UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

MEMORANDUM FOR MDBC PROJECT FILES

TO: Rachel W. Sweeney, DWH Program Manager

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DATE: May 28, 2021

SUBJECT: Environmental compliance analysis for coral sampling activity by ROV in support of MDBC portfolio planning phase activities

The preferred alternatives for project implementation under the Mesophotic and Deep Benthic Communities (MDBC) restoration type (collectively referenced herein as "the MDBC portfolio") in the Final Open Ocean Restoration Plan 2 / Environmental Assessment (OORP2/EA) described the need for collection of biological samples in support of assessments of genetic connectivity, life history characteristics, health condition, and trophodynamic linkages among ecosystem components. OORP2/EA further describes that surveys performed under the MDBC portfolio would collect data and samples by ROV, AUV, technical divers, HOV, and image-based monitoring. As stated in OORP2/EA, through the MDBC portfolio, "Small samples of corals and other sessile benthic invertebrates, associated mobile invertebrates and fish, and sediment cores and traps would also be collected along with oceanographic conditions using instrumented moorings or landers."

MDBC Coral Propagation Technique Development (CPT) project managers have identified activities being undertaken separately from the DWH restoration program that can be leveraged for opportunistic sample collection for MDBC CPT project purposes, as well as for evaluation of potential partner capabilities for project field implementation. Coral sample collection will support establishment of standard operating procedures for husbandry operations for the Coral Propagation Technique Development project.

These opportunities result from separate federal activities that will proceed regardless of the additional MDBC-related sample collection, and that have been fully evaluated for compliance with relevant environmental regulations by the federal programs conducting the work. This memo analyzes the status of environmental compliance for sample collection, and assesses the potential need for any additional compliance for the incremental additional work associated with the opportunistic collection. It details the additional work and methodologies as well as documents the environmental compliance reviews conducted to date.

MDBC CPT project managers propose to leverage ongoing operations to survey the continental shelf edge of the South Atlantic Bight, between Port Canaveral, FL and Cape Lookout, NC, being performed by the NMFS Southeast Fisheries Science Center (SEFSC) aboard the NOAA Ship *Pisces* with embarkation and disembarkation from Cape Canaveral, FL between May 29 and June 12, 2021. MDBC CPT project managers also propose to leverage ongoing operations for habitat characterization and long-term

monitoring of reefs and banks in the northwest Gulf of Mexico being performed by the Flower Garden Banks National Marine Sanctuary (FGBNMS), aboard the R/V *Manta* (with embarkation and disembarkation from Galveston, TX between Jul. 11 and Jul. 24, 2021). Both efforts are supported by the University of North Carolina at Wilmington's Undersea Vehicle Program, which will operate the remotely operated vehicle (ROV) Mohawk for transect surveys and video documentation of habitat and reef fish communities and for collection of corals and sponges. Dates may vary based on operating windows allowed by weather, crew accommodations needed to meet COVID-19 safety requirements, mechanical issues, etc. This evaluation is also intended to encompass any additional opportunities for coral sample collection using similar methods to those described here that may be identified during the planning phase of the projects.

Existing Compliance Determinations and Status

OORP2/EA documented the evaluation of potential environmental consequences and compliance requirements of the MDBC portfolio. The following regulatory compliance reviews were determined not applicable to the projects in the portfolio:

- Bald and Golden Eagle Protection Act (USFWS)
- Endangered Species Act Section 7 (USFWS)
- Marine Mammal Protection Act (MMPA) (USFWS)
- Migratory Bird Treaty Act (MBTA) (USFWS)
- Rivers and Harbors Act/Clean Water Act (USACE permit)

OORP2/EA documented determinations that the following projects do not require a consistency determination or a negative determination was made under the Coastal Zone Management Act (CZMA): Mapping, Ground-truthing, and Predictive Habitat Modeling project, the Habitat Assessment and Evaluation project, and the Coral Propagation Technique Development Project. For the Active Management and Protection project, Federal agency consistency determinations were affirmed by the states bordering the Gulf of Mexico.

OORP2/EA documented determinations that the following regulatory compliance review was in progress for the projects in the MDBC portfolio. The compliance determinations for this statute are discussed below:

- National Historic Preservation Act (NHPA)

OORP2/EA documented determinations that the following regulatory compliance reviews would require a phased approach to consultation and/or reviews as implementation methodologies and locations were determined for the four proposed MDBC projects during the planning stages. The compliance determinations for these statutes are discussed below:

- Endangered Species Act - Section 7 (NMFS)
- Magnuson Stevens Act (EFH) (NMFS)
- Marine Mammal Protection Act (MMPA) (NMFS)

Description of the Project Area and Affected Environment

The mesophotic corals targeted by the collection work proposed here are described in Sections 3.5.3 and 4.5 of the DWH Programmatic Damage Assessment and Restoration Plan / Programmatic Environmental Impact Statement and in Section 4.3.2.1.1 of OORP2/EA. The areas targeted for this collection work in the northern Gulf of Mexico are also described in Section 4.3 of OORP2/EA. The areas targeted for this collection work in the South Atlantic Bight are generally biologically and ecologically similar, and are further described in the South Atlantic Fishery Management Council's *Habitat Plan for the South Atlantic Region* (1998), *Fishery Ecosystem Plan of the South Atlantic Region* (2009), and *Comprehensive Ecosystem-Based Amendment 2* (2012).

Description of MDBC Portfolio Activity: Opportunistic Planning Phase Collection of Coral Samples

The ongoing SEFSC and FGBNMS operations have previously been evaluated for environmental compliance and authorized in existing documentation including:

NOAA Fisheries Southeast Fisheries Science Center Fisheries Research Activities

(1) 2020 Final Programmatic Environmental Assessment for Fisheries and Ecosystem Research Conducted and Funded by the Southeast Fisheries Science Center[1]
(2) 2016 ESA Section 7 Biological Opinion on the Continued Authorization and Implementation of National Marine Fisheries Service's Integrated Fisheries Independent Monitoring Activities in the Southeast Region and 2018 Amendment[1]
(3) 2020 Letter of Authorization under MMPA for incidental take of marine mammals during Southeast Fisheries Science Center fishery and ecosystem research activities in the Atlantic Ocean, Gulf of Mexico and Caribbean Sea[1]
(4) 2011 Programmatic Environmental Assessment for NOAA Fisheries Southeast Regional Office Federal Financial Assistance and Special Permits;
(5) 2021 Supplemental Programmatic Environmental Assessment (S-PEA) for NOAA Fisheries Southeast Regional Office and Southeast Fishery Science Center Federal Financial Assistance and Special Permits
(6) 2017 Scientific Research Permit and Turtle Excluder Device Exemption issued by the NMFS Southeast Regional Office for scientific research activities conducted by the SEFSC from 2017-2021 (inclusive of the supporting ESA Section 7 Consultation Biological Opinion and MMPA Letter of Authorization)

Flower Garden Banks National Marine Sanctuary

(1) 2012 Final Environmental Assessment of the FGBNMS Final Management Plan

Coral collection is a standard part of these particular SEFSC and FGBNMS missions. The only activity that would not occur but for the MDBC projects is the collection of the specific numbers of whole coral colonies to be used by the MDBC teams for husbandry operations planning.

MDBC CPT project managers plan targeted collections during each cruise mission not to exceed 50 whole (live) colonies across all target taxa for laboratory culture. The colonies collected during each cruise may be from any of five Alcyonacean octocoral (sea fan) taxa (*Muricea pendula* (formerly *Hypnogorgia pendula*); *Placogorgia, Paramuricea,* and *Muriceides),* and *Swiftia exserta.* None of the target taxa are ESA listed. Sampling will be limited to collection of no more than 3 whole colonies from

[1] Available at: https://www.fisheries.noaa.gov/action/incidental-take-authorization-noaa-fisheries-southeast-fisheries-science-center-fisheries

aggregations of 12-15 colonies in order to minimize impact during coral sampling as described in OORP2/EA. As described in the 2021 SERO/SEFSC S-PEA, operators using ROVs for coral collection control the altitude of the ROV above the seabed using thrusters to avoid contact with benthos and select soft-bottom sites for landing to perform collection to avoid impacts to sensitive benthic resources.

MDBC CPT project team members involved in collection activities will carry onboard during operations a Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) scientific research permit from NMFS Southeast Regional Office, issued in May 2021, which documents these coral collection activities as exempt from fishing regulations. All coral collection activities in the South Atlantic Bight will occur seaward of the boundaries of the state coastal zones in FL, GA, and SC. Additionally, the coral collection activities will not affect any coastal resource or coastal use within the states' coastal zones, and no CZMA federal consistency determination is required.

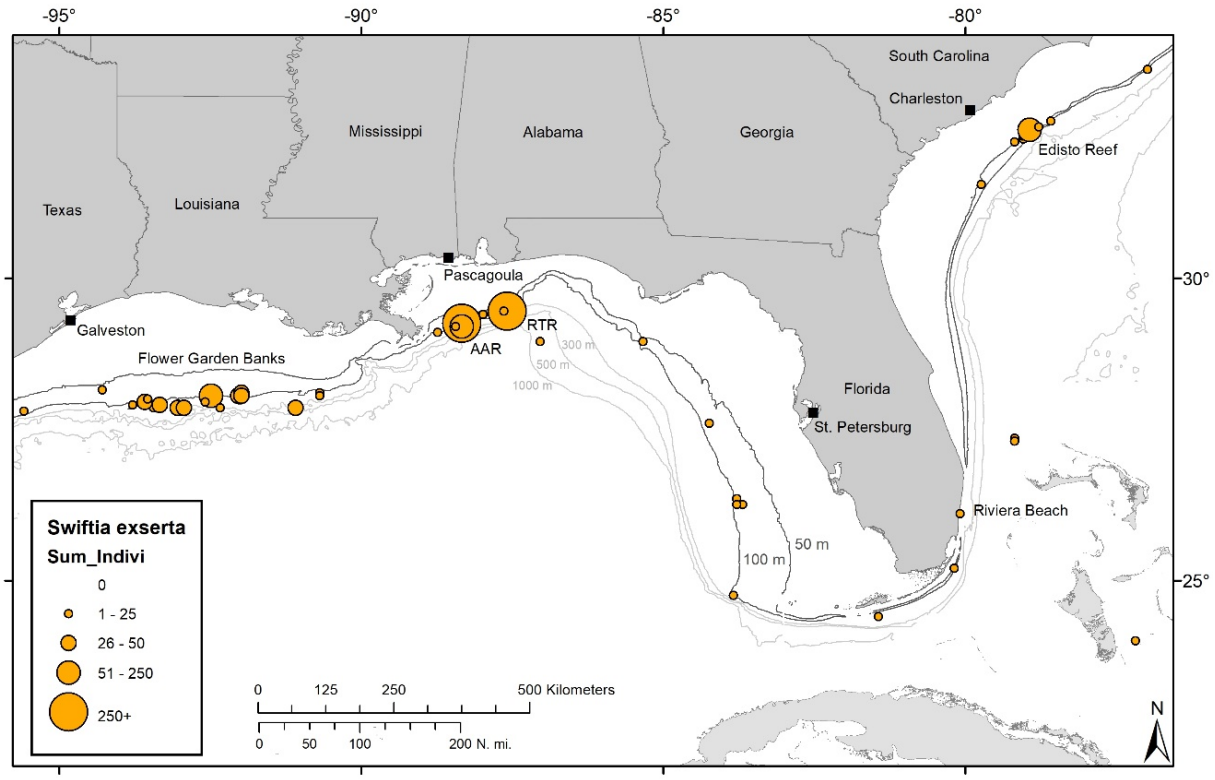

Figure 1. Aggregations of *Swiftia exserta* targeted for collection in the northern Gulf of Mexico and South Atlantic Bight. MDBC CPT project managers do not expect to perform collection activities offshore of Southwest FL and all collections in the Atlantic will be offshore and outside the coastal zones of any of those states.

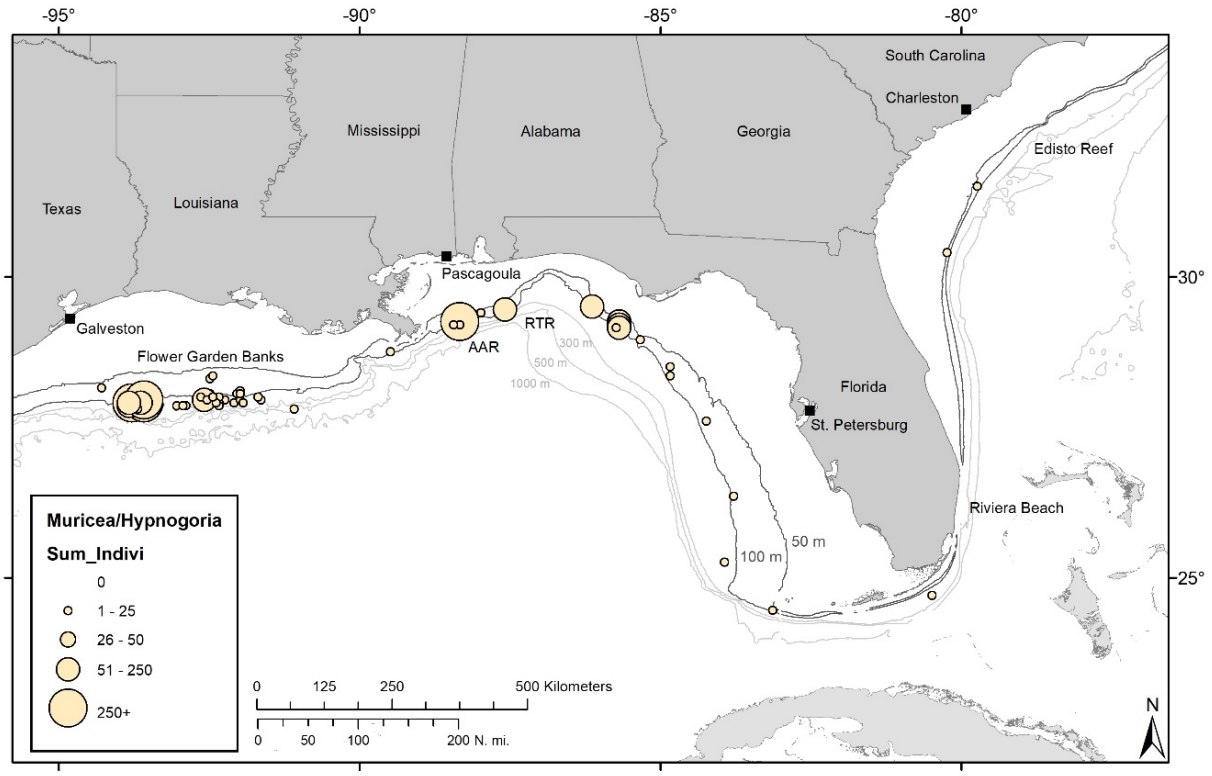

Figure 2. Aggregations of *Muricea pendula* targeted for collection in the northern Gulf of Mexico and South Atlantic Bight. MDBC CPT project managers do not expect to perform collection activities offshore of Southwest FL and all collections in the Atlantic will be far offshore and outside the coastal zones of any of those states.

The target taxa are delicate colonial organisms, consisting of thin branches with fleshy polyps that must be handled with care and maintained at cold temperatures at all times. Samples will consist of whole, live colonies (~20-50cm or ~8-20in), dislodged from their holdfasts by ROV manipulator arm and collected in sterile wide-mouth 1-gallon or 5-gallon polyethylene containers. ROV collection work will target the aggregations identified in Figures 1 and 2, below. No corals will be collected from areas that are designated protected areas such as Habitat Area of Particular Concern (HAPC), sanctuaries or marine protected areas.

Compliance Determinations for Opportunistic Planning Phase Collection of Coral Samples

MDBC Coral Propagation Technique Development project managers coordinated with both the DWH Environmental Compliance and NEPA Coordinators on the opportunistic planning phase coral sample collection activity described above to make the determinations below for statutes that were re-evaluated based on the details of the activity. If any project details change, these reviews will be re-evaluated as needed.

NEPA

Coral sample collection activities required for the MDBC portfolio are adequately described in Sections 2.6.4.1, 2.6.4.2, 2.6.4.3, 2.6.4.4, 3.8.1.2, 3.8.2.2, 3.8.3.2, and 3.8.4.2 of OORP2/EA. Coral sample collection is included in the OORP2/EA description of activities that would provide fundamental information to prioritize and support MDBC protection and management activities as well as direct

restoration; fill critical gaps in our understanding of the health, biodiversity, recovery, and resilience of MDBC taxa; support analyses of coral age dating, growth rates, and population genetics; maximize restoration and protection using population genetic models; and develop methods and techniques for effective enhancement of coral recruitment and growth. Potential impacts of these activities are addressed in Sections 4.4.6.1, 4.4.6.2, 4.4.6.3, and 4.4.6.4. OORP2/EA found that MDBC portfolio activities including collection of biological samples could result in short-term, localized, minor adverse impacts to the benthic habitats and communities from which biological samples would be collected. These impacts result from the collection of the small number of individual colonies indicated here, from landing and unavoidable or inadvertent strikes by the ROV on the bottom, and from potential trampling of sessile or slow-moving biota that may be present at landing site. Operator care and training are applied to avoid and minimize these impacts to the greatest extent possible.

Impacts from collection of samples during the two missions evaluated here would result in not more than the short-term, localized, minor adverse impacts to the benthic habitats and communities from which samples would be collected that were described in OORP2/EA. This determination is consistent with those of the SERO, SEFSC, and FGBNMS Environmental Assessments cited above. No additional NEPA review is necessary based on the existing NEPA analyses already completed.

Coastal Zone Management Act

MDBC CPT project activities in the Gulf of Mexico, including coral sample collections, were documented in OORP2/EA as not requiring a consistency determination under the Coastal Zone Management Act (CZMA). Likewise, all coral collection activities to be performed in the South Atlantic Bight will occur seaward of the boundaries of the state coastal zones in FL, GA, and SC. The coral collection activities to be performed in the South Atlantic Bight will not affect any coastal resource or coastal use within those states' coastal zones, and no CZMA federal consistency determination is required.

National Historic Preservation Act

The proposed planning phase collection of coral samples will be performed in a deepwater, offshore area where no known buried cultural or historic resources are present on the sea floor. Based on the information provided above regarding the nature and location of the proposed coral sampling activity, the proposed activity will have no potential effect on known or unknown historic or cultural resources protected under the NHPA, thus no further review is required.

Endangered Species Act Section 7 – NMFS jurisdiction

The proposed opportunistic planning phase collection of coral samples involves minimal field work and sample collection. None of the targeted taxa are ESA listed. The proposed action is a *de minimis* collection of samples from large aggregations of the target coral taxa will not affect ESA-listed species or habitats under NMFS jurisdiction, thus no ESA consultation with NMFS is required.

Magnuson-Stevens Fishery Conservation and Management Act

The proposed opportunistic planning phase collection of coral samples involves minimal field work and sample collection from EFH (specifically the EFH category of “corals and coral reefs”). The impact of the proposed work is *de minimis* in nature and will not result in effects to designated essential fish habitat (EFH). None of the proposed work will take place in any Habitat Area of Particular Concern or other designated marine protected area. These activities will have no effect, thus no EFH consultation with

NMFS is required. In May 2021, SERO issued a scientific research permit under the MSFCMA for coral collection during SEFSC operations.

Marine Mammal Protection Act – NMFS jurisdiction

The proposed opportunistic planning phase collection of coral samples involves minimal field work and sample collection. This *de minimis* collection of samples from large aggregations of the target coral taxa would not affect any species protected by the MMPA under NMFS jurisdiction and does not have the potential to result in the take, injury, or harassment of any species protected under the MMPA. No further review is needed under MMPA.