UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
https://www.fisheries.noaa.gov/region/southeast

03/01/2021

F/SER31:MA
SERO-2020-00382
SERO-2020-00803
SERO-2020-01345
SERO-2020-01467
SERO-2020-01469

Chief, Miami Permits Section
Jacksonville District Corps of Engineers
Department of the Army
9900 Southwest 107th Avenue, Suite 203
Miami, Florida 33176

Dear Sir or Madam:

The enclosed Biological Opinion ("Opinion") responds to your request for consultation with us, the National Marine Fisheries Service (NMFS), pursuant to Section 7 of the Endangered Species Act (ESA) for the following actions:

Permit Number	Applicant	SERO Number	Project Types
SAJ-2017-03082	Congress Bay Harbor North, LLC	SERO-2020-00382	Dock
SAJ-2014-00458	Desarollo Inmobilaria	SERO-2020-00803	Dock & Lift
SAJ-2020-01244	Jose Vazquez	SERO-2020-01345	Dock & Lift
SAJ-2019-04537	Shari Levitan	SERO-2020-01467	Dock & Lift
SAJ-2018-03347	Drexler / Bay Road 4462, LLC	SERO-2020-01469	Dock

We are responding to your consultation request in a batched format. We have batched these projects based on the location, type of project, construction methods, and species and critical habitat that may be affected. This Opinion analyzes the potential for the projects to affect sea turtles [loggerhead (Northwest Atlantic Distinct Population Segment [DPS]), Kemp's ridley, hawksbill, green (North and South Atlantic DPSs), and leatherback], smalltooth sawfish, and designated critical habitat for Johnson's seagrass. This analysis is based on project-specific information provided by the U.S. Army Corps of Engineers (USACE), the consultant, and NMFS's review of published literature. We conclude that the projects are likely to adversely affect, but are not likely to destroy or adversely modify Johnson's seagrass critical habitat. The Opinion includes conservation recommendations for your consideration.

We look forward to further cooperation with you on other USACE projects to ensure the conservation and recovery of our threatened and endangered marine species. If you have any questions regarding this consultation, please contact Melissa Alvarez, Consultation Biologist, at (954) 734-0716, or by email at Melissa.Alvarez@noaa.gov.

Sincerely,

AMENDOLA.KIMBERLY.B.1365830769 Digitally signed by AMENDOLA.KIMBERLY.B.1365830769 Date: 2021.03.01 16:51:58 -05'00'

for Andrew J. Strelcheck
Acting Regional Administrator

Enc.: Biological Opinion
File: 1514-22.F.4

Endangered Species Act - Section 7 Consultation
Biological Opinion

Action Agency: United States Army Corps of Engineers (USACE), Jacksonville District

Applicants:

Permit Numbers	Applicants
SAJ-2017-03082	Congress Bay Harbor North, LLC
SAJ-2014-00458	Desarollo Inmobilaria
SAJ-2020-01244	Jose Vazquez
SAJ-2019-04537	Shari Levitan
SAJ-2018-03347	Drexler / Bay Road 4462, LLC

Activities: Dock Construction and Boat Lift Construction, Miami-Dade County, Florida

Consulting Agency: National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), Southeast Regional Office, Protected Resources Division, St. Petersburg, Florida

Applicants	SERO Numbers
Congress Bay Harbor North, LLC	SERO-2020-00382
Desarollo Inmobilaria	SERO-2020-00803
Jose Vazquez	SERO-2020-01345
Shari Levitan	SERO-2020-01467
Drexler / Bay Road 4462, LLC	SERO-2020-01469

Approved By:

AMENDOLA.KIMBERLY.B.1365830769 Digitally signed by AMENDOLA.KIMBERLY.B.1365830769 Date: 2021.03.01 16:52:48 -05'00'

for Andrew J. Strelcheck, Acting Regional Administrator
NMFS, Southeast Regional Office
St. Petersburg, Florida

Date Issued: 03/01/2021

Table of Contents

List of Figures

List of Tables

Acronyms and Abbreviations

CFR	Code of Federal Regulations
DPS	Distinct Population Segment
ECO	NMFS Environmental Consultation Organizer
ESA	Endangered Species Act
MHW	Mean High Water
MLW	Mean Low Water
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
Opinion	Biological Opinion

USACE	U.S. Army Corps of Engineers

Units of Measurement

ac	acre(s)
ft	foot/feet
ft^2	square foot/feet
in	inch(es)
km	kilometer

Introduction

Section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 et seq.), requires that each federal agency ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. Section 7(a)(2) requires federal agencies to consult with the appropriate Secretary in carrying out these responsibilities. The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) and the United States Fish and Wildlife Service share responsibilities for administering the ESA.

Consultation is required when a federal action agency determines that a proposed action "may affect" listed species or designated critical habitat. Informal consultation is concluded after NMFS determines that the action is not likely to adversely affect listed species or critical habitat. Formal consultation is concluded after NMFS issues a Biological Opinion ("Opinion") that identifies whether a proposed action is likely to jeopardize the continued existence of a listed species, or destroy or adversely modify critical habitat, in which case reasonable and prudent alternatives to the action as proposed must be identified to avoid these outcomes. The Opinion states the amount or extent of incidental take of the listed species that may occur, develops measures (i.e., reasonable and prudent measures) to reduce the effect of take, and recommends conservation measures to further the recovery of the species.

Updates to the regulations governing interagency consultation (50 Code of Federal Regulations [CFR] part 402) were effective on October 28, 2019 [84 FR 44976]. This consultation was pending at that time, and we are applying the updated regulations to the consultation. As the preamble to the final rule adopting the regulations noted, "[t]his final rule does not lower or raise the bar on Section 7 consultations, and it does not alter what is required or analyzed during a consultation. Instead, it improves clarity and consistency, streamlines consultations, and codifies existing practice." We have reviewed the information and analyses relied upon to complete this biological opinion in light of the updated regulations and conclude the opinion is fully consistent with the updated regulations.

This document represents NMFS's Opinion based on our review of impacts associated with the proposed actions within Miami-Dade County, Florida. This Opinion analyzes the proposed actions' effects on threatened and endangered species and designated critical habitat, in accordance with Section 7 of the ESA. We based our Opinion on individual project information provided by the Jacksonville District of the U.S. Army Corps of Engineers (USACE) and other sources of information, including the published literature cited herein.

1 CONSULTATION HISTORY

The following are consultation histories for the 5 consultations evaluated in this batched biological opinion (Opinion). NMFS batched these 5 consultations into one Opinion due to the similarities in project location, scope, and scale, and effects to ESA-listed species and designated critical habitat.

1. The first consultation history is for NMFS Environmental Consultation Organizer (ECO) identifier number SERO-2020-00382 Congress Bay Harbor North, LLC Dock. On February 19, 2020, NMFS received a request for formal consultation under Section 7 of the ESA from the USACE for construction permit application SAJ-2017-03082 and initiated consultation on that same day.

2. The next is the consultation history for ECO identifier number SERO-2020-00803, Desarollo Inmobilaria Dock & Lift. On March 25, 2020, NMFS received a request for formal consultation under Section 7 of the ESA from the USACE for construction permit application SAJ-2014-00458. A request for additional information was sent on June 25, 2020 and a response was received on June 29, 2020 and the consultation was initiated that day.

3. The third is the consultation history for ECO identifier number SERO-2020-01345, Jose Vazquez Dock & Lift. On April 13, 2020, NMFS received a request for formal consultation under Section 7 of the ESA from the USACE for construction permit application SAJ-2014-01561. NMFS initiated consultation the same day.

4. The fourth is the consultation history for ECO identifier number SERO-2020-01467, Levitan Dock & Lift. On May 27, 2020, NMFS received a request for formal consultation under Section 7 of the ESA from the USACE for construction permit application SAJ-2014-01561. NMFS initiated consultation the same day.

5. The last is the consultation history for ECO identifier number SERO-2020-01469, Drexler / Bay Road 4462, LLC Dock. On May 29, 2020, NMFS received a request for formal consultation under Section 7 of the ESA from the USACE for construction permit application SAJ-2014-01561. NMFS initiated consultation the same day.

2 DESCRIPTION OF THE PROPOSED ACTIONS AND ACTION AREAS

2.1 **Proposed Actions**

1. Congress Bay Harbor North, LLC Dock

The USACE proposes to permit the removal of an existing 232.5 square foot (ft^2) dock, the installation of a 297 ft^2 marginal dock with IPE hardwood decking, (2) 30 ft^2 finger piers, and 4 mooring piles for a total of 360 square feet (ft^2) of overwater structure. The project includes the installation of a total of 20 new 12 inch (in) diameter wood piles. All existing structures will be demolished by a barge mounted crane, piles will be pull from the mud, removed via a barge, and

disposed of in an approved upland facility. Wood piles will be installed with a barge-mounted impact hammer. All work will be completed from both a barge and from the uplands. A maximum of 10 piles will be installed per day. The proposed dock will be installed 3.8 feet (ft) above mean high water (MHW) and will not be built to dock construction guidelines for structures in Johnson's seagrass designated critical habitat. The proposed action will result in 4 vessel slips at the project site. In-water work is expected to take 2 weeks to complete during daylight hours only. The applicant will comply with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*[1] and will use turbidity curtains.

2. Desarollo Inmobilaria Dock & Lifts

The USACE proposes to permit the removal of an existing T-dock (933.5 ft^2), 2 elevator boat lifts, unauthorized boat lift extension (191.5 ft^2), unauthorized boat lift cat walk (16 ft^2) and various associated piles (43 piles). All existing structures will be demolished by a barge mounted crane, piles will be pull from the mud, removed via a barge, and disposed of in an approved upland facility. The project includes the installation of a concrete T-dock (704 ft^2), a concrete finger pier (172 ft^2), a 30,000 pound 4-post boat lift, a 12,000 pound elevator boat lift, and a 10,000 pound quad jet ski lift, for a total of 876 ft^2 of overwater structure. In addition, the project will include the installation of 42 new, 12-in by 12-in concrete piles and 12 new, 12-in diameter wood piles. The piles will all be installed with an impact hammer. All work will be completed from both a barge and the uplands. A maximum of 6 piles will be driven per day (concrete) and only 4 piles driven per day (wood), for a total of no more than 10 piles per day. In-water work is expected to take up to 8 weeks to complete during daylight hours only and will result in the addition of 8 new boat slips. The applicant will comply with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* and will use turbidity curtains.

3. Jose Vazquez Dock & Lift

The USACE proposes to permit the removal of 168 ft^2 wooden floating dock and the installation of a 160 ft^2 wooden dock as an extension to an existing dock and a 7,000-pound boatlift. The existing floating dock will be removed by a barge-mounted crane and piles will be pulled from the mud. All debris will be disposed of at a licensed upland facility. It will also include installing 3, 12-in diameter wood piles (for dock support) with an impact hammer. The proposed action will not result in any additional boat slips at the project site beyond the one existing. In-water work is expected to take 2 weeks, with 1 day for pile driving. All work will occur during daylight hours only. The applicant will comply with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* and will use turbidity curtains.

4. Shari Levitan Dock & Lift

The USACE proposes to permit the removal of an existing 384 ft^2 wood dock with (4) wood fender piles and a 30 ft^2 floating dock with (2) aluminum piles. All existing structures will be demolished by a barge mounted crane, piles will be pull from the mud, removed via a barge, and

[1] NMFS. 2006. Sea Turtle and Smalltooth Sawfish Construction Conditions revised March 23, 2006. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, Protected Resources Division, Saint Petersburg, Florida. https://www.fisheries.noaa.gov/webdam/download/92937961

disposed of in an approved upland facility. The project also proposes to install a 360 ft^2 wooden dock, which includes a new, solid platform, double jet ski lift and (3) new wood fender piles; a 132 ft^2 wooden dock which includes a new, solid platform, kayak and paddle board lift and (3) new wood fender piles; and 312.5 ft^2 of wood decking to be installed atop the existing seawall cap (no additional over-water shading/area). New overwater structures total 492 ft^2. The piles (16, 12-in by 12-in concrete piles and 12, 12-in diameter wood piles) will all be installed with an impact hammer. Work will be completed from both the water (by barge) and the uplands. A maximum of 5 piles will be driven per day for both the concrete and wood piles. The proposed action will result in adding 3 new boat slips, for a total of 4 slips. Work is expected to take up to 4 weeks to complete during daylight hours only. The applicant will comply with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* and will use turbidity curtains.

5. Drexler / Bay Road 4462, LLC Dock

The USACE proposes to permit the installation of a 480 ft^2 wooden dock with grated decking supported by 14 new 12-in diameter wood piles. It will also include 3 dolphin pile clusters (each cluster contains 3 individual piles) and 2 mooring exclusion piles, for a total of 25, 12-in diameter wood piles with an impact hammer. The proposed action will result in adding 2 new boat slips. Total construction time is expected to take 3 weeks to complete during daylight hours only. The applicant will comply with NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* and will use turbidity curtains.

2.2 **Action Areas**

The action area is defined by regulation as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR 402.02). For the purposes of these Federal actions, the action area includes the shoreline and submerged habitat within the immediate vicinity of the project sites that will be affected by the proposed actions, including the submerged habitat within the boundary of the turbidity curtain.

All project sites fall within the boundaries of Johnson's seagrass designated critical habitat Unit J, which encompasses the northern portion of Biscayne Bay from Northeast 163rd Street south to Central Key Biscayne at 25º45´N.

1. Congress Bay Harbor North, LLC Dock

The proposed project site is located on a zoned multi-family residence with an existing seawall, seawall cap, T-piles and a 232.5 ft^2 wooden marginal dock, at 10301 E. Bay Harbor Drive, Bay Harbor Islands, Miami-Dade County, Florida (25.893988°N, 80.131764°W [North American Datum 1988 (NAD88)]) in Biscayne Bay approximately 0.7 miles (mi) southwest of the mouth of Haulover Inlet, the nearest opening to the Atlantic Ocean (Figure 1).

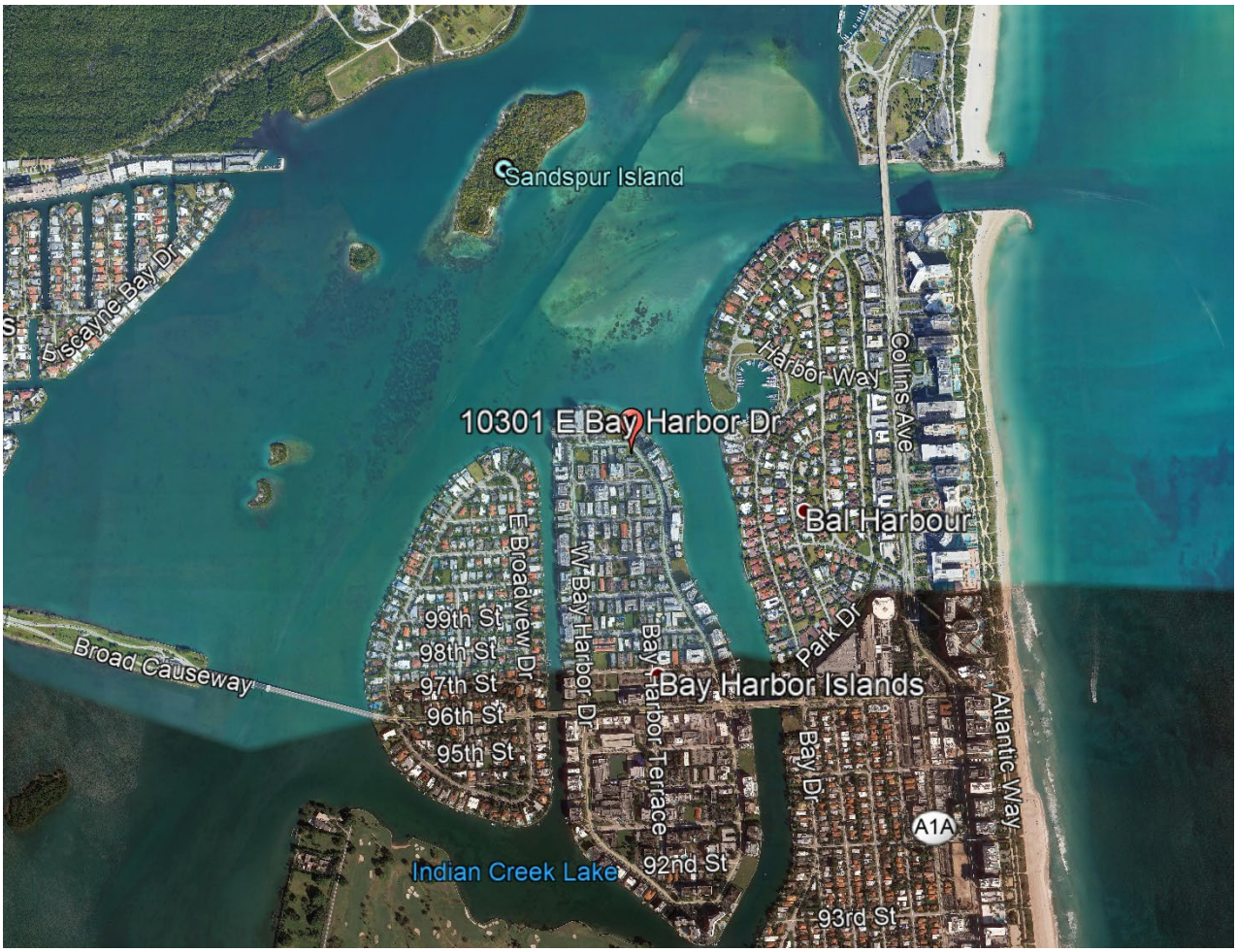

Figure 1. Image showing the Congress Bay Harbor North, LLC project site in Biscayne Bay at 10301 E. Bay Harbor Drive, Bay Harbor Islands, Miami-Dade County, Florida (©2020 Google).

Based on our noise analysis in SAJ-82 (NMFS 2014), the action area is equivalent to the radius of behavioral noise effects to ESA-listed fishes based on the proposed action's installation of 12-in diameter wood piles using an impact hammer (i.e., 705-ft behavioral noise radius).

A benthic survey was performed on September 16, 2016 and February 9, 2018. There were no mangroves within the project footprint. According to the survey, there are patches of non-listed seagrasses within the action area, but not within the project footprint. One colony of non-listed coral was found in the survey outside of the project footprint in the 2018 survey. Water depths adjacent to the existing seawall range from 3.5 ft to 4.0 ft at mean low water (MLW). The project area has a course sand substrate.

2. Desarollo Inmobilaria Dock & Lifts

The proposed project site is located on an upland lot developed for a single-family residence with an existing concrete seawall. A 933.5 ft^2 wood L-shaped dock, two elevator boatlifts (one of which has a 16 square-foot catwalk and 191.5 square foot extension), and a total of 43 piles. There are 2 boat slips. The site is located at 31 Indian Creek Island

Road, Indian Creek Village, Miami-Dade County Florida (25.875790°N, -80.132010°W [NAD83]) in Biscayne Bay approximately 2.1 mi southwest of the mouth of Haulover Inlet, the nearest opening to the Atlantic Ocean (Figure 2).

Figure 2. Image showing the Desarollo Inmobilaria project site in Biscayne Bay 31 Indian Creek Island Road, Indian Creek Village, Miami-Dade County Florida (©2020 Google).

Based on our noise analysis in SAJ-82 (NMFS 2014), the action area is equivalent to the radius of behavioral noise effects to ESA-listed fishes based on the proposed action's installation of 12-in by 12-in concrete piles and 12-in diameter wood piles using an impact hammer (i.e., 705-ft behavioral noise radius).

A benthic survey was performed on April 24, 2019. There were no seagrasses or mangroves within the project footprint. Two non-ESA listed corals were found in the survey in the action area outside of the project footprint. Water depths adjacent to the existing seawall range from 0 ft to 7.0 ft at mean MLW. The project area has a silty substrate.

3. Jose Vazquez Dock & Lift

The proposed project site is located on an upland lot developed for a single-family residence with an 168 ft^2 existing dock and 1 boat slip at 1480 Stillwater Drive, Miami, Miami-Dade County, Florida (25.868848°N, 80.136541°W [NAD83]) in Biscayne Bay

approximately 3 mi southwest of the mouth of Haulover Inlet, the nearest opening to the Atlantic Ocean (Figure 3).

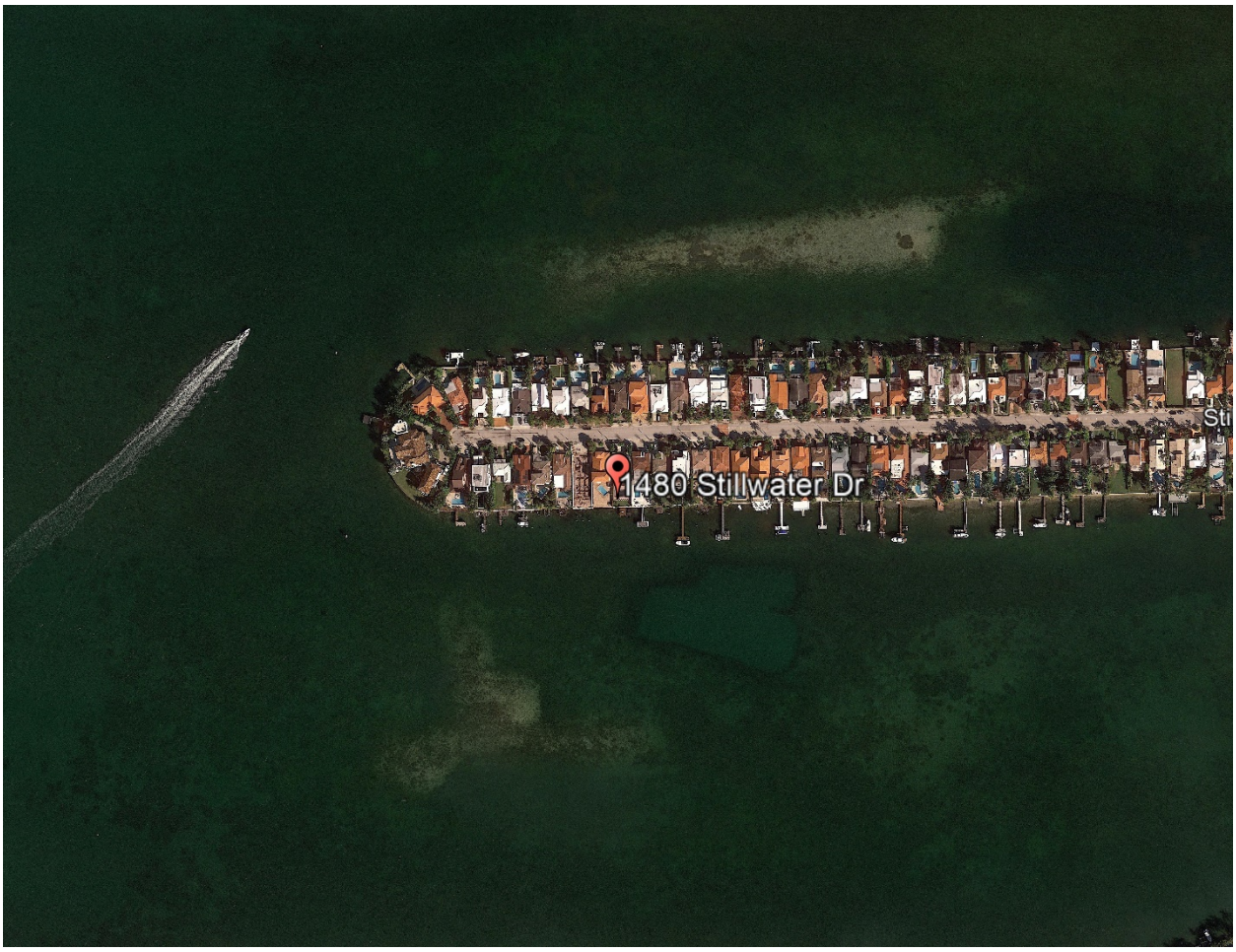

Figure 3. Image showing the Jose Vazquez project site in Biscayne Bay at 1480 Stillwater Drive, Miami, Miami-Dade County, Florida (©2020 Google).

Based on our noise analysis in SAJ-82 (NMFS 2014), the action area is equivalent to the radius of behavioral noise effects to ESA-listed fishes based on the proposed action's installation of 12-in diameter wood piles using an impact hammer (i.e., 705-ft behavioral noise radius).

A benthic survey was performed on November 5, 2019. There were no mangroves or corals within the project footprint. According to the survey, there are non-listed seagrasses present within the project footprint Water depths in the project footprint are around 1.7 ft at MLW. The project area has a sandy, silty substrate.

4. Shari Levitan Dock & Lift

The proposed project site is located on an upland lot developed for a single-family residence with an existing dock, riprap, and 1 boat slip at 1800 West 25th Street, Miami Beach, Miami-Dade County, Florida (25.800608°N, -80.146380°W [NAD83]) in

Biscayne Bay approximately 3.2 mi northwest of the mouth of Government Cut, the nearest opening to the Atlantic Ocean (Figure 4).

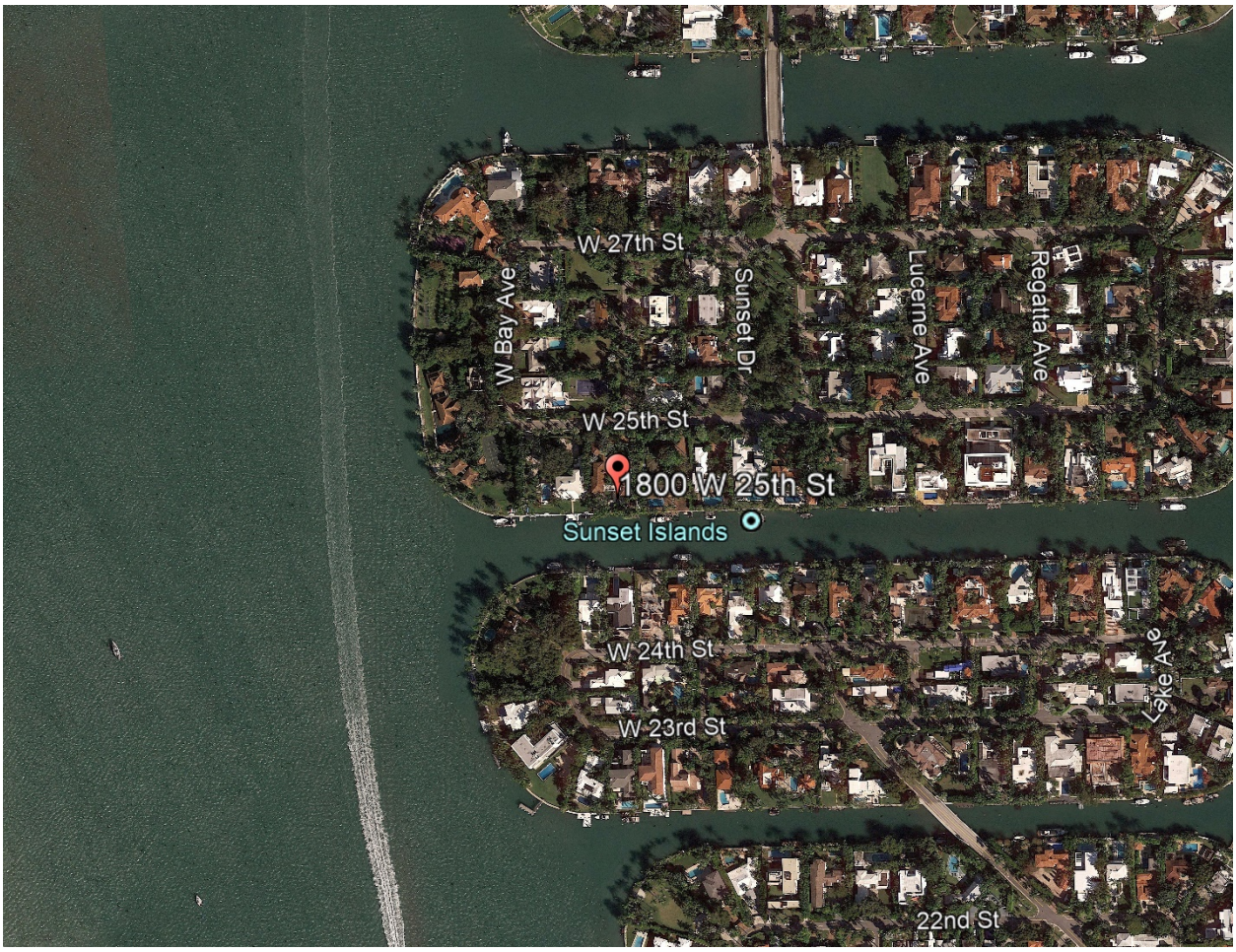

Figure 4 Image showing the Shari Levitan project site in Biscayne Bay 1800 West 25th Street, Miami Beach, Miami-Dade County Florida (©2020 Google).

Based on our noise analysis in SAJ-82 (NMFS 2014), the action area is equivalent to the radius of behavioral noise effects to ESA-listed fishes based on the proposed action's installation of 12-in by 12-in concrete piles and 12-in diameter wood piles using an impact hammer (i.e., 705-ft behavioral noise radius).

A benthic survey was performed on April 24, 2019. There were no mangroves or seagrasses within the project footprint. According to the survey, there are non-listed corals present within the project footprint on the riprap. Water depths in the project footprint range from 0 to 7.0 ft at MLW. The project area has a silty substrate.

5. Drexler / Bay Road 4462, LLC Dock & Lift

The proposed project site is located on an upland lot developed for a single-family residence with an existing seawall and riprap at 4462 North Bay Road, Miami Beach, Miami-Dade County, Florida (25.819951°N, 80.137327°W [NAD83]) in Biscayne Bay

approximately 4.8 mi northwest of the mouth of Government Cut, the nearest opening to the Atlantic Ocean (Figure 5).

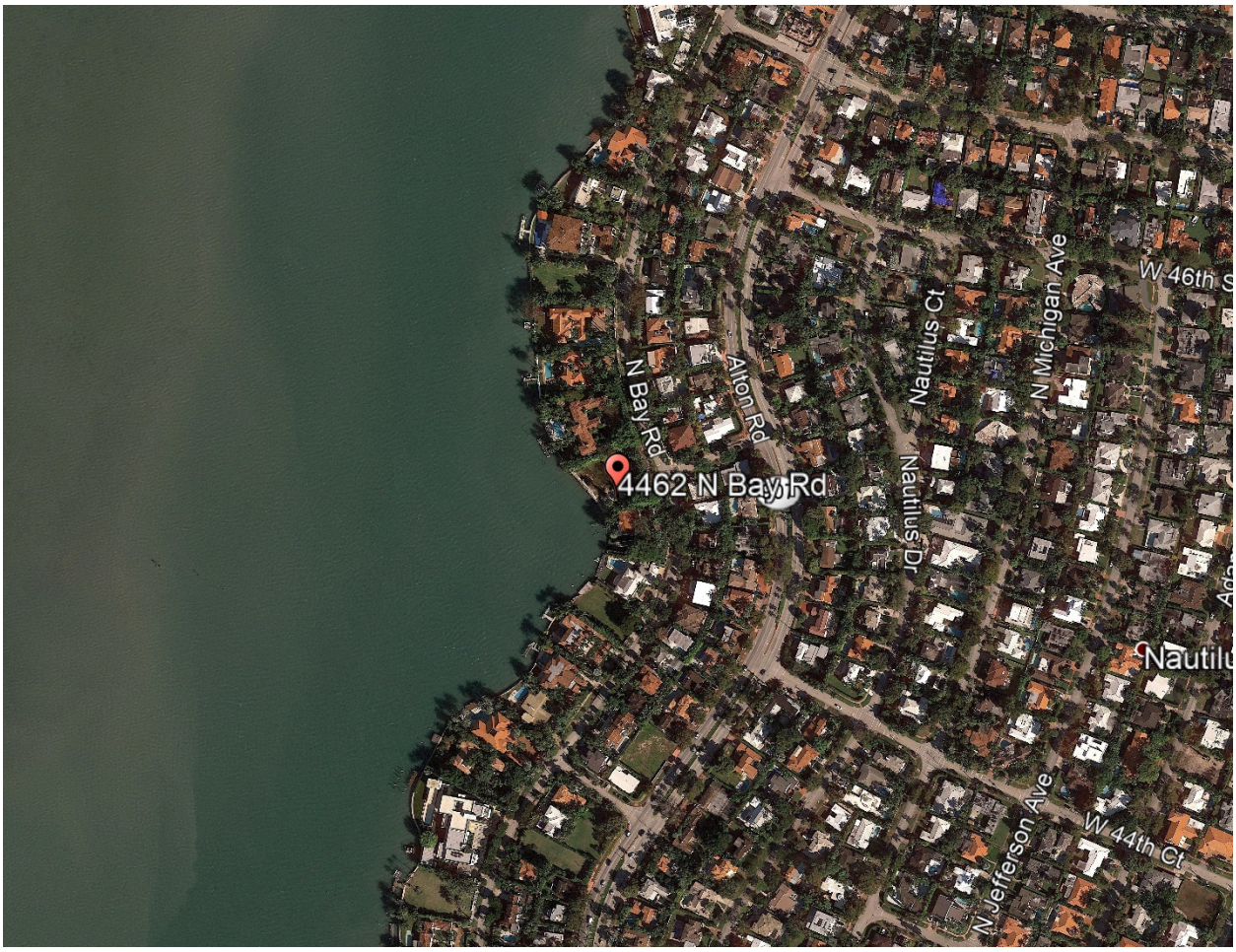

Figure 5. Image showing the Drexler / Bay Road 4462, LLC project site in Biscayne 4462 North Bay Road, Miami Beach, Miami-Dade County Florida (©2020 Google).

Based on our noise analysis in SAJ-82 (NMFS 2014), the action area is equivalent to the radius of behavioral noise effects to ESA-listed fishes based on the proposed action's installation of 12-in diameter wood piles using an impact hammer (i.e., 705-ft behavioral noise radius).

A benthic survey was performed on February 10, 2020. There were no mangroves or corals within the project footprint. According to the survey, there are non-listed seagrasses present within the project footprint. Water depths in the project footprint range from 0 to 6.0 ft MLW. The project area has a sandy substrate.

3 STATUS OF LISTED SPECIES AND CRITICAL HABITAT

We believe the species listed in Table 1 may be present within the action areas.

Table 1. Effects Determinations for Species the Action Agency and/or NMFS Believe May Be Affected by the Proposed Actions

Species	ESA Listing Status[2]	Action Agency Effect Determination	NMFS Effect Determination
Sea Turtles			
Green (North Atlantic [NA] distinct population segment [DPS])	T	NLAA	NLAA
Green (South Atlantic [SA] DPS)	T	NLAA	NLAA
Kemp's ridley	E	NLAA	NLAA
Leatherback	E	NLAA	NE
Loggerhead (Northwest Atlantic [NWA] DPS)	T	NLAA	NLAA
Hawksbill	E	NLAA	NLAA
Fish			
Smalltooth sawfish (U.S. DPS)	E	NLAA	NLAA

We believe the projects will have no effect on leatherback sea turtles due to the species' very specific life history strategy, which is not supported at the site. Leatherback sea turtles have pelagic, deepwater life history, where they forage primarily on jellyfish.

Table 2 provides the effects determinations for designated critical habitat occurring in the action areas that the USACE and/or NMFS believe may be affected by the proposed actions.

Table 2. Effects Determinations for Designated Critical Habitat the Action Agency and/or NMFS Believe May Be Affected by the Proposed Actions

Species	Unit	USACE Effect Determination	NMFS Effect Determination
Johnson's seagrass	Unit J	Likely to adversely affect	Likely to adversely affect, will not destroy or adversely modify

3.1 Potential Routes of Effect Not Likely to Adversely Affect Listed Species

We believe that sea turtles (green, loggerhead, hawksbill, and Kemp's ridley) and smalltooth sawfish maybe found in or near the action areas and may be affected by the proposed actions covered in this Opinion. We have identified the following potential effects to these species and concluded that they are not likely to be adversely affected by the proposed actions for the reasons described below.

The action areas contain shallow water habitat that may be used by sea turtle species and smalltooth sawfish for foraging and refuge. Sea turtles and smalltooth sawfish may be affected by their inability to access the action areas due to their avoidance of construction activities and physical exclusion from the project area due to blockage by turbidity curtains. We believe habitat displacement effects to sea turtles and smalltooth sawfish will be insignificant because the proposed actions will be temporary and intermittent (i.e., in-water work will last 2 weeks to 2

[2] E = endangered; T = threatened; NLAA = may affect, not likely to adversely affect; NE = no effect

months for each project and construction for all proposed actions will occur during daylight hours only) and will only occur within a small area adjacent to otherwise open water. In addition, because these species are mobile, we expect that they will move away from construction activities and forage in adjacent areas with similar habitat.

Effects to sea turtles and smalltooth sawfish include the potential for injury from construction equipment or materials. We believe this effect is extremely unlikely to occur. Because these species are highly mobile, we expect these species to move away from the action areas if disturbed. The applicants have also agreed to adhere to NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions*, which will further reduce the risk by requiring all construction personnel to watch for sea turtles and smalltooth sawfish. Operation of any mechanical construction equipment will cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities will not resume until the protected species has departed the project area of its own volition.

Green sea turtles, which forage on seagrasses, may be affected by the potential loss of approximately 576 ft^2 of seagrass habitat due to shading from overwater structures at the Vazquez project site (shading of approximately 160 ft^2 of seagrasses) and the Drexler project site (shading of approximately 416 ft^2 of seagrasses). We believe this effect on green sea turtles would be insignificant, given the availability of similar, undisturbed seagrass habitat nearby and throughout Biscayne Bay.

Sea turtles and smalltooth sawfish may be affected by an increase in vessel traffic in Biscayne Bay that may result from the construction of 15 new slips (i.e., 2 new slips for Congress Bay Harbor North, LLC; 8 new vessel slips for Desarollo Inmobilaria; 3 new slips for Shari Levitan; and 2 new vessel slip for Drexler / Bay Road 4462, LLC). Sea turtles could be affected by increased vessel traffic in the bay, as it may increase the risk of collisions with these species. However, even if 15 new vessels are introduced to the area, we conclude, based on a recent NMFS analysis,[3] that it is extremely unlikely that this would result in an interaction with sea turtles. Vessel interactions with smalltooth sawfish are highly unlikely. Smalltooth sawfish are primarily demersal (i.e., associated with the bottom) and rarely would be at risk from moving vessels.

Noise created by pile driving activities can physically injure animals or change animal behavior in the affected areas. Injurious effects can occur in 2 ways. First, immediate adverse effects can occur to listed species if a single noise event exceeds the threshold for direct physical injury. Second, effects can result from prolonged exposure to noise levels that exceed the daily cumulative exposure threshold for the animals, and these can constitute adverse effects if animals are exposed to the noise levels for sufficient periods. Behavioral effects can be adverse if such effects interfere with animals migrating, feeding, resting, or reproducing, for example. Our evaluation of effects to listed species as a result of noise created by construction activities is

[3] Barnette, M. 2013. Threats and Effects Analysis for Protected Resources on Vessel Traffic Associated with Dock and Marina Construction. NMFS Southeast Regional Office Protected Resources Division Memorandum. April 18, 2013.

based on the analysis prepared in support of the Opinion for SAJ-82.[4] The noise analysis in this consultation evaluates effects to smalltooth sawfish and sea turtles identified by NMFS as potentially affected in the table above.

Based on our noise calculations, the installation of wood piles by impact hammer (ie: Congress Bay Harbor North, LLC; Desarollo Inmobilaria; Shari Levitan; and Drexler / Bay Road 4462, LLC projects) will not cause single-strike or peak-pressure injury to sea turtles or ESA-listed fish. The cumulative sound exposure level (cSEL) of multiple pile strikes over the course of a day may cause injury to ESA-listed fishes and sea turtles at a radius of up to 30 ft (9 m). Due to the mobility of sea turtles and smalltooth sawfish, we expect them to move away from noise disturbances. Because we anticipate the animal will move away, we believe that an animal's suffering physical injury from noise is extremely unlikely to occur. Even in the unlikely event an animal does not vacate the daily cumulative injurious impact zone, the radius of that area is smaller than the 50-ft radius that will be visually monitored for listed species. Construction personnel will cease construction activities if an animal is sighted per NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions.* Thus, we believe the likelihood of any injurious cSEL effects is extremely unlikely to occur. An animal's movement away from the injurious impact zone is a behavioral response, with the same effects discussed below.

Based on our noise calculations, installation of concrete piles by impact hammer (i.e., Desarollo Inmobilaria and Shari Levitan projects) will not cause single-strike or peak-pressure injurious noise effects. However, the cumulative sound exposure level of multiple pile strikes over the course of a day may cause injury to smalltooth sawfish and sea turtles up to 72 ft (22 m) away from the pile. Due to the mobility of sea turtles and ESA-listed fishes, and because the projects occur in open water, we expect them to move away from noise disturbances. Because we anticipate the animal will move away, we believe that an animal's suffering physical injury from noise is extremely unlikely to occur. An animal's movement away from the injurious sound radius is a behavioral response, with the same effects discussed below.

The installation of piles using an impact hammer could also result in behavioral effects at radii 705 ft (215 m) for smalltooth sawfish and 151 ft (46 m) for sea turtles. Due to the mobility of sea turtles and ESA-listed fishes, we expect them to move away from noise disturbances in this open-water environment. Because there is similar habitat nearby, we believe behavioral effects will be insignificant. If an individual chooses to remain within the behavioral response zone, it could be exposed to behavioral noise impacts during pile installation. Since installation will occur only during the day, these species will be able to resume normal activities during quiet periods between pile installations and at night. Therefore, we anticipate any behavioral effects to them will be insignificant.

3.2 **Critical Habitat Likely To Be Adversely Affected**

The term "critical habitat" is defined in Section 3(5)(A) of the ESA as (i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (1) essential to the conservation of

[4] NMFS. Biological Opinion on Regional General Permit SAJ-82 (SAJ-2007-01590), Florida Keys, Monroe County, Florida. June 10, 2014.

the species and (2) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" is defined in Section 3(3) of the ESA as "…the use of all methods and procedures that are necessary to bring any endangered or threatened species to the point at which listing under [the ESA] is no longer necessary."

3.2.1 Johnson's Seagrass Critical Habitat

Description
NMFS designated Johnson's seagrass critical habitat on April 5, 2000 (65 FR 17786; see also, 50 CFR 226.213). The specific areas occupied by Johnson's seagrass and designated by NMFS as critical habitat are those with 1 or more of the following criteria:

1. Locations with populations that have persisted for 10 years
2. Locations with persistent flowering populations
3. Locations at the northern and southern range limits of the species
4. Locations with unique genetic diversity
5. Locations with a documented high abundance of Johnson's seagrass compared to other areas in the species' range

Ten areas (Units) within the range of Johnson's seagrass (approximately 200 kilometers [km] of coastline from Sebastian Inlet to northern Biscayne Bay, Florida) are designated as Johnson's seagrass critical habitat (Table 3). The total range-wide acreage of critical habitat for Johnson's seagrass is roughly 22,574 acres (ac) (NMFS 2002).

Table 3. Designated Critical Habitat Units for Johnson's Seagrass

Unit	Location/Area
A	A portion of the Indian River, Florida, north of the Sebastian Inlet Channel
B	A portion of the Indian River, Florida, south of the Sebastian Inlet Channel
C	A portion of the Indian River Lagoon, Florida, in the vicinity of the Fort Pierce Inlet
D	A portion of the Indian River Lagoon, Florida, north of the St. Lucie Inlet
E	A portion of Hobe Sound, Florida, excluding the federally marked navigation channel of the Intracoastal Waterway
F	A portion of the south side of Jupiter Inlet, Florida
G	A portion of Lake Worth, Florida, north of Bingham Island
H	A portion of Lake Worth Lagoon, Florida, located just north of the Boynton Inlet
I	A portion of northeast Lake Wyman, Boca Raton, Florida, excluding the federally marked navigation channel of the Intracoastal Waterway

Unit	Location/Area
J	A portion of northern Biscayne Bay, Florida, including all parts of the Biscayne Bay Aquatic Preserve excluding the Oleta River, Miami River, and Little River beyond their mouths, the federally marked navigation channel of the Intracoastal Waterway, and all existing federally authorized navigation channels, basins, and berths at the Port of Miami to the currently documented southernmost range of Johnson's seagrass, Central Key Biscayne

Critical Habitat Unit Impacted by this Action

This consultation focuses on activities that occurs in Unit J, which encompasses the northern portion of Biscayne Bay from Northeast 163rd Street south to Central Key Biscayne at 25º45´N (Figure 6). This portion of Biscayne Bay is bound by heavy residential and commercial development, though a few areas of mangrove shoreline remain. Dredge and fill projects have resulted in a number of spoil islands and channels too deep for seagrass growth. Biscayne Bay supports a diversity of biological communities including intertidal wetlands, seagrasses, hard bottom, assemblages, and open water. Unit J is wholly within the Biscayne Bay Aquatic Preserve.

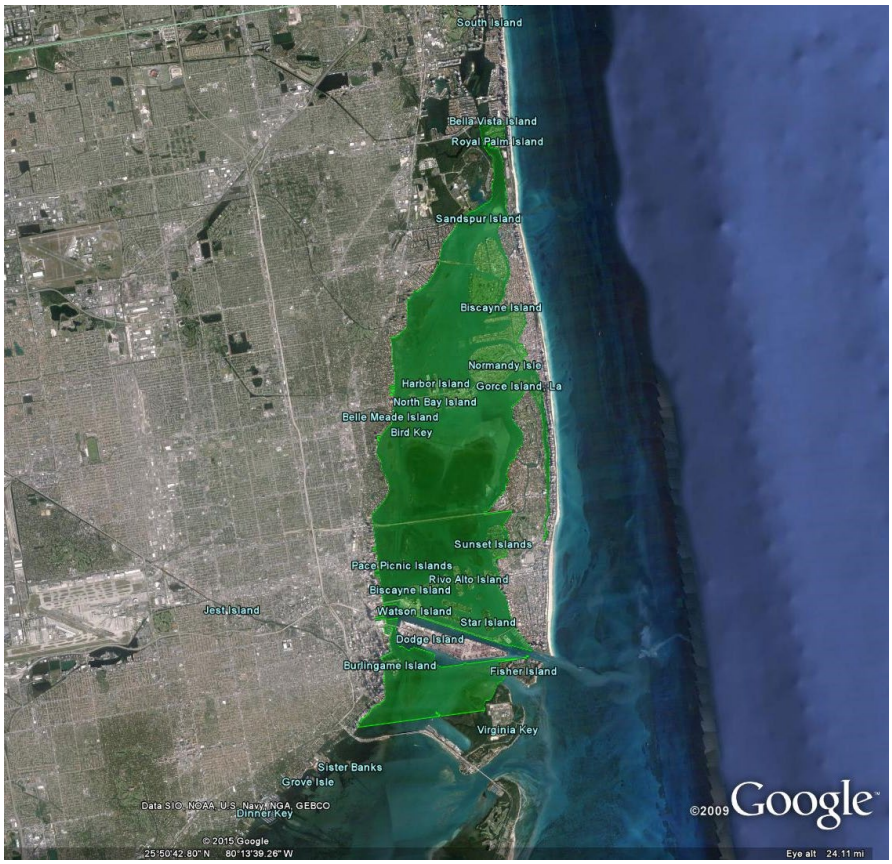

Figure 6. Johnson's seagrass critical habitat Unit J (©2015 Google, Data SIO, NOAA, U.S. Navy, NGA, GEBCO)

Essential Features of Critical Habitat
NMFS identified 4 habitat features essential for the conservation of Johnson's seagrass: (1) adequate water quality, defined as being free from nutrient over-enrichment by inorganic and organic nitrogen and phosphorous or other inputs that create low oxygen conditions; (2) adequate salinity levels, indicating a lack of very frequent or constant discharges of fresh or low-salinity waters; (3) adequate water transparency, which would allow sunlight necessary for photosynthesis; and (4) stable, unconsolidated sediments that are free from physical disturbance. All 4 essential features must be present in an area for it to function as critical habitat for Johnson's seagrass.

Status and Threats
A wide range of activities, many funded authorized or carried out by federal agencies, have and will continue to affect the essential habitat requirements of Johnson's seagrass. These are generally the same activities that may affect the species itself, and include: (1) vessel traffic and the resulting propeller dredging; (2) dredge and fill projects; (3) dock, marina, and bridge construction; (4) water pollution; and (5) land use practices (shoreline development, agriculture, and aquaculture).

Vessel traffic has the potential to affect Johnson's seagrass critical habitat by reducing water transparency. Operation of vessels in shallow water environments often leads to the suspension of sediments due to the spinning of propellers on or close to the bottom. Suspended sediments reduce water transparency and the depth to which sunlight penetrates the water column. Populations of Johnson's seagrass that inhabit shallow water and water close to inlets where vessel traffic is concentrated, are likely to be most affected. This effect is expected to worsen with increases in boating activity.

The dredging of bottom sediments to maintain, or in some cases create, inlets, canals, and navigation channels can directly affect essential features of Johnson's seagrass critical habitat. Dredging results in turbidity through the suspension of sediments. As discussed previously, the suspension of sediments reduces water transparency and the depth to which sunlight can penetrate the water column. The suspension of sediments from dredging can also re-suspend nutrients, which could result in over-enrichment and/or reduce dissolved oxygen levels. Further, dredging can destabilize sediments and alter both the shape and depth of the bottom within the dredged footprint. This may affect the ability of the critical habitat to function through the removal or modification of essential features.

Dock, marina, and bridge construction leads to loss of habitat via construction impacts (e.g., pile installation) and shading. Similar to dredging, installation of piles for docks or bridges can result in increased turbidity that can negatively impact water transparency over short durations. Additionally, installed piles also replace the stable, unconsolidated bottom sediments essential for the species. Completed structures can have long-term effects on critical habitat in the surrounding area because of the shade they produce. While shading does not affect water transparency directly, it does affect the amount and/or duration of sunlight that can reach the bottom. The threat posed by dock, marina, and bridge construction is especially apparent in coastal areas where Johnson's seagrass is found.

Other threats include inputs from adjacent land use. Johnson's seagrass critical habitat located in proximity to rivers, canal mouths, or other discharge structures is affected by land use within the watershed. Waters with low salinity that are highly colored and often polluted are discharged to the estuarine environment. This can impact salinity, water quality, and water transparency, all essential features of Johnson's seagrass critical habitat. Frequent pulses of freshwater discharge to an estuarine area may decrease salinity of the habitat and provoke physiological stress to the species. Nutrient over-enrichment, caused by inorganic and organic nitrogen and phosphorous loading via urban and agricultural land run-off, stimulates increased algal growth, decreased water transparency, and diminished oxygen content within the water. Low oxygen conditions have a demonstrated negative impact on seagrasses and associated communities. Discharges can also contain colored waters stained by upland vegetation or pollutants. Colored waters released into these areas reduce the amount of sunlight available for photosynthesis by rapidly reducing the amount of shorter wavelength light that reaches the bottom. In general, threats from adjacent land use will be ongoing, randomly occurring events that follow storm events.

4 ENVIRONMENTAL BASELINE

By regulation, the environmental baseline for an Opinion refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. 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 that are contemporaneous with the consultation in process. The consequences to the listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR 402.02).

4.1 Status of Johnson's Seagrass Critical Habitat Within the Action Areas

The proposed actions will occur at residential properties in Biscayne Bay Aquatic Preserve located from 0.7 mile to up to 3.0 miles south of Haulover Inlet (Congress Bay Harbor North, LLC, Desarollo Inmobilaria and Jose Vasquez) and from 3.2 to 4.8 miles north of Government Cut (Shari Levitan and Drexler / Bay Road 4462, LLC). The projects have existing seawalls, and/or docks and boat slips. They are adjacent to other residential properties with existing seawalls, docks, and boat slips. Non-ESA listed seagrass in varying densities was observed at 4 of the project sites, but no Johnson's seagrass was documented within any of the project sites.

4.2 Factors Affecting Johnson's Seagrass and its Designated Critical Habitat in the Action Areas

Federal Actions

A wide range of activities funded, authorized, or carried out by federal agencies may affect Johnson's seagrass and its designated critical habitat. These include actions permitted or implemented by the USACE such as dredging, dock/marina construction, bridge/highway construction, residential construction, shoreline stabilization, breakwaters, and the installation of

subaqueous lines or pipelines. These projects are located in Miami-Dade County. The Miami-Dade programmatic (SAJ-42) authorizes docks that may affect Johnson's seagrass and its designated critical habitat. NMFS issued an Opinion concerning the Programmatic General Permit on February 10, 2011, and the USACE issued the permit on April 29, 2013. As per a review of NMFS PRD's completed consultation database by the consulting biologist on January 22, 2021, there are no other projects with adverse effects to Johnson's seagrass critical habitat within each of the action areas.

Recreational Vessel Traffic

Marina and dock construction increases recreational vessel traffic within areas of Johnson's seagrass critical habitat, which increases suspended sediments from propellers and could result in propeller dredging. As mentioned above, suspended sediments are known to adversely affect Johnson's seagrass critical habitat by reducing the water transparency essential feature. Shading from docks and vessels also affects the water transparency essential feature of the designated critical habitat. Propeller dredging and installation of piles and bridge support structures may adversely affect Johnson's seagrass and permanently removes the unconsolidated sediments essential feature of the critical habitat.

Marine Pollution and Environmental Contamination

The projects are all located in a highly-developed coastal area with extensive canal systems. This can lead to freshwater discharges and nutrient over-enrichment due to coastal runoff and canal discharges into the Bay. Freshwater discharge affects the salinity essential feature of the designated critical habitat while excess nutrients can lead to decreased water transparency and decreased dissolved oxygen content in the water.

State and Federal Activities That May Benefit Johnson's Seagrass Critical Habitat in the Action Area

State and federal conservation measures exist to protect Johnson's seagrass and its habitat under an umbrella of management and conservation programs that address seagrasses in general (Kenworthy et al. 2006). These conservation measures must be continually monitored and assessed to determine if they will ensure the long-term protection of the species and the maintenance of environmental conditions suitable for its continued existence throughout its geographic distribution.

5 EFFECTS OF THE ACTIONS ON CRITICAL HABITAT

Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed actions, including the consequences of other activities that are caused by the proposed actions. A consequence is 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 CFR 402.02). The proposed actions are within the boundary of Johnson's seagrass critical habitat (Unit J).

5.1 **Johnson's Seagrass Critical Habitat**

The 4 habitat features essential for the conservation of Johnson's seagrass: (1) adequate water quality, defined as being free from nutrient over-enrichment by inorganic and organic nitrogen and phosphorous or other inputs that create low oxygen conditions; (2) adequate salinity levels, indicating a lack of very frequent or constant discharges of fresh or low-salinity waters; (3) adequate water transparency, which would allow sunlight necessary for photosynthesis; and (4) stable, unconsolidated sediments that are free from physical disturbance. All 4 essential features must be present in an area for it to function as critical habitat for Johnson's seagrass and the loss of 1 essential feature of Johnson's seagrass critical habitat will result in a total loss in the conservation function of the critical habitat in that area.

We believe the proposed actions will have no effect on the adequate salinity levels essential feature of Johnson's seagrass critical habitat because the proposed actions lack any potential to affect adequate salinity levels in the action areas.

The adequate water quality and adequate water transparency essential features of Johnson's seagrass critical habitat may be affected by increased turbidity due to pile installation; however, we believe this effect will be insignificant. Turbidity is expected to be temporary (not more than 2 months) and contained to the immediate area by the use of turbidity curtains.

The proposed work is likely to adversely affect Johnson's seagrass critical habitat by removing the adequate water transparency essential feature due to shading from the new docks and new vessels. In addition, we believe the proposed work is likely to adversely affect Johnson's seagrass critical habitat by removing the stable, unconsolidated sediments essential feature due to the placement of new piles.

The adequate water transparency essential feature of Johnson's seagrass critical habitat may be affected by shading from the new docks and vessel storage. Shading from docks not built to the dock construction guidelines, as mentioned in Section 3, results in the complete loss of the water transparency essential feature of Johnson's seagrass critical habitat. We only expect adverse effects in the area immediately underneath the dock, as any shading to nearby areas will be temporary in nature (i.e., shading and light transmission will change over the course of the day) and therefore insignificant. Due to the shading caused by the existing docks at four of the project sites, the area under these docks is not currently functioning as critical habitat. We cannot determine the extent of any overlap between the new docks and the area shaded by the existing docks. Therefore, we assume that there will be no overlap to account for all potential effects to the adequate water transparency essential feature of Johnson's seagrass critical habitat. The amount of the adequate water transparency essential feature impacted by all of the new docks will be 2,623 ft^2.[5] The same amount of Johnson's seagrass critical habitat will be affected because the loss of one essential feature results in a loss of conservation function of the critical

[5] Congress Bay Harbor North, LLC 360 ft^2 (new)
Desarollo Inmobilaria 1141 ft^2 (new)
Jose Vazquez 160 ft^2 (new)
Shari Levitan 482 ft^2 (new)
Drexler / Bay Road 4462, LLC 480 ft^2 (new)

habitat. When the existing docks are removed, the adequate water transparency essential feature of Johnson's seagrass designated critical habitat in an adjacent portion of the action area will be restored (1692.5 ft^2)[6] and this will restore the same amount of functioning critical habitat. Thus, a total of 930.5 ft^2 (2,623 ft^2 – 1692.5 ft^2) of Johnson's seagrass critical habitat will be adversely affected from loss of water transparency essential feature due to shading by the docks.

Next, we consider the potential impact of shading from the storage of 15 new vessels. We believe that shading due to new vessels will adversely affect the adequate water transparency essential feature of Johnson's seagrass designated critical habitat. When we do not know the size of the new vessels, but we estimate each vessel to be 176 ft^2, based on the average vessel size in Florida used in the analysis for the Statewide Programmatic Biological Opinion (SWPBO).[7] Since the proposed action will result in 15 new vessel slips, total impact by shading from vessel storage will be 2,816 ft^2. Thus, we believe the new docks and the vessels will adversely affect 3,746.5 ft^2 (2,623 ft^2 + 2,816 ft^2 – 1692.5 ft^2) of Johnson's seagrass critical habitat through removal of the adequate water transparency essential feature.

The proposed actions are also likely to adversely affect Johnson's seagrass critical habitat by permanently removing the stable, unconsolidated sediments essential feature as a result of the installation of the piles. Per the drawings, there will be 127 piles installed that the project sites, with 72 of the piles 100% subsumed under the new docks, 4 dock piles 50% subsumed under one of the docks (i.e., about 50% of each pile falls outside of the framing for the dock), and 51 piles completely outside of the new docks. These 127 piles will remove 127 ft^2 of the stable, unconsolidated sediments essential feature (each pile impacts 1 ft^2). However, the area of the piles that will be subsumed by the docks will not be included in calculating the impacts to Johnson's seagrass critical habitat by removal of the stable, unconsolidated sediments essential feature to avoid double-counting impacts already considered by shading from the dock. The piles that are 50% subsumed under the dock or are completely outside of the docks include 8 wood piles (4 are only half) at Congress Bay Harbor North, LLC project, 12 wood and 8 concrete piles at the Desarollo Inmobilaria project, 4 wood piles at the Jose Vazquez project, 6 wood and 4 concrete piles at the Shari Levitan project, and 13 wood piles at the Drexler / Bay Road 4462, LLC project. Therefore, we believe the proposed actions will adversely affect 53 ft^2 of Johnson's seagrass critical habitat by removal of the stable, unconsolidated sediments essential feature[8].

Combining the total impacts to Johnson's seagrass critical habitat from the loss of the stable, unconsolidated sediments essential feature and the adequate water transparency essential feature, we believe the project will adversely affect 3,799.5 ft^2 of Johnson's seagrass critical habitat or 0.087 acre (ac) of Johnson's seagrass critical habitat.[9] Because the area of Johnson's seagrass designated critical habitat is measured in acres, we will use acres, not square feet, in our analysis below.

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[6] Congress Bay Harbor North, LLC 232.5 ft^2 (old removed)
Desarollo Inmobilaria 876 ft^2 (old removed)
Jose Vazquez 168 ft^2 (old removed)
Shari Levitan 416 ft^2 (old removed)

[7] Florida Statewide Programmatic Biological Opinion (SWPBO) issued by NMFS on December 4, 2015 (SER-2013-12540).

[8] 6 ft^2 + 20 ft^2 + 4 ft^2 +10 ft^2 + 13 ft^2 = 53 ft^2 total pile impact outside of new docks

[9] 1 square foot = 0.0000229568 ac; 3,799.5 x 0.0000229568 = 0.087 ac

6 CUMULATIVE EFFECTS

Cumulative effects include the effects of future state, tribal, or local private actions that are reasonably certain to occur in the action area subject to this Opinion. Future federal actions that are unrelated to the proposed actions are not considered in this section because they require separate consultation pursuant to Section 7 of the ESA.

No categories of effects beyond those already described are expected in the action area, and we are not aware of any other future state, tribal or local private actions that are reasonably certain to occur within the action area.

Dock and marina construction will likely continue at current rates, with associated loss and degradation of seagrass habitat, including Johnson's seagrass critical habitat. Because these activities are subject to USACE permitting and thus, the ESA Section 7 consultation requirement, they do not lead to cumulative non-federal effects to be discussed in this section. NMFS and the USACE have developed protocols to encourage the use of light-transmitting materials in future construction of docks constructed in or over submerged aquatic vegetation (SAV), marsh or mangrove habitat, namely the *Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat*, and for docks within the range of Johnson's seagrass, namely NMFS and USACE's *Key for Construction Conditions for Docks or Other Minor Structures Constructed in or over Johnson's Seagrass* (*Halophila johnsonii*). Even if all new docks are constructed in full compliance with the NMFS and USACE's guidance, NMFS acknowledges that shading impacts (and thus, impacts to the water transparency essential feature) to Johnson's seagrass will continue via dock construction. As NMFS and the USACE continue to encourage permit applicants to design and construct new docks in full compliance with the construction guidelines discussed above, and the recommendations in Landry et al. (2008b) and Shafer et al. (2008), NMFS believes that shading impacts to Johnson's seagrass critical habitat will be reduced in the short- and long-term. Moreover, even with some shading from grated construction materials, researchers have found all 4 essential features necessary for Johnson's seagrass to persist under docks constructed of grated decking (Landry et al. 2008b).

Upland development and associated runoff will continue to affect the water quality and water clarity essential features of Johnson's seagrass critical habitat. Flood control and imprudent water management practices will continue to result in freshwater inputs into estuarine systems, thereby degrading water quality and altering salinity. Long-term, large-scale reduction in salinity has been identified as a potentially significant threat to Johnson's seagrass and may lead to the destruction or adverse modification of Johnson's seagrass critical habitat.

7 DESTRUCTION/ADVERSE MODIFICATION ANALYSIS

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 generally conclude that a Federal action is likely to "destroy or adversely modify" designated critical habitat if the action results in an alteration of the quantity or quality of the essential physical or biological features of designated

critical habitat, or if the alteration precludes or significantly delays the capacity of that habitat to develop those features over time, and if the effect of the alteration is to appreciably diminish the value of critical habitat for the conservation of the species. We intend the phrase "significantly delay" in development of essential features to encompass a delay that interrupts the likely natural trajectory of the development of physical and biological features in the designated critical habitat to support the species' recovery. This analysis takes into account the geographic and temporal scope of the proposed actions, recognizing that "functionality" of critical habitat necessarily means that it must now and must continue in the future to support the conservation of the species and progress toward recovery. Destruction or adverse modification does not depend strictly on the size or proportion of the area adversely affected, but rather on the role the action area serves with regard to the function of the overall designation, and how that role is affected by the action.

Recovery for Johnson's seagrass as set forth in the final recovery plan (NMFS 2002), will be achieved when the following recovery objectives are met:

(1) The species' present geographic range remains stable for at least 10 years, or increases.
(2) Self-sustaining populations are present throughout the range at distances less than or equal to the maximum dispersal distance to allow for stable vegetative recruitment and genetic diversity.
(3) Populations and supporting habitat in its geographic range have long-term protection (through regulatory action or purchase acquisition).

We evaluated the proposed actions' expected effects on critical habitat to determine whether it will be able to continue to provide its intended functions in achieving these recovery objectives and supporting the conservation of the species.

The first recovery objective for Johnson's seagrass is for its present range to remain stable for 10 years or to increase during that time. NMFS's 5-year review (2007) of the status of the species concluded that the first recovery objective had been achieved as of 2007. In fact, the range had increased slightly northward at that time, and we have no information indicating range stability has decreased since then. NMFS has determined that the proposed actions will adversely affect a total of 3,799.5 ft^2 of Johnson's seagrass critical habitat. But the action area is not a boundary of the species' range. The action areas that will be impacted are very small and the loss of potential areas for colonization will not affect the stability of the species' range now or in the future. Thus, we believe the proposed actions' effects will not impact the critical habitat's ability to contribute to range stability for Johnson's seagrass.

The second recovery objective for Johnson's seagrass requires that self-sustaining populations be present throughout the range at distances less than or equal to the maximum dispersal distance for the species. Due to its asexual reproductive mode, self-sustaining populations are present throughout the range of species. As discussed in Section 3.2.1, there are approximately 22,574 ac of Johnson's seagrass critical habitat. The loss of 3,799.5 ft^2 (0.087 ac) of designated critical habitat for Johnson's seagrass in Unit J would equate to a loss of 0.00039% of Johnson's seagrass critical habitat (0.087 ac x 100 /22,574 ac). This loss will not affect the conservation value of available critical habitat to an extent that it would impact Johnson's seagrass self-sustaining populations by adversely affecting the availability of suitable habitat in which the

species can spread/flow in the future. Drifting fragments of Johnson's seagrass can remain viable in the water column for 4-8 days (Hall et al. 2006), and can travel several km under the influence of wind, tides, and waves. Because of this, we believe that the removal of 3,799.5 ft^2 of critical habitat for these 5 projects combined will not appreciably diminish the conservation value of critical habitat in supporting self-sustaining populations.

The final recovery objective is for populations and supporting habitat in the geographic range of Johnson's seagrass to have long-term protection (through regulatory action or purchase acquisition). Though the affected portion of the project site will not be available for the long-term, thousands of acres of designated critical habitat are still available for long-term protection, which would include areas surrounding the action areas.

Based on the above analysis, we conclude that the proposed actions' adverse effects on Johnson's seagrass critical habitat will not impede achieving the recovery objectives listed above and will, therefore, not appreciably diminish the value of critical habitat for the conservation of the species.

8 CONCLUSION

We have analyzed the best available data, the current status of the species and the critical habitat, environmental baseline, effects of the proposed action, and cumulative effects, it is our opinion that the loss of 3,799.5 ft^2 (0.087 ac) from the proposed actions, when considering the baseline and cumulative effects, will not interfere with achieving the relevant habitat-based recovery objectives for Johnson's seagrass. It is our opinion that the proposed actions will not impede the critical habitat's ability to support Johnson's seagrass conservation, despite permanent adverse effects. Therefore, we conclude that the actions, as proposed, are likely to adversely affect, but are not likely to destroy or adversely modify, Johnson's seagrass designated critical habitat.

9 INCIDENTAL TAKE STATEMENT

NMFS does not anticipate that the proposed action will incidentally take any species and no take is authorized. Nonetheless, any take of any ESA-listed species shall be immediately reported to takereport.nmfsser@noaa.gov. Refer to the present Biological Opinion by title, issuance date, NMFS ECO identifier numbers SERO-2020-00382, SERO-2020-00803, SERO-2020-01345, SERO-2020-01467, or SERO-2020-01469. At that time, consultation must be reinitiated.

10 CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

NMFS believes the following conservation recommendations are reasonable, necessary, and appropriate to conserve and recover Johnson's seagrass. NMFS strongly recommends that these measures be considered and adopted.

1. NMFS recommends that the USACE, in coordination with seagrass researchers and industry, support ongoing research on light requirements and transplanting techniques to preserve and restore Johnson's seagrass, and on collection of plants for genetics research, tissue culture, and tissue banking.

2. NMFS recommends that the USACE continue promoting the use of the October 2002 *Key for Construction Conditions for Docks or other Minor Structures Constructed in or over Johnson's Seagrass* as the standard construction methodology for proposed docks located in the range of Johnson's seagrass.

3. NMFS recommends that the USACE review and implement the recommendations in the July 2008 report, *The Effects of Docks on Seagrasses, With Particular Emphasis on the Threatened Seagrass, Halophila johnsonii* (Landry et al. 2008a).

4. NMFS recommends that the USACE review and implement the Conclusions and Recommendations in the October 2008 report, *Evaluation of Regulatory Guidelines to Minimize Impacts to Seagrasses from Single-family Residential Dock Structures in Florida and Puerto Rico* (Shafer et al. 2008).

5. NMFS recommends that a report of all current and proposed USACE projects in the range of Johnson's seagrass be prepared and used by the USACE to assess impacts on the species from these projects, to assess cumulative impacts, and to assist in early consultation that will avoid and/or minimize impacts to Johnson's seagrass and its critical habitat. Information in this report should include location and scope of each project and identify the federal lead agency for each project. The information should be made available to NMFS.

6. NMFS recommends that the USACE conduct and support research to assess trends in the distribution and abundance of Johnson's seagrass. Data collected should be contributed to the Florida Fish and Wildlife Conservation Commission's Florida Wildlife Research Institute to support ongoing geographic information system mapping of Johnson's seagrass and other seagrass distribution.

7. NMFS recommends that the USACE prepare an assessment of the effects of other actions under its purview on Johnson's seagrass for consideration in future consultations.

11 REINITIATION OF CONSULTATION

As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of taking specified in the proposed actions is exceeded, (2) new information reveals effects of the actions that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the identified actions

are subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the Biological Opinion, or (4) a new species is listed or critical habitat designated that may be affected by the identified actions.

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