

# 2020 SOUTH ATLANTIC REGIONAL BIOLOGICAL OPINION (2020 SARBO)

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US Army Corps  
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Management



# SARBO Overview and History

## Action Agencies

- U.S. Army Corps of Engineers South Atlantic Division (Lead Agency)
- BOEM Marine Minerals Program (Joint Consulting Agency)

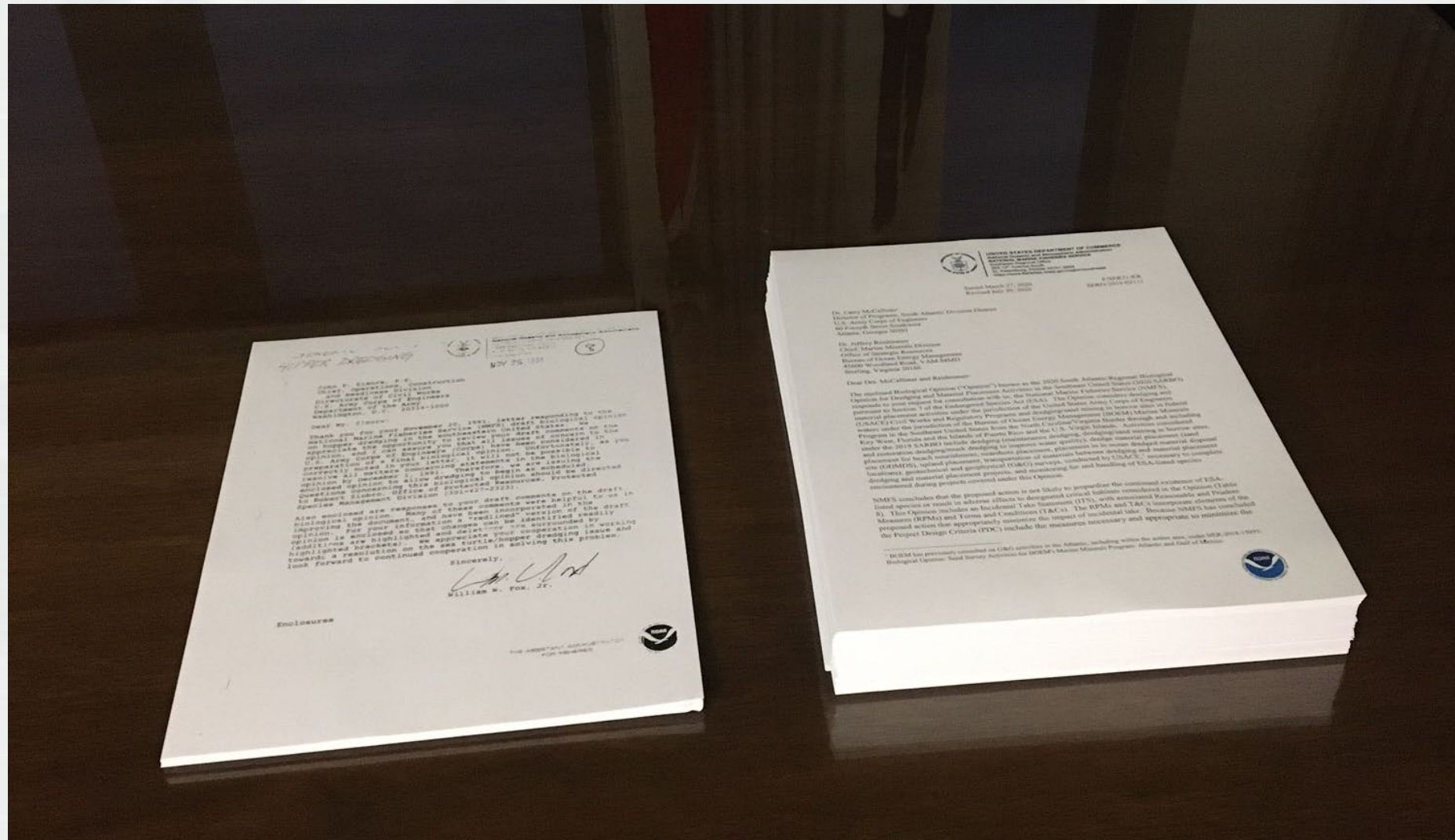
## 13 Years to Complete!

- 1997 SARBO– Amended 1995 opinion
- 2007: USACE formally reinstitute consultation
- 2008: USACE/ BOEM Joint SARBA
- 2018: Meet with State Partners
- March 27, 2020: SARBO Signed by NMFS
- July 31, 2020: SARBO revised to clarify use of single-beam sonar



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# 1997 SARBO vs 2020 SARBO



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# More Activities Covered

## Five types of activities covered under the 2020 SARBO

### 1. Dredging

- Maintenance dredging
- Dredging/sand mining in borrow sites
- Restoration dredging/muck dredging to improve water quality

### 2. Dredge material placement

- Sand placement for beach nourishment
- Nearshore placement
- Placement in an Ocean dredged material disposal site (ODMDS)
- Upland placement

3. **Transportation of dredge materials** between dredging and material placement locations.

4. **Geophysical and geotechnical surveys** performed by or authorized by the USACE necessary to complete dredging and material placement projects

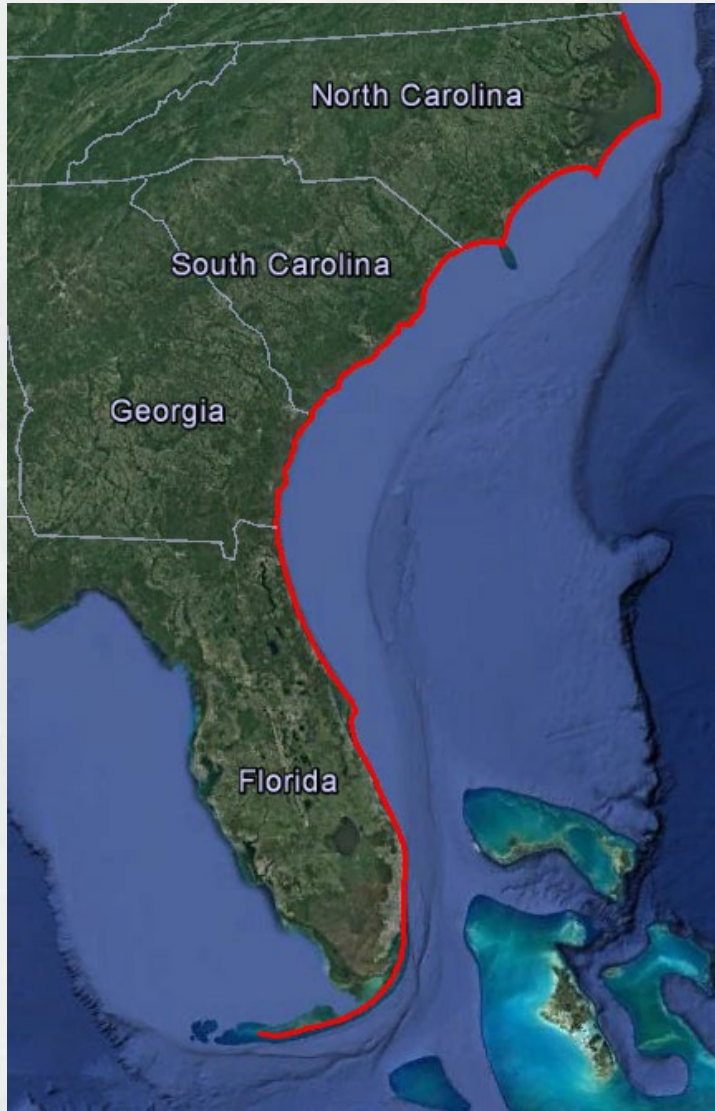
5. **Monitoring for and handling of ESA-listed species encountered**

- Relocation Trawling
- Genetic Sampling



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# More Area Covered



## 2020 SARBO Action Area:

- Waters off of the Atlantic coast, from the North Carolina/Virginia border south to the tip of Florida including the Florida Keys
- Waters off of the Islands of Puerto Rico and the U.S. Virgin Islands.
- Sturgeon spawning rivers



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# More Species Considered

| 25 Species Covered in 2020 SARBO |   |                                |
|----------------------------------|---|--------------------------------|
| Species                          | Sub-Species   |                                |
| Sea Turtles                      | Kemp's Ridley, green, hawksbill, leatherback, loggerhead                            |                                |
| Sturgeon                         | Shortnose, Atlantic   |                                |
| Whales                           | North Atlantic Right Whale, Blue, Fin, Sei, Sperm                                   |                                |
| Corals                           | Boulder star, elkhorn, Lobed star, Mountainous star, Pillar, rough cactus, staghorn |                                |
| Nassau Grouper                   | <b>Critical Habitat covered in 2020 SARBO</b>                                       |                                |
| Giant manta ray                  | Species   | Sub-Species                    |
| Scalloped Hammerhead Shark       | Corals  | Elkhorn/Staghorn               |
| Smalltooth Sawfish               | Sea Turtles   | Green, leatherback, loggerhead |
| Oceanic Whitetip Shark           | Johnsons Seagrass   |                                |
| Johnsons Seagrass                | North Atlantic Right Whale  |                                |
|                                  | Atlantic Sturgeon   |                                |



1997 SARBO only covered sea turtles, shortnose sturgeon, whales



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# In-Depth Analysis of Routes of Effects

## 1. Species Interactions with Dredging and Material Placement

- Entrainment/ Impingement
- Water Quality Changes
- Hopper, hydraulic, mechanical, agitation dredging

## 2. Entanglement

## 3. Species Effects from Relocation Trawling

- Effects from Capture
- Effects from tagging, genetic sampling

## 4. Vessel Strikes

## 5. Species Interaction with Material Placement

## 6. Blocked Access by Construction or Material Placement

## 7. Habitat Alteration

## 8. Sound Generated by Projects

- Equipment noise
- Geophysical Surveys



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# Other Major Changes in 2020 SARBO

## **USACE/ BOEM/ NMFS Partnership**

- Frequent coordination to determine if/when changes are needed
- Increased reporting including annual review of project specific details and lessons learned

## **Project Design Criteria (PDCs) and Risk-based adaptive management**

- All projects must meet PDCs. Determined under umbrella of risk-based assessments
- Internal living document considering risk to all species and habitat and recommending minimization measures at a project and regional scale

## **Species-Specific PDCs**

- North Atlantic Right Whale Conservation Plan, ESA-listed Corals, Atlantic sturgeon

## **Supersede procedures- Avoids unnecessary consultations and reinitiation**

- Covers actions with effects that are substantially similar to the effects considered in the Opinion
- Covers unplanned actions, equipment, etc.



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# 2020 SARBO Incidental Take Statement

Table 52. Anticipated Future Take Per 3 Consecutive Year Period

| Species                              | Nonlethal Take - Observed | Lethal Take - Observed | Lethal Take - Unobserved | Total Lethal Observed + Unobserved Take | Sea Turtle Lost Egg Clutch |
|--------------------------------------|---------------------------|------------------------|--------------------------|---|----------------------------|
| Green Sea Turtle NA DPS              | 742                       | 59                     | 59                       | 118                                     | 3                          |
| Green Sea Turtle SA DPS              | 40                        | 4                      | 4                        | 8                                       | 0                          |
| Kemp's Ridley Sea Turtle             | 1340                      | 58                     | 58                       | 116                                     | 1                          |
| Leatherback Sea Turtle               | 369                       | 0                      | 4                        | 4                                       | 6                          |
| Loggerhead Sea Turtle NWA DPS        | 5270                      | 107                    | 107                      | 214                                     | 65                         |
| Atlantic Sturgeon South Atlantic DPS | 499                       | 73                     | 0                        | 73                                      | N/A                        |
| Atlantic Sturgeon Carolina DPS       | 319                       | 47                     | 0                        | 47                                      | N/A                        |
| Atlantic Sturgeon Chesapeake Bay DPS | 91                        | 14                     | 0                        | 14                                      | N/A                        |
| Atlantic Sturgeon New York Bight DPS | 34                        | 5                      | 0                        | 5                                       | N/A                        |
| Atlantic Sturgeon Maine DPS          | 1                         | 1                      | 0                        | 1                                       | N/A                        |
| Shortnose Sturgeon                   | 6                         | 8                      | 6                        | 14                                      | N/A                        |
| Giant manta ray                      | 89                        | 0                      | 0                        | 0                                       | N/A                        |

Table 53. Anticipated Future Take Per Other Defined Time Period

| Species                       | Nonlethal Take - Observed      | Lethal Take - Observed       | Lethal Take - Unobserved            |
|-------------------------------|--------------------------------|------------------------------|-------------------------------------|
| Smalltooth sawfish (U.S. DPS) | 1 total per 3 year period      | 1 total per 9 year period    |                                     |
| Elkhorn Coral                 | 2 total per 10 year period     | 1 total per 10 year period   | Monitoring required = no unobserved |
| Staghorn Coral                | 1,105 total per 10 year period | 195 total per 10 year period | Monitoring required = no unobserved |
| Lobed star Coral              | 43 total per 10 year period    | 8 total per 10 year period   | Monitoring required = no unobserved |
| Mountainous star Coral        | 136 total per 10 year period   | 25 total per 10 year period  | Monitoring required = no unobserved |
| Boulder star Coral            | 63 total per 10 year period    | 11 total per 10 year period  | Monitoring required = no unobserved |



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# Additional Ongoing Research

- **USACE Water quality changes around dredging**
  - ERDC tested in Savannah, Charleston, and Wilmington
- **USACE Hydrodynamic modeling of specific areas**
  - Port Everglades, Wilmington, Morehead City
- **BOEM Sea turtle and Giant Manta behavior studies and Relocation Trawling efficacy study**
- **Innovative ways to reduce take on hopper dredging**
  - Tickler chains, lighting, water-injection



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# Questions?

<https://www.fisheries.noaa.gov/content/endangered-species-act-section-7-biological-opinions-southeast>



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