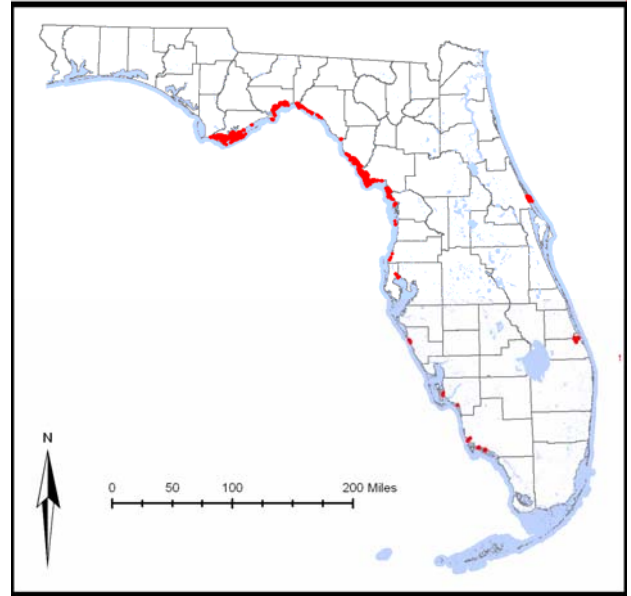


Bivalve Reef



Status

Current condition: Poor and declining. According to the best available GIS information at this time (see Appendix D. GIS Data Tables), approximately 13,586 acres (5,498 ha) of oyster reef (a subtype of Bivalve Reef habitat) are accurately mapped. However, spatial data are lacking for most oyster and other Bivalve Reefs, thus minimal distribution is portrayed in this habitat map.



Some habitat distributions or locations may be misrepresented on this map due to size, resolution and insufficient data sources.

Habitat Description

FNAI type: Mollusk Reef

This habitat is comprised of dense, expansive concentrations of sessile mollusks that attach to hard substrates and each other. Bivalve Reefs occur in both intertidal and subtidal zones to depths of 40 feet (12 m). In Florida the most extensive examples of this habitat, dominated by oysters, are restricted to estuarine environments where salinity concentrations range from 15 to 30 parts per thousand. Events or processes that alter freshwater deliveries to estuaries are detrimental to this habitat. The Bivalve Reef habitat is a diverse ecological community that provides nursery grounds, refugia, and foraging areas to a wide variety of wildlife species.

Associated Species of Greatest Conservation Need

Mammals

- | | |
|---|-----------------------------|
| • <i>Procyon lotor auspicatus</i> | Key Vaca Raccoon |
| • <i>Procyon lotor incautus</i> | Key West Raccoon |
| • <i>Trichechus manatus latirostris</i> | Florida Manatee |
| • <i>Tursiops truncatus</i> | Atlantic Bottlenose Dolphin |

Birds

- | | |
|---------------------------------------|------------------------|
| • <i>Haematopus palliatus</i> | American Oystercatcher |
| • <i>Numenius phaeopus hudsonicus</i> | Whimbrel |
| • <i>Limosa fedoa</i> | Marbled Godwit |
| • <i>Calidris canutus rufa</i> | Red Knot |
| • <i>Calidris mauri</i> | Western Sandpiper |

Reptiles

- | | |
|------------------------------|----------------------|
| • <i>Malaclemys terrapin</i> | Diamondback Terrapin |
| • <i>Caretta caretta</i> | Loggerhead |
| • <i>Lepidochelys kempii</i> | Kemp's Ridley |

Fish

- | | |
|--------------------------------------|-------------------------|
| • <i>Negaprion brevirostris</i> | Lemon Shark |
| • <i>Sphyrna tiburo</i> | Bonnethead |
| • <i>Albula vulpes</i> | Bonefish |
| • <i>Opsanus beta</i> | Gulf Toadfish |
| • <i>Opsanus pardus</i> | Leopard Toadfish |
| • <i>Opsanus tau</i> | Oyster Toadfish |
| • <i>Centropomus undecimalis</i> | Common Snook |
| • <i>Epinephelus itajara</i> | Goliath Grouper |
| • <i>Lutjanus griseus</i> | Gray Snapper |
| • <i>Archosargus probatocephalus</i> | Sheepshead |
| • <i>Pogonias cromis</i> | Black Drum |
| • <i>Sciaenops ocellatus</i> | Red Drum |
| • <i>Prognathodes aculeatus</i> | Longsnout Butterflyfish |
| • <i>Stegastes partitus</i> | Bicolor Damselfish |
| • <i>Lachnolaimus maximus</i> | Hogfish |
| • <i>Stathmonotus hemphilli</i> | Blackbelly Blenny |

Invertebrates

- | | |
|--------------------------------|----------------|
| • <i>Crassostrea virginica</i> | Eastern Oyster |
| • <i>Fasciolaria liliium</i> | Banded Tulip |

Conservation Threats

Threats to the Bivalve Reef habitat that were also identified for multiple other habitats are addressed in the Chapter Multiple Habitat Threats and Conservation Actions. These threats include:

- Channel modification/shipping Lanes
- Coastal development

- Dam operations/incompatible release of water (quality, quantity, timing)
- Harmful algal blooms
- Incompatible fishing pressure
- Incompatible industrial operations
- Incompatible recreational activities
- Incompatible wildlife and fisheries management strategies
- Invasive animals
- Management of nature (beach nourishment and impoundments)
- Nutrient loads (urban)
- Roads, bridges and causeways
- Surface water and groundwater withdrawal

The following stresses and sources of stress threaten this habitat:

Stresses		Habitat Stress Rank
A	Altered hydrologic regime	Very High
B	Altered structure	High
C	Altered water quality–physical, chemical	High
D	Habitat disturbance	High
E	Altered species composition	Medium
F	Altered water quality–nutrients	Medium
G	Altered water quality–contaminants	Medium
H	Erosion	Medium
I	Excessive depredation	Medium
J	Sedimentation	Medium

The sources of stress, or threats, were used to generate conservation actions.

Sources of Stress		Habitat Source Rank	Related Stresses (see above)
1	Inadequate stormwater management	Very High	A, B, C, D, F, G
2	Roads, bridges and causeways	High	A
3	Coastal development	High	A, J
4	Dam operations/incompatible release of water (quality, quantity, timing)	High	A, B, C, F, G
5	Harmful algal blooms	High	D, E, F
6	Surface water withdrawal	High	A, C
7	Channel modification/shipping lanes	High	A, J
8	Invasive animals	High	B, E, I
9	Nutrient loads (all sources)	High	F
10	Management of nature (beach nourishment, impoundments)	High	A, B, C
11	Incompatible recreational activities	Low	D
12	Incompatible industrial operations	Low	G
13	Incompatible wildlife and fisheries management strategies	Low	B, E

Sources of Stress		Habitat Source Rank	Related Stresses (see above)
14	Incompatible fishing pressure	Low	E
15	Boating impacts	Low	B, D, H
Statewide Threat Rank of Habitat		Very High	

Conservation Actions

Nearly all threats to Bivalve Reefs were also identified as statewide threats (see list above). Actions for abatement are addressed in the Chapter Multiple Habitat Threats and Conservation Actions. The sole habitat-specific threat to Bivalve Reefs is Boating impacts, which also affects several other marine and estuarine habitats. Consequently, actions to abate this threat will be the same or similar to the actions recommended for the other affected marine and estuarine habitats (e.g., Coastal Tidal River or Stream, Submerged Aquatic Vegetation, Subtidal Unconsolidated Marine/Estuary Sediment, Tidal Flat) and are not repeated here.