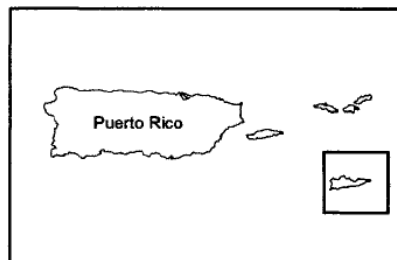
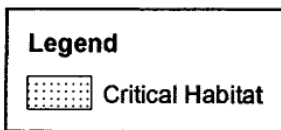
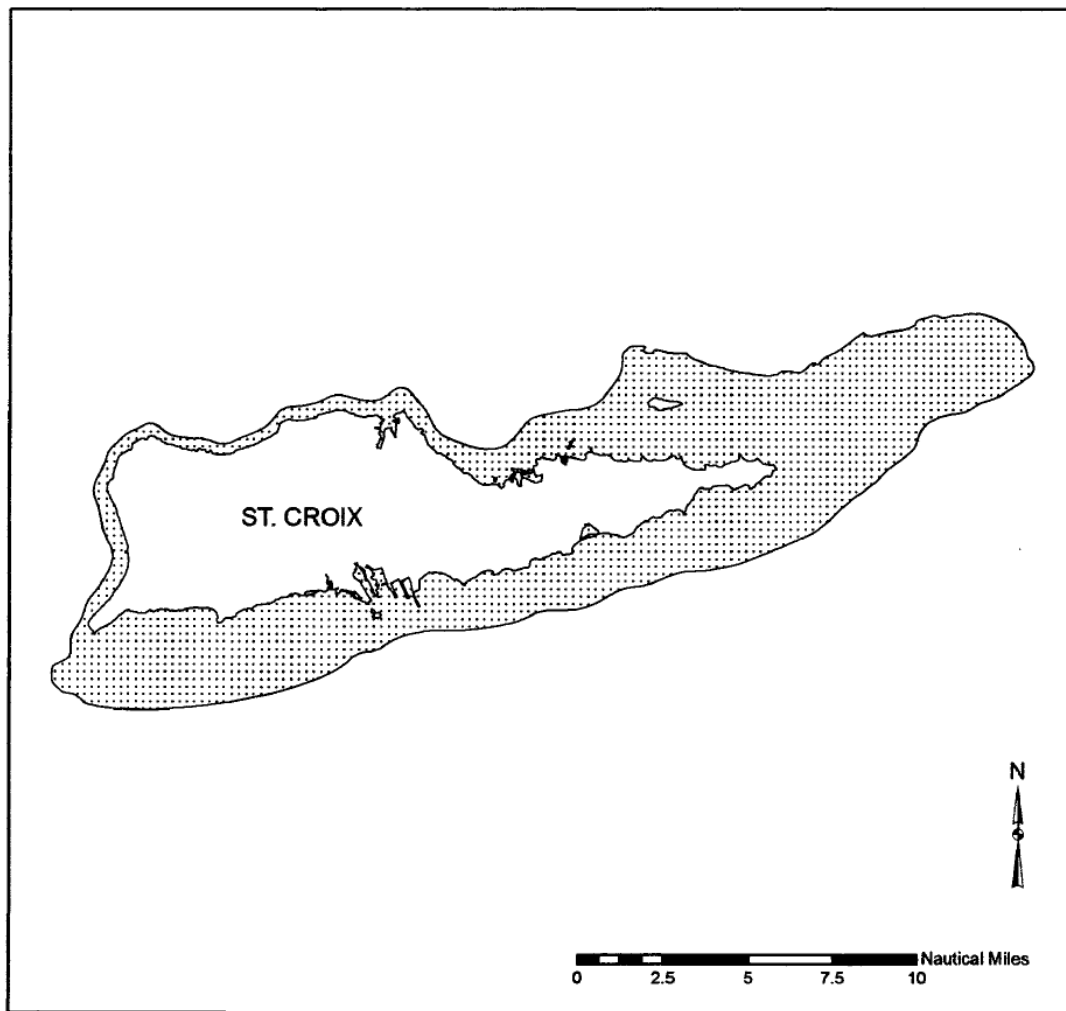


# DEFINITION OF CRITICAL HABITAT FOR ACROPORID CORALS

Physical or biological features essential for conservation

- Substrate of suitable quality and availability
- Water depths from MHW to 30 m
- Supporting successful larval settlement and reattachment of fragments
- Substrate means consolidated hard bottom or dead coral skeleton free of macroalgae and sediment cover

**Critical Habitat for Elkhorn and Staghorn Corals  
Area 4: St. Croix, U.S.V.I.**



# XXXXX Bay Project Area

- No historical records of either acroporid species at this location!
- No fossil record of either acroporid species at this location during the Holocene Epoch!
- No extant observations of either acroporid species at this location during the preparation of the initial benthic surveys or the Biological Assessment for this project!

# ADVERSE MODIFICATION OF CRITICAL HABITAT

regulatory definition: *Destruction or adverse modification* means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features.

# NMFS – DRAFT BIOLOGICAL OPINION FOR LISTED CORAL SPECIES

<b>Species or Critical Habitat</b>	<b>NMFS's Determination</b>
Rough cactus coral, <i>Mycetophyllia ferox</i>	May affect, but is not likely to adversely affect
Elkhorn and staghorn coral critical habitat	Destruction or adverse modification
Elkhorn coral, <i>Acropora palmata</i>	Likely to adversely affect, but not likely to jeopardize the continued existence of
Staghorn coral, <i>Acropora cervicornis</i>	Likely to adversely affect, but not likely to jeopardize the continued existence of
Pillar coral, <i>Dendrogyra cylindrus</i>	May affect, but is not likely to adversely affect
Lobed star coral, <i>Orbicella</i> (formerly <i>Montastraea</i> ) <i>annularis</i>	Likely to adversely affect, but not likely to jeopardize the continued existence of
Mountainous star coral, <i>Orbicella faveolata</i>	Likely to adversely affect, but not likely to jeopardize the continued existence of
Boulder star coral, <i>Orbicella franksi</i>	May affect, but is not likely to adversely affect

# NMFS – DRAFT BIOLOGICAL OPINION FOR LISTED CORAL SPECIES

## 10 Conclusion

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NMFS has analyzed the best available data, the current status of the species, environmental baseline, effects of the proposed action, and cumulative effects to determine whether the proposed action is likely to jeopardize the continued existence of elkhorn, staghorn, lobed star and mountainous star corals or green, leatherback, and hawksbill sea turtles, or result in the destruction or adverse modification of critical habitat for elkhorn and staghorn corals. It is our Opinion that the construction and operation of the [REDACTED] Bay project is not likely to jeopardize the continued existence of lobed star (*Orbicella annularis*), mountainous star (*Orbicella faveolata*), elkhorn (*Acropora palmata*) and staghorn (*Acropora cervicornis*) corals or leatherback (*Dermochelys coriacea*), green (*Chelonia mydas*), or hawksbill (*Eretmochelys imbricate*) sea turtles, but the project is likely to result in the destruction or adverse modification of designated critical habitat for elkhorn coral (*Acropora palmate*).

# Nearshore Hardbottom Outcrops Covered with Sediment





# Nearshore Hardbottom Habitats Covered with Macroalgae and Sediment





# Octocorals Covered with Migrating Sands



# Dead Octocoral Covered in Macroalgae and Buried in Sand



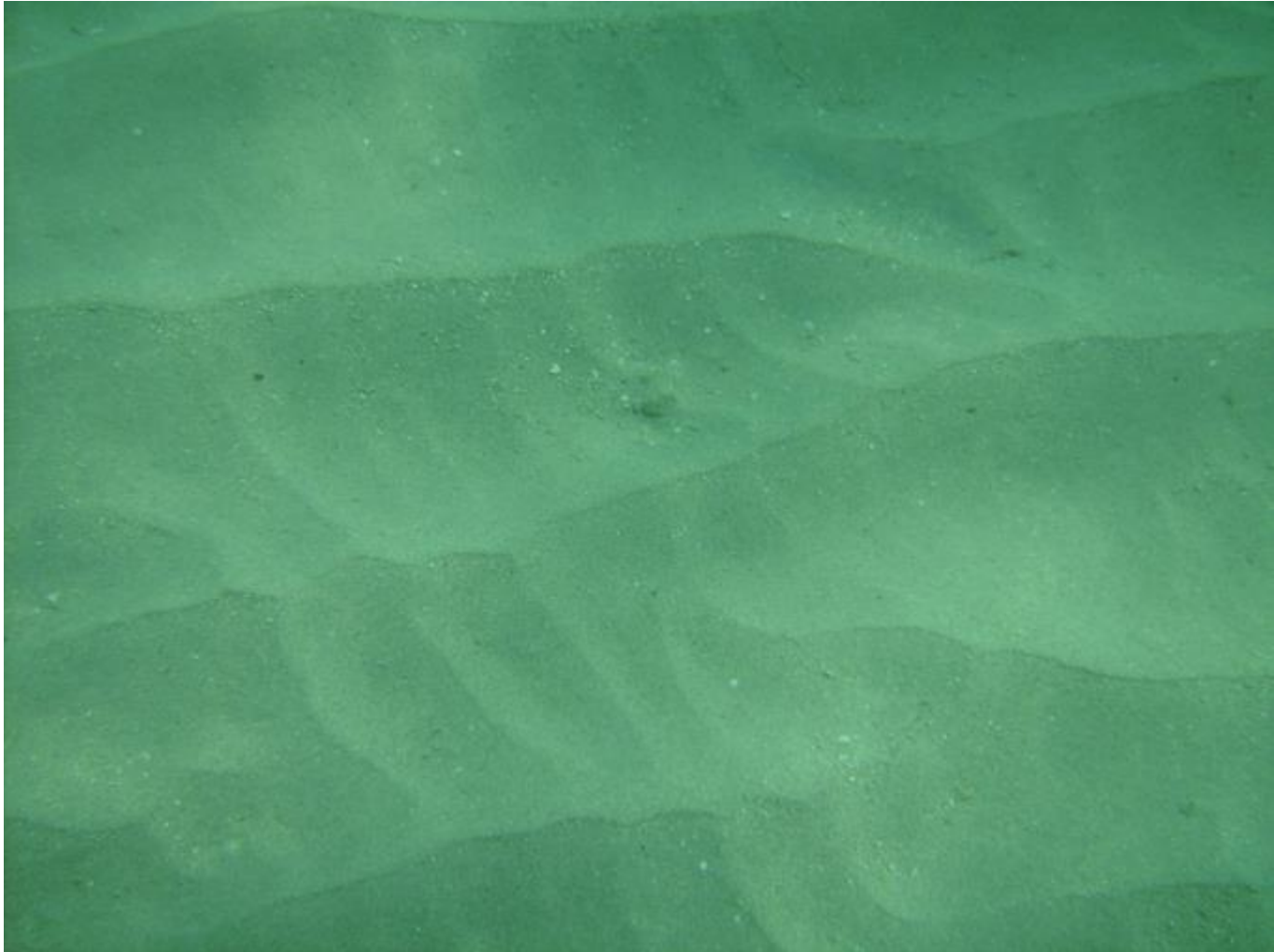
# Macroalgae and Sediment Covered Hardbottom



# Dead Coral Covered in Sediment

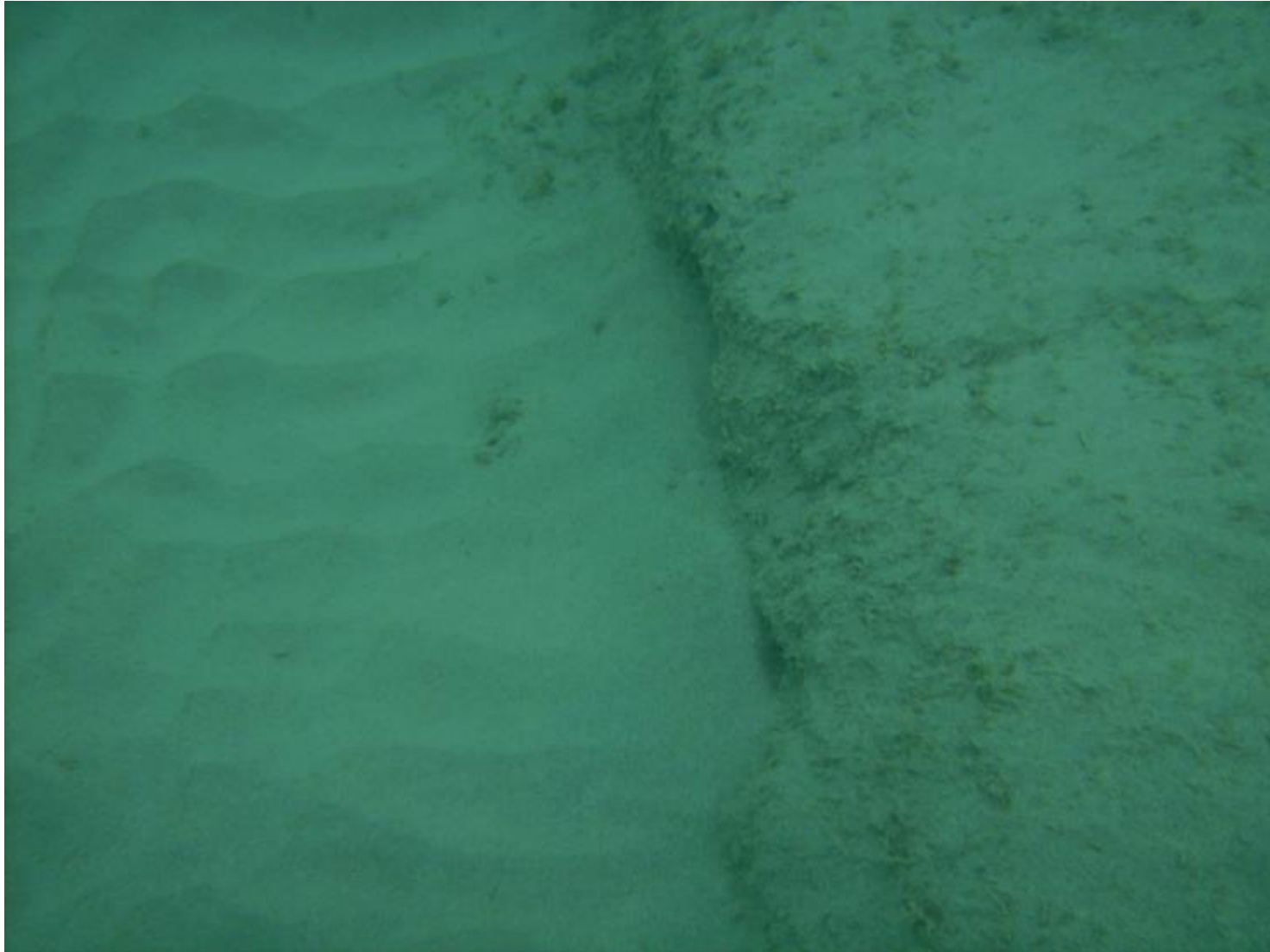


# Large Areas of Migrating Sand Waves and Ripples





# Sand and Sand Covered Hardbottom



# XXXX Bay Project Area

- 33 acres of critical habitat determined to be “Adversely Modified” by project.

## HOWEVER

- Most of that area is a combination of:  
(1) nearshore hardbottoms  
ephemerally covered with migrating  
and shifting sands; (2) macroalgae and/  
or sediment covered hardbottoms; (3)  
sediment laden algal turfs over  
hardbottom; and (4) small areas of  
exposed hardbottom with extant stony  
corals and octocorals.



# XXXX Bay Project

Natural sites covered with loose sediment, fleshy or turf macroalgal covered hard substrate, or seagrasses do not provide the essential feature for elkhorn and staghorn corals.

Substrates within the critical habitat boundaries that do not contain the essential feature are not part of the designation.

(from NOAA-NMFS 2008)

# XXXX Bay Project

- Does not meet definition of “Critical Habitat” for *Acropora palmata*.
- Does not meet definition of “Adverse modification” to critical habitat.