

# Restoration Blueprint

An Effort to Restore Critical Marine Habitats in the Florida Keys



# Sanctuary Advisory Council Goals

Improve biological diversity and restore and enhance natural systems across all regions of the Keys

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Facilitate public and private resource use compatible with resource protection

- Reduce stresses from human activities by establishing areas that restrict access to sensitive wildlife and habitats
- Protect large and contiguous habitats to replenish and preserve habitats and full life cycle needs of species
- Improve/maintain the condition of habitats
- Increase abundance and condition of selected key species
- Minimize conflicts among uses
- Prevent heavy concentrations of uses that degrade sanctuary resources
- Provide undisturbed sites for research and monitoring
- Achieve vibrant sustainable ecosystem and economy

# Proposed Action

## Alternatives

No Action

Range of Reasonable Alternatives (3)

*Alternative 3 is agency preferred*

## Alternative Components

Management Plan activities

Boundary expansion

Sanctuary-wide regulations

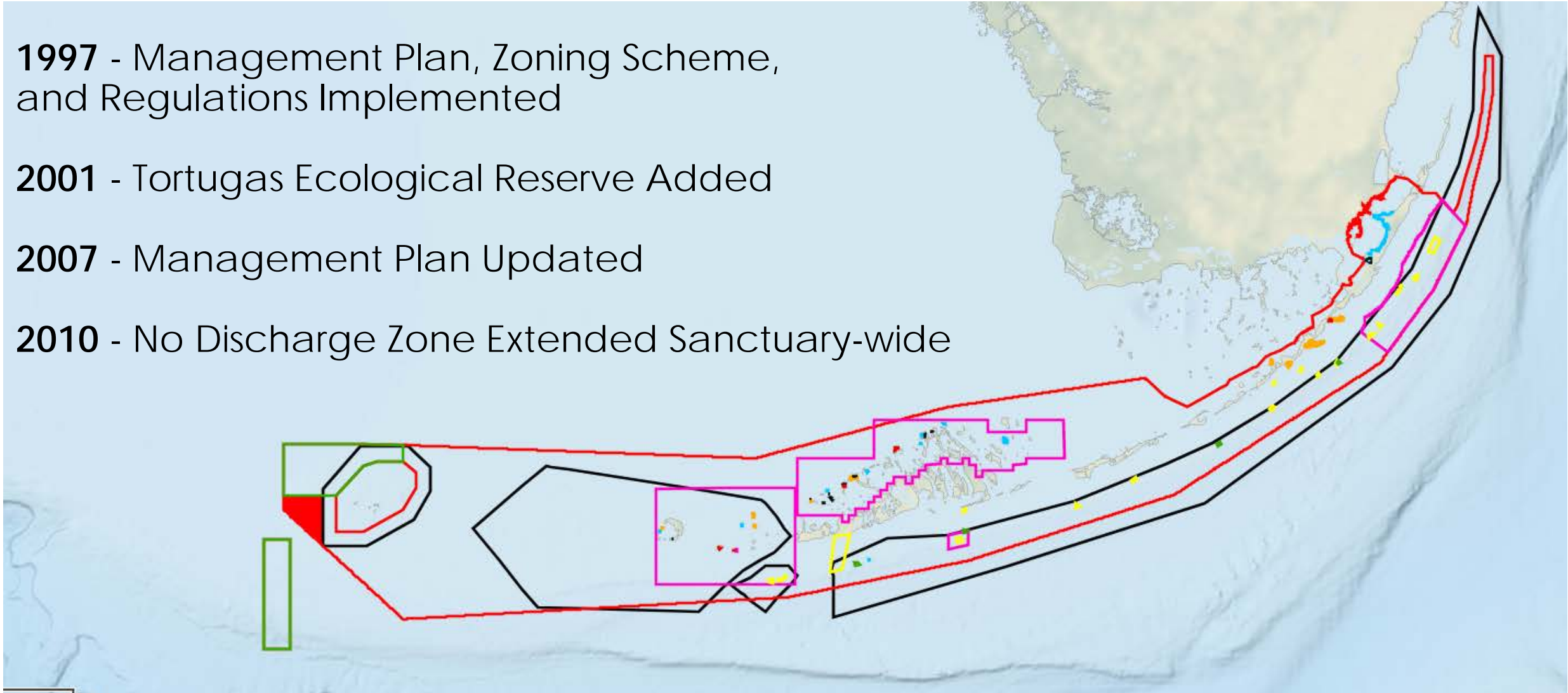
Marine zones & zone specific regulations





# Alternative 1: No Action

- 1997** - Management Plan, Zoning Scheme, and Regulations Implemented
- 2001** - Tortugas Ecological Reserve Added
- 2007** - Management Plan Updated
- 2010** - No Discharge Zone Extended Sanctuary-wide



# Management Plan

# Management Approach

**GOAL 1:** Improve our Understanding of Sanctuary Resources, Ecosystem Services, and their Value to the Florida Keys Economy.



- Develop Comprehensive Science Plan
- Develop online data portal
- Survey for and identify historical resources
- Repeat economic value study



# Management Approach

**GOAL 2:** Maintain or Improve the Condition of Sanctuary Resources and, where possible, Restore Ecosystem Structure and Function.



- Update water quality monitoring program
- Develop sanctuary restoration plan
- Collaborate to understand and improve the condition of living marine resources



# Management Approach

**GOAL 3:** Maintain or Increase Efforts to Reduce Threats to Sanctuary Resources and Manage Human Uses and Associated Impacts.



- Monitor human use and potential impacts
- Implement a mooring buoy program
- Enhance regulatory compliance
- Execute the permitting program
- Expand the Blue Star programs





# Management Approach

**GOAL 4:** Increase Awareness and Support for FKNMS and its Resources.



- Enhance outreach activities and expand to include new and diverse audiences
- Develop issue-specific outreach products and tools
- Support and strengthen volunteer programs



# Management Approach

**GOAL 5:** Advance and Support Collaborative and Coordinated Management.



- Facilities and operational requirements
- Enhance existing partnership and collaborative management
- Staffing plans, training



Side Elevation

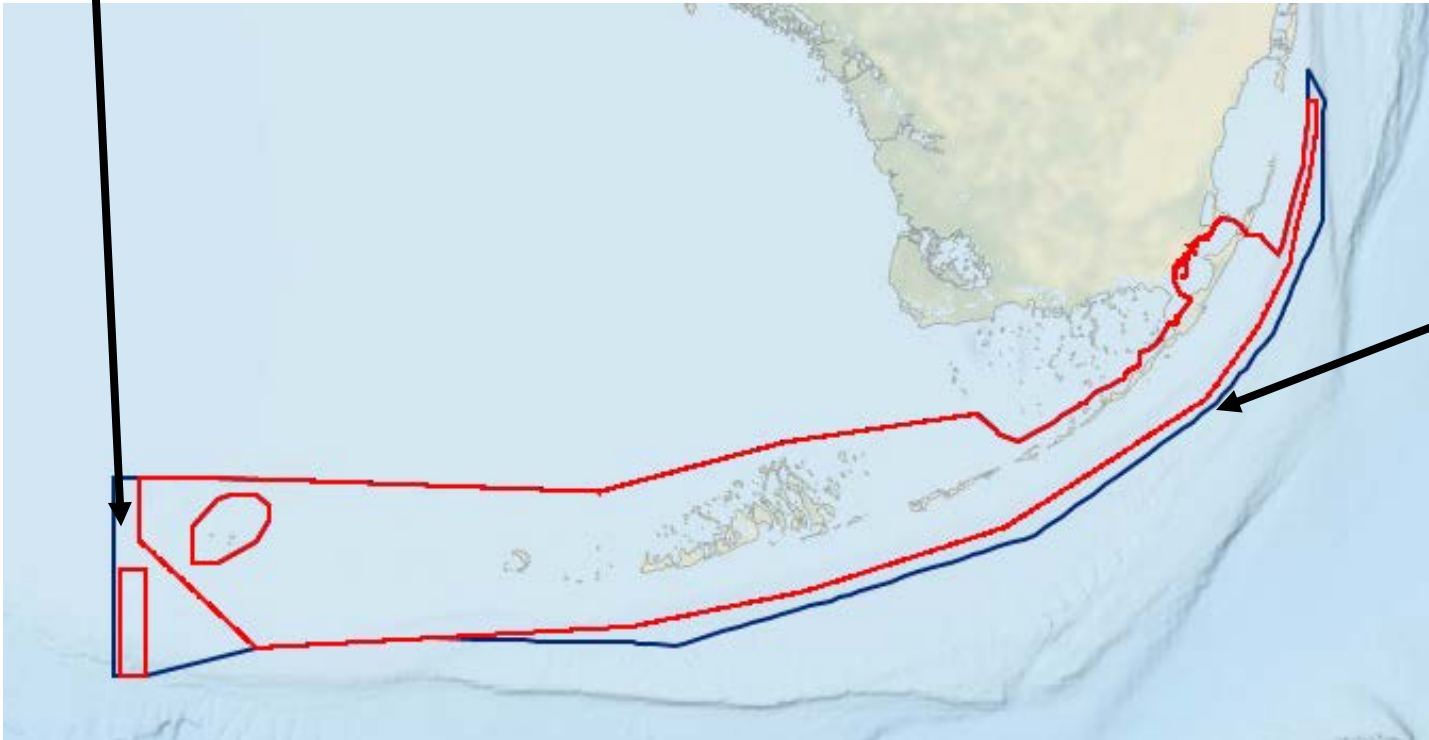


# Sanctuary Boundary



# Sanctuary Boundary Expansion: Alternatives 2 & 3

Connectivity- Tortugas



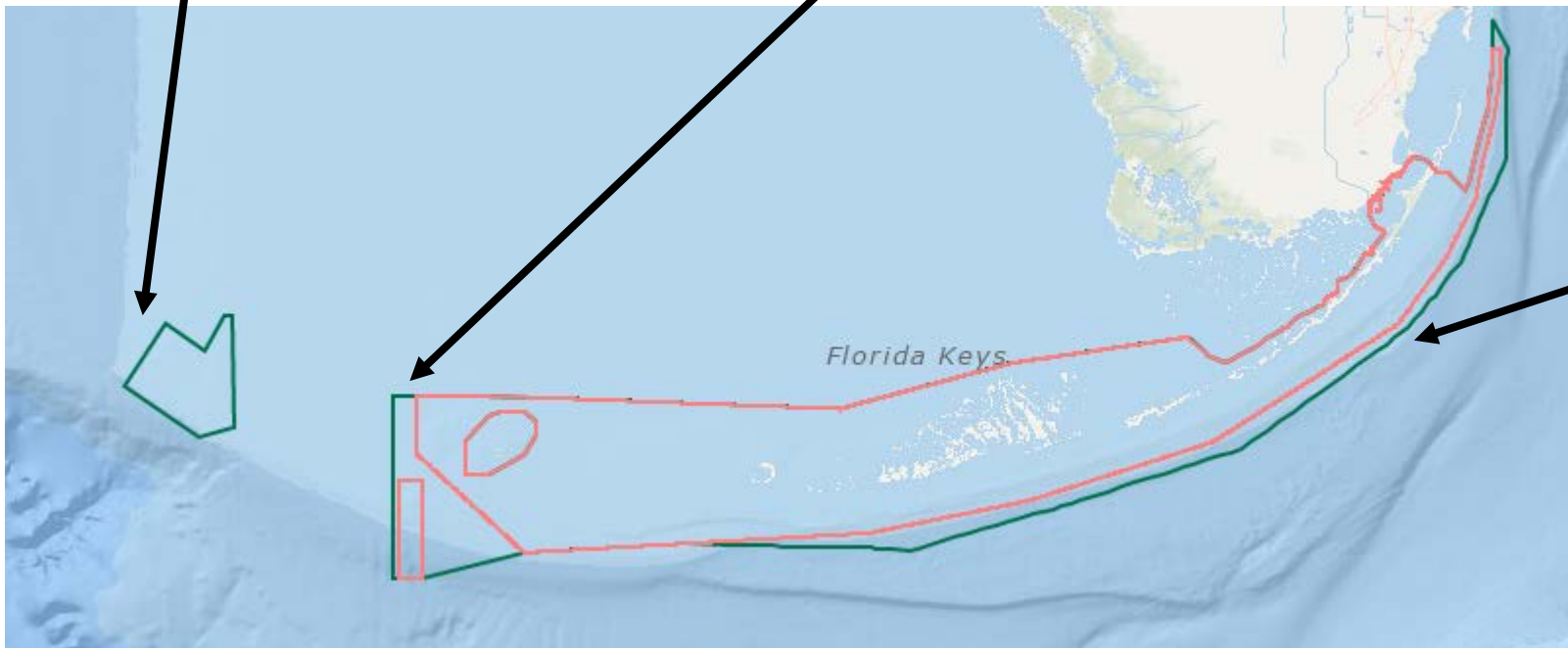
**Consistent regulation-** Expand boundary to include areas already closed to large vessel traffic



# Sanctuary Boundary Expansion: Alternative 4

Significant Ecosystems-  
Pulley Ridge

Connectivity- Tortugas



**Consistent regulation-**  
Expand boundary to  
include areas already  
closed to large vessel  
traffic

# Sanctuary-wide Regulations





# Sanctuary-wide Regulations:

Alternatives 2, 3 & 4:

- Limit discharge from cruise ships in sanctuary
- Increase # days allowed for emergency regulation
- Align NOAA permitting regulations with those of the Florida Department of State Division of Historical Resources (DHR)
- Ability to address impact from derelict or deserted vessels
- Prohibit fish feeding
- Mooring buoy restrictions



Only included in **Alternative 4**:

- **Require FKNMS authorization for live rock aquaculture**
- **Limit boat speed within 100 yards of all shorelines**

# Sanctuary-wide Regulations: Cruise ship discharges

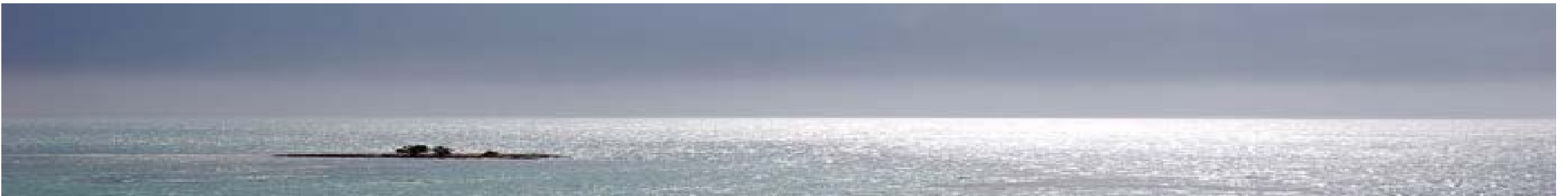
Proposed change applies in Alternatives 2, 3, and 4

## Current regulation\*:

Prohibits discharge of any material  
except “water generated by routine vessel operations” (e.g., deck wash down and graywater)

## Proposed Change:

Prohibits discharge of any material from a cruise ship  
except **clean** cooling waters, **clean** bilge water, or **clean** anchor wash water



\*For full text of existing regulations see: 15 CFR 922 Subpart P



# Sanctuary-wide Regulations: Emergency Regulation

Proposed change applies in Alternatives 2, 3, and 4

## Current regulation\*:

Emergency regulations may be enacted for 60 days with option for additional 60 day extension

***Has been used for:*** ship grounding removal and restoration, to reduce stress on coral impacted by disease

## Proposed Change:

Emergency regulations may be enacted for 180 days with option for additional 186 day extension

***Goals:*** Allows additional time for recovery; allows time to engage regulatory process if new regulation needed



\*For full text of existing regulations see: 15 CFR 922 Subpart P

# Sanctuary-wide Regulations: Historical resource permitting

Proposed change applies in Alternatives 2, 3, and 4

## Current regulation\*:

Inconsistent with state regulations

Permitted categories include:

- survey/inventory
- research/recovery
- deaccession/transfer

## Proposed Change:

Aligns sanctuary regulations with state regulations

Create one historical resource permit category for:

- archaeological research



\*For full text of existing regulations see: 15 CFR 922 Subpart P

# Sanctuary-wide Regulations: Derelict Vessels

Proposed change applies in Alternatives 2, 3, and 4

## Current regulation\*:

**Not** explicitly regulated unless:

- a discharge,
- alteration to the seabed, or
- destruction, loss, or injury to a sanctuary resource occurs



## Proposed change:

Prohibit anchoring, mooring, or occupying a vessel at risk of becoming derelict, or deserting a vessel aground, at anchor, or adrift

Prohibit leaving harmful matter aboard a grounded or deserted vessel

\*For full text of existing regulations see: 15 CFR 922 Subpart P



# Sanctuary-wide Regulations: Fish Feeding

Proposed change applies in Alternatives 2, 3, and 4

## Current regulation\*:

Inconsistent with state regulations

**Not** explicitly regulated unless:

- a discharge, or
- destruction, loss, or injury to a sanctuary resource occurs

## Proposed Change:

Prohibit the feeding of fish, sharks, or other marine species from any vessel and/or while diving



\*For full text of existing regulations see: 15 CFR 922 Subpart P

# Sanctuary-wide Regulations: Use of Mooring Buoys

Proposed change applies in Alternatives 2, 3, and 4

## Current regulation\*:

Use of FKNMS mooring buoys is required:

- in Tortugas North Ecological Reserve
- in all other SPAs and Western Sambo Ecological Reserve if a buoy is available



## Proposed change:

Require vessels over 65' length overall to use large vessel designated mooring buoys

Prohibit overnight use of FKNMS mooring buoys, except for safe harbor

\*For full text of existing regulations see: 15 CFR 922 Subpart P

# Sanctuary-wide Regulations: Live Rock Aquaculture

Proposed change applies in Alternative 4

## Current regulation\*:

Prohibits harvesting or possessing any live rock within the sanctuary, except as authorized by a permit for aquaculture issued by the National Marine Fisheries Service or as authorized by the applicable state authority

## Proposed change:

Require sanctuary authorization for existing and any future live rock aquaculture activities



\*For full text of existing regulations see: 15 CFR 922 Subpart P



# Sanctuary-wide Regulations: Shoreline Slow Speed

Proposed change applies in Alternative 4

## Current regulation\*:

Prohibits operating a vessel at a speed greater than 4 knots or creating a wake:

- within 100 yards of residential shorelines

## Proposed change:

Extend this prohibition to apply to all shorelines within the sanctuary and modify the restriction to slow speed



\*For full text of existing regulations see: 15 CFR 922 Subpart P

# Marine Zone Boundaries & Regulations



# Marine Zones

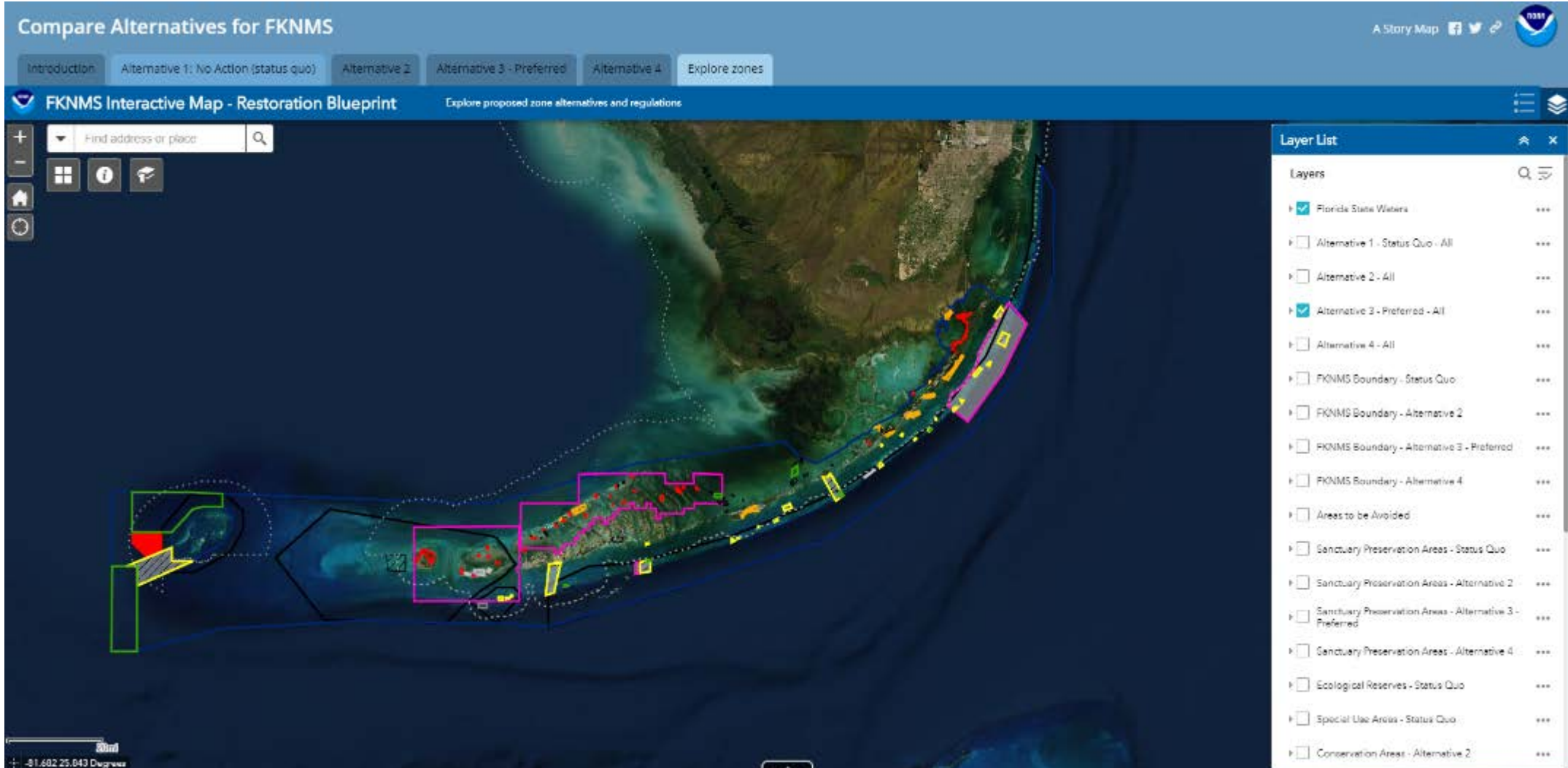
- Individual zone types provide different levels of protection
- Blueprint proposes new zones to address persistent threats to resource health, protect a range of habitat types, and facilitate restoration





# Marine Zones: Explore Alternatives

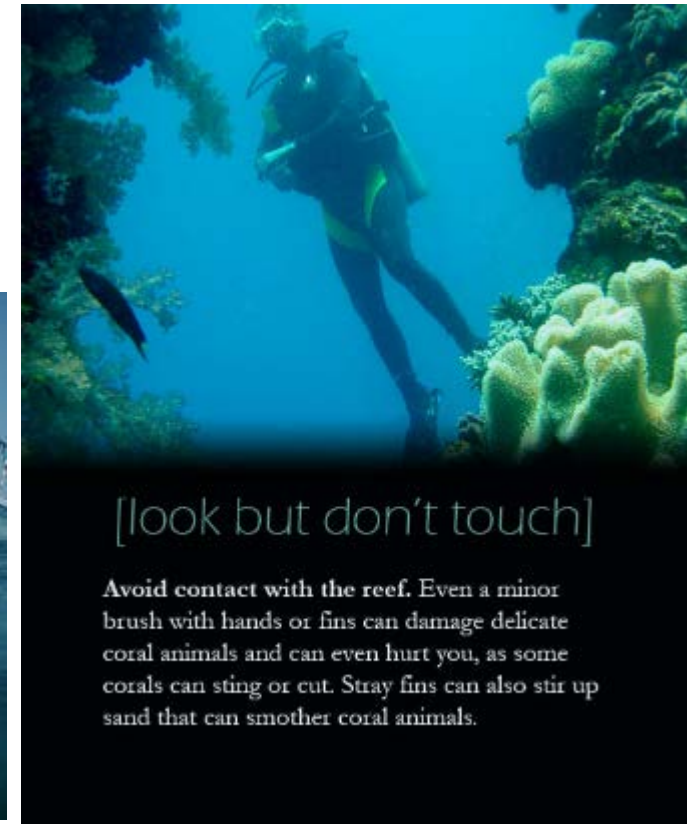
[Interactive Map](#) will be available to explore alternatives



# Marine Zones: Sanctuary Preservation Area

Manage activities to separate conflicting use and protect habitats

Regulations: prohibit discharge, fishing, touching or anchoring on coral



# Marine Zones: Sanctuary Preservation Area

General approach across alternatives

## Alternative 1 - Status Quo

### Existing SPA regulations\* prohibit:

- Discharge, touching coral, certain anchoring restrictions;
- Fishing, possessing marine life except:
  - Baitfishing allowed by permit in all SPAs
  - Catch and release trolling allowed in some SPAs: Conch, Alligator, Sombrero, and Sand Key SPAs

## Alternatives 2, 3, and 4 propose to:




- Eliminate:
  - Baitfishing
  - Catch and release trolling
- Add:
  - Idle Speed/No Wake
  - No Anchor

\*For full text of existing regulations see: 15 CFR 922 Subpart P



# Marine Zones: Sanctuary Preservation Area (images show preferred alternative)

Protect additional habitat types: patch reefs

-  No Anchor
-  Idle Speed
-  Sanctuary Preservation Area



Turtle Rocks



Turtle Shoals

# Marine Zones: Sanctuary Preservation Area

(images show preferred alternative overlapping status quo)

Protect additional habitat types: deep reef



Carysfort



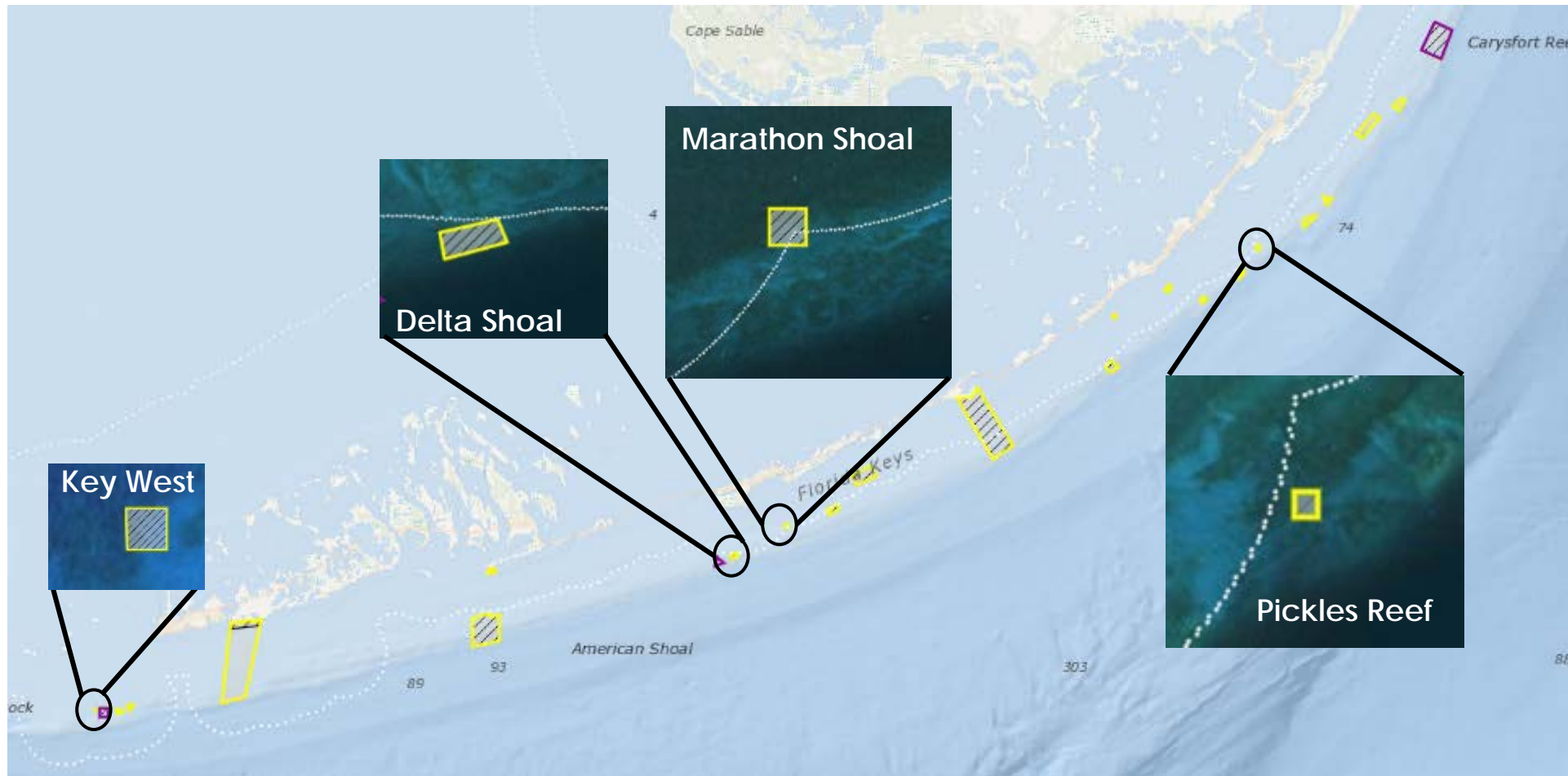
Alligator Reef







Western Sambo

# Marine Zones: Sanctuary Preservation Area (images show preferred alternative)

Facilitate habitat restoration



-  No Anchor
-  Idle Speed
-  Sanctuary Preservation Area
-  Limited Entry



# Marine Zones: Sanctuary Preservation Area (images show preferred alternative)





Test application of limited use zones in the sanctuary

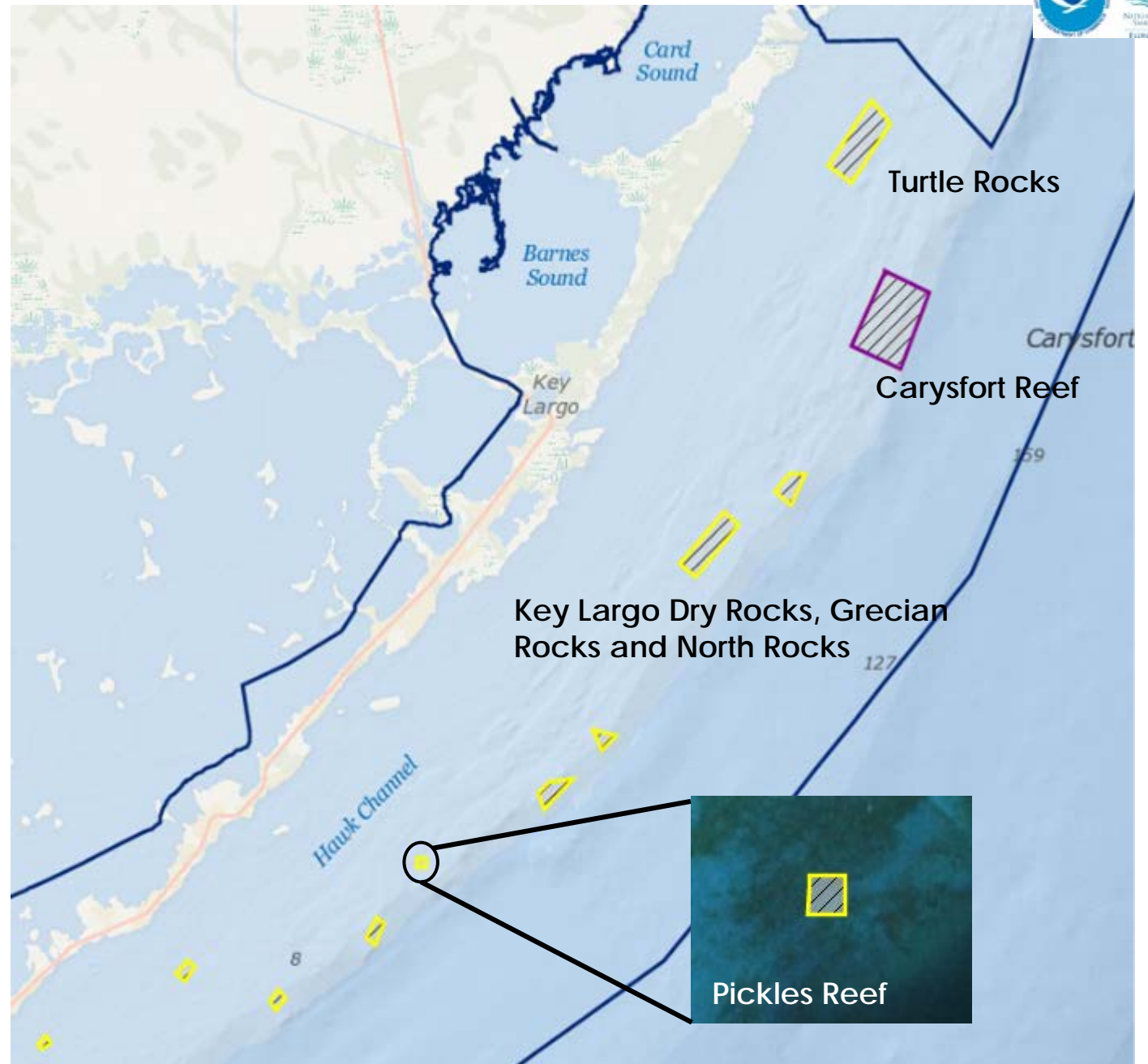


# Marine Zones:

## Sanctuary Preservation Area

Preferred alternative:  
Upper Keys





-  No Anchor
-  Idle Speed
-  Sanctuary Preservation Area
-  Limited Entry

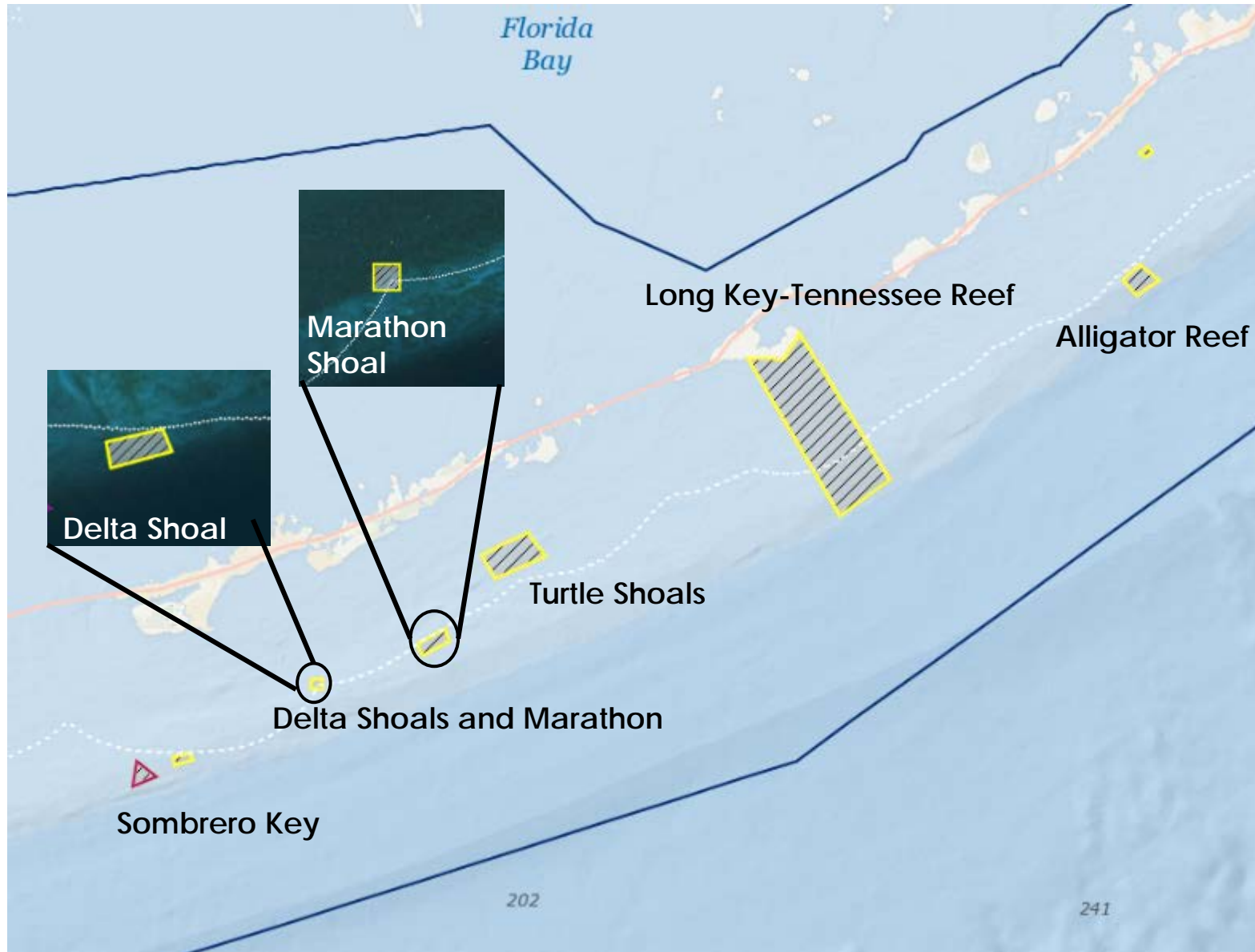


# Marine Zones:

## Sanctuary Preservation Area

Preferred alternative:  
Middle Keys

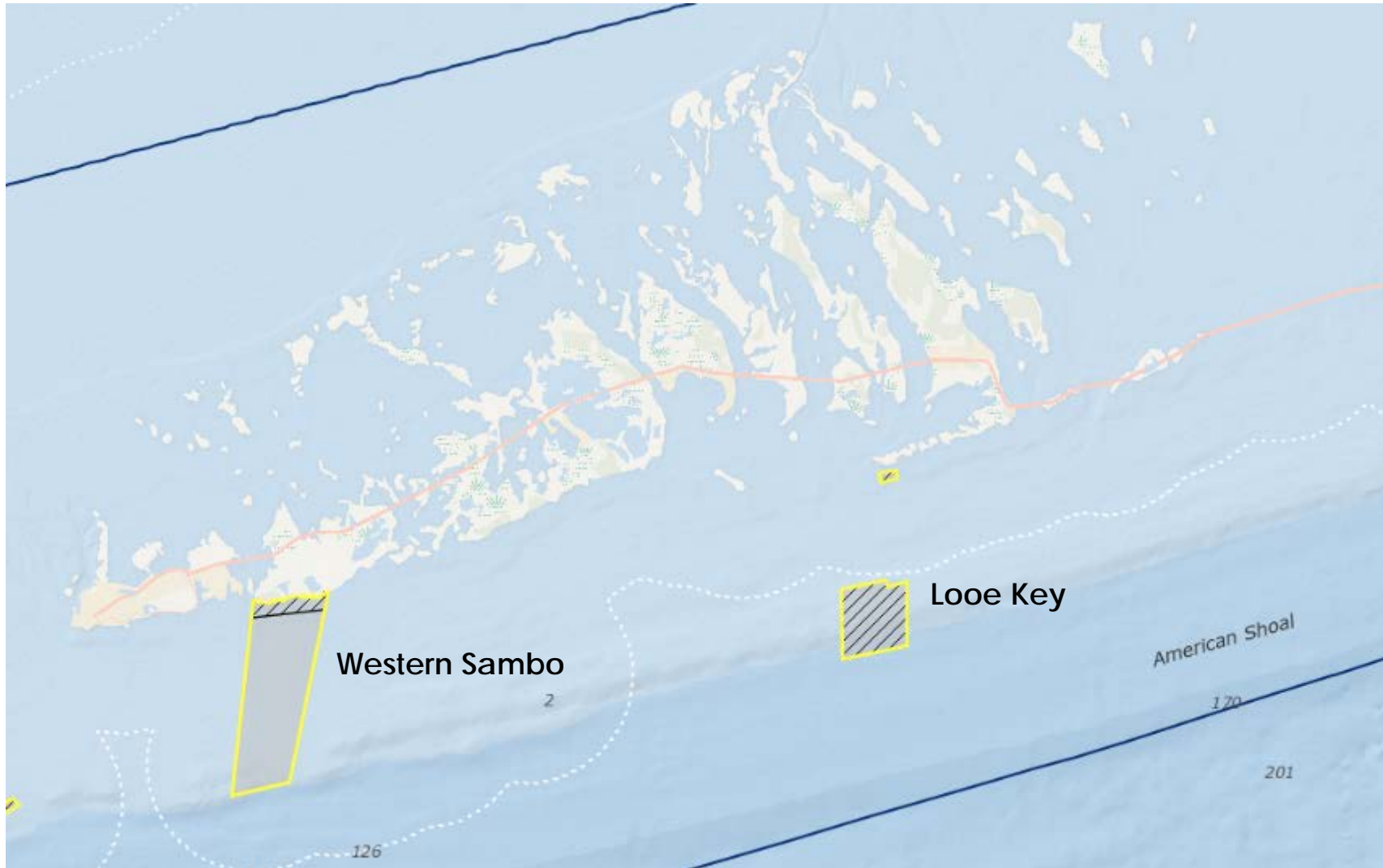
-  No Anchor
-  Idle Speed
-  Sanctuary Preservation Area
-  Limited Entry








# Marine Zones: Sanctuary Preservation Area

Preferred alternative: Lower Keys







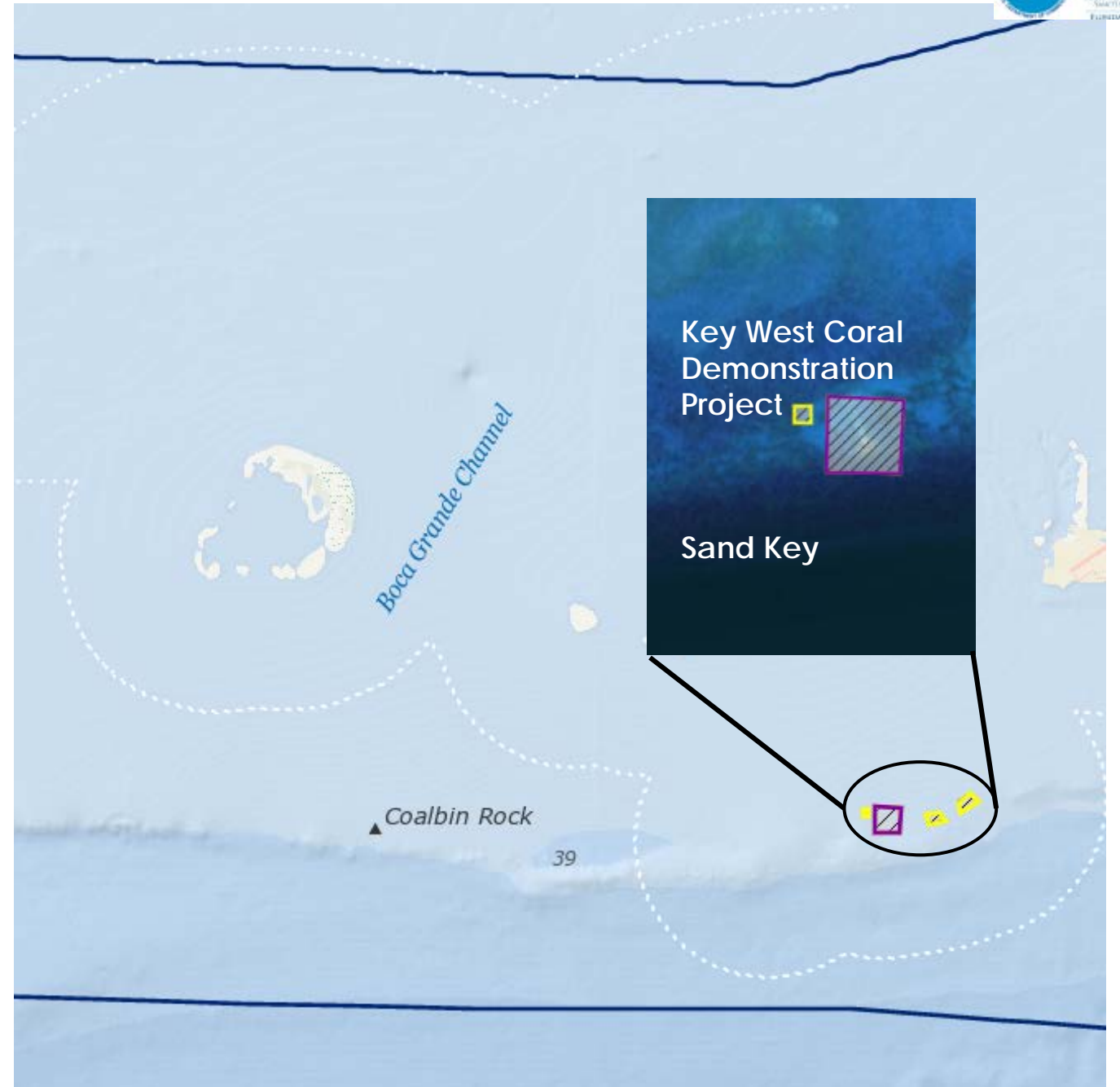
-  No Anchor
-  Idle Speed
-  Sanctuary Preservation Area

# Marine Zones:

## Sanctuary Preservation Area

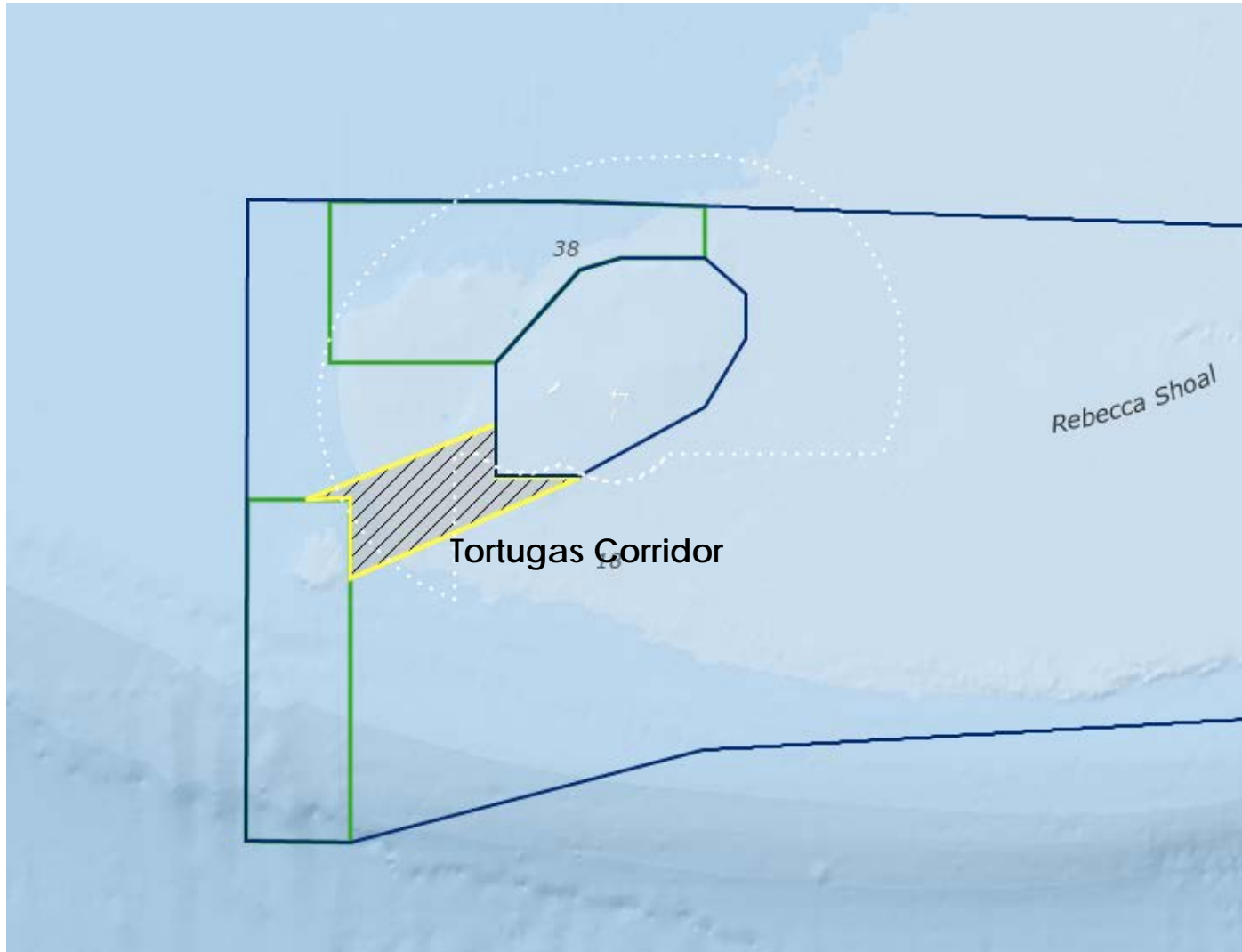
Preferred alternative:  
Marquesas






-  No Anchor
-  Idle Speed
-  Sanctuary Preservation Area
-  Limited Entry



# Marine Zones: Sanctuary Preservation Area

Preferred alternative: Tortugas



-  No Anchor
-  Idle Speed
-  Sanctuary Preservation Area
-  Limited Entry
-  Transit Only



# Marine Zones: Sanctuary Preservation Area (summary of alternatives)

- Separate conflicting uses
- Protect coral reef habitat through placement of mooring buoys

Sanctuary Preservation Areas				
	Alternative 1 (status quo)	Alternative 2	Alternative 3 (preferred)	Alternative 4
Total zones <sup>1</sup>	19	25	26	22
Total area (sq miles) <sup>1</sup>	18	68.43	78	50.33
Regulations applied	*existing SPA regulations *baitfishing permits *catch and release trolling allowed in 4 SPAs	*existing SPA regulations *eliminate baitfish permits *eliminate catch and release trolling *idle speed/no wake *no anchor	*existing SPA regulations *eliminate baitfish permits *eliminate catch and release trolling *idle speed/no wake *no anchor *3 limited entry SPAs	*existing SPA regulations *eliminate baitfish permits *eliminate catch and release trolling *idle speed/no wake *no anchor *2 limited entry SPAs

<sup>1</sup> Includes Western Sambo Ecological Reserve as it is regulated like a Sanctuary Preservation Area

# Marine Zones: Conservation Area

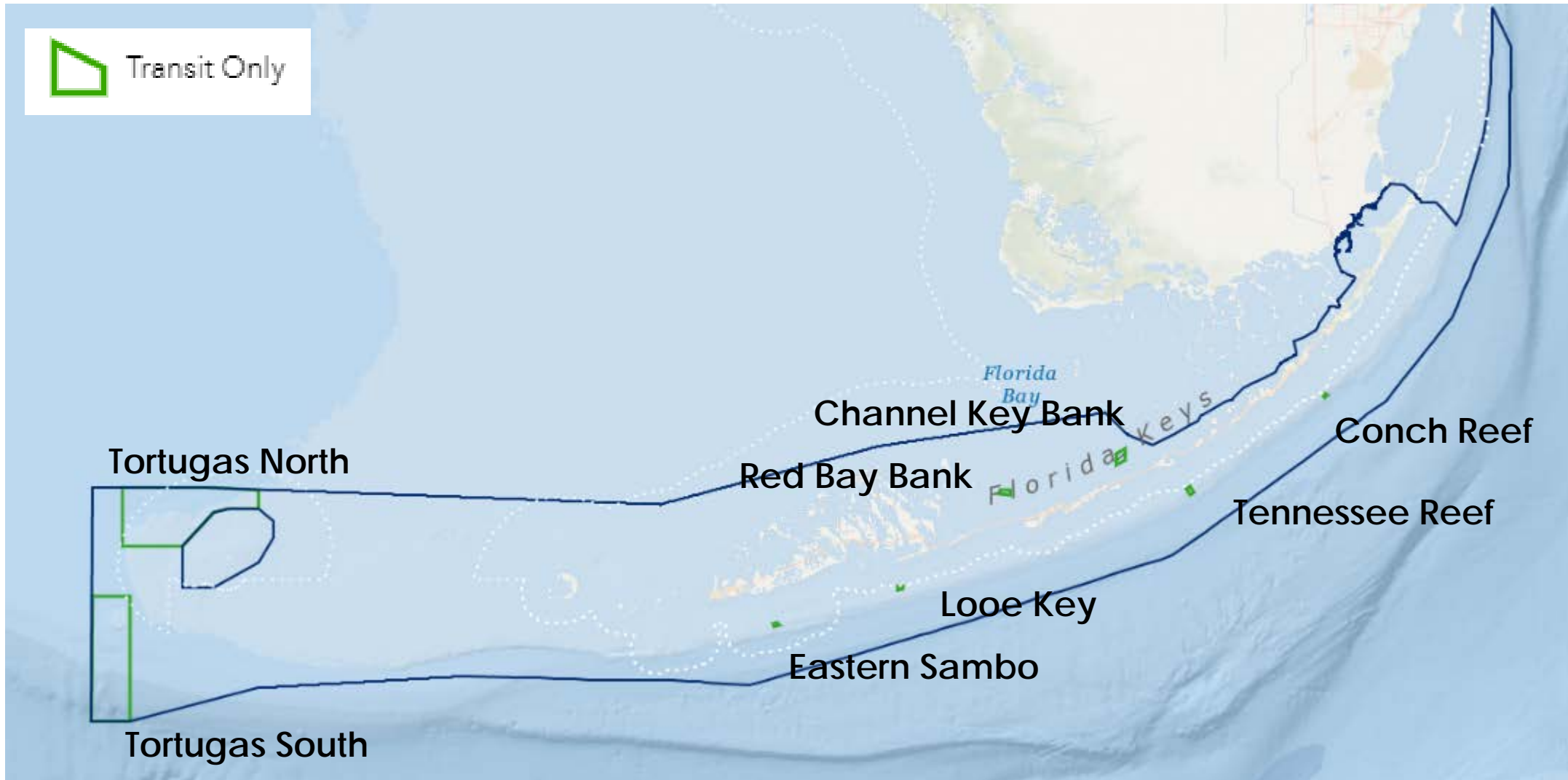
Most protective zone type

Regulations: transit only (without a valid sanctuary permit)



# Marine Zones: Conservation Area

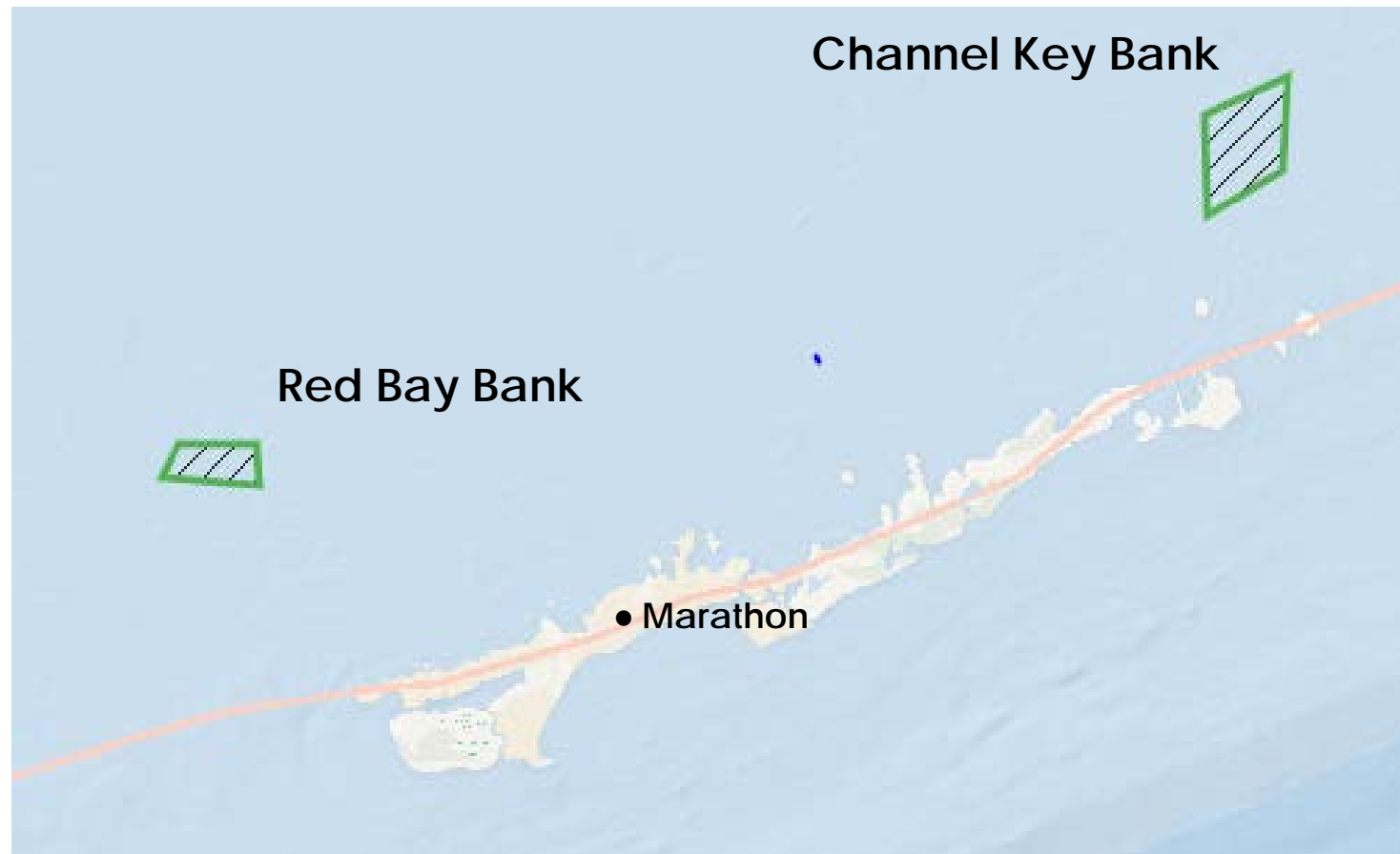
Preferred alternative





# Marine Zones: Conservation Area

- Protect new habitat types: hardbottom, seagrass and shallow banks
- Facilitate research and restoration in these areas



# Marine Zones: Conservation Area (summary of alternatives)

- Replace existing Ecological Reserve and Special Use Area zone types
- Most protective zone type
- Protect large contiguous habitat areas
- Facilitate research, restoration, and monitoring

Conservation Areas				
	Alternative 1 (status quo)	Alternative 2	Alternative 3 (preferred)	Alternative 4
Total zones	6 <sup>1</sup>	8	8	13
Total area (sq miles)	182.23	203.21	203.21	270.01
Regulations applied	transit only without applicable permit	transit only without applicable permit	transit only without applicable permit	transit only without applicable permit

<sup>1</sup> Alternative 1 includes two Ecological Reserves and four Special Use Areas.

# Marine Zones: Wildlife Management Area

Restrict vessel operations to protect wildlife & minimize disturbance

Regulation Options: no anchor, idle speed/no wake, no motor, no entry





# Marine Zones: Wildlife Management Area

Restrict vessel operations to protect seagrass and hardbottom habitat

Regulation Options: no anchor, idle speed/no wake, no motor, no entry

## Tavernier Key No Motor zone before & after zoning



Photos: Curtis Kruer; Florida Keys Shallow Water Boating Impact Analysis and Trends Assessment - Mapping Summary Report, March 2017

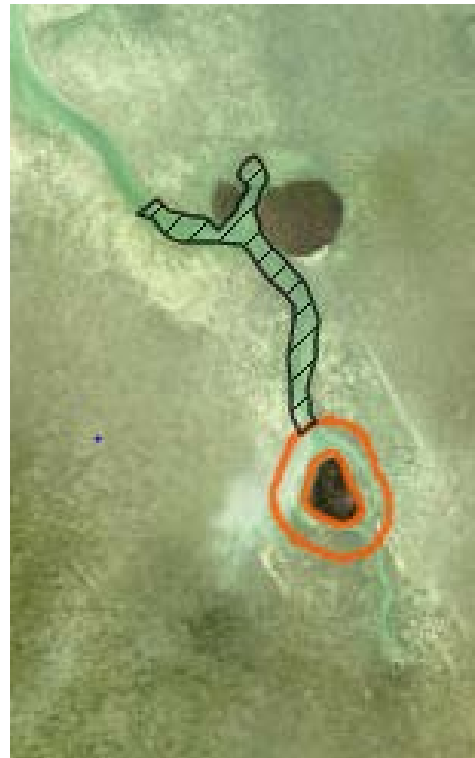
# Marine Zones: Wildlife Management Area

General approach across alternatives: Bay Keys

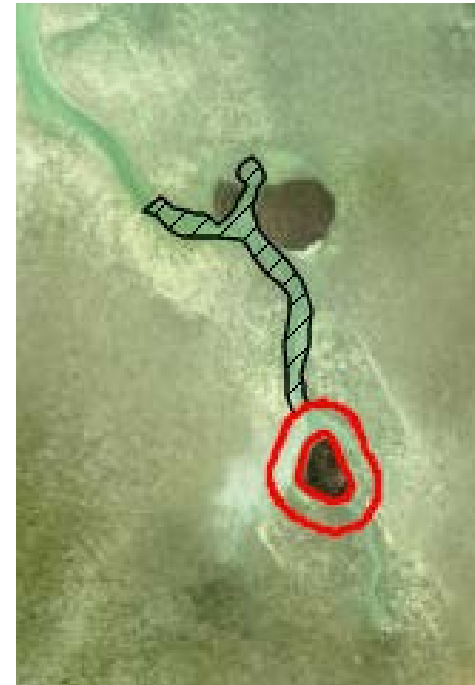
-  No Entry
-  No Anchor
-  Idle Speed
-  Trolling Only
-  No Motor



Alternative 1



Alternative 2



Alternative 3



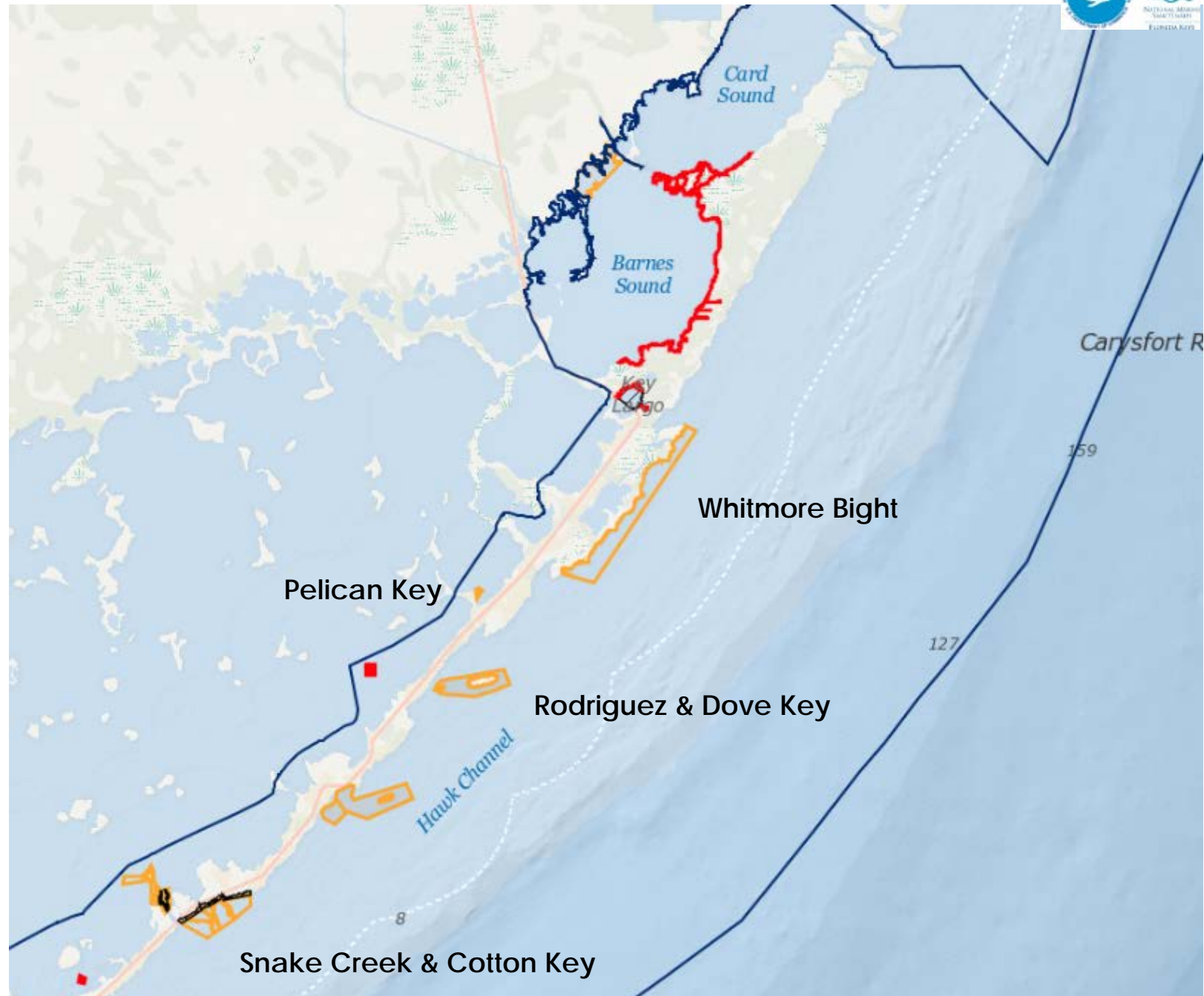
Alternative 4

# Marine Zones:

## Wildlife Management Area

Preferred alternative:  
Upper Keys

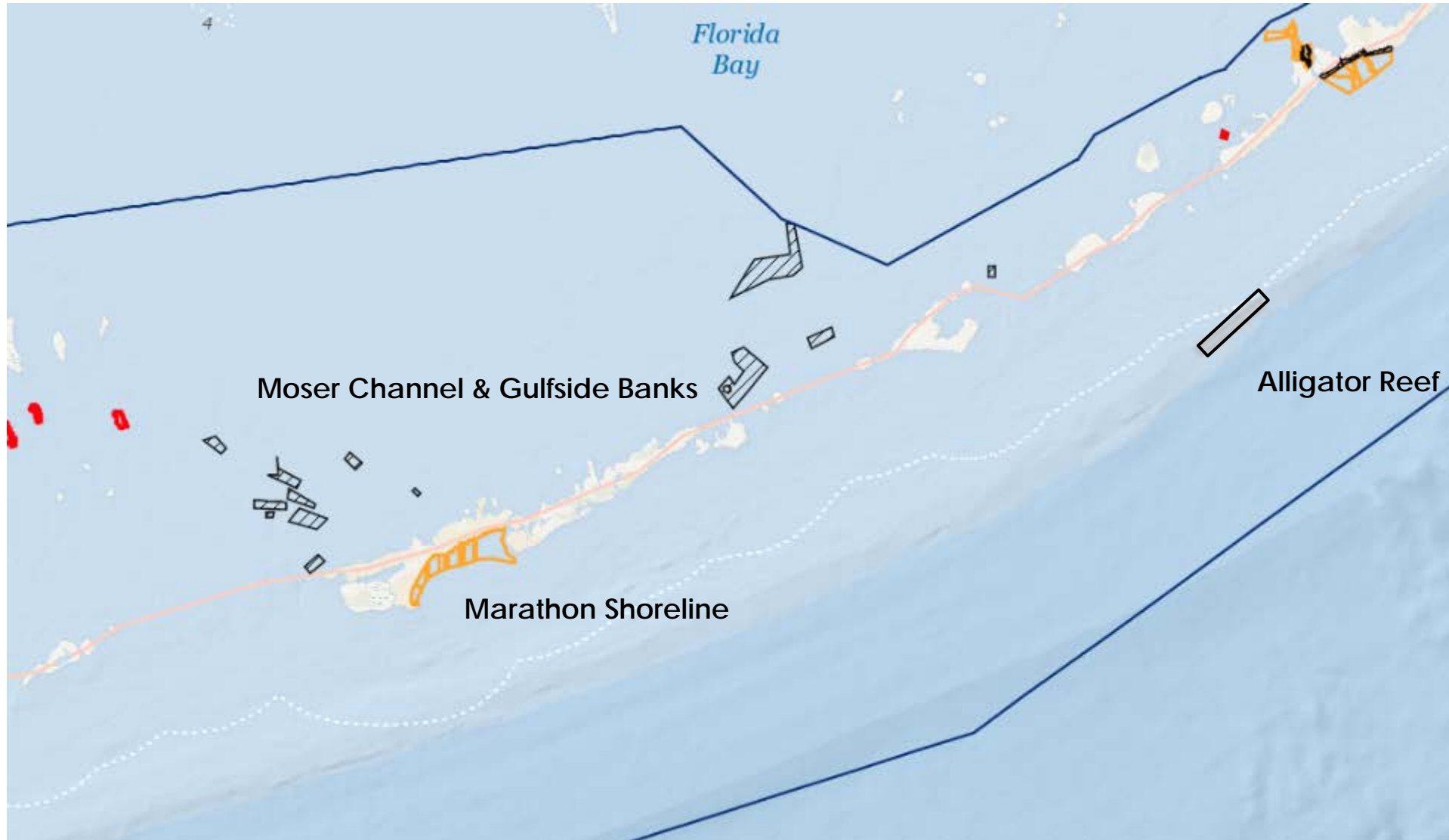
-  No Entry
-  No Anchor
-  Idle Speed
-  Trolling Only
-  No Motor





# Marine Zones: Wildlife Management Area

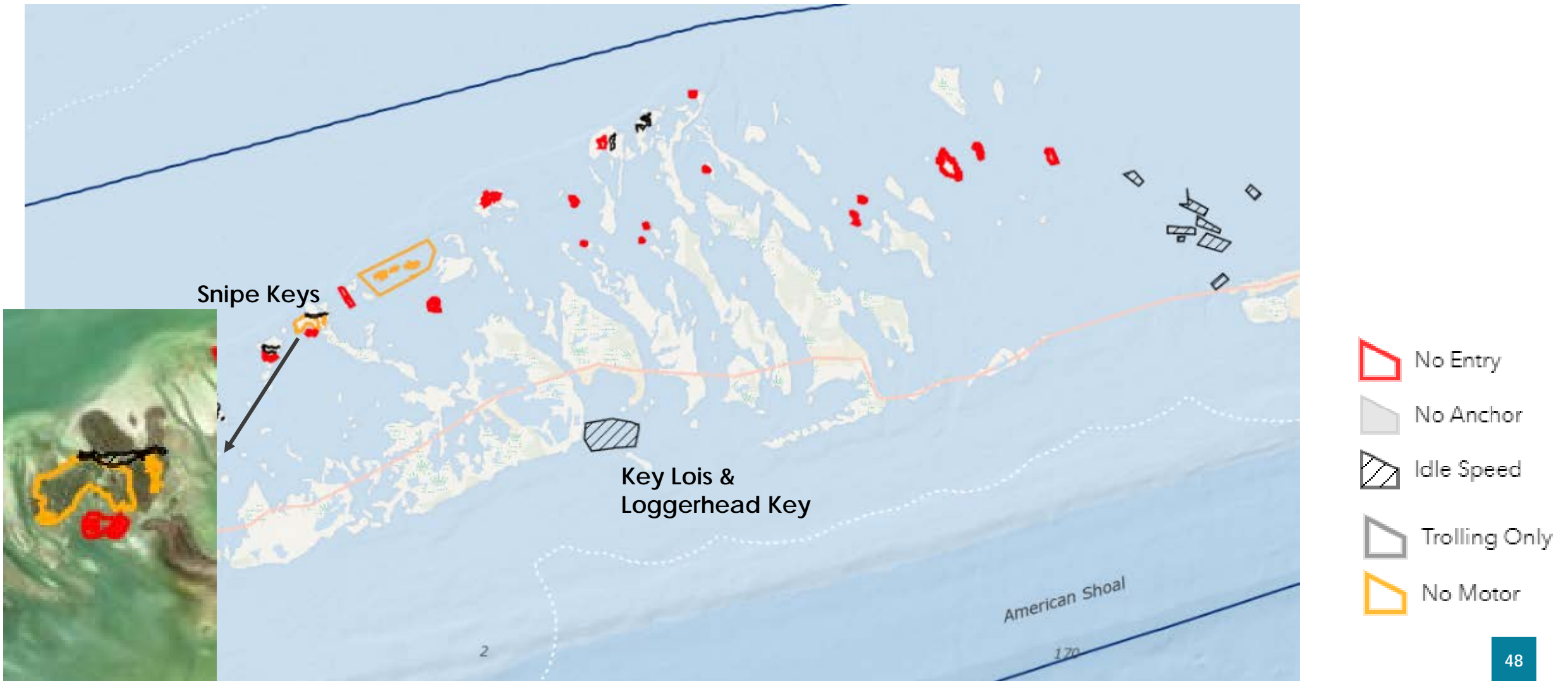
Preferred alternative: Middle Keys



-  No Entry
-  No Anchor
-  Idle Speed
-  Trolling Only
-  No Motor

# Marine Zones: Wildlife Management Area

Preferred alternative: Lower Keys

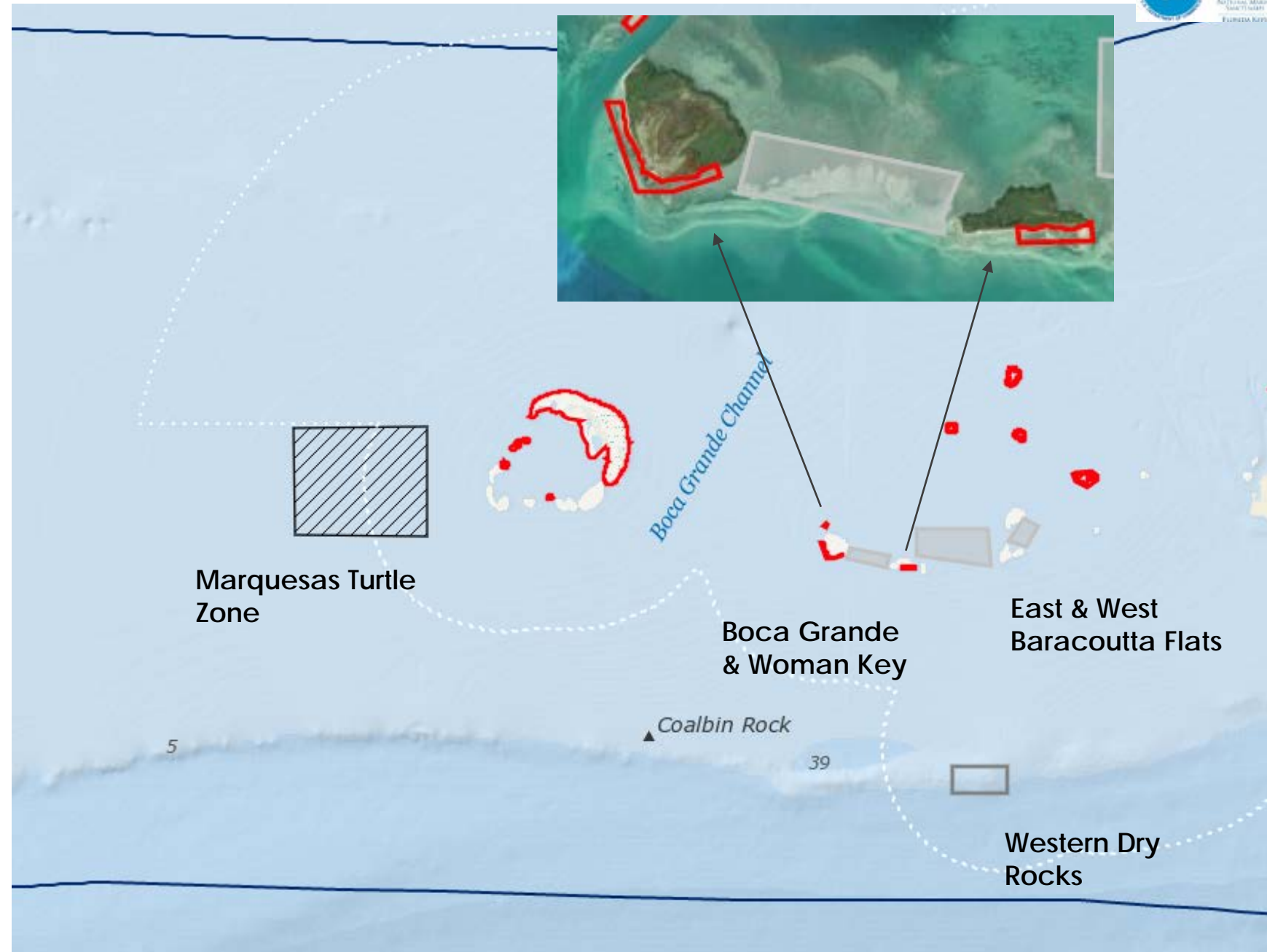


# Marine Zones:

## Wildlife Management Area

Preferred alternative:  
Marquesas

-  No Entry
-  No Anchor
-  Idle Speed
-  Trolling Only
-  No Motor





# Marine Zones: Wildlife Management Area (summary of alternatives)

- Minimize disturbance to sensitive or endangered wildlife
- Restrictions vary- no anchor, idle speed/no wake, no motor, no entry
- WMAs are small and targeted, and comprise the majority of existing and proposed new zones

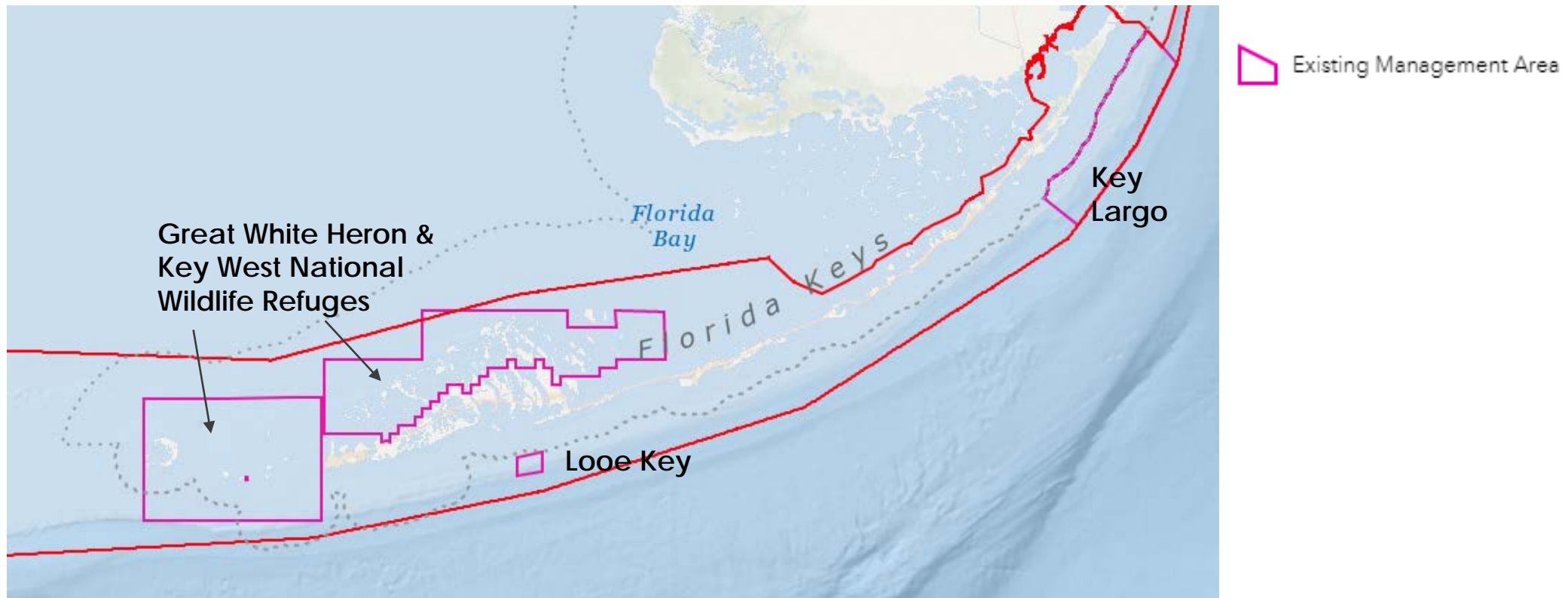
Wildlife Management Areas				
	Alternative 1 (status quo)	Alternative 2	Alternative 3 (preferred)	Alternative 4
<b>Total zones<sup>1</sup></b>	28	59	60	59 <sup>2</sup>
<b>Total area (sq miles)<sup>1</sup></b>	37.55	67.68	69.62	322.73 <sup>2</sup>
<b>Regulations applied</b>	*idle speed/no wake *no motor *no anchor *no access buffer zone *closed	*idle speed/no wake *no motor *no anchor *trolling only *no entry	*idle speed/no wake *no motor *no anchor *trolling only *no entry	*idle speed/no wake *no motor *no anchor *no entry

<sup>1</sup> Includes Tortugas No Anchor zone

<sup>2</sup> Includes Pulley Ridge No Anchor zone

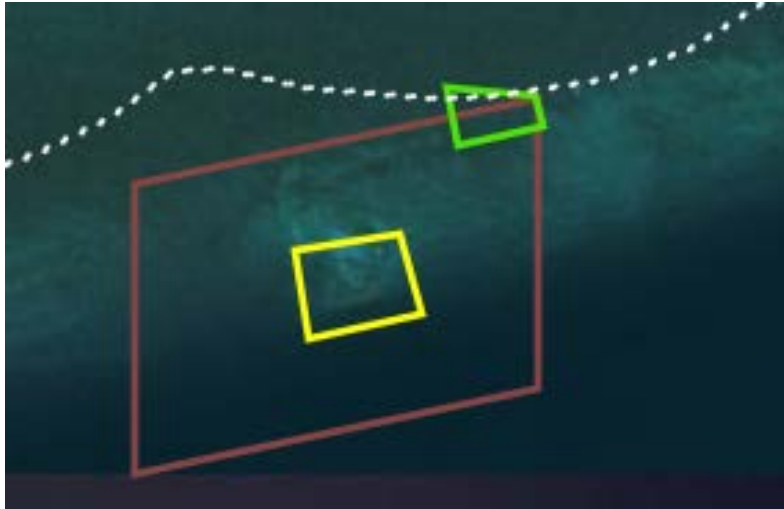
# Marine Zones: Management Areas (image shows status quo)

Areas that were already established when FKNMS was designated in 1990  
Proposed name update to from “Existing Management Areas”

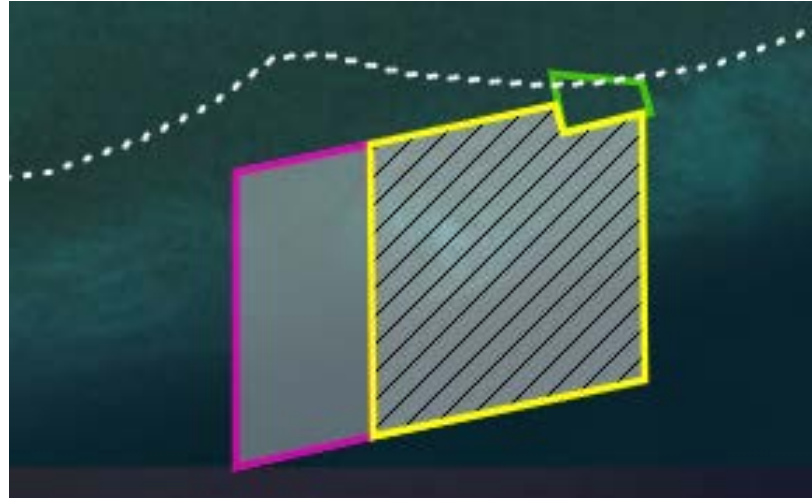


# Marine Zones: Management Areas

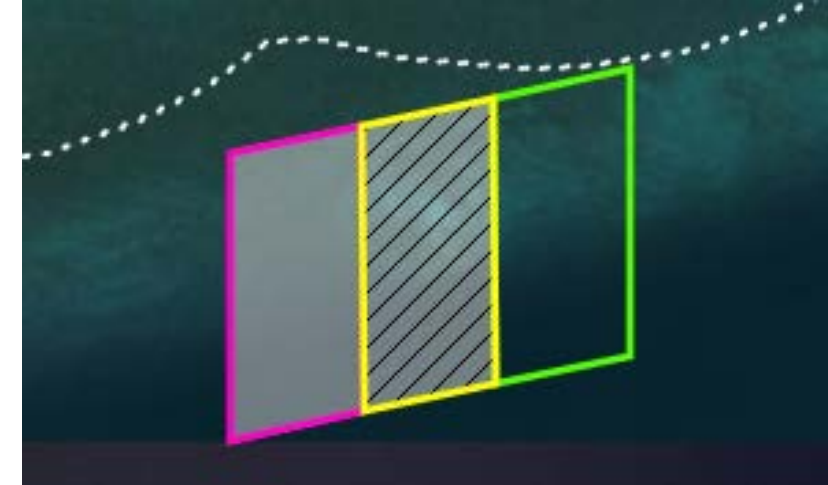
Proposed spatial and regulation changes at Looe Key



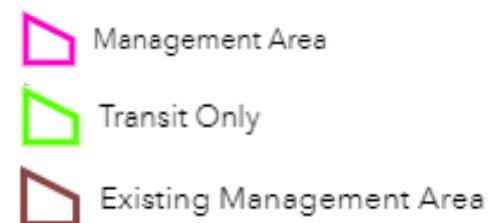
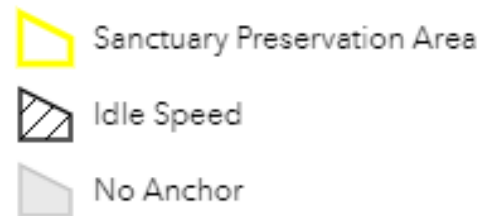
Alternative 1



Alternatives 2 & 3



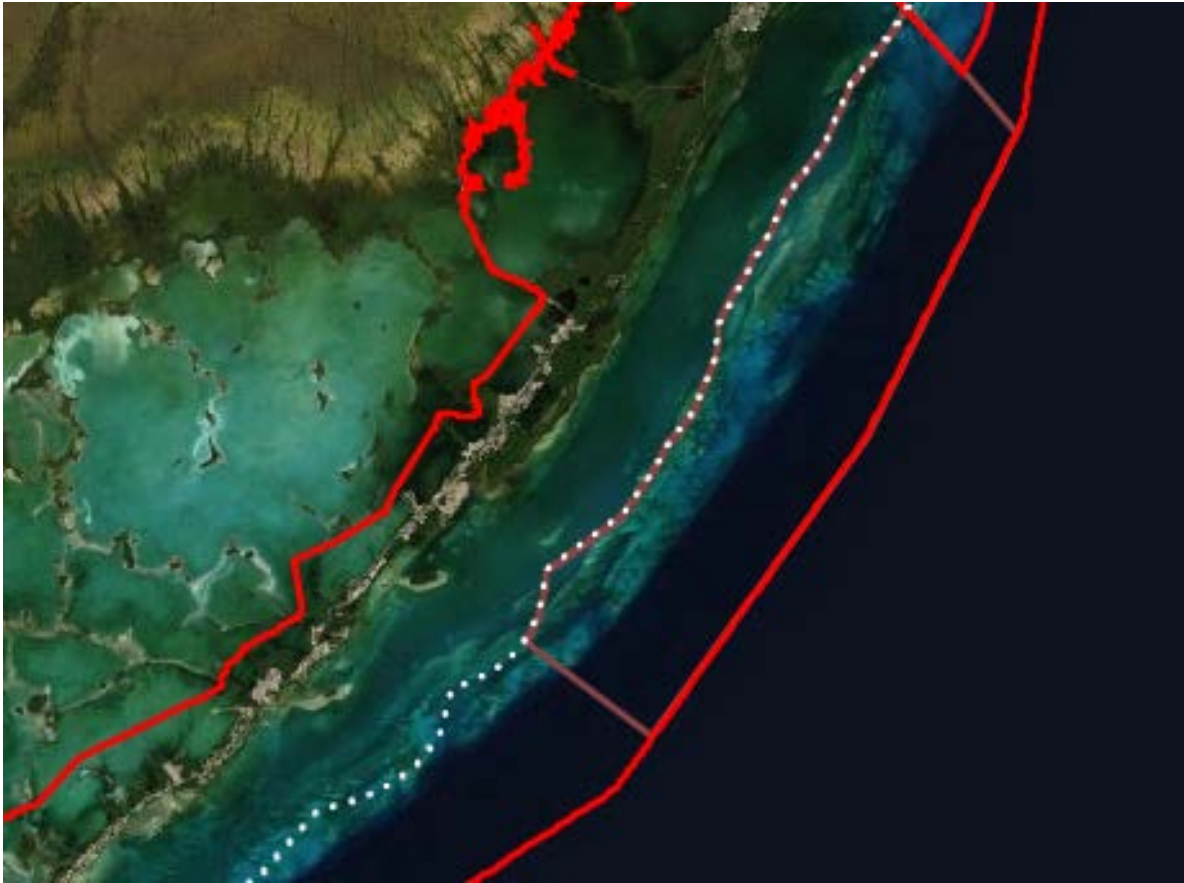
Alternative 4





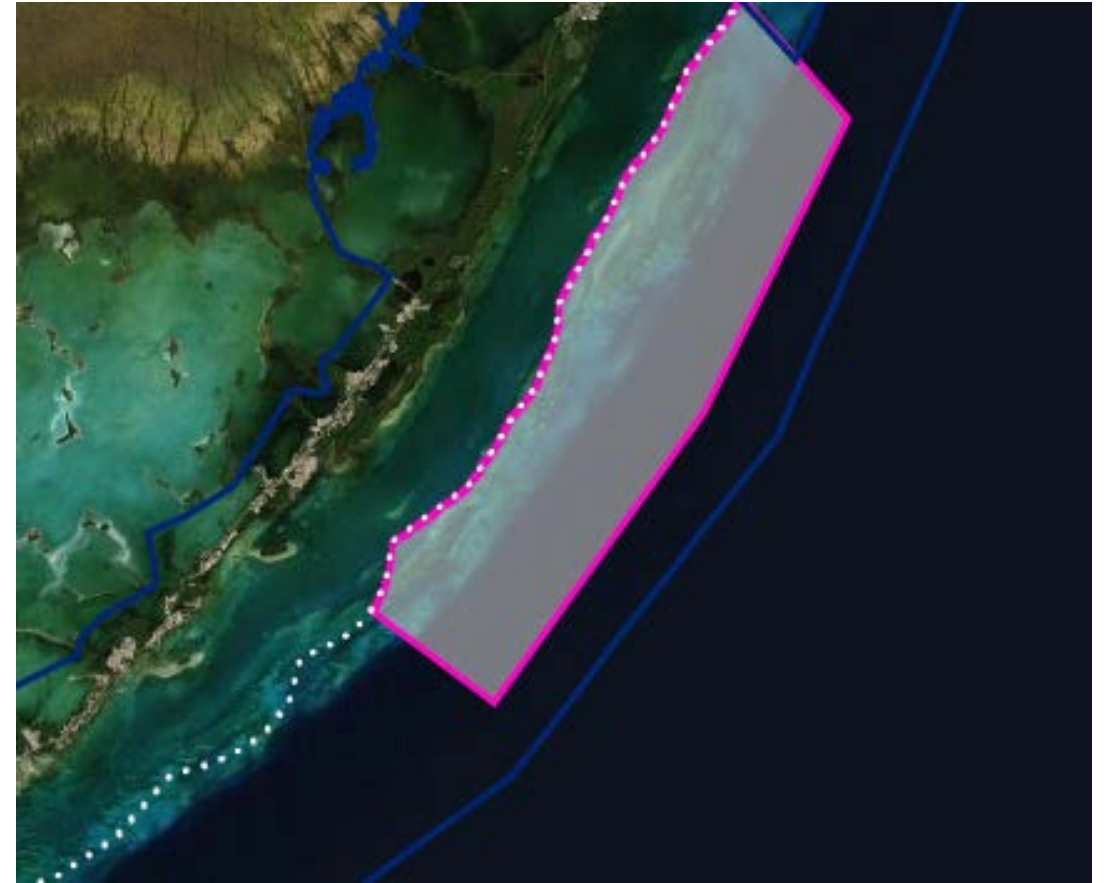
# Marine Zones: Management Areas

- proposed anchoring prohibition in Key Largo



**Alternative 1**

Existing Management Area regulations

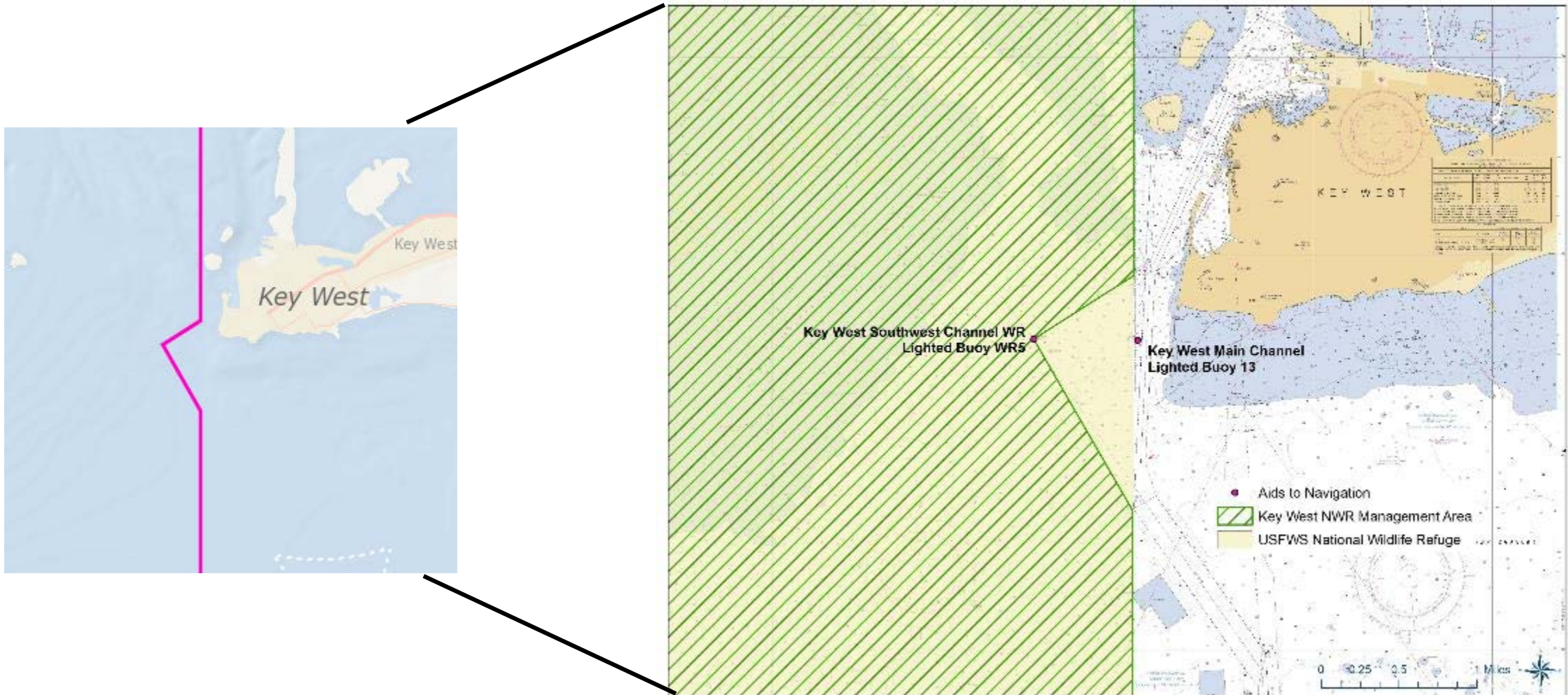


**Alternative 2**

Existing Management Area regulations  
No Anchor

# Marine Zones: Management Areas (image shows preferred alternative)

- proposed relief of personal watercraft operation in small portion of Key West National Wildlife Refuge





# Marine Zones: Management Areas (summary of alternatives)

Management areas (including national wildlife refuges) <sup>1</sup>				
	Alternative 1 (status quo)	Alternative 2	Alternative 3 (preferred)	Alternative 4
<b>Total zones</b>	4	4	4	4
<b>Total area: Looe Key and Key Largo sq miles</b>	139.45	134.75	134.75	134.75
<b>Regulations applied to Key Largo and Looe Key</b>	Prohibited activities: *Removing, taking, spearing, or otherwise damaging any coral, marine invertebrate, plant, soil, rock, or other material; taking tropical fish *Use of wire fish traps and similar gear *Spearfishing	*Existing regulations applied and *No Anchoring	*Existing regulations applied and *No Anchoring	*Existing regulations applied and *No Anchoring
<b>Total area: Key West and Great White Heron NWR</b>	656.06	656.06	656.06	656.06
<b>Regulations applied to NWR portions<sup>1</sup></b>	Prohibited activities: Operating a personal watercraft (PWC), airboat, or water skiing	Small area of relief for PWC operation around the "G13" marker	Small area of relief for PWC operation around the "G13" marker	Small area of relief for PWC operation around the "G13" marker

# Marine Zones: Highlights Across Alternatives

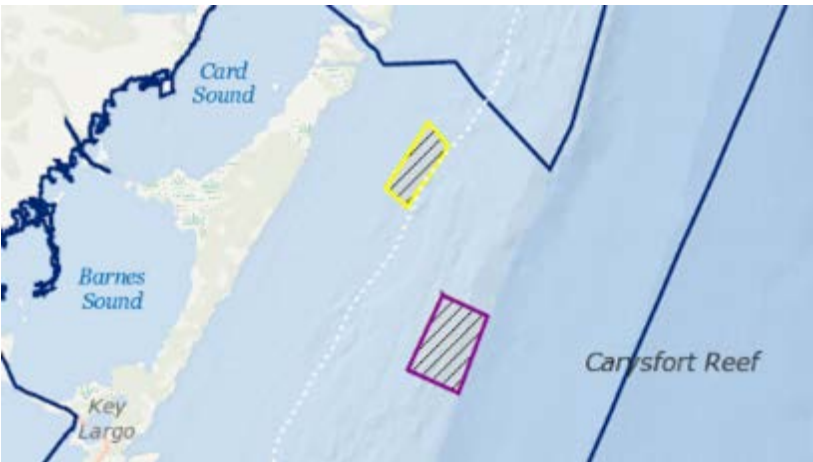
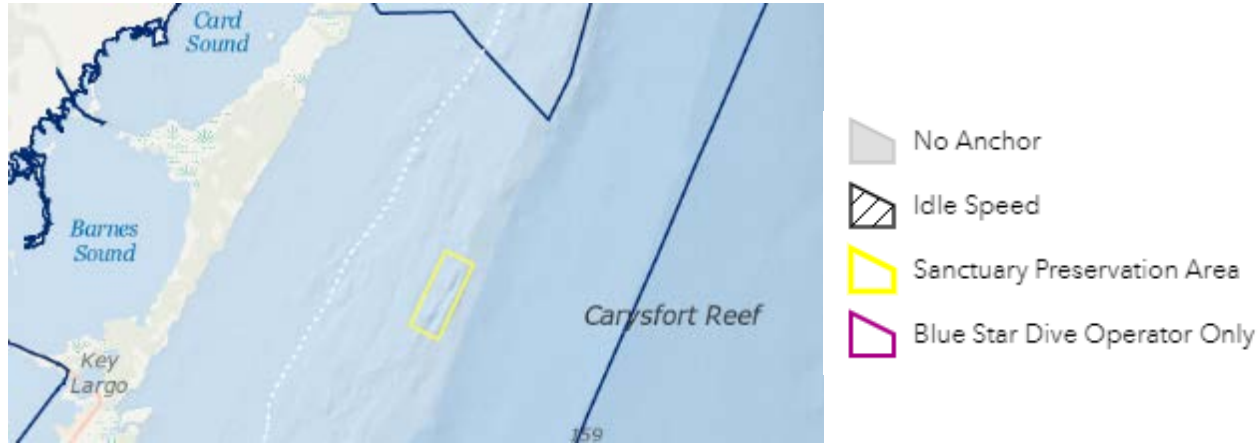




# Marine Zones: Highlight Zone Changes Across Alternatives

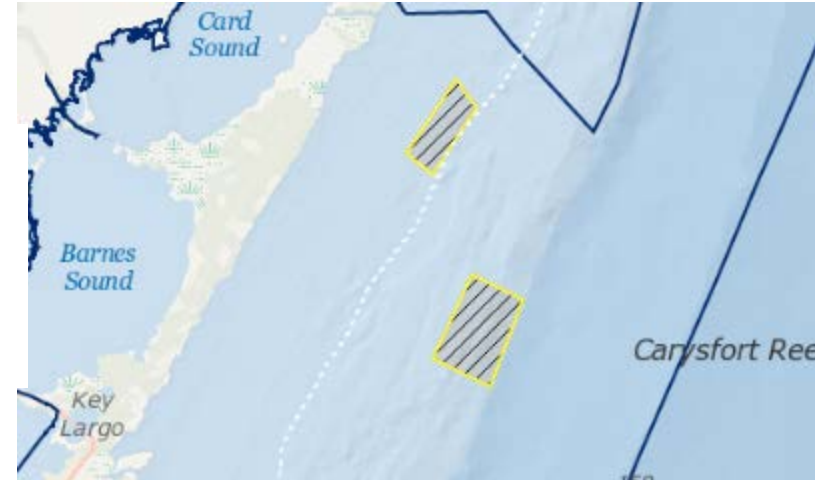
Carysfort: protect large contiguous habitats in the Upper Keys

**Alternative 1: Sanctuary Preservation Area**



**Alternative 3: Limited Use Sanctuary Preservation Area**

**Alternative 2: Sanctuary Preservation Area**



**Alternative 4: Sanctuary Preservation Area**

# Marine Zones: Highlight Zone Changes Across Alternatives

Long Key-Tennessee Reef: protect large contiguous habitats in the Middle Keys

**Alternative 1: Special Use Area**



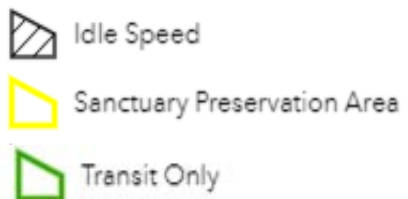
**Alternative 2: Conservation Area**



**Alternative 3: Sanctuary Preservation Area & Conservation Area**

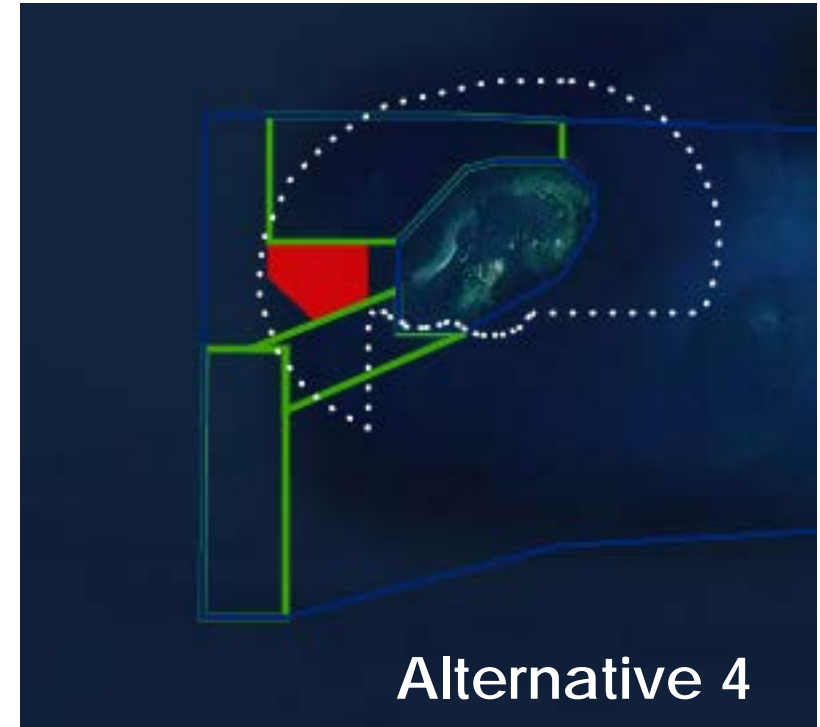
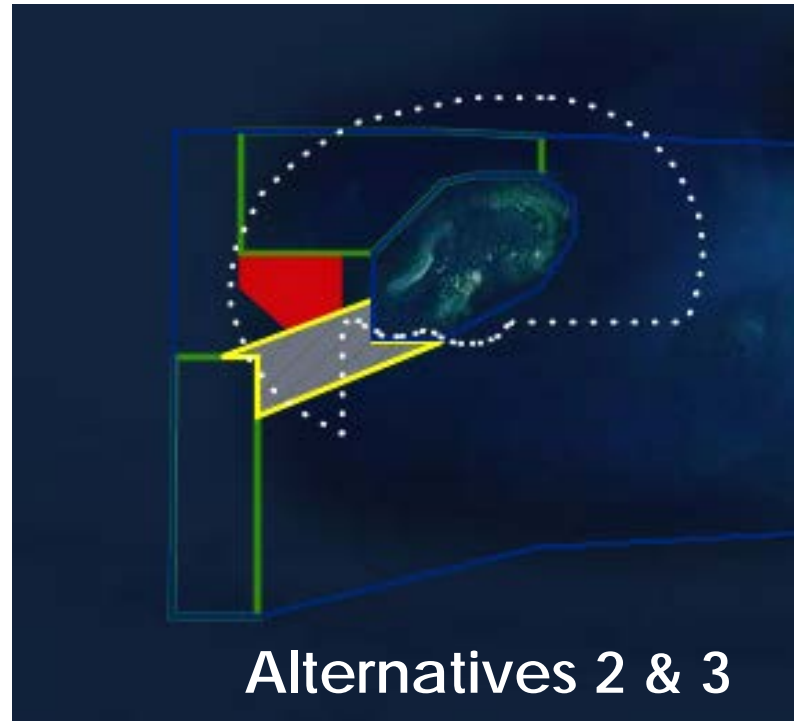
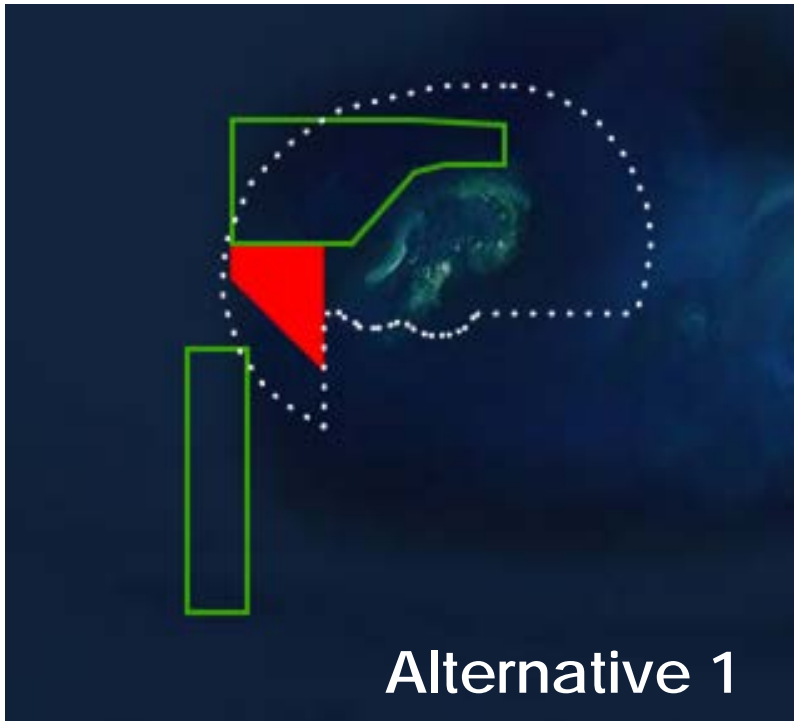


**Alternative 4: Conservation Area**



# Marine Zones: Conservation Area

Tortugas Region: protect large contiguous habitats & fish spawning sites



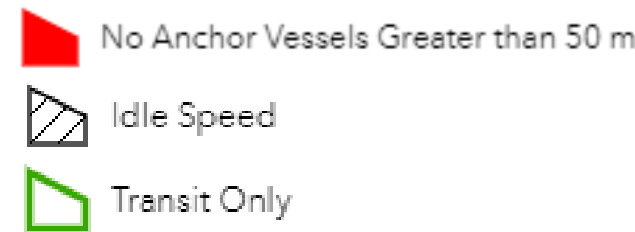
**Tortugas North:** no change across alternatives

**Tortugas South:** extends westward by 1 mile in Alternatives 2, 3, and 4

**Tortugas Corridor:**

Alternatives 2 and 3: Sanctuary Preservation Area

Alternative 4: Conservation Area

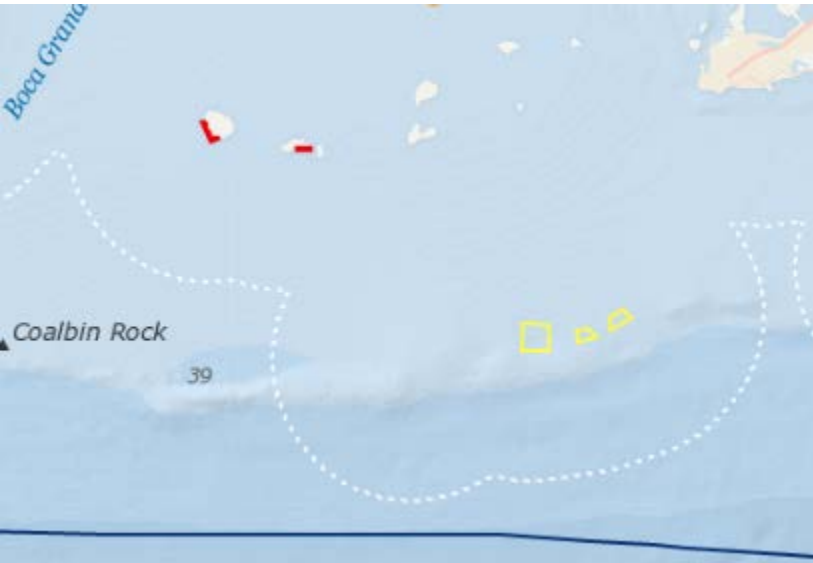




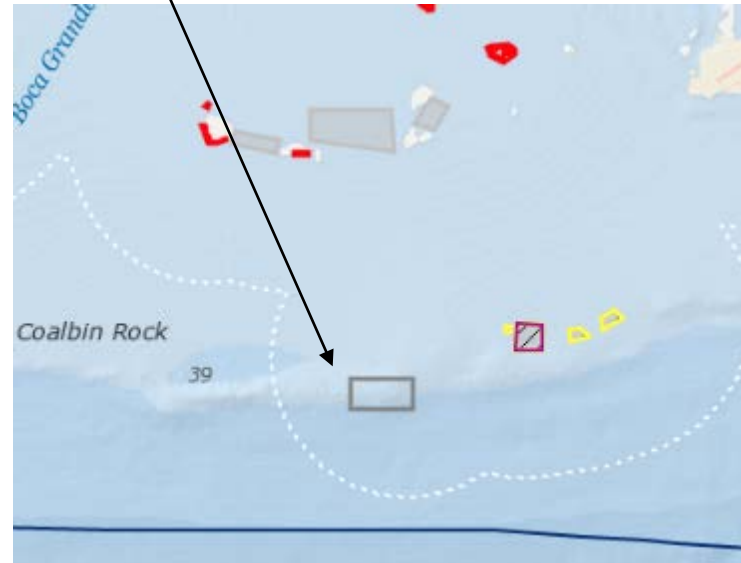
# Marine Zones: Highlight Zone Changes Across Alternatives

Western Dry Rocks: protects a multi-fish spawning aggregation site

**Alternative 1:** Status Quo - No Zone

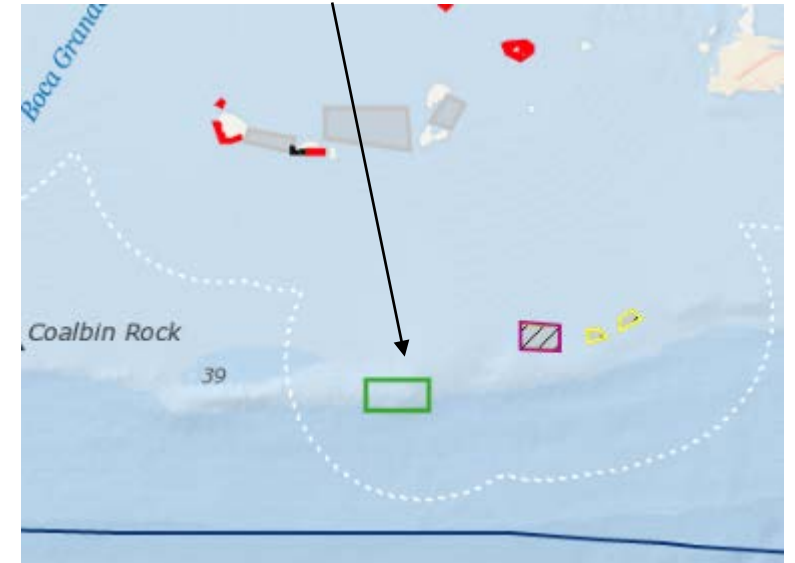


**Alternatives 2 & 3:** Wildlife Management Area



 Trolling Only

**Alternative 4:** Conservation Area

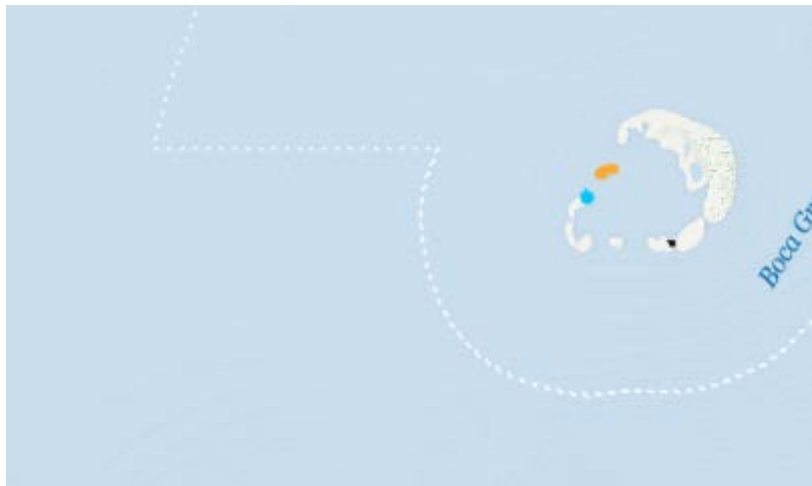


 Transit Only

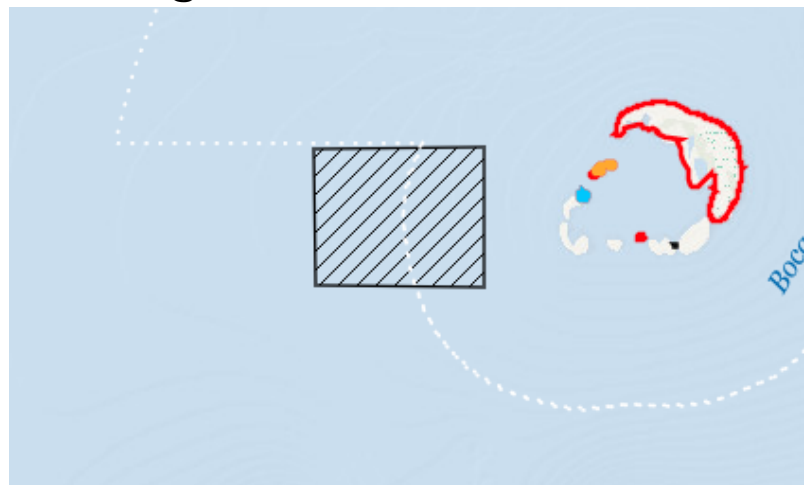
# Marine Zones: Highlight Zone Changes Across Alternatives


- Marquesas Turtle Zone: protects internationally important sea turtle seagrass foraging habitat

**Alternative 1: Status Quo - No Zone**

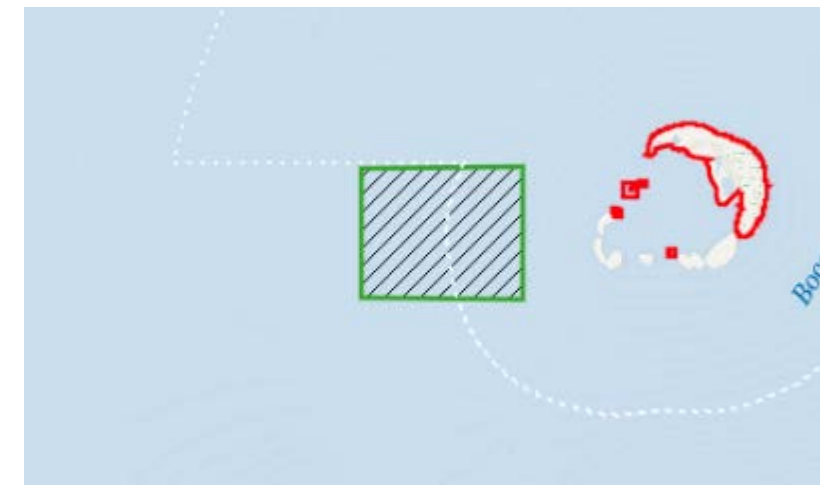



**Alternative 2 & 3: Wildlife Management Area**




 Idle Speed

**Alternative 4: Conservation Area**



 Idle Speed

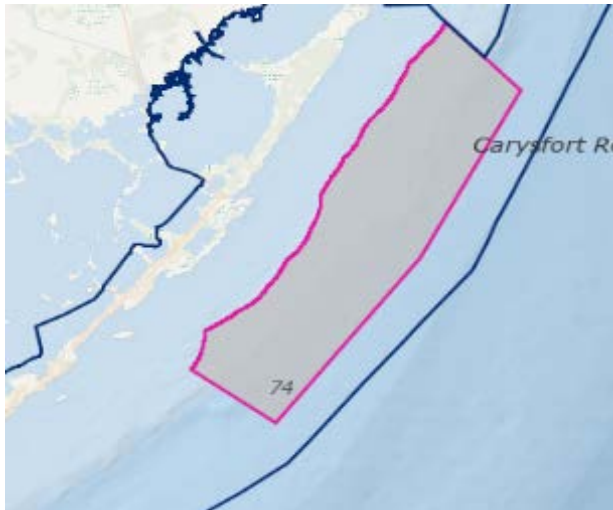
 Transit Only

# Marine Zones: Restrict anchoring to protect habitats






## Looe Key & Key Largo Management Area (Alternatives 2, 3, and 4)

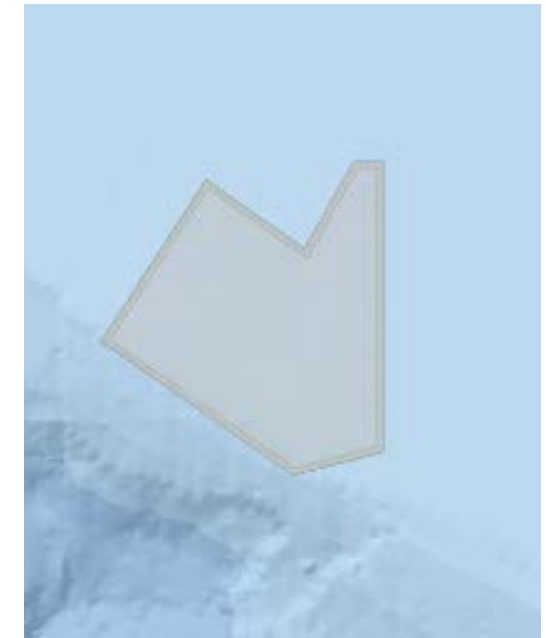


## All Sanctuary Preservation Areas (Alternatives 2, 3, and 4)



## Tortugas No Anchor Zone (existing, applies to vessels over 50m)

-  No Anchor
-  Idle Speed
-  Trolling Only
-  Existing Management Area
-  No Anchor Vessels Greater than 50 m



## Pulley Ridge (only in Alternative 4, applies to all vessels)

# Summary of Alternatives



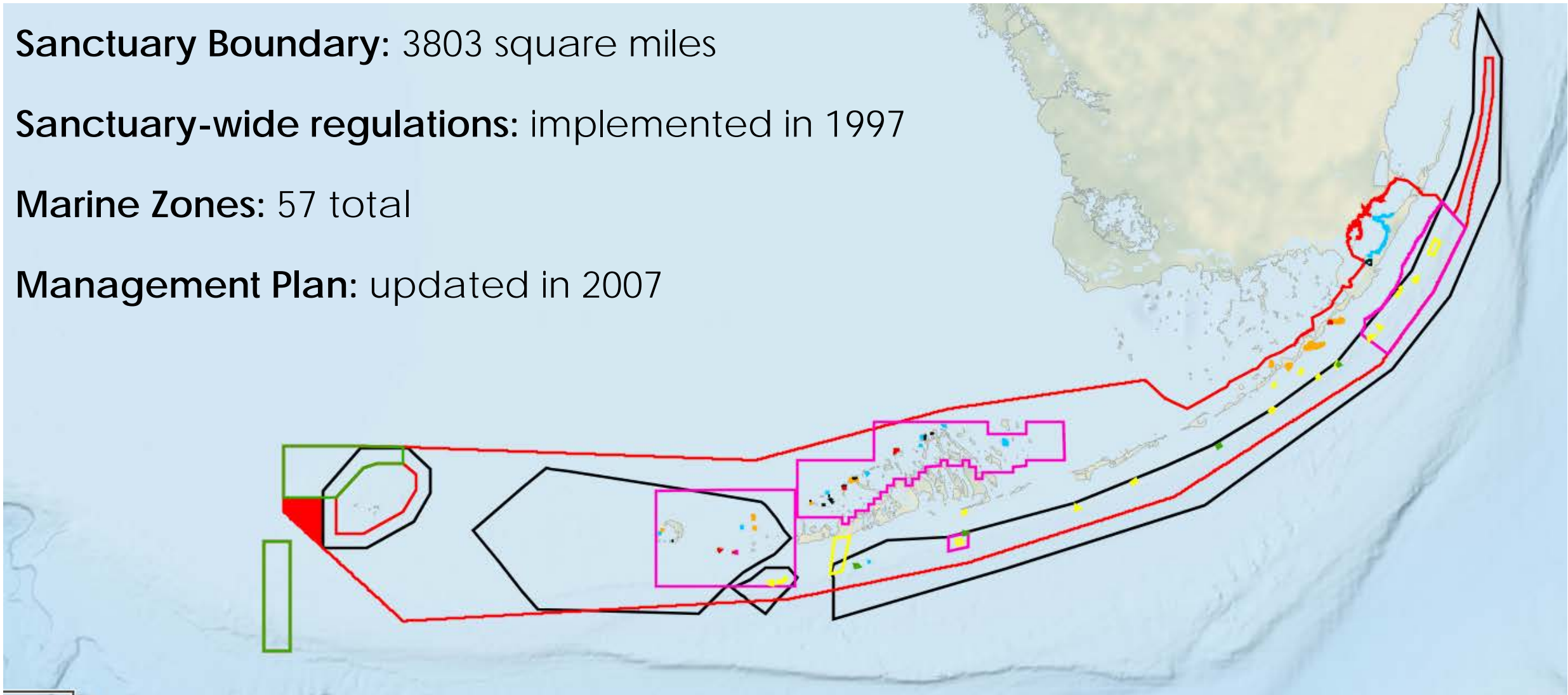
# Alternative 1: No Action

**Sanctuary Boundary:** 3803 square miles

**Sanctuary-wide regulations:** implemented in 1997

**Marine Zones:** 57 total

**Management Plan:** updated in 2007



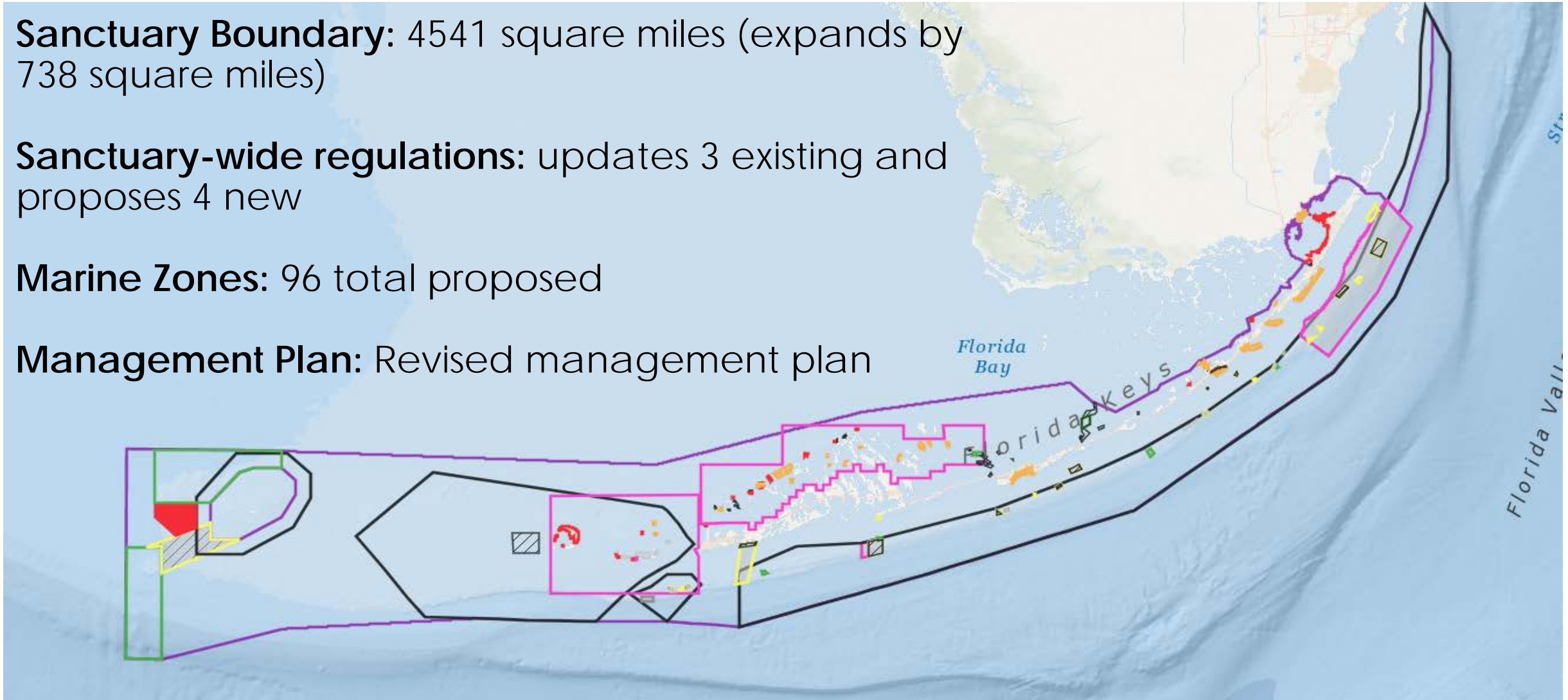
# Alternative 2: Reduce concentrated & conflicting uses

**Sanctuary Boundary:** 4541 square miles (expands by 738 square miles)

**Sanctuary-wide regulations:** updates 3 existing and proposes 4 new

**Marine Zones:** 96 total proposed

**Management Plan:** Revised management plan



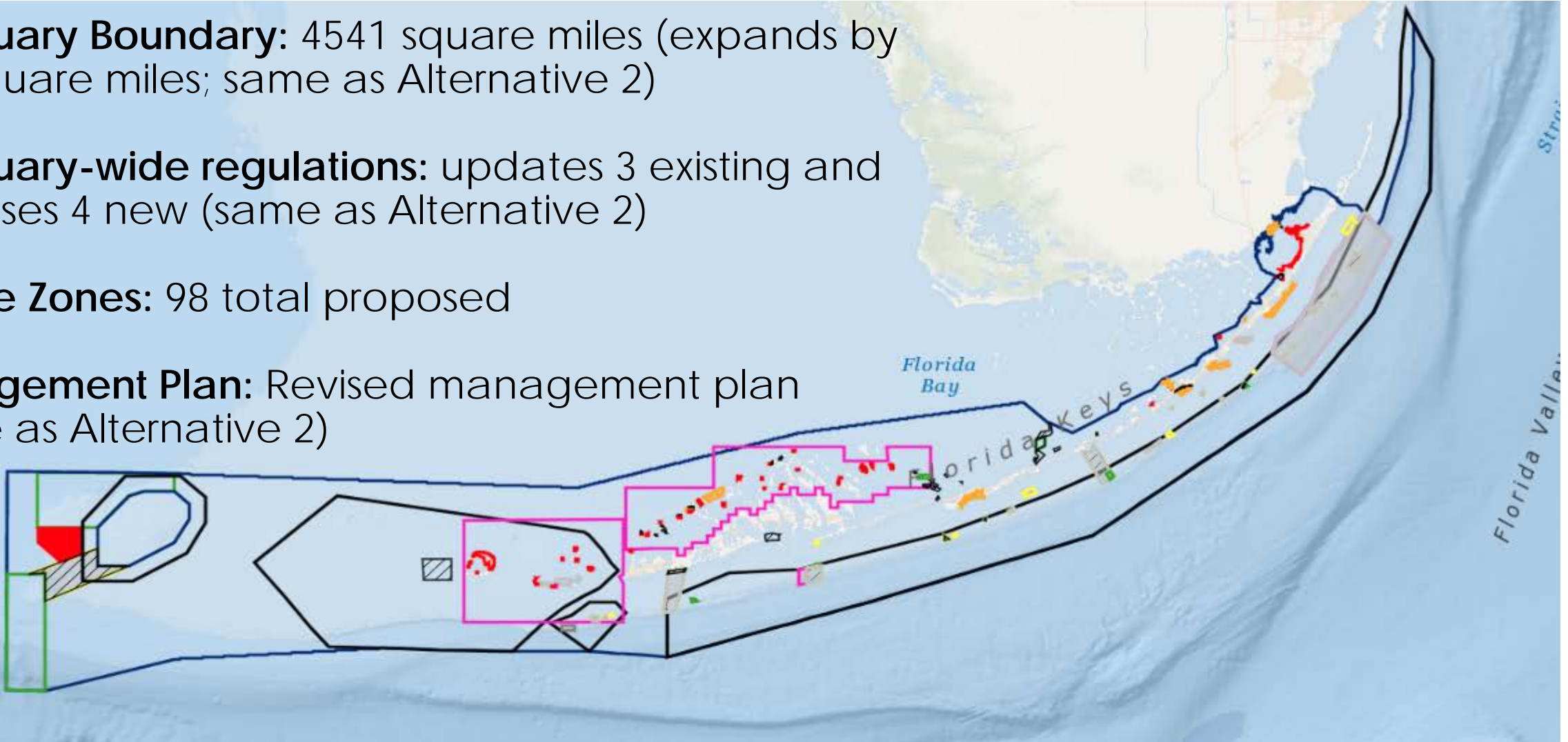
# Alternative 3: Preferred

**Sanctuary Boundary:** 4541 square miles (expands by 738 square miles; same as Alternative 2)

**Sanctuary-wide regulations:** updates 3 existing and proposes 4 new (same as Alternative 2)

**Marine Zones:** 98 total proposed

**Management Plan:** Revised management plan (same as Alternative 2)





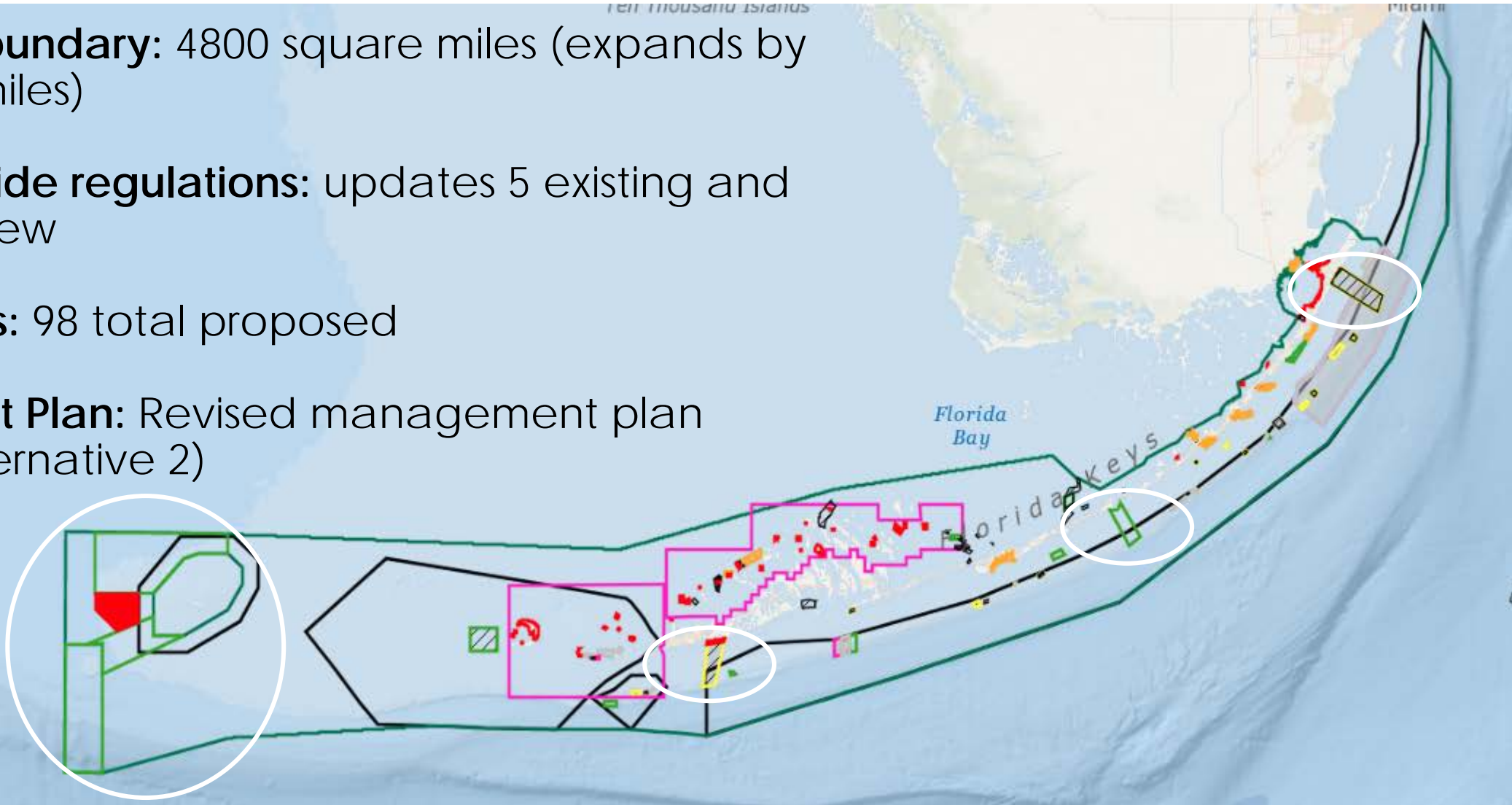
# Alternative 4: Protect large contiguous habitats

**Sanctuary Boundary:** 4800 square miles (expands by 997 square miles)

**Sanctuary-wide regulations:** updates 5 existing and proposes 4 new

**Marine Zones:** 98 total proposed

**Management Plan:** Revised management plan (same as Alternative 2)





# NOAA's Preferred Alternative:

1. **Expand the sanctuary boundary:**
  - protect connected habitats
2. **Update sanctuary-wide regulations:**
  - be consistent with state regulations
  - provide additional authority to address threats to sanctuary resources
3. **Modify and create new marine zones:**
  - provide targeted habitat protections
  - protect additional habitat types
  - protect wildlife including ESA listed coral species
  - facilitate research and restoration
  - manage human uses and impacts
4. **Revise the management plan:**
  - advance understanding
  - improve sanctuary resource condition
  - reduce threats and impacts
  - enhance stewardship
  - advance collaboration and partnership







THANK YOU

Insert Image