne and Broward-Miami subregions.”⁷⁶ The authors stated that the severity of this mortality event depends in part on “the possible presence of unknown survivors and their resilience potential.”⁷⁷

A second study conducted by scientists from NOAA and Shedd Aquarium (Cunning et al., 2025) documented coral density and community structure of the reef around Port Everglades. This study found that around Port Everglades, the “[l]ocal densities of naturally-occurring ESA-listed staghorn corals (*Acropora cervicornis*) may be higher than anywhere else in Florida, representing some of the last survivors following widespread mortality during the 2023 heatwave”⁷⁸ and “that Port Everglades reef habitats are conducive to coral recruitment, survivorship, and growth.”⁷⁹ This is highly unusual for Florida, where corals are largely declining along the reef tract. The Port Everglades reef is the only known location that is currently reversing this trend and showing unparalleled signs of recovery and resilience, even following the peak of stony coral tissue loss disease (SCTLD) in 2016—as opposed to other regions of Florida where disease recovery “could be impeded by the more severe impacts of the heatwave in 2023.”⁸⁰ The authors stated “our findings show that [the Port Everglades reefs] are a site of active recovery from SCTLD and a potential last refuge for Florida’s wild *A. cervicornis*.”⁸¹ These survivors could be critical to the fate of the entire species in Florida.

None of this critical information about the status of elkhorn and staghorn coral, or the importance of the heatwave survivors, was factored into NMFS’s determinations for these species or their critical habitat in the biological opinions for the Project. The Corps must reinitiate consultation for the Sand Bypass Project so that NMFS can reassess its determinations for elkhorn and staghorn coral, taking into account the new information about the species’ abundance and distribution and the importance of the surviving staghorn colonies near the Project area for the species’ recovery in Florida.

3. Recent science demonstrates that sediment can serve as a vector of disease, transferring pathogens from one coral to another and that the 2014 SCTLD outbreak may have been instigated or exacerbated by large-scale dredging.

⁷⁶ *Id.* at 364.

⁷⁷ *Id.*

⁷⁸ Ross Cunning et al., *Integrated Analysis of Coral Density and Community Structure Across Reef Habitats Near Port Everglades in Advance of Dredging Operations* 1 (2025), https://www.ncei.noaa.gov/data/oceans/coris/library/NOAA/CRCP/NMFS/SERO/Projects/31329/Serrano2025_Port_Everglades_CoralDensity_CommunityStructure_Analysis.pdf.

⁷⁹ *Id.*

⁸⁰ *Id.* at 18.

⁸¹ *Id.* at 20.

Studivan et al. (2022) found that reef sediments can act as a vector and reservoir for SCTLD, meaning sediments can directly transmit disease.⁸² In the study, healthy corals were directly exposed to diseased coral tissue, and visible lesions generally developed after approximately one to two weeks. However, when the experiment was repeated using sediments previously inoculated with diseased coral material, healthy corals showed signs of disease in approximately 24 hours.⁸³ Based on this finding, the authors state, “sediments may have played a critical role in the uncharacteristically rapid spread of SCTLD throughout Florida’s Coral Reef [during the 2014 disease outbreak], as well as the persistence of the disease over the last 7 years.”⁸⁴ The authors concluded that “[u]ltimately, the ability of sediments to act as a SCTLD vector and/or reservoir throughout the endemic zone will likely impact local disease prevalence and coral mortality, potentially prolonging the outbreak, and representing a threat of reemergence following disturbance events, such as storms and future coastal development activities.”⁸⁵

Another recent study from Dobbelaere et al. (2024) investigated various transmission scenarios to determine how the 2014 SCTLD outbreak initially emerged and spread. The authors concluded that the PortMiami “dredging operations might be responsible for the onset of the [SCTLD] epidemics.”⁸⁶ The study also found that the hypothesis that the disease spread originated with a sewage leak was not supported by the data.⁸⁷

Serrano et al. (2024) further supports the findings of Studivan and Dobbelaere, demonstrating that “[PortMiami] sediments had different microbiome profiles and significantly higher abundances of potentially pathogenic bacteria compared to Reef sediments,” suggesting that port sediments can contain coral disease pathogens.⁸⁸ Neither of the biological opinions for this Project discuss the implications of sediment as a vector of disease or the relationship between a dredging project and the worst coral disease outbreak in Florida’s history. Therefore, this new information reveals the Project may affect listed species and critical habitat in a manner and to an extent not previously considered. The Corps must reinitiate consultation so that NMFS can incorporate the findings of Studivan et al. (2022), Dobbelaere et al. (2024), and Serrano et al. (2024) into its jeopardy and adverse modification determinations for listed coral species.

C. The new information discussed above invalidates many of the key assumptions in the biological opinions that NMFS used to determine no jeopardy and no

⁸² Michael S. Studivan et al., *Reef Sediments Can Act as a Stony Coral Tissue Loss Disease Vector*, 8 FRONTIERS IN MARINE SCI. 815698 (2022).

⁸³

⁸⁴ *Id.* at 12.

⁸⁵ *Id.* at 2.

⁸⁶ Thomas Dobbelaere et al, *Investigating the link between the Port of Miami dredging and the onset of the stony coral tissue loss disease epidemics*, 207 MARINE POLLUTION BULLETIN 116886 (2024).

⁸⁷ *Id.*

⁸⁸ Xaymara M. Serrano et al., *Sediment source and dose influence the larval performance of the threatened coral *Orbicella faveolata**, 19 PLoS ONE e0292474 (2024).

adverse modification for coral and conch and the Corps' continued reliance on the biological opinions, without reinitiating consultation, violates the ESA.

The new evidence discussed above undermines the accuracy of NMFS's jeopardy and adverse modification determinations for the Sand Bypass Project. First, all the jeopardy and adverse modification determinations for coral and conch are erroneously based on the assumption that the Project's impacts would remain within the predicted area of impact, would remain below certain levels of increased sedimentation, or both. As explained above, new evidence demonstrates these assumptions are undoubtedly false and impacts are greater than predicted. Second, the biological opinions fail to consider new information on the effects of sediment-induced disease on coral or the possibility of another dredge-induced disease outbreak even though new science demonstrates the two are likely linked. The Corps' failure to reinitiate and continued reliance on these deficient biological opinions violates Section 7.

1. The Corps' continued reliance on the biological opinions, without reinitiation, violates the ESA because the new information described above shows the opinions' jeopardy and adverse modification determinations are based on the erroneous assumption that Project impacts would remain within predicted bounds.

The jeopardy determinations for all listed coral species in the 2020 biological opinion are based on assumptions that new evidence shows are erroneous. First, the jeopardy analysis for listed corals assumes that the only corals that will be affected by the Project are those located within the area of predicted impact. Based on this assumption, the 2020 biological opinion concluded that the Project would take 785 (224 lethal and 561 nonlethal) colonies of staghorn coral and one lobed star coral, and that this level of take would not jeopardize either species.⁸⁹ Since the biological opinion determined that the rest of the five listed coral species were "not present"⁹⁰ in the Project area, the opinion concluded that the Project would have no effect on these species.⁹¹ Similarly, the jeopardy determination in the 2025 biological opinion for queen conch assumes the only conch that will be killed and otherwise harmed by the Project are those found within the area of impact.⁹² And both biological opinions assume critical habitat will only be affected within the Project area, estimating permanent losses of critical habitat between zero to 23.6 acres based on this assumption.⁹³ But now, satellite imagery shows Project impacts outside the predicted impact area. The Project therefore may be affecting far more listed coral and queen conch, as well as far more coral critical habitat than analyzed. The opinions' determinations are therefore no longer rational nor based on the best available science, reinitiation is required, and the Corps' continued reliance on these opinions is arbitrary.

⁸⁹ 2020 Sand Bypass Project BiOp at 62, 79.

⁹⁰ *Id.* at 22.

⁹¹ *Id.* at 23.

⁹² 2025 Sand Bypass Project BiOp at 61–62 (estimating lost conch based on how many are in the direct and indirect area of impact for project construction; same for maintenance dredging events).

⁹³ *Id.* at 64, 7; 2020 Sand Bypass Project BiOp at 64.

Likewise, the 2025 biological opinion based its adverse modification determination for pillar coral, rough cactus coral, lobed star coral, mountainous star coral, and boulder star coral critical habitat on the assumption that most of this habitat within the Project area would only receive up to 1.5 mm of sediment accumulation:

NMFS concludes that the 10.13 ac of habitat within the 1.5 mm contour is likely to be subjected to low levels of temporary sedimentation. Such levels and degree of sedimentation are not expected to permanently preclude coral larval settlement or fragment attachment. Therefore, NMFS concludes that the sediment impacts to this area will be temporary and insignificant based on the dredge methodology and the model results, and thus are not likely to adversely affect the coral critical essential feature.⁹⁴

However, as discussed above, multiple transects have already received more than the predicted level of sediment accumulation, with some areas receiving up to 16 cm of sediment. The 2025 biological opinion's adverse modification determinations are therefore no longer rational nor based on the best available science and reinitiation is required.

In addition, the jeopardy determination for staghorn and elkhorn coral fails to take into account the dramatic decrease in species abundance and distribution following the 2023 heatwaves. This means that all the determinations for elkhorn and staghorn coral, including the jeopardy determinations, adverse modifications determinations, and the staghorn incidental take statement are based on erroneous, outdated information that assumes the species are more abundant and widespread than they actually are.

For example, for staghorn coral, NMFS determined the Project would not adversely modify staghorn critical habitat nor jeopardize the continued existence of the species even though the Project could lethally take up to 224 staghorn colonies.⁹⁵

NMFS based these determinations on outdated, invalidated information about the species abundance and range, assuming that there were tens of millions of staghorn corals range-wide⁹⁶ and that staghorn was distributed across Florida's Coral Reef "from Palm Beach County through Monroe County."⁹⁷ But Manzello et al. (2025) demonstrates this information is not accurate, that abundance and distribution are much smaller, and that every surviving colony in Florida is important. Moreover, NMFS justified the lethal incidental take of up to 224 staghorn colonies as well as its no jeopardy and adverse modification determinations by reasoning that the Project's "impacts ... will be limited to the immediate action area."⁹⁸ But the assumption that the Project

⁹⁴ 2025 Sand Bypass Project BiOp at 66.

⁹⁵ 2020 Sand Bypass Project BiOp at 72.

⁹⁶ *Id.* at 45, 72.

⁹⁷ *Id.* at 72.

⁹⁸ *Id.* at 73.

will have only localized impacts is no longer a rational basis to conclude no jeopardy or adverse modification if the action area is one of the only locations in Florida where the species still persists and is actively reproducing, as Manzello et al. (2025) and Cunning et al. (2025) indicate. Moreover, as described above, the effects of the action are not as limited as the federal agencies assumed.

Likewise, given widespread mortality of staghorn following the 2023 heatwaves and the importance of survivors for the species recovery, an incidental take statement authorizing the take of up to 785 (224 lethal and 561 nonlethal) staghorn coral colonies is likely not rational or based on the best available science.

Because the jeopardy and adverse modification determinations for elkhorn and staghorn coral and the staghorn incidental take statement are demonstrably incorrect considering the new information described above, the Corps' continued reliance on these biological opinions, without reinitiation, is arbitrary and unlawful.

2. The Corps' continued reliance on the 2020 biological opinion violates the ESA because the opinion's jeopardy determinations for listed coral species fail to consider implications of sediment as a vector of disease or the possibility of another widespread disease outbreak induced or exacerbated by dredging.

The biological opinions acknowledge that sediment and turbidity can exacerbate disease prevalence, and NMFS bases its conclusion that up to 125 non-relocated staghorn will be killed by the Project in part due to increased risk of disease from sedimentation.⁹⁹ The biological opinions also note that fine-grained sediments like those at ports are more likely to have active bacterial communities that make disease outbreak more likely.¹⁰⁰ However, both opinions fail to discuss the relationship between the PortMiami dredging project and the worst coral disease outbreak in Florida's history (the 2014 SCTL outbreak) even though mounting scientific evidence from Studivan et al. (2022) and Dobbelaere et al (2024), published after the 2020 opinion but before the 2025 opinion, indicates there is a likely link between the two and that such an event could happen again. Since the 2014 outbreak caused the extirpation of pillar coral in Florida,¹⁰¹ such an event has serious implications for the survival and recovery of listed coral species but this possibility was not considered in the biological opinions. The 2020 biological opinion's jeopardy analysis for corals assumes that the Project would only kill corals within the bounds of the Project area.¹⁰² However, if sediment is a potential vector of disease, then even very low levels of sediment traveling outside the mixing zone could potentially transfer disease

⁹⁹ See, e.g., 2020 Sand Bypass Project BiOp at 56, 59, 79.

¹⁰⁰ *Id.*, at 56.

¹⁰¹ Karen Neely, *Pillar coral (Dendrogyra cylindrus) fragment rescue for preservation of genetic diversity*, Florida Fish & Wildlife Research Institute (2016) (on file with the Florida Fish and Wildlife Conservation Commission); Nicholas Jones et al., *Temperature stress and disease drives the extirpation of the threatened pillar coral, Dendrogyra cylindrus, in southeast Florida*, 11 SCIENTIFIC REPORTS 14113 (2021).

¹⁰² See, e.g., 2020 Sand Bypass Project BiOp at 56, 59.

from corals within the Project area to corals outside the Project area. This possibility was also not considered in the biological opinions. The Corps' continued reliance on biological opinions that fail to consider new evidence about the role dredged sediment plays as a vector of disease and in contributing to the worst coral disease outbreak in Florida's history is arbitrary.

D. Even absent new information, the Corps' reliance on the biological opinions violates ESA Section 7 because NMFS's analyses and conclusions in the opinions are arbitrary, irrational, and not based on the best available science.

The Project significantly exceeding the existing biological opinions' predicted impacts is all the more concerning because the existing opinions already severely underestimate and ignore serious adverse effects to coral critical habitat and queen conch.

First, the 2025 biological opinion's jeopardy analysis for queen conch arbitrarily omits impacts from the Project on conch in their early life stages, even though these life stages are the most sensitive to sediment exposure. In addition, the opinion's no jeopardy conclusion for queen conch contradicts the evidence before the agency, which shows both that the Project will cause significant reproductive losses, substantially diminishing the Port Everglades aggregation's reproductive capacity, and that this aggregation is critical for the species' recovery in Florida.

Second, the biological opinions arbitrarily rely on mitigation actions that are not reasonably certain to yield tangible benefits to species and habitat. This unlawful reliance on ineffective mitigation results in an underestimation of the Project's impacts on coral critical habitat.

Third, the biological opinions' analyses rely on unlawful, invalidated regulatory definitions of "effects of the action" and "destruction or adverse modification" that unlawfully ignore the best available science and dismiss serious impacts to listed corals' critical habitat by requiring that the modification affect the "overall critical habitat designation."

The Corps' reliance on these biological opinions, even though the opinions were deficient and arbitrary at the time they were issued, violates the ESA.

1. The Corps' reliance on the jeopardy analysis for queen conch violates the ESA because the 2025 biological opinion fails to analyze the Project's impacts on conch in their early life stages and the no jeopardy conclusion contradicts evidence before the agency.

The 2025 biological opinion's jeopardy determination for queen conch fails to account for the Project's impacts on conch eggs and larvae and how the loss of these early life stages will affect the species' survival and recovery. This is arbitrary because elsewhere the biological opinion recognizes that "[d]eveloping embryos, hatching veliger larvae, and metamorphic post-settlement larvae are intolerant of fine sediments. These early life stages may experience severe

mortality in sediment accumulation as little as 0.1 mm.”¹⁰³ Likewise, sediment deposition of just 1 mm can kill one- to five-month-old infaunal conch juveniles.¹⁰⁴ But the biological opinion never attempts to estimate how many conch in their early life stages the Project will injure and kill, instead focusing solely on the loss of relocated adult conch and their reproductive potential.¹⁰⁵ Indeed, the biological opinion does not even consider impacts associated with sediment accumulation of less than 1.5 mm, even though conch larvae and juveniles can be harmed by substantially lower levels. By failing to analyze the Project’s impact on conch in their early life histories, the biological opinion underestimates the Project’s harm on the species. The biological opinion also underestimates impacts to queen conch by only counting losses from relocation events prior to construction and maintenance dredging events. The biological opinion fails to consider losses from conch that migrate back into the area between dredging events, fall into the 10.8-acre sand trap, and die.

Second, the biological opinion’s conclusion that the Project will not impede the queen conch’s survival or recovery and thus will not jeopardize the species contradicts the evidence before the agency. In particular, the biological opinion finds that the Project will kill 457 adult conch and that “this translates to a decrease of approximately 6.87 million individuals” over the Project’s ten year period due to reproductive losses.¹⁰⁶ The biological opinion acknowledges that “the proposed action is expected to reduce the abundance of adult queen conch and the overall spawning capacity of the large Port Everglades aggregation.”¹⁰⁷ Nevertheless, the biological opinion concludes no jeopardy because this loss “does not indicate a significant negative survival trend for the species *as a whole*”¹⁰⁸ and “is not expected to hinder the ... overall recovery of the queen conch *throughout its range*.”¹⁰⁹ But analyzing conch losses from the Project in the context of the species’ global population and range fails to account for the specific importance of the Port Everglades aggregation, even though the biological opinion acknowledges the importance of the aggregation elsewhere. For example, the biological opinion states that “[t]he aggregation at Port Everglades may play a major role in sustaining nearshore Florida populations, and may also have important seeding potential for both the Florida Keys and the nearby Bahamas archipelago”¹¹⁰ and that “[t]he population at Port Everglades is likely a large contributor to the recovery of conch populations throughout Florida, including the Florida Keys.”¹¹¹ The jeopardy determination fails to address the aggregation’s critical role in seeding nearby populations, much less explain why such dramatic reproductive losses would not impair its special role in the

¹⁰³ 2025 Sand Bypass Project BiOp at 60.

¹⁰⁴ Doerr et al. in review, cited in FWC, Second Request for Additional Information (RAI) for Port Everglades Environmental Resource Permit Application (0401375-002-BI) 1 tbl. 1 (2025).

¹⁰⁵ 2025 Sand Bypass Project BiOp at 71.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 72.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 35.

¹¹¹ *Id.* at 44.

species' recovery. The Corps' reliance on an arbitrary jeopardy determination for queen conch violates the ESA.

2. The Corps' continued reliance on the biological opinions violates the ESA because the opinions arbitrarily rely on mitigation for coral critical habitat losses that are not likely to yield tangible benefits for listed coral.

If an agency relies on mitigation measures to find no jeopardy or no adverse modification, those mitigation measures “must be reasonably specific, certain to occur and subject to deadlines or other forcible obligations.”¹¹² Moreover, the benefits of those mitigation measures to the species and habitat at issue must also be “‘reasonably certain’ to occur.”¹¹³

The Sand Bypass Project biological opinions rely on the re-exposure of hardbottom habitat within a rubble removal area to compensate for critical habitat losses elsewhere in the Project area.¹¹⁴ Based on this proposed mitigation, both biological opinions reduce the net loss of coral critical habitat due the Project, assuming that seven acres of critical habitat will be regained via the re-exposure of the rubble removal area.¹¹⁵ However, this rubble removal area is located adjacent to the sand trap and within the zone expected to experience sedimentation during Project construction.¹¹⁶ Monitoring results from the nearest transect (Transect 28 discussed above) already indicate significant sediment accumulation in the surrounding area. If similar sediment deposition occurs within the rubble removal area, it is unlikely that the newly exposed hardbottom will function as effective coral habitat in the near term.¹¹⁷

Furthermore, maintenance dredging of the sand trap is expected to occur every two to four years. Because the rubble removal area is located within the anticipated mixing zone for these operations,¹¹⁸ the exposed hardbottom is likely to experience repeated sediment exposure over time. The rubble removal area is also located in the area expected to receive substantial sediment deposition during the Port Everglades Harbor Expansion Project.¹¹⁹ NMFS has included hard

¹¹² *Fla. Key Deer v. Brown*, 364 F. Supp. 2d 1345, 1355 (S.D. Fla. 2005), *aff'd sub nom. Fla. Key Deer v. Paulison*, 522 F.3d 1133 (11th Cir. 2008); *Ctr. for Biological Diversity, v. U.S. Dep't of Interior*, No. 24-cv-04651-JST, 2026 WL 898264, at *16 (N.D. Cal. Mar. 30, 2026) (rejecting current regulations that allow agency conclusions to rely on nonbinding mitigation measures as inconsistent with ESA's requirement to ensure against jeopardy and adverse modification).

¹¹³ *Ctr. for Biological Diversity v. Haaland*, 87 F.4th 980, 987 (9th Cir. 2023).

¹¹⁴ 2020 Sand Bypass Project BiOp at 64–65 (“Under Outcome A there would be no net loss of designated critical habitat for elkhorn and staghorn coral because the amount of re-exposed hardbottom [from the rubble removal area] exceeds the amount of critical habitat lost due to burial by sedimentation. Under Outcome B there will be a net loss of up to 16.29 ac of designated coral critical habitat (23.6 ac – 7.31 ac [from the rubble removal area] = 16.29 ac).”; *see also* 2025 Sand Bypass Project BiOp at 67.

¹¹⁵ 2025 Sand Bypass Project BiOp at 74; 2020 Sand Bypass Project BiOp at 65.

¹¹⁶ Minimization, Mitigation, and Monitoring Plan at 45, fig. 4.

¹¹⁷ 2020 Sand Bypass Project BiOp at 64 (stating “even small increases in sedimentation can significantly reduce coral recruitment and survivorship.”)

¹¹⁸ *Id.* at 21, fig. 10; Minimization, Mitigation, and Monitoring Plan at 45, fig. 4.

¹¹⁹ U.S. Army Corps of Engineers, Revised Supplemental Biological Assessment for the Port Everglades Deep Dredge Project (May 31, 2024) at 4.

substrate free from sediment cover as an essential feature of coral critical habitat.¹²⁰ And indeed, coral recruitment requires clean substrate that is free from sediment cover,¹²¹ and repeated sedimentation events may prevent corals from successfully colonizing the area. As a result, this mitigation strategy likely will not create new critical habitat as defined by regulation nor provide the ecological benefits anticipated in the biological opinions. The biological opinions’ reliance on the rubble removal area to reduce the net loss of critical habitat from the Project—even though this area is unlikely to function as coral critical habitat—is arbitrary.

3. The biological opinions employ unlawful, invalidated regulatory definitions of “effects of the action” and “destruction or adverse modification” that caused NMFS to dismiss the best available science and serious impacts to critical habitat.

The Corps cannot rely on the biological opinions because NMFS used unlawful regulatory definitions in its analyses that render the biological opinions unlawful. For example, the biological opinions’ analyses rely on at least two unlawful, invalidated regulatory definitions of terms within the ESA, which renders NMFS’s analyses that underpin its biological opinion, jeopardy determination, destruction and adverse modification determination, and incidental take statement unlawful.

First, NMFS applied a definition of “effects of the action” that a district court invalidated and vacated on March 30, 2026 for violating the ESA. In the 2025 biological opinion, NMFS explained that it defined “effects of the action” as follows:

Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action but that are not part of the action. A consequence is caused by the proposed action if the effect *would not occur but for the proposed action and the effect is reasonably certain to occur*. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR 402.02).¹²²

The 2020 biological opinion also relied on this definition of “effects of the action.”¹²³ As District Judge Jon S. Tigar explained in his March 30, 2026 order, this definition of effects violates the

¹²⁰ 50 C.F.R. § 226.216(a) (defining critical habitat for elkhorn and staghorn); 50 C.F.R. § 226.230(c) (defining critical habitat for Caribbean Boulder Star Coral, Mountainous Star Coral, Pillar Coral, and Rough Cactus Coral).

¹²¹ 2020 Sand Bypass Project BiOp at 64 (citing Babcock and Smith (2000)); *see also* 50 C.F.R. §§ 216.226(a), 226.230(c).

¹²² 2025 Sand Bypass Project BiOp at 57 (emphasis added).

¹²³ 2020 Sand Bypass Project BiOp at 51 (“Effects of the action are defined as including all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is considered to be caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (50 C.F.R. 402.02).”).

text of the ESA and is unlawful because the “reasonably certain to occur” language contradicts the ESA’s clear statutory requirements that NMFS use the best scientific data available and determine whether jeopardy is “likely” (rather than “reasonably certain”—a much higher bar).¹²⁴ Specifically, the definition unlawfully “ensures that categories of evidence are removed from consideration before the Services analyze the likelihood of jeopardy or harm,”¹²⁵ which cuts directly against the ESA’s mandate to use the “best scientific and commercial data available.”¹²⁶ NMFS’s application of this unlawful, vacated regulation substantively undermines NMFS’s biological opinions because it precluded NMFS from considering all of the best available science, as required by the ESA.

Upon reinitiating consultation, NMFS must apply the now-reinstated regulations that were in existence before the unlawful 2019 regulatory revisions were made, which define “effects of the action” as:

direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.¹²⁷

NMFS also applied an invalidated and vacated regulatory definition of “destruction or adverse modification.” In the 2025 biological opinion, NMFS explained that it defined “destruction or adverse modification” as follows:

NMFS’s regulations define *destruction or adverse modification* to mean “a direct or indirect alteration that appreciably diminishes the value of critical habitat *as a whole* for the conservation of a listed species” (50 CFR 402.02). . . . NMFS will

¹²⁴ *Ctr. for Biological Diversity v. U.S. Dep’t of the Interior*, 2026 U.S. Dist. LEXIS 68386, at *30. The court also found that the Service’s regulation was arbitrary and capricious because it was not reasonably explained. *Id.* at *40.
¹²⁵ *Id.* at *33–34.

¹²⁶ 16 U.S.C. § 1536(a)(2).

¹²⁷ 50 C.F.R. § 402.02 (2018); see *Ctr. for Biological Diversity v. U.S. Dep’t of the Interior*, 2026 U.S. Dist. LEXIS 68386, at *72 (“The Court vacates the definitions of ‘effects of the action’ and ‘destruction or adverse modification,’ 50 C.F.R. § 402.02, and reinstates the versions in effect before the problematic revisions were made in 2019.”).

generally conclude that a federal action is likely to “destroy or adversely modify” critical habitat if the action results in an alteration of the quantity or quality of the essential physical or biological features of critical habitat and if the effect of the alteration is to appreciably diminish the value of critical habitat as a whole for the conservation of the species.¹²⁸

The 2020 biological opinion also uses this invalidated definition.¹²⁹ As Judge Tigar explained, the “as a whole” language in the regulation “authorizes piecemeal diminution of critical habitat, which, by definition, has already been deemed ‘essential.’”¹³⁰ This cuts against “[t]he statutory text, [which] by contrast, prohibits adverse modification entirely.”¹³¹ Although NMFS claimed in the 2025 biological opinion that “[d]estruction or adverse modification does not depend strictly on the size or proportion of the area adversely affected,” it clearly explained that it measured its determination against “the function of the *overall critical habitat designation*.”¹³² However, even stated another way, this comparison to the function of the critical habitat designation as a whole “imposes a significant restriction on the statutory language of the ESA.”¹³³ In fact, it was precisely this comparison—and NMFS’s opinion that the destruction affected “a very small portion of the Florida Area Unit of critical habitat”—that led NMFS to “conclude that . . . the proposed action will not appreciably diminish the conservation value of designated critical habitat in the Florida unit for lobed star, mountainous star, boulder star, pillar, and rough cactus coral.”¹³⁴ NMFS’s interpretation of the ESA cuts directly against the ESA’s statutory mandate to prohibit adverse modification entirely, and because NMFS’s determination in the 2025 biological opinion is based on this unlawful standard, it is arbitrary and unlawful.

Upon reinitiating consultation, NMFS must apply the now-reinstated regulations that were in existence before the unlawful 2019 regulatory revisions were made, which define “destruction or adverse modification” as “a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species.”¹³⁵ NMFS used unlawful regulatory standards that violated the ESA’s clear statutory mandates when it formulated the biological opinions for the Project. This legal error substantively affected the outcome of key analyses in the opinions, including the jeopardy determinations, the destruction or adverse modification determinations, and the incidental take statement. Consequently, the Corps cannot proceed with the Project in reliance on the erroneous biological opinions, and NMFS must revise its analysis using lawful regulatory standards.

¹²⁸ 2025 Sand Bypass Project BiOp at 73 (emphasis added).

¹²⁹ 2020 Sand Bypass Project BiOp at 75.

¹³⁰ *Ctr. for Biological Diversity v. U.S. Dep’t of the Interior*, 2026 U.S. Dist. LEXIS 68386, at *46.

¹³¹ *Id.*

¹³² 2025 Sand Bypass Project BiOp at 73 (emphasis added); *see also* 2020 Sand Bypass Project BiOp at 75.

¹³³ *Ctr. for Biological Diversity v. U.S. Dep’t of the Interior*, 2026 U.S. Dist. LEXIS 68386, at *47.

¹³⁴ 2025 Sand Bypass Project BiOp at 74.

¹³⁵ 50 C.F.R. § 402.02 (2018).

E. The Corps has violated ESA Section 9 because the Project is likely taking staghorn coral and the incidental take statement is invalid and cannot shield the agency from liability.

The ESA prohibits any person from “taking” endangered species¹³⁶ and imposes civil or criminal liability for those who violate this prohibition.¹³⁷ The ESA defines take, in relevant part, to mean “harass, harm, . . . wound, [or] kill.”¹³⁸ However, the ESA “provides an escape hatch” from liability for take if the take “*is in compliance* with the terms and conditions specified’ in an [incidental take statement].”¹³⁹ But if the terms and conditions are “disregarded,” this escape hatch is no longer valid and “the action agency or the applicant may be subject to potentially severe . . . penalties.”¹⁴⁰ The ITS also loses validity when “an action agency does not reinstate consultation” after “the failure of promised conservation measures.”¹⁴¹ The 2020 biological opinion’s incidental take statement for staghorn coral is invalid for both these reasons.

First, the Corps failed to reinstate consultation after the permittee broke its conservation commitment to prohibit overflow.¹⁴² Second, the Corps failed to comply with the terms and conditions of the ITS. Specifically, NMFS included an incidental take statement for staghorn coral, authorizing the lethal take of 224 staghorn coral colonies and the nonlethal take of 561 colonies in the 2020 biological opinion.¹⁴³ NMFS specified a list of reasonable prudent measures (RPMs) the agency deemed necessary to minimize the impact of this incidental take as well as associated terms and conditions the Corps must comply with to implement those RPMs.¹⁴⁴

Term and Condition 9 for the Sand Bypass Project requires:

USACE shall ensure that the applicant coordinates the preconstruction survey event is with NMFS and USACE. NMFS staff shall attend the initial survey dive to provide training and guidance on the implementation of the Sediment Monitoring Protocol. If it is determined during the initial survey dive that the Sediment Monitoring Protocol is not practicable within the action area then changes to the protocol will be discussed and determined by NMFS, USACE, and the applicant. (RPM 6).¹⁴⁵

¹³⁶ 16 U.S.C. § 1538(a)(1)(B).

¹³⁷ *Id.* § 1540.

¹³⁸ *Id.* § 1532(19).

¹³⁹ *Ctr. for Biological Diversity v. Regan*, 734 F. Supp. 3d 1, 20 (D.C. Cir. 2024), judgment entered, 729 F. Supp. 3d 37 (D.C. Cir. 2024), and *aff’d sub nom. Ctr. for Biological Diversity v. Zeldin*, No. 24-5101, 2026 WL 850257 (D.C. Cir. Mar. 27, 2026).

¹⁴⁰ *Ariz. Cattle Growers’ Ass’n v. U.S. Fish & Wildlife, Bureau of Land Mgmt.*, 273 F.3d 1229, 1239 (9th Cir. 2001).

¹⁴¹ *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1115 (9th Cir. 2012).

¹⁴² 2026 Letter from Andrew Strelcheck at 3.

¹⁴³ 2020 Sand Bypass Project BiOp at 72–74.

¹⁴⁴ *Id.* at 80–83.

¹⁴⁵ *Id.* at 82.

Available information indicates the Corps failed to implement this term and condition prior to the onset of construction by neglecting to coordinate a pre-construction survey event with NMFS. Per e-mail communications between Miami Waterkeeper and Mr. Andrew Strelcheck on March 5, 2026:

NMFS was not coordinated with to participate in a pre-construction survey event. We have inquired with the USACE regarding this matter and requested the resulting reports and survey data. We recommend you direct your inquiry to the USACE and FL DEP.¹⁴⁶

This email indicates that NMFS was not present to “provide training ... on the implementation of the Sediment Monitoring Protocol” or to determine if “changes to the protocol” were needed for effective implementation.¹⁴⁷ Moreover, this failure to abide by Term and Condition 9 also undermines other terms and conditions, including Term and Condition 8, which states, “USACE shall ensure that pre- and post-construction sediment monitoring is completed at sites 1, 2, 4, 33, and 34 *in accordance with the Sediment Monitoring Protocol (Appendix C) (RPM 6).*”¹⁴⁸ However, if that protocol has not been vetted by the expert agency, as the biological opinion required, it is less likely this required monitoring will be effective.

This failure to comply with the biological opinions’ terms and conditions means that the Corps could be liable for take of staghorn coral if such take occurs. And it is likely that take is occurring.

Based on the erroneous assumption that sediment accumulation would likely be less than 1.5 mm at multiple sites within the Project area (including sites 2, 33, and 34 as marked at Figure 13 of the 2020 biological opinion),¹⁴⁹ NMFS and the Corps decided to leave staghorn colonies *in situ* at these locations rather than relocating them.¹⁵⁰ Available evidence demonstrates that staghorn are likely being harmed by the Project. For example, the closest sediment monitoring stations to these sites where staghorn were left *in situ*, appear to be Station 1, Station 2, Station 38, and Station 34. As discussed above, sediment monitoring demonstrates that average sediment accumulation has exceeded this predicted level at least at Station Transect 34, which seems to be located at or near site 34 where staghorn remain *in situ*.¹⁵¹ Sediment monitoring from January 24, 2026, showed an average increase of sediment of 4 mm at Station Transect 34, with some areas of the transect receiving up to 5 cm (50 mm).¹⁵² And the Florida Department of

¹⁴⁶ E-mail communication between Jessica Ganim, Environmental Policy Specialist (Miami Waterkeeper) and Andrew Strelcheck, Regional Administrator (NMFS Southeast Regional Office), dated March 5, 2026.

¹⁴⁷ 2020 Sand Bypass Project BiOp at 82.

¹⁴⁸ *Id.* (emphasis added).

¹⁴⁹ 2025 Sand Bypass Project BiOp at 58.

¹⁵⁰ 2020 Sand Bypass Project BiOp at 80.

¹⁵¹ Minimization, Mitigation, and Monitoring Plan at 55, 56.

¹⁵² See Attachment 1, mean difference sediment depth measurements for ST34 (tabs *SedimentDepth_MeanData* & *SedimentDepth_RawData*), downloaded from the Florida Department of Environmental Protection, <https://dep-file->

Environmental Protection’s Site Inspection Report, shows that Station 1 and Station 2 are also showing signs of impacts from dredging, with organisms at Station 1 exhibiting signs of stress.¹⁵³ This evidence indicates that staghorn left *in situ* at Sites 2 and 34 could also likely be experiencing harm from dredge related sediment.

Under the ESA “take” includes “harm”,¹⁵⁴ which NMFS defines as “significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering.”¹⁵⁵

Even low levels of sedimentation may impede the survival and settlement of coral larvae, thereby impairing coral reproduction and inhibiting coral recruitment. The burial of substrate under 0.4 cm of fine sediment can “cause drastic decreases in larval settlement and recruit survival,”¹⁵⁶ the necessary process for new corals to attach to hard substrate and grow. Burial under 0.2 cm of fine sediment can even reduce settlement probability or inhibit it entirely for species like staghorn.¹⁵⁷ Moreover, older coral recruits that do manage to settle in these conditions still have higher mortality rates than those on sediment-free substrate,¹⁵⁸ and obstruction by surrounding sediments can impair the growth of settled recruits into adults.¹⁵⁹ Likewise, corals that asexually reproduce through fragmentation will be unable to re-attach to a substrate with sedimentation. Consistently, NMFS asserts that hardbottom levels of “fine” sediment less than 0.5 cm “is not functioning as recruitment habitat for corals, including staghorn corals.”¹⁶⁰ Staghorn left *in situ* may already be experiencing this level of sediment exposure and thus are likely subject to unlawful take. In addition, sediment can introduce or exacerbate disease and smother corals through burial, which would also constitute take.

The Project is likely taking staghorn coral. Moreover, the ITS no longer shields the Corps from liability for this take because the Corps failed to comply with the terms and conditions of the ITS and because the Corps failed to reinitiate after conservation commitments were broken. As a result, the Corps is violating ESA Section 9.

portal.dep.state.fl.us/public/folder/4carqwyoduirddl0wtowvg/0289308_PE_Sand_Bypass, password provided to Miami Waterkeeper.

¹⁵³ Florida Department of Environmental Protection, Site Inspection Report for the Port Everglades Inlet Sand Bypassing Project (May 12, 2026) at 5, 11.

¹⁵⁴ 16 U.S.C. § 1532(19).

¹⁵⁵ 50 C.F.R. § 222.102.

¹⁵⁶ Victor Rodriguez-Ruano et al., *Understanding the effects of sediment on coral settlement and coral recruits*, Florida DEP, Internal Report 1-23 (2024); see also Victor Rodriguez-Ruano et al., *Assessing the effects of sediment grain size on coral settlement and recruit survival across multiple Caribbean species*, Florida DEP, Internal Report 1-29 (2025).

¹⁵⁷ Rodriguez-Ruano et al. (2025).

¹⁵⁸ Rodriguez-Ruano et al., at 15 (2024).

¹⁵⁹ Rodriguez-Ruano et al., at 4 (2025).

¹⁶⁰ NMFS, Examination of Sedimentation Impacts to Coral Reef along the Port of Miami Channel Entrance Channel at 48 (2016).

VI. CONCLUSION

The Corps is violating ESA Section 7 by failing to reinitiate consultation after 1) the Project was subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the biological opinion and 2) the Corps learned of new information revealing that the effects of the Project may affect listed species and critical habitat in a manner or to an extent not previously considered. Subsequent changes to the project design and new information render key assumptions in the biological opinions that NMFS used to determine no jeopardy and no adverse modification for coral and conch erroneous and invalid, and the Corps' continued reliance on these opinions, without reinitiation, violates ESA Section 7. In addition, even absent new information, the Corps' reliance on the biological opinions violates ESA Section 7 because NMFS's analyses and conclusions in the opinions are arbitrary, irrational, and not based on the best available science. Finally, the Corps is violating ESA Section 9 because the Project is likely taking staghorn coral and the incidental take statement cannot shield the Corps from liability.

Sincerely,

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APPENDIX A



Figure 1A. Satellite showing extent of sediment plume relative to the Sand Bypass project initial construction mixing zone, taken on December 27, 2025 at 11:30 am ET. Imagery is derived from SuperDove true-color data. The approximate distance from the northern edge of the mixing zone boundary to the visible northern edge of the plume is greater than 2,100 meters.

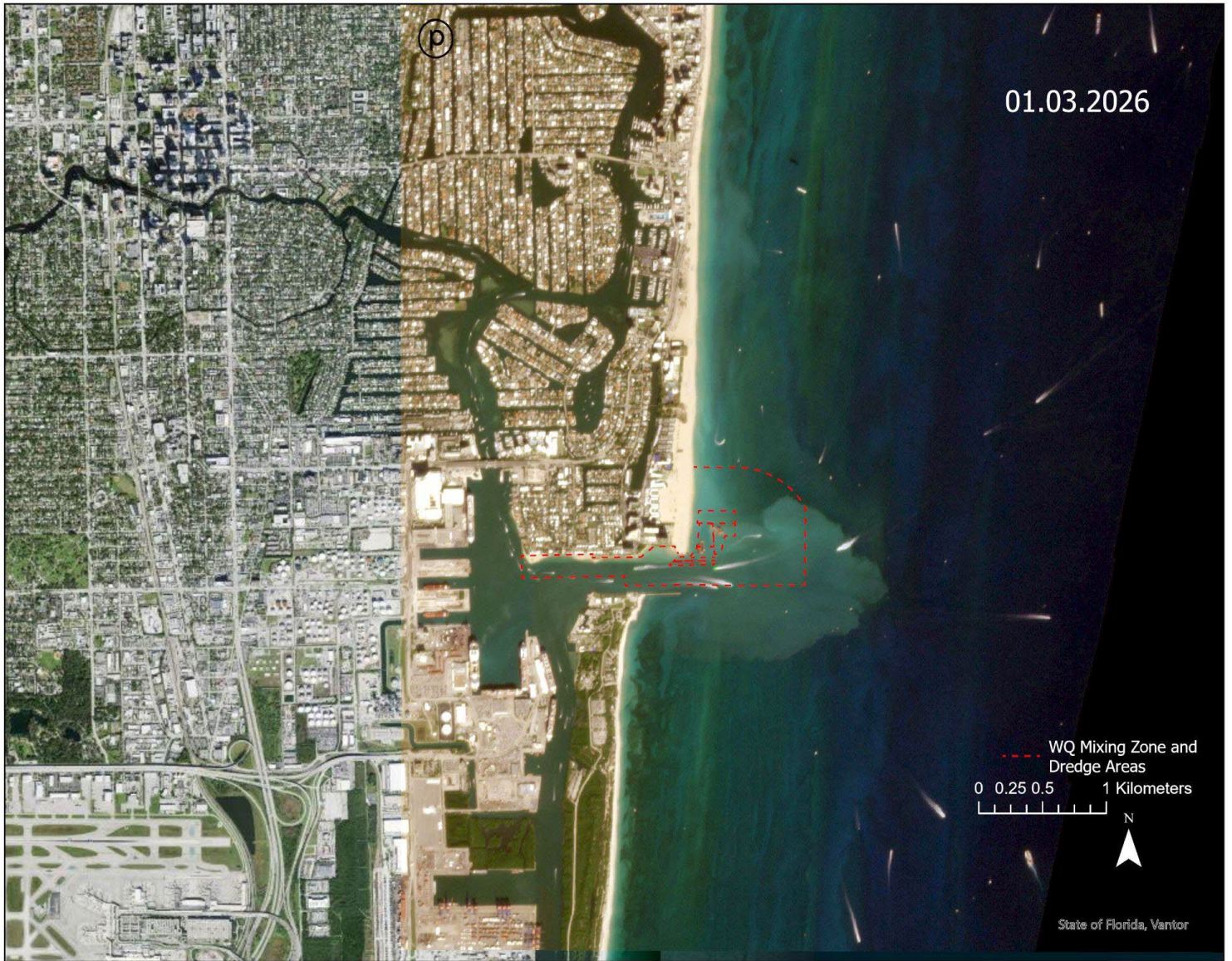


Figure 2A. Satellite showing extent of sediment plume relative to the Sand Bypass project initial construction mixing zone, taken on January 3, 2026 at 11:28 am ET. Imagery is derived from SuperDove true-color data. The plume is observed travelling approximately 300-600 meters beyond the eastern edge of the mixing zone and approximately 500 meters beyond the southern edge of the mixing zone.

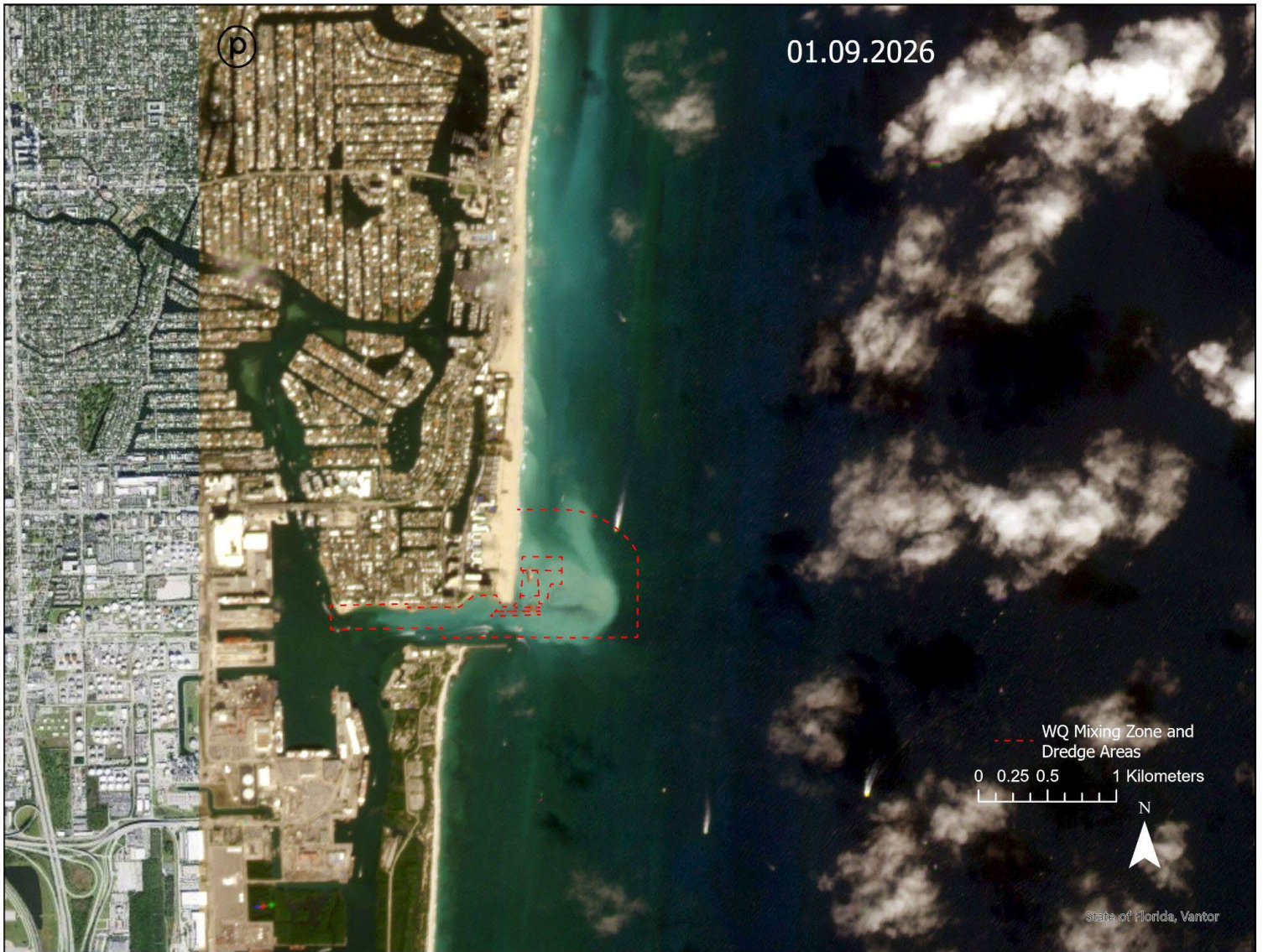


Figure 3A. Satellite showing extent of sediment plume relative to the Sand Bypass project initial construction mixing zone, taken on January 9, 2026 at 11:44 am ET. Imagery is derived from SuperDove true-color data. The approximate distance from the northern edge of the mixing zone boundary to the visible northern edge of the plume is greater than 3,500 meters.

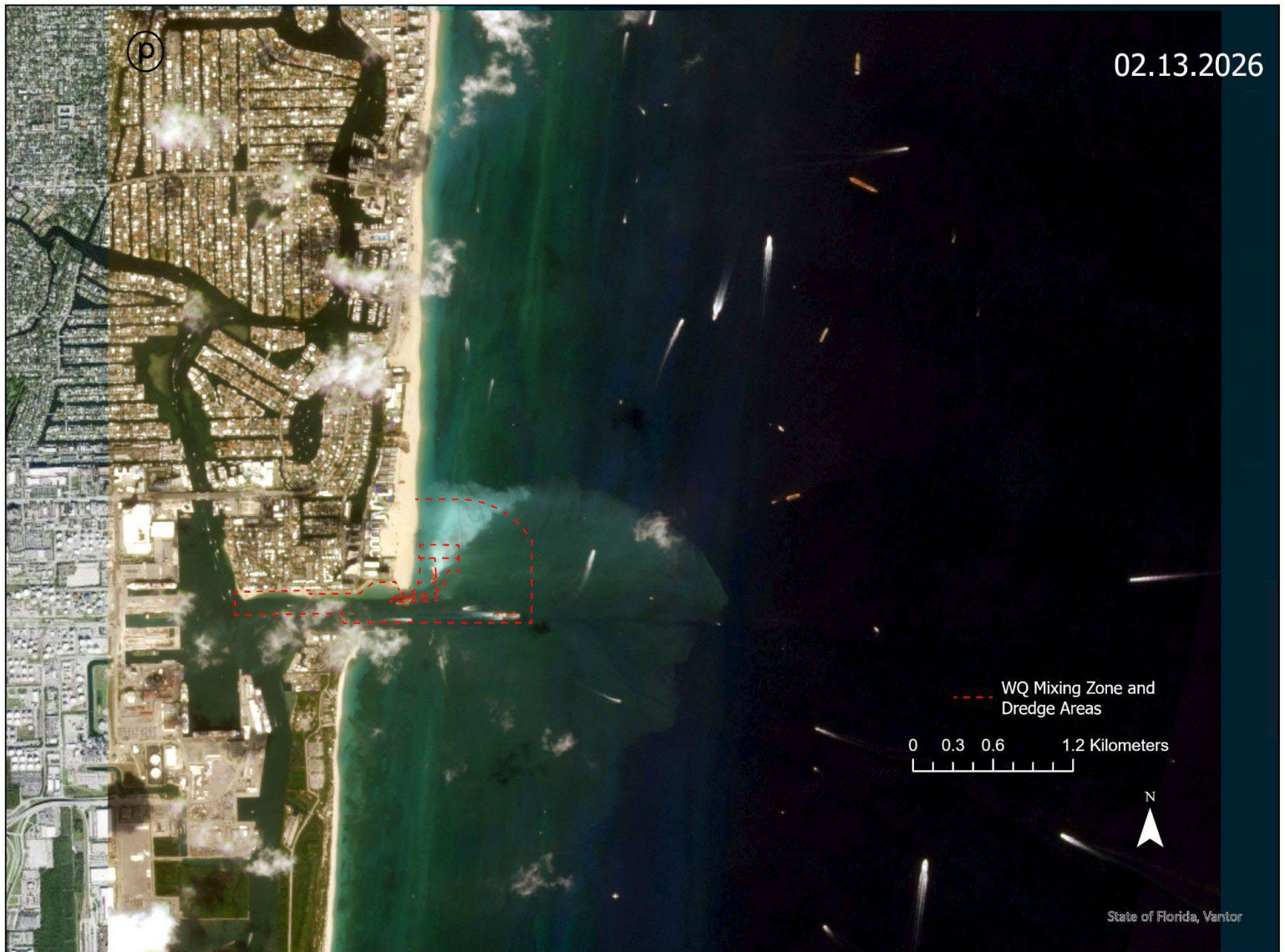


Figure 4A. Satellite showing extent of sediment plume relative to the Sand Bypass project initial construction mixing zone, taken on February 13, 2026 at 11:57 am ET. Imagery is derived from SuperDove true-color data. The visible extent of the plume appears to be traveling approximately more than 1,300 meters beyond the eastern edge of the mixing zone.

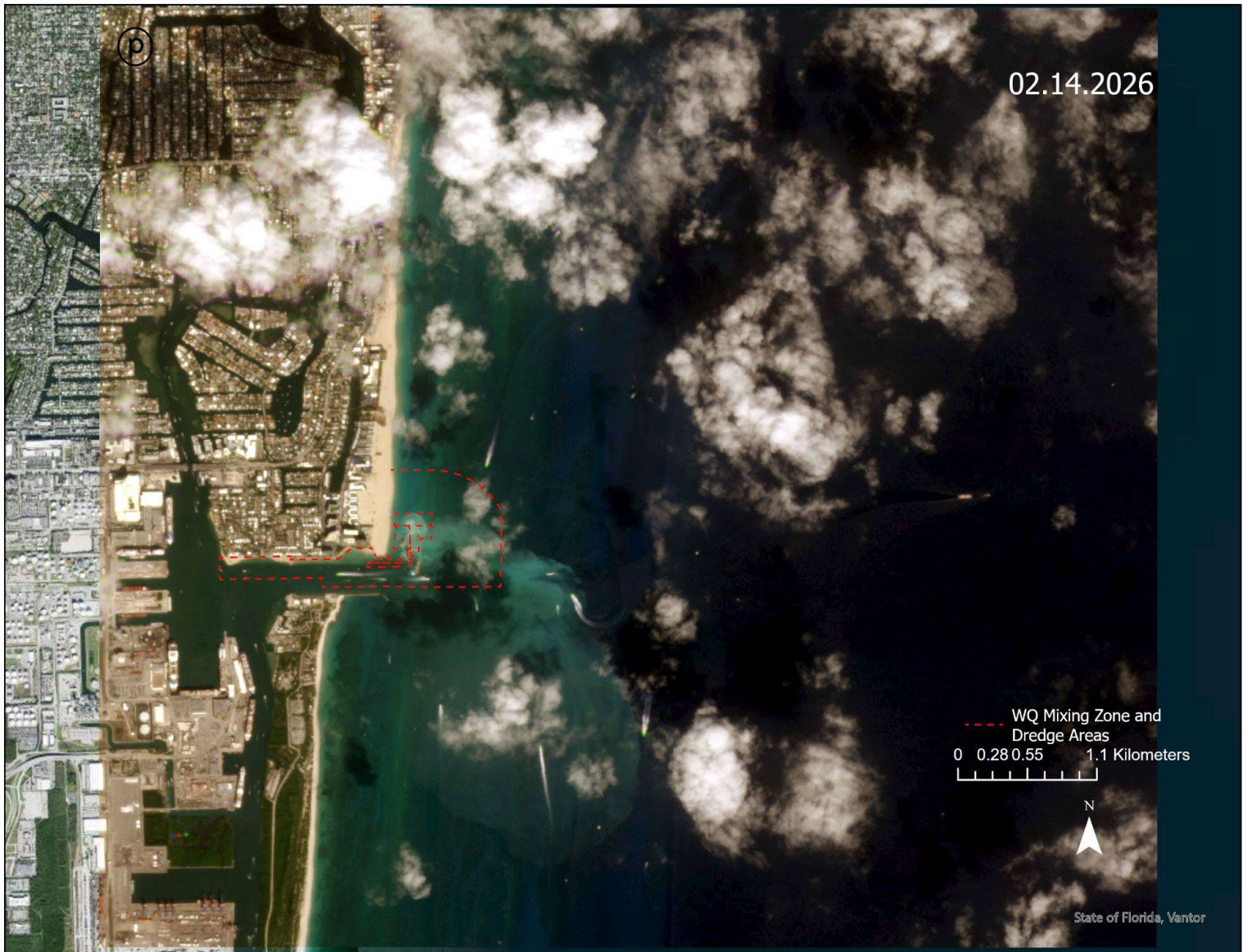


Figure 5A. Satellite showing extent of sediment plume relative to the Sand Bypass project initial construction mixing zone, taken on February 14, 2026 at 11:35 am ET. Imagery is derived from SuperDove true-color data. The sediment plume is visible extending approximately 500 meters east and over 1,800 meters south of the mixing zone boundaries.

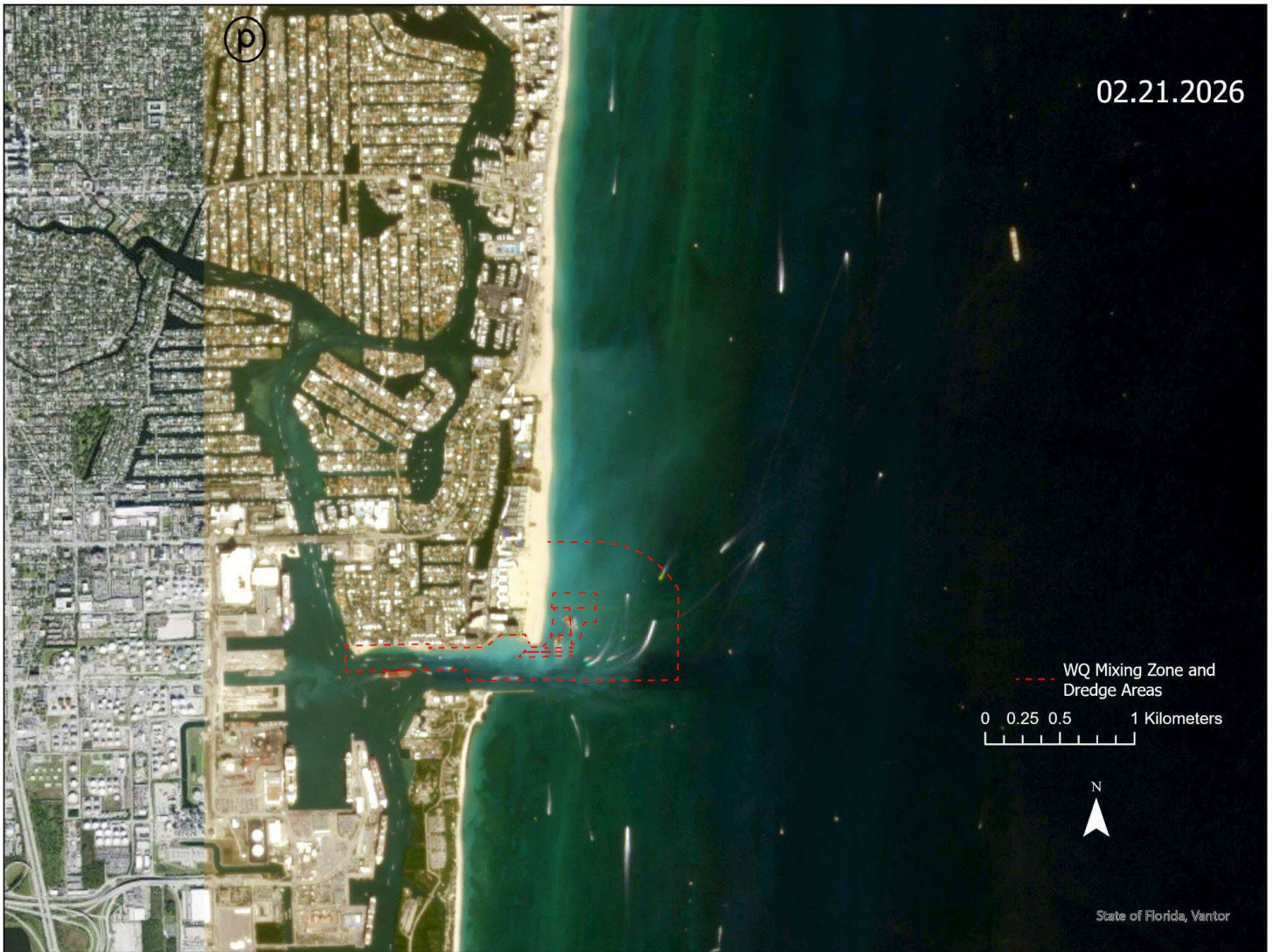


Figure 6A. Satellite showing extent of sediment plume relative to the Sand Bypass project initial construction mixing zone, taken on February 21, 2026 at 11:27 am ET. Imagery is derived from SuperDove true-color data. The approximate distance from the northern edge of the mixing zone to the visible northern edge of the plume is over 1,200 meters.



Figure 7A. Satellite showing extent of sediment plume relative to the Sand Bypass project initial construction mixing zone, taken on March 10, 2026 at 11:42 am ET. Imagery is derived from SuperDove true-color data. The approximate distance from the northern edge of the mixing zone boundary to the visible northern edge of the plume is greater than 2,500 meters.