

Florida Keys National Marine Sanctuary Advisory Council Marine Zoning and Regulatory Review

DRAFT

Working Group Recommendations:

Coral Reef Ecosystem Restoration Working Group

and

Shallow Water Wildlife and Habitat Protection Working Group

**For Florida Keys National Marine Sanctuary Advisory
Council Consideration at Sanctuary Advisory Council
Meeting June 17, 2014**

**Florida Keys National Marine Sanctuary
Marine Zoning and Regulatory Review**

**Florida Keys National Wildlife Refuges Complex
Backcountry Management Plan Update**

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Introduction and Background

The Sanctuary Advisory Council (Council), working with public and community experts, is leading the process to help guide and develop recommendations for changes to the Florida Keys National Marine Sanctuary (FKNMS) regulations and marine zoning plan. Based on the direction from the FKNMS management plan (2007), the Council's guidance in adopted goals and objectives (see below), and public comments, nine specific priority issues were identified to be addressed by the Council as part of this process:

1. Shallow Water Wildlife and Habitat Protection
2. Coral Reef Ecosystem Restoration
3. Ecosystem Protection: Ecological Reserves / Preservation Areas and Wildlife Protection
4. Permit Procedures and Adaptive Management
5. Artificial Reefs
6. Study Areas and Boundary Modifications
7. Personal Watercraft Tours/ Fishing Conflicts
8. Water Quality
9. Fishery Management Coordination

The Council created working groups to focus on addressing three of the identified priorities: Coral Reef Ecosystem Restoration, Shallow Water Wildlife and Habitat Protection, and Ecosystem Protection: Ecological Reserves/Preservation Areas and Wildlife Protection. Working groups allow the Council to gather information from community experts, user groups, and scientists. The Council's three working groups have completed several months of meetings since their work began in January 2013. Working group draft recommendations were developed using relevant scientific and resource information, as well as input from the public, during meetings that were held throughout the Florida Keys.

This document reflects draft recommendations from the Coral Reef Ecosystem Restoration and Shallow Water Wildlife and Habitat Protection Working Groups and is intended to help the Council identify those issues that should be included in the economic and environmental analysis. This document includes three main sections:

- 1) Summaries of each working group's draft recommendations for Council consideration.
- 2) Maps and site descriptions for each of the areas modified and/or identified for potential zoning by two Council working groups (Coral Reef Ecosystem Restoration and Shallow Water Wildlife and Habitat Protection).
**This document does not include analysis or recommendations from the third working group –Ecosystem Protection: Ecological Reserves / Preservation Areas and Wildlife Protection. That working group is still meeting and will provide recommendations to the Council at a later date (summer 2014, estimated).
- 3) Appendices providing additional background, discussion to date, and information on each working group's draft recommendations for Council consideration.

This document includes 100 draft recommendations for Council review. The Council will identify those draft recommendations for which further information is needed prior to making a final recommendation to the sanctuary superintendent for potential changes to the FKNMS marine zones and regulations.

The review of the marine zone boundaries and regulations of FKNMS is a very involved, open, and

public process culminating in the implementation of any regulatory modifications, additions, or eliminations in 2017. The process will take time – not months, but years. It will involve proactively reaching out to members of the community to gather input, weighing collected information against the best available science, and developing recommendations that will allow the sanctuary to meet the goals and objectives of the review. From there the Council will develop recommendations for NOAA and the U.S. Fish and Wildlife Service to consider, and staff will assess the environmental and economic impacts of any modifications or additions to sanctuary regulations. Finally, any changes to marine zone regulations or boundaries will be adopted and implemented.



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Goals and Objectives for Marine Zoning and Regulatory Review

Approved on December 13, 2011 by Florida Keys National Marine Sanctuary Advisory Council.

The Council approved the following goals and objectives for the review of FKNMS zones and regulations in December 2011. These goals and objectives were highlighted in the public scoping notice in order to better inform public comments during the initial scoping period. These goals and objectives also provide guidance for the Council and working groups during development of recommendations for regulations, modifications to the zoning plan and other resource protection strategies.

- A. To improve the diversity of natural biological communities in the Florida Keys to protect, and, where appropriate restore and enhance natural habitats, populations and ecological processes overall and in each of these sub regions Tortugas, Marquesas, Lower, Middle, and Upper Keys.
 - 1. Reduce stresses from human activities by establishing areas that restrict access to sensitive wildlife populations and habitats.
 - 2. Protect large, contiguous, diverse and interconnected habitats that provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life and protect and preserve all habitats and species.
 - 3. Improve/maintain the condition of the biologically structured habitats including
 - a. Coral Reef
 - i. Inshore Patch Reef
 - ii. Mid-Channel Patch Reef
 - iii. Offshore Patch Reef
 - iv. Reef Margin/Fore Reef
 - v. Deep Reef
 - b. Seagrass Bed
 - c. Hardbottom
 - d. Coastal Mangrove
 - 4. Increase abundance and condition of selected key species including corals, queen conch, long spined sea urchin, apex predatory fish, birds and sea turtles.
- B. To facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities.
 - 1. Minimize conflicts among uses compatible with the National Marine Sanctuary.
 - 2. Prevent heavy concentrations of uses that degrade Sanctuary resources.
 - 3. Provide undisturbed monitoring sites for research and control sites to help determine the effects of human activities.
 - 4. Achieve a vibrant ecologically sustainable ecosystem and economy.
 - a. Apply the best available science and balanced, conservation based management.

Principles for Marine Zoning and Regulatory Review

Approved on December 13, 2011 by Florida Keys National Marine Sanctuary Advisory Council.

1. The Florida Keys National Marine Sanctuary regulation/zoning review should be conducted with the recognition that there are bordering and overlapping marine management regimes in place, and that these regimes must be considered when contemplating changes to the Florida Keys National Marine Sanctuary regulation/marine zoning structure.
2. All areas of the Florida Keys National Marine Sanctuary should be classified as part of a specific zone, therefore the current “unzoned” area should be classified as a recognized zone type such as “general use area” or “multiple use area”.
3. Each habitat type should be represented in a non-extractive marine zone in each of the biogeographically distinct sub regions of the Florida Keys National Marine Sanctuary to achieve replication. The subregions identified were the Tortugas, Marquesas, and Lower, Middle, and Upper Keys.
4. Information on resilient reef areas that can serve as refugia should be taken into account in zoning changes.
5. Temporal zoning should be considered as a tool for protecting spawning aggregations and nesting seasons.
6. The size of individual non-extractive zoned areas, the cumulative total area included in non-extractive zones, and their spatial relationship with one another matter greatly in achieving the resource protection purposes of the Florida Keys National Marine Sanctuary.

Coral Reef Ecosystem Restoration Working Group Recommendations

Ecosystem restoration, particularly coral reef ecosystem restoration, is a priority to incorporate into the management activities of the sanctuary.

The Coral Reef Ecosystem Restoration working group consisted of 13 community members, nine of which were Council members, representing a range of issues and constituencies.

	Name	Affiliation
1	Ken Nedimyer	SAC; Conservation & Environment; Working Group Chair
2	David Vaughan	SAC; Research & Monitoring; Working Group Co-Chair
3	Clinton Barras	SAC; Tourism – Lower Keys
4	Alex Brylske	SAC; Education & Outreach
5	Jeff Cramer	SAC; Fishing – Commercial – Shell/Scale
6	Don Kincaid	SAC; Diving – Lower Keys
7	Rob Mitchell	SAC; Diving – Upper Keys
8	Martin Moe	SAC; Education & Outreach
9	Bob Smith	SAC; Diving – Lower Keys
10	Patti Gross	History of Diving Museum; USCG Auxiliary
11	Caitlin Lustic	The Nature Conservancy
12	Jeff Neidlinger	A Deep Blue Dive Center
13	Marius Venter	Fury Water Adventures

Coral Reef Ecosystem Restoration Working Group Objectives:

Approved on December 11, 2012 by Florida Keys National Marine Sanctuary Advisory Council.

1. Identify specific areas and zones for active restoration of coral reef ecosystem.
2. Identify regulatory impediments and appropriate permitting conditions for active restoration of coral reef ecosystem species.
3. Identify adaptive management measures and criteria for opening area closed for restoration purposes (i.e. performance standards for sunset).

The working group met over a series of seven meetings from late January to June, 2013:

January 31: Clarified role and authority of working group; determined entire Florida Keys coral reef ecosystem would be considered in developing recommendations for active coral reef ecosystem restoration.

February 21: Identified habitats and resources to consider for active restoration; and activities that may impact the success of restoration action.

March 13: Identified criteria to use for developing options and recommendations; identified areas on charts to consider for active restoration.

April 3: Further refined selection criteria and areas to consider for recommendation as restoration areas.

May 1: Reviewed individual maps for proposed coral reef ecosystem restoration and proposed additional new areas for restoration; discussed resources, purposes and intent of the sites identified,

and activities that need to be managed due to potential impact to restoration success.

May 22: Developed recommendations regarding streamlining the permitting process, options for managing restoration zones, mechanisms to mark area/zone, adaptive management of zones, and restoration research zones; and reviewed and prioritized active coral reef ecosystem restoration areas.

June 12: Finalized area selections and draft recommendations regarding coral reef ecosystem restoration within FKNMS.

For More Information

Full working group meeting notes, presentations, products and draft recommendations can be found on the sanctuary website: <http://floridakeys.noaa.gov/review/coralrestoration.html>

Summary of Working Group Recommendations for Sanctuary Advisory Council Consideration

**For Coral Reef Ecosystem Restoration zone recommendations: see FKNMS Index Map for more information. Note: areas marked on the Index Map are point locations only. To see the complete Coral Reef Ecosystem Restoration Working Group outcomes and recommendations see Appendix I.

The Coral Reef Ecosystem Restoration Working Group recommends that the entire reef tract be eligible for restoration activities, however 36 priority sites were identified.

Recommendation CR 1-36: Evaluate the 36 priority sites for economic and environmental benefit/impact.

ID	Coral Reef Site Name	Region	Map Number
CR-1	Turtle Reef, Pennekamp (East Ocean Reef)	Upper	1
CR-2	Carysfort Reef, North	Upper	2
CR-3	Elbow Reef, North <i>Elpis</i>	Upper	4
CR-4	Key Largo Dry Rocks	Upper	5
CR-5	French Reef	Upper	5
CR-6	Molasses Reef North/ <i>Wellwood</i>	Upper	5
CR-7	Molasses Reef	Upper	5
CR-8	Snapper Ledge	Upper	9
CR-9	Davis Reef	Upper	11
CR-10	Hen and Chickens	Upper	11
CR-11	Cheeca Rocks	Upper	11
CR-12	South of Lower Matecumbe	Middle	14
CR-13	Caloosa Rocks	Middle	14
CR-14	Tennessee Reef	Middle	16
CR-15	South of Little Duck Key	Middle	20
CR-16	Coffins Patch	Middle	20

CR-17	South of Key Colony Beach/Marker 48	Middle	23
CR-18	Delta Shoal	Middle	23
CR-19	Sombrero Key	Middle	23
CR-20	Newfound Harbor SPA	Lower	33
CR-21	Looe Key Reef SPA - <i>R/V Columbus Iselin</i> Restoration	Lower	33
CR-22	American Shoal Reef	Lower	36
CR-23	Pelican Shoal	Lower	36
CR-24	Hawk Channel Patch Reefs 1	Lower	38
CR-25	Boca Chica Patch Reefs	Lower	38
CR-26	Key West Patch Reefs	Lower	38
CR-27	Western Sambo 1 -- (larger general Ecological Reserve)	Lower	39
CR-28	Western Sambo 2 -- (west end- <i>Jackie L, Connected</i> Restoration)	Lower	39
CR-29	Eastern Dry Rocks 1 (general SPA area)	Lower	42
CR-30	Rock Key 1 (general SPA)	Lower	42
CR-31	Sand Key 1 (general SPA)	Lower	44
CR-32	Cottrell Key	Lower	43
CR-33	Man Key Patch Reefs	Marquesas	43
CR-34	Western Dry Rocks	Marquesas	44
CR-35	Boca Grande Patch Reef	Marquesas	45
CR-36	East of Dry Tortugas National Park - Pulaski Shoals	Dry Tortugas	50

Recommendation CR 37: For each of the 36 sites, analyze the following for economic/use impact and ecosystem protection effects:

ID	Economic/Use Impacts and Ecosystem Protection Efforts for Analysis
CR 37.1	Impacts to existing use of the area and to various user groups.
CR 37.2	Impact of restricting all activities while restoration is in progress and for a set duration of time following the restoration activities to allow the site to stabilize.
CR 37.3	Impact of restricting only those activities that could impact the success of restoration activities (i.e. activities that may impact the benthic community).
CR 37.4	Impact of restricting all access (i.e. potentially closed) to allow for undisturbed sites for research.
CR 37.5	Impact of controlling access to sites; limiting what organizations can access sites (i.e. restoration activity sponsoring agency access allowed).
CR 37.6	Impact of limiting or removing access to mooring buoys.

Recommendation CR 38: Analyze the following for enforceability and regulatory feasibility:

ID	Analysis of Enforceability and Regulatory Feasibility
CR 38	Link regulations for restoration zones to the type of marker buoy used rather than the specific location. (The markers and hence restoration zones can be moved without revising regulations.)

Recommendation CR 39: Analyze the feasibility of developing a central cross-agency on-line permitting system:

ID	Analysis of Cross-Agency On-Line Permitting System
CR 39	Analyze and determine the feasibility of developing a central cross-agency on-line permitting system. (May be restricted by Office of Management & Budget rule related to collection of Personal Identifiable Information.)

Recommendation CR 40: Analyze and determine the feasibility of streamlining the permit process. Options to consider include:

ID	Analysis to Determine Feasibility of Streamlining Permit Process
CR 40.1	Allow for simple modifications including the permit period and ease of permit renewals.
CR 40.2	Streamline permitting process if locations are predetermined.
CR 40.3	Establish "qualified" practitioner permitting requirements to allow faster permit processing.
CR 40.4	Options to permit projects more quickly particularly when funding is time sensitive.

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Shallow Water Wildlife and Habitat Protection Working Group Recommendations

Addressing impacts to shallow water habitats and resources is a priority resource protection issue to address. One means of doing this is through establishing marine zones and regulations designed to protect shallow water resources.

The Shallow Water Wildlife and Habitat Protection working group consisted of 18 community members, eight of which were Council members, representing a range of issues and constituencies.

	Name	Affiliation
1	Jack Curlett	SAC; Recreational Fishing; Working Group Chair
2	Justin Bruland	SAC; Commercial Fishing
3	Bruce Frerer	SAC; Recreational Fishing
4	Pete Frezza	SAC; South Florida Ecosystem Restoration
5	Richard Grathwohl	SAC; Fishing Charter Flats Guide
6	David Makepeace	SAC; Citizen at Large – Upper Keys
7	Bruce Popham	SAC; Boating Industry
8	Jessica Pulfer	SAC; Conservation and Environment
9	Aaron Adams	Bonefish and Tarpon Trust
10	Carla Bellenger	Key West Eco Tours, Inc.
11	Mike Bresette	InWater Research Group, Inc.
12	Tad Burke	Florida Keys Fishing Guides Association
13	Charlie Causey	Florida Keys Environmental Fund
14	John Coffin	Coffin Marine Services Inc.
15	Roy Herndon	Marine Life Collectors
16	Meaghan Johnson	The Nature Conservancy
17	Bill Keogh	Big Pine Kayak
18	John O’Hearn	Lower Keys Guides Association

Shallow Water Wildlife and Habitat Protection Working Group Objectives:

Approved on December 11, 2012 by Florida Keys National Marine Sanctuary Advisory Council.

1. Evaluate existing Wildlife Management Areas for effectiveness in protecting wildlife and their habitats under current as well as emerging public uses and environmental conditions; recommend status quo, modification, and/or new areas.
2. Develop recommendations considering existing regulations and zoning – mainly use of vessel restrictions on access, anchoring, speed, and channel marking – to further protect seagrass and critical shallow water habitats in FKNMS.
3. Address concentrated uses that diminish and destroy seagrass and shallow water habitats.
4. Identify where high impact activities known to occur should be allowed and encouraged for public and private uses.
5. Identify seagrass and shallow water habitat areas for exclusion to allow for research control areas.
6. Evaluate mangrove habitat protection for bird nesting.
7. Reduce damage to natural resources from improper vessel salvage methods.

The working group met over a series of seven meetings from late January to June, 2013:

January 30: Clarified Role and Authority of Working Group.

February 20: Identified habitats and resources at risk and impacts and uses that affect those resources.

March 12: Identified criteria to use for developing options and recommendations.

April 2: Identified data layers needed to facilitate development of habitat protection recommendations.

April 30: Assessed Wildlife Management Areas and associated access restrictions and identified potential modifications, new or status quo recommendations.

May 21: Developed a recommendation on management options for dealing with natural resource impacts from improper vessel salvage methods.

June 11: Developed site specific recommendations on management options for existing Wildlife Management Areas, new areas and refined regulations.

For More Information

Full working group meeting notes, presentations, products and draft recommendations can be found on the sanctuary website: <http://floridakeys.noaa.gov/review/shallowwater.html>

Summary of Working Group Recommendations for Sanctuary Advisory Council Review

**For Shallow Water Wildlife and Habitat Protection zone recommendations: see FKNMS Index Map for more information. To see the complete Shallow Water Wildlife and Habitat Protection Working Group outcomes and recommendations see Appendix II.

Potential Regulatory Recommendations:

Recommendation SW 1-53: Evaluate the 27 existing Wildlife Management Areas (WMAs) with recommended modifications and the 24 proposed new zones for shallow water wildlife and habitat protection for economic and environmental benefit/impact:

ID	Name	Zone Modification	Region	Map Number
SW-1	Crocodile Lake	Existing WMA, status quo	Upper	3,4,7
SW-2	Eastern Lake Surprise	Existing WMA, no modifications	Upper	4,7
SW-3	Whitemore Bight – El Radabob – Rattlesnake Key	potential new zone	Upper	4,7,8
SW-4	Barnes Sound – Shallow Bays	potential new zone	Upper	6
SW-5	Rodriguez Key	Existing WMA, modifications	Upper	8
SW-6	Dove Key	Existing WMA, modifications	Upper	8
SW-7	Tavernier Key	Existing WMA, modifications	Upper	8,9,10,11
SW-8	Pigeon Key	potential new zone	Upper	10
SW-9	Snake Creek	Existing WMA, modifications	Middle	11

SW-10	Cotton Key	Existing WMA, modifications	Middle	11
SW-11	Ashbey – Horseshoe Key	potential new zone	Middle	13
SW-12	Gulfside Banks	potential new zone	Middle	16,19,22
SW-13	Moser Channel Banks	potential new zone	Middle	22,23,25,26
SW-14	Marathon Oceanside Shoreline	potential new zone	Middle	23
SW-15	Tarpon Migration Lane	potential new zone	Lower	26,29,30,32,33,35,36,38,41
SW-16	Horseshoe Key	Existing WMA, no modifications	Lower	28
SW-17	Little Pine Mangrove Key	potential new zone	Lower	28
SW-18	Content Keys and Upper Harbor Key- Flats	potential new zone	Lower	31,34
SW-19	Upper Harbor Key	Existing WMA, modifications	Lower	31
SW-20	East Content Keys	Existing WMA, modifications	Lower	31
SW-21	West Content Keys	Existing WMA, modifications	Lower	31,34
SW-22	Little Crane Key	Existing WMA, remove zone	Lower	34
SW-23	Island near Torch Key	potential new zone	Lower	32
SW-24	Key Lois and Loggerhead Basin	potential new zone	Lower	32,33,35,36
SW-25	Crane Key	potential new zone	Lower	34
SW-26	Sawyer Keys	Existing WMA, modifications	Lower	34
SW-27	Marvin Key and the Barracuda Keys	potential new zone	Lower	35,37
SW-28	Tidal Flat South of Marvin Key	Existing WMA, no modifications	Lower	37
SW-29	Snipe Keys	Existing WMA, no modifications	Lower	37
SW-30	Mud Keys	Existing WMA, modifications	Lower	37
SW-31	East Harbor Key	Existing WMA, status quo	Lower	37
SW-32	Lower Harbor Keys	Existing WMA, modifications	Lower	37
SW-33	Cayo Agua Keys	Existing WMA, modifications	Lower	37,40
SW-34	Western Sambos – shoreline	Existing ER, modifications	Lower	38
SW-35	Pelican Shoal	Existing WMA, remove zone	Lower	38
SW-36	Bay Keys	Existing WMA, modifications	Lower	40
SW-37	Sea Plane Basin	Considered, not recommended	Lower	41
SW-38	Demolition Key	potential new zone	Lower	41
SW-39	Pearl Basin	potential new zone	Lower	41
SW-40	Mule Key	potential new zone	Marquesas	41
SW-41	Cottrell Key	Existing WMA, modifications	Marquesas	43
SW-42	Lakes Area (La Vina Bank)	potential new zone	Marquesas	43,45
SW-43	Little Mullet Key	Existing WMA, status quo	Marquesas	43
SW-44	Big Mullet Key	Existing WMA, modifications	Marquesas	43

SW-45	Archer Key	potential new zone	Marquesas	43
SW-46	East Barracouta Key Flats	potential new zone	Marquesas	43
SW-47	West Barracouta Key Flats	potential new zone	Marquesas	43
SW-48	Woman Key	Existing WMA, modifications	Marquesas	43
SW-49	Boca Grande to Woman Key – Shallow Bank	potential new zone	Marquesas	43,45
SW-50	Wilma Key	potential new zone	Marquesas	45
SW-51	Boca Grande Key	Existing WMA, modifications	Marquesas	45
SW-52	Marquesas Keys	Existing WMA, modifications	Marquesas	45,47
SW-53	Marquesas Keys Turtle Zone	potential new zone	Marquesas	47,49

Recommendation SW 54: Based on the resources of concern and using the criteria identified by the working group, if additional modifications and/or new areas should be analyzed, identify those areas and include them in the analysis (i.e. areas of severe seagrass scarring not noted by the working group).

ID	Criteria for Identifying Additional Modifications and/or New Areas for Analysis
SW 54	Based on the resources of concern and using the criteria identified by the working group, if additional modifications and/or new areas should be analyzed, identify those areas and include them in the analysis (i.e. areas of severe seagrass scarring not noted by the working group).

Recommendation SW 55: Analyze the following for economic/use impact and ecosystem protection effects:

ID	Criteria for Identifying Additional Modifications and/or New Areas for Analysis
SW 55.1	Impact to existing users including small-scale users.
SW 55.2	Associated wildlife protection impact from non-extraction, identify zones for non-extraction based on this analysis (determine what constitutes non-extraction).
SW 55.3	Use of various types of access and access restrictions (i.e. motor, idle speed no wake, pole/troll/paddle, no motor, closed, buffer zones, etc.).
SW 55.4	Adequate access/transit channels between (and, if needed within) zones
SW 55.5	Determine appropriate size of zone to meet resource protection goals (i.e. larger contiguous zones).
SW 55.6	Determine if additional regulations related to anchoring and mooring buoy use are needed and prudent.
SW 55.7	Benefit or impact from additional zone marking and range of marking options (i.e. gated, intelligent).

Recommendation SW 56: Analyze the above items for enforceability and regulatory feasibility.

ID	Analysis of Enforceability and Regulatory Feasibility
SW 56	Analyze all recommendations to determine enforceability and regulatory feasibility.

Recommendation SW 57: Analyze temporal management options for potential economic/use impact, ecosystem protection effect and regulatory feasibility and enforceability.

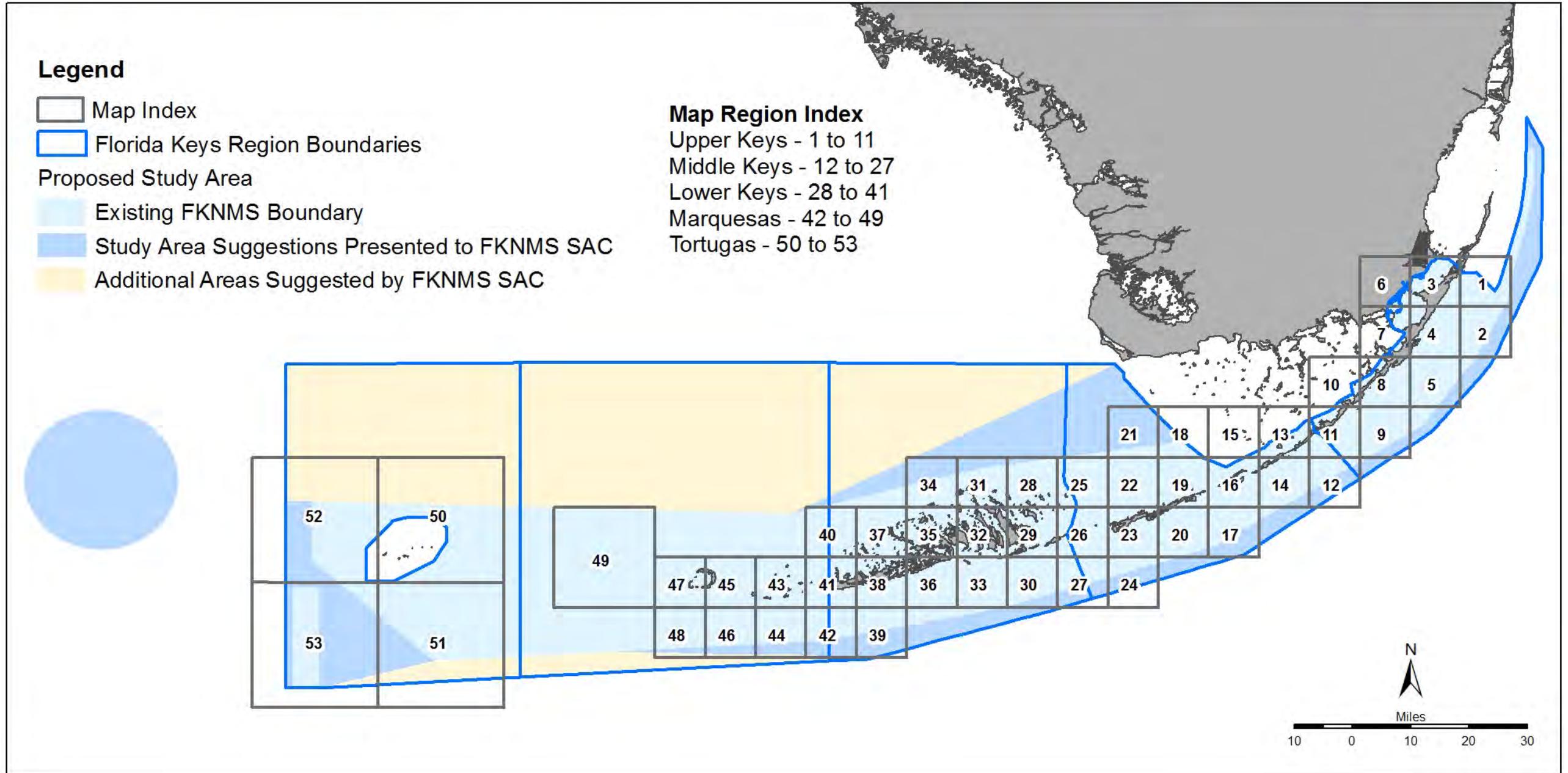
ID	Analysis of Temporal Management Options
SW 57	Analyze temporal management options for potential economic/use impact, ecosystem protection effect and regulatory feasibility and enforceability.

Non-Regulatory Recommendations:

ID	Non-Regulatory Recommendations
SW 58	Establish a standing Sanctuary Advisory Council Wildlife and Habitat Protection working group.
SW 59	Establish a Sanctuary Advisory Council Towing and Salvage working group to focus on this issue and ensure continued dialog and coordination among the towing and salvage community and the Florida Keys National Marine Sanctuary.
SW 60	Evaluate and determine the feasibility of using the successful and established programs at Biscayne National Park as guidance to implement a towing and salvage permit program in Florida Keys National Marine Sanctuary.

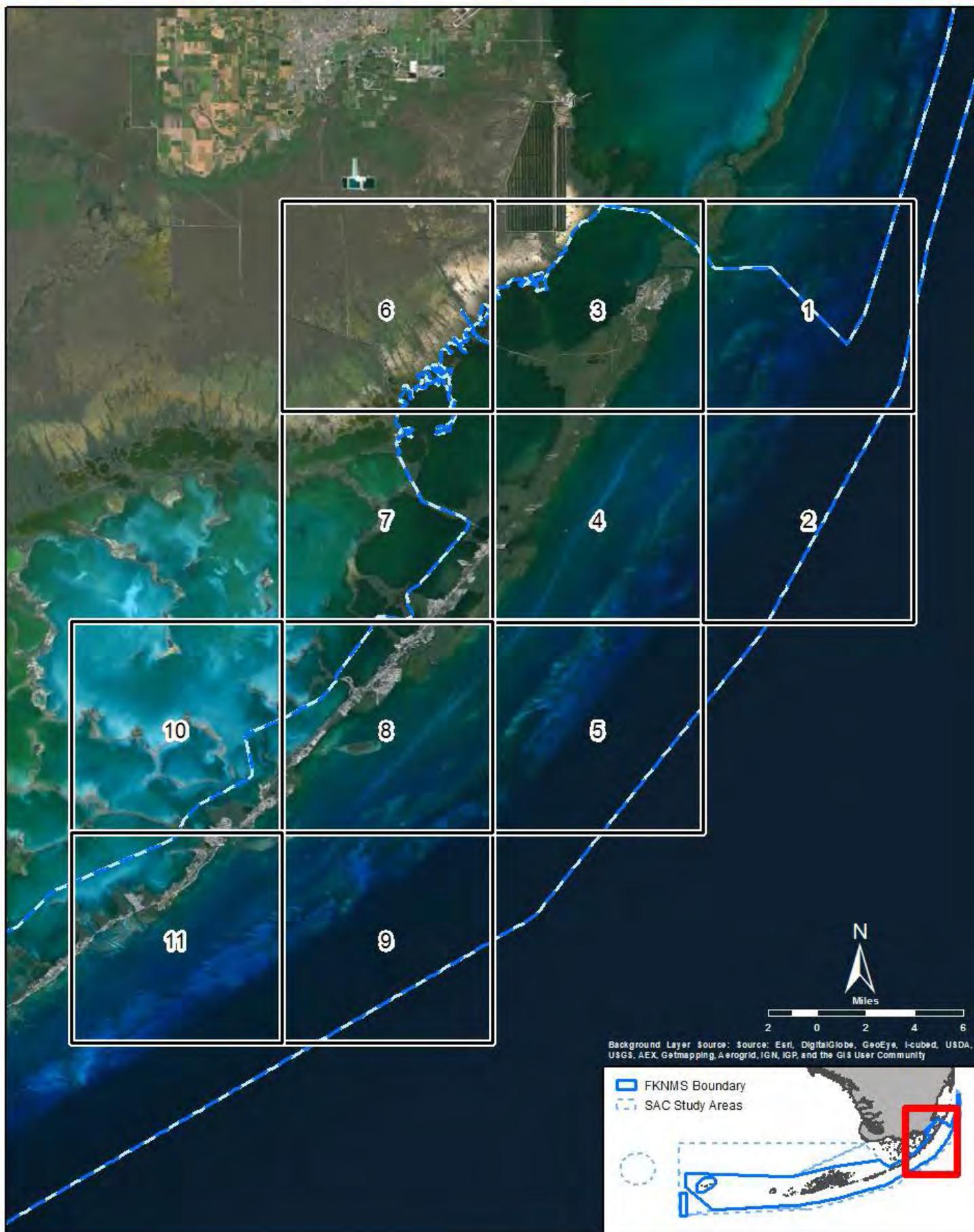
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Draft Index Map for the Florida Keys National Marine Sanctuary Advisory Council - Marine Zoning and Regulatory Review, 2013



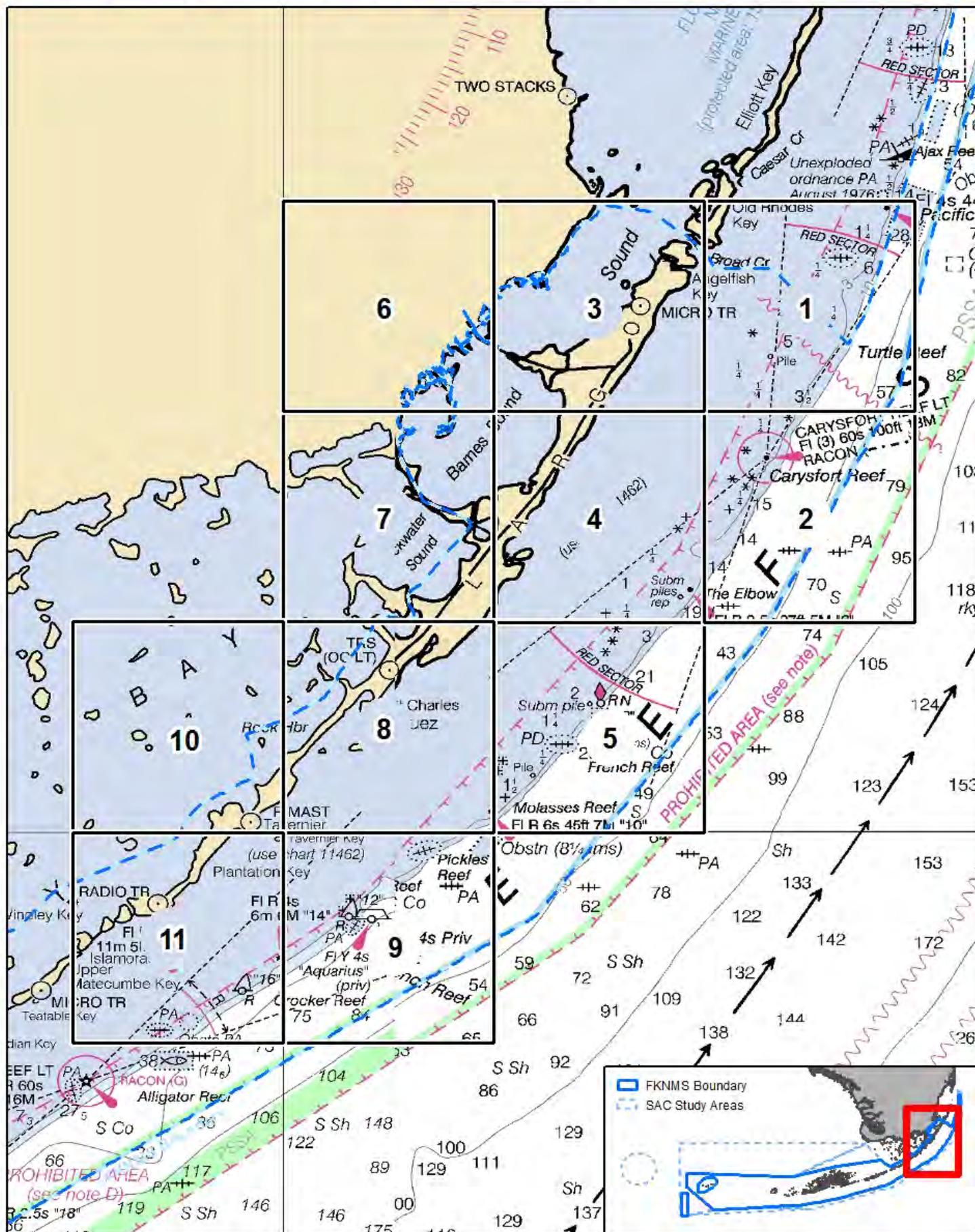
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Upper Keys Region Index Map

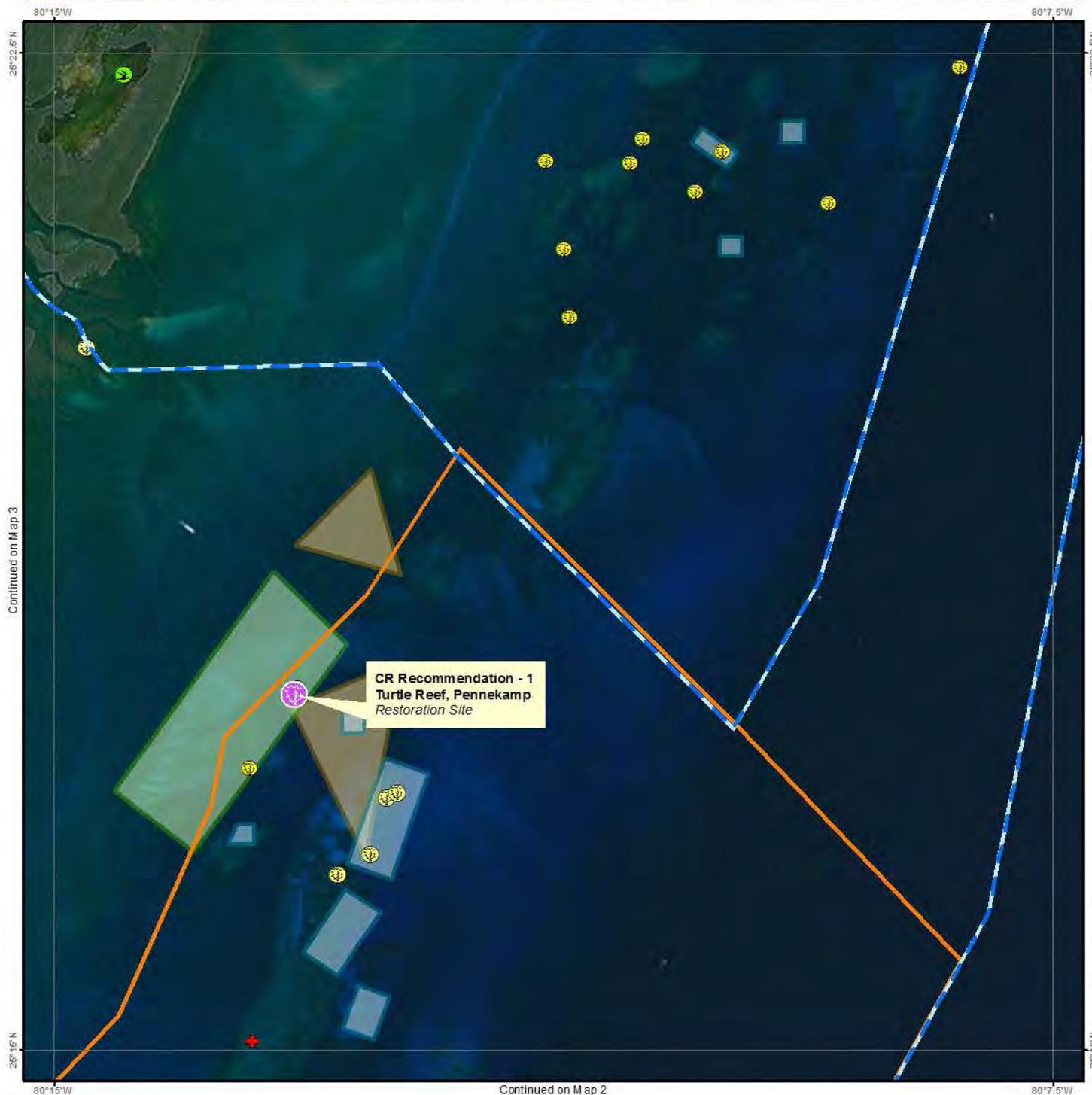




Upper Keys Region Index Map



Map 1 - Pacific Reef



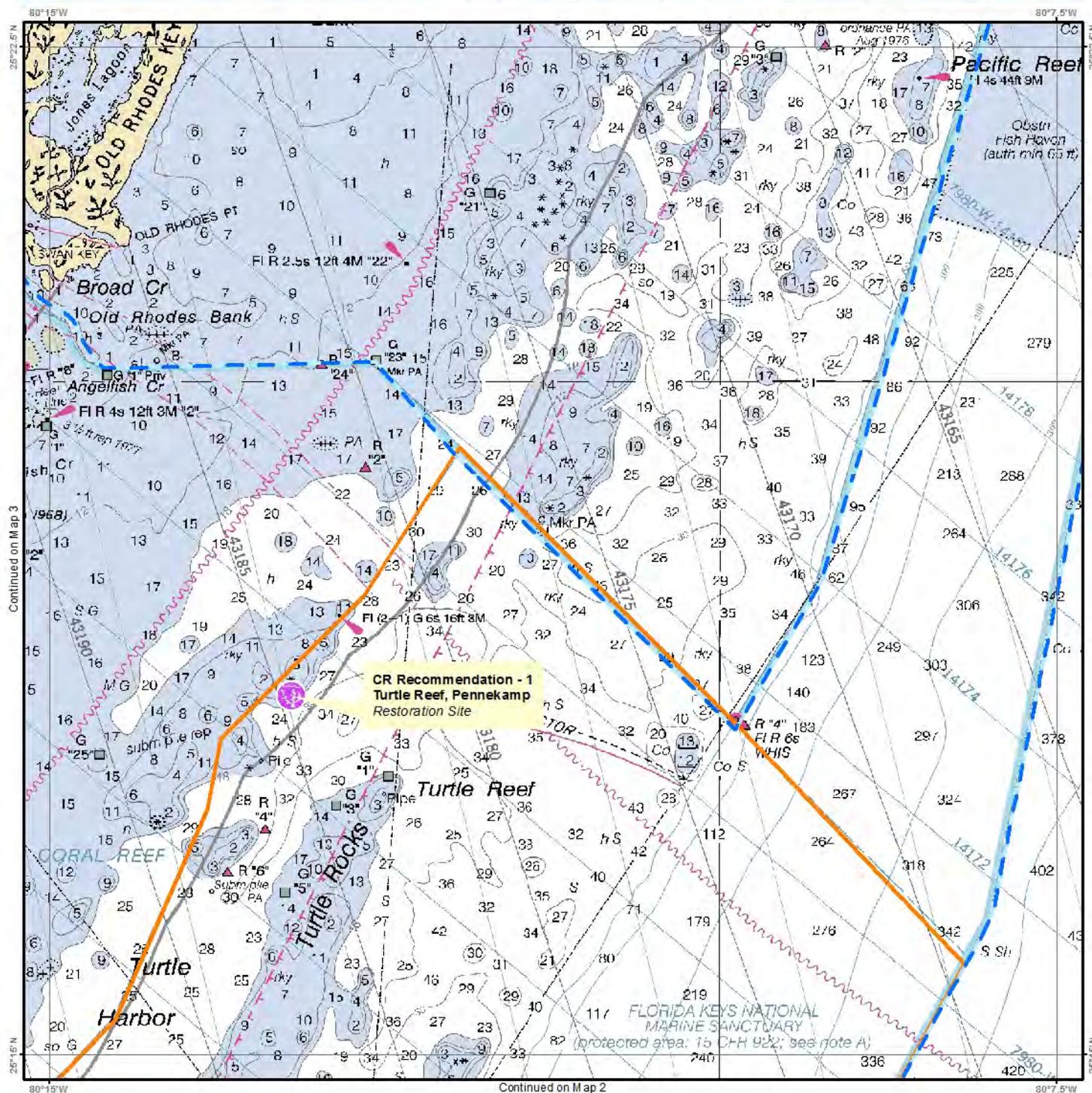
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	Coral Reef Ecosystem Restoration Working Group Recommendations		FKNMS Vessel Groundings (2000-2012)
	FKNMS Boundary		
	Existing Marine Zones		
	Areas Closed to Lobster Trapping (National Marine Fisheries Service)		
	Coral Formation Protection Zones (State Parks)		
	Florida Reef Resiliency Program Resilient Reefs		
	Bird Nests (Various Species)		
	FKNMS Permitted Restoration Sites		

NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

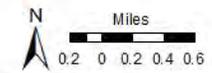
Map 1 - Pacific Reef



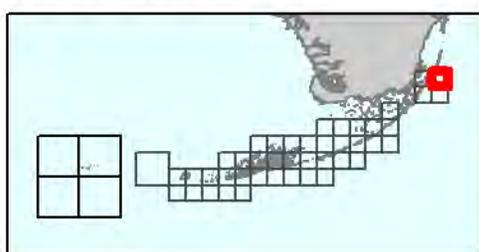
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Continued on Map 2

- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



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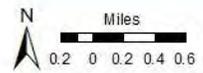
Map 2 - Carysfort Reef



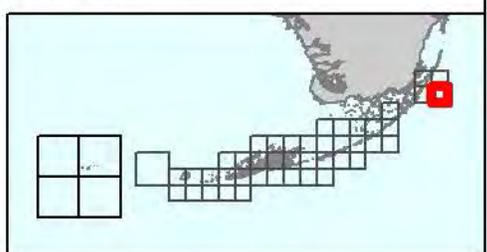
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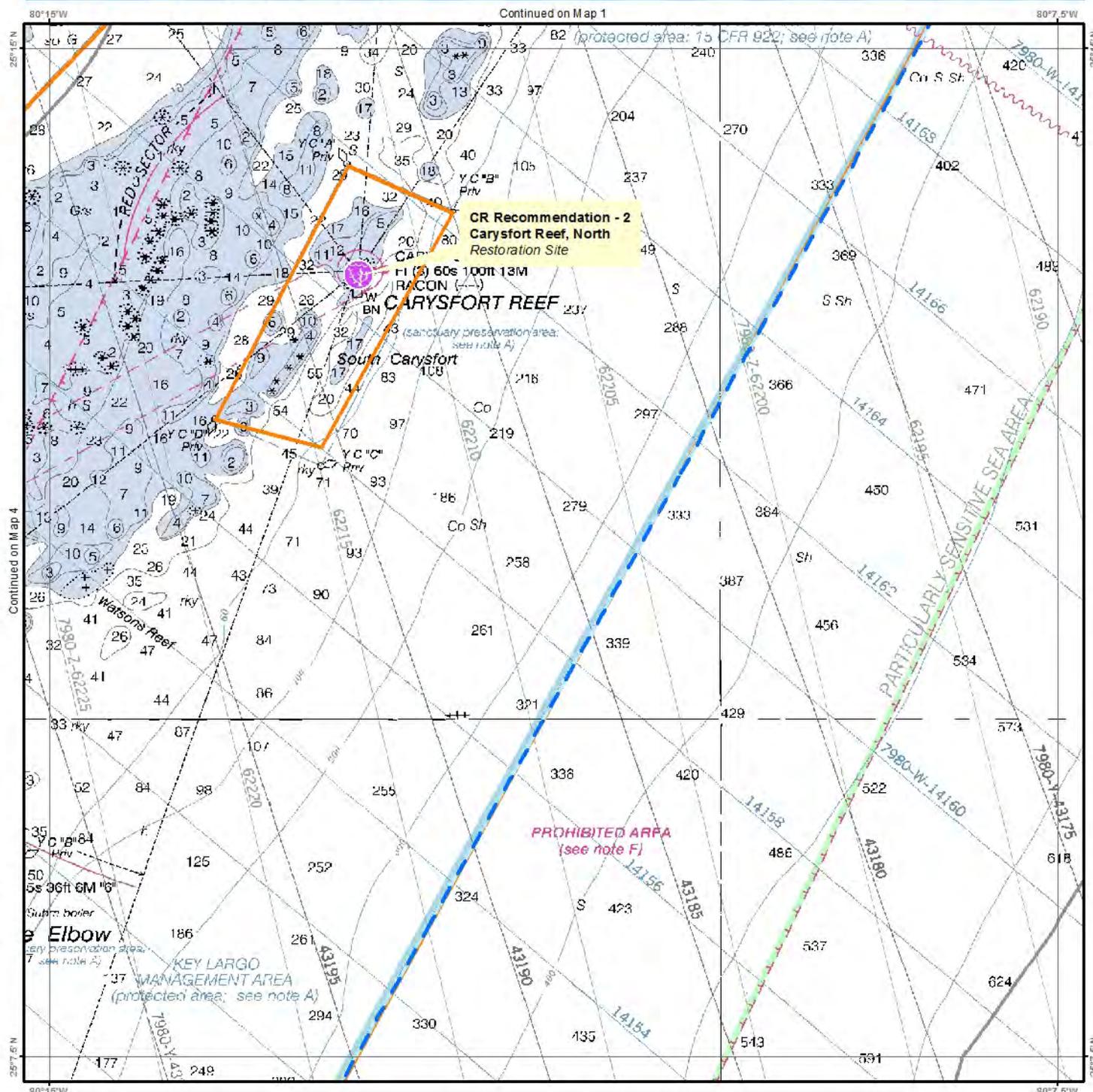
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Areas Closed to Lobster Trapping (National Marine Fisheries Service)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



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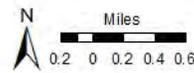
Map 2 - Carysfort Reef



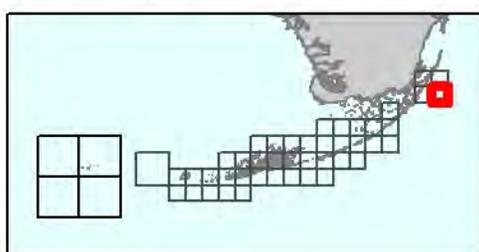
Continued on Map 4

Continued on Map 1

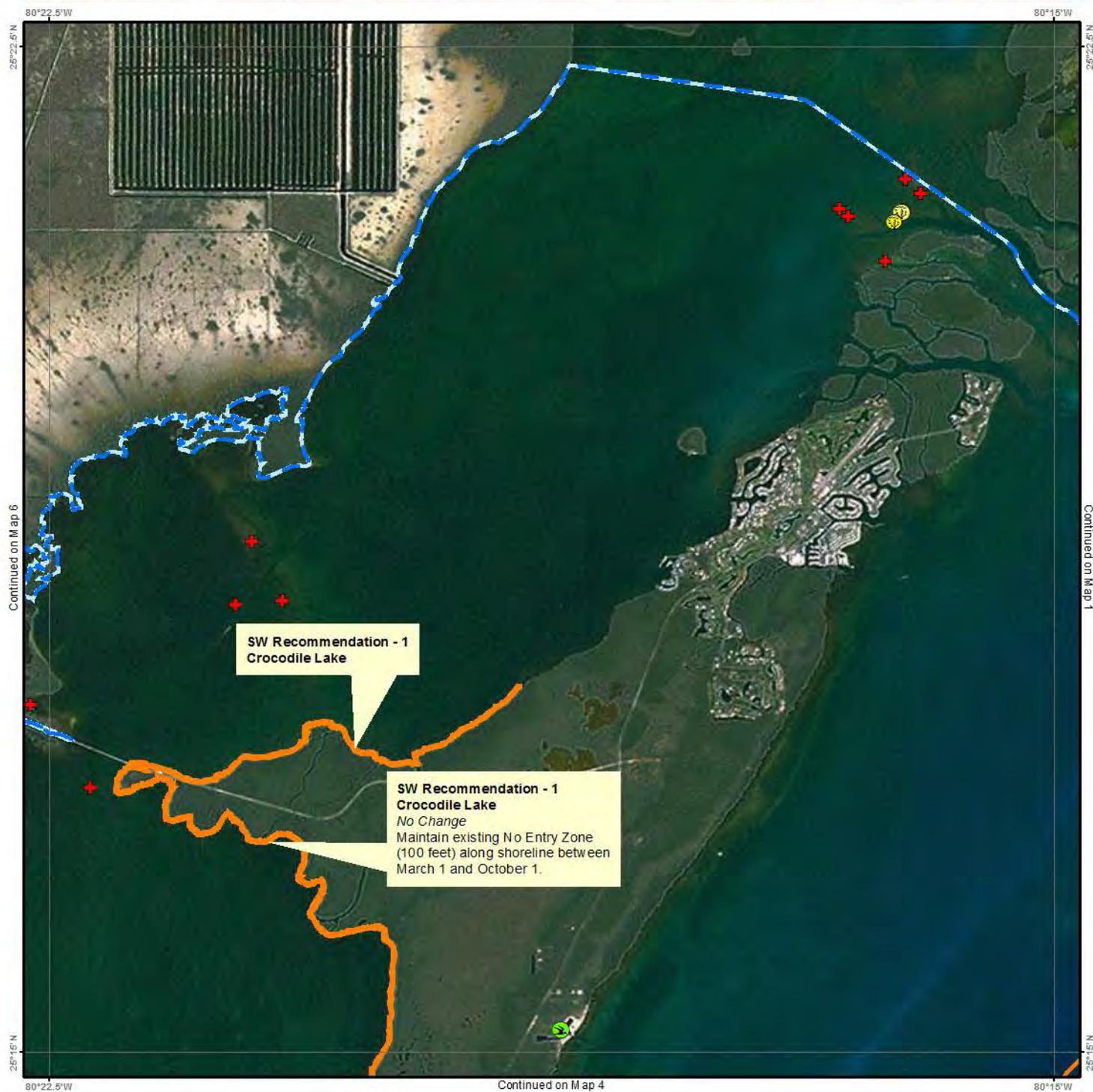
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



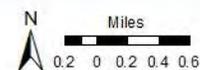
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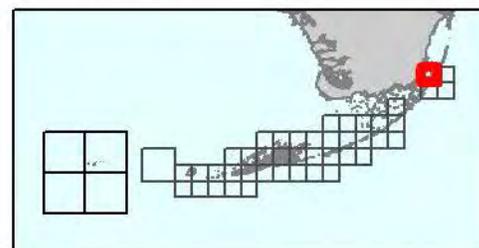
Map 3 - Ocean Reef



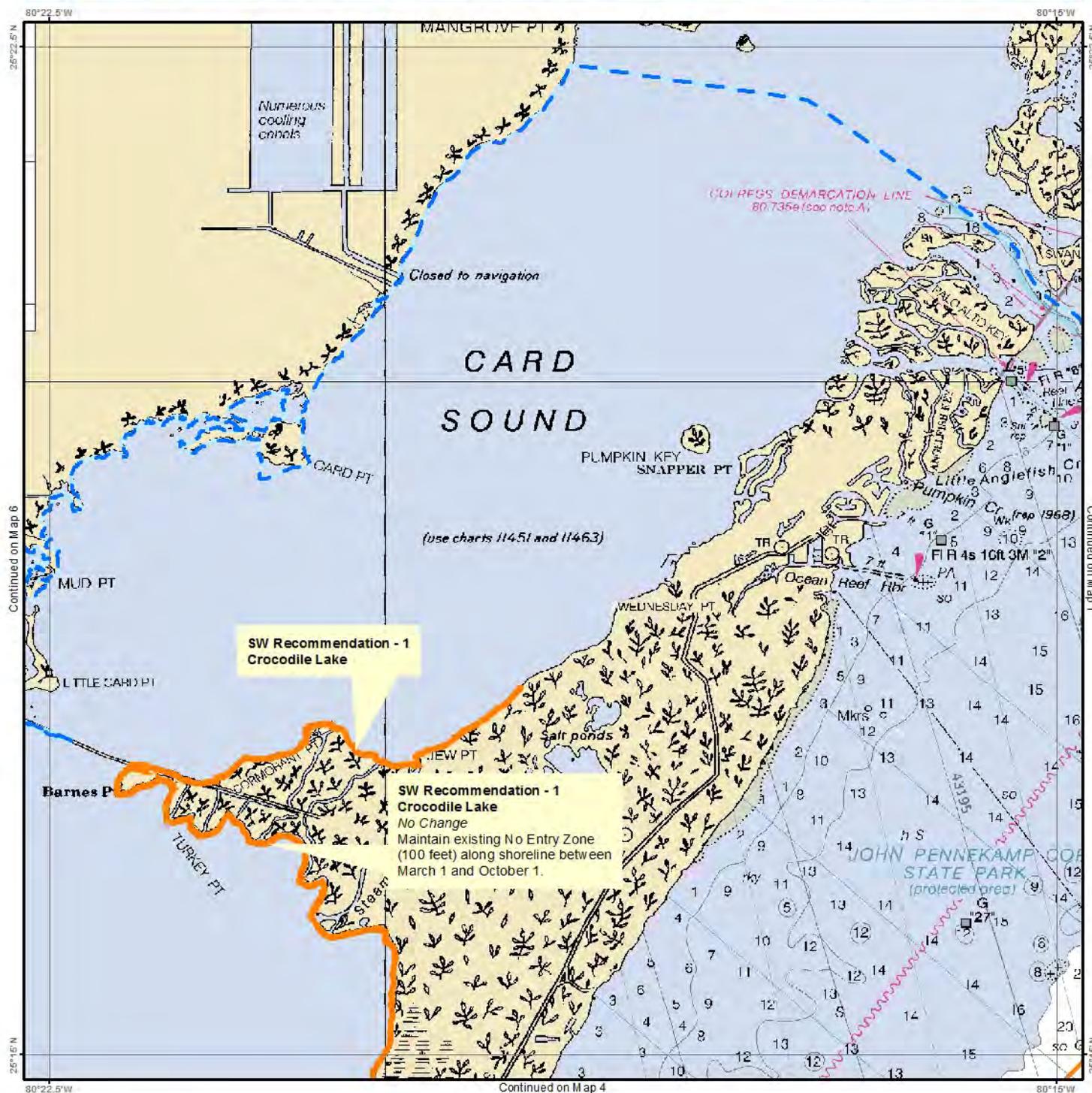
- FKNMS Boundary
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



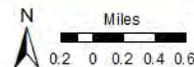
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



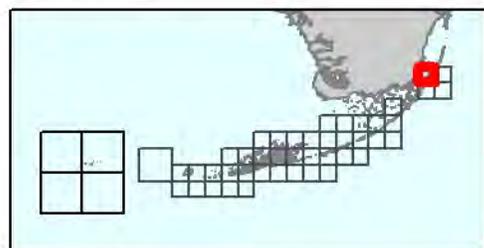
Map 3 - Ocean Reef



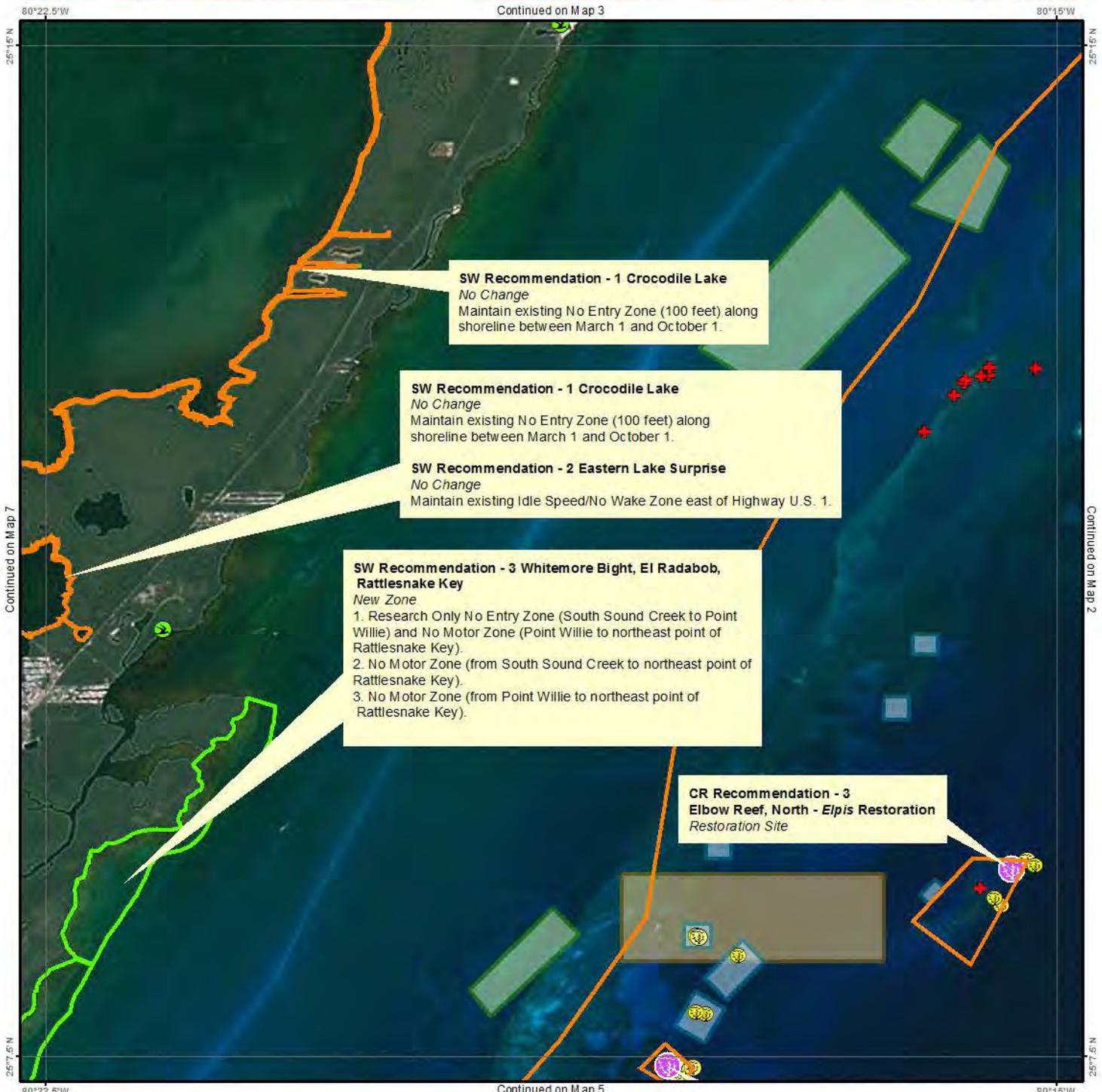
-  FKNMS Boundary
-  Existing Marine Zones



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Map 4 - The Elbow



SW Recommendation - 1 Crocodile Lake
No Change
 Maintain existing No Entry Zone (100 feet) along shoreline between March 1 and October 1.

SW Recommendation - 1 Crocodile Lake
No Change
 Maintain existing No Entry Zone (100 feet) along shoreline between March 1 and October 1.

SW Recommendation - 2 Eastern Lake Surprise
No Change
 Maintain existing Idle Speed/No Wake Zone east of Highway U.S. 1.

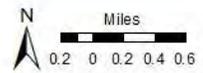
SW Recommendation - 3 Whitemore Bight, El Radabob, Rattlesnake Key
New Zone

1. Research Only No Entry Zone (South Sound Creek to Point Willie) and No Motor Zone (Point Willie to northeast point of Rattlesnake Key).
2. No Motor Zone (from South Sound Creek to northeast point of Rattlesnake Key).
3. No Motor Zone (from Point Willie to northeast point of Rattlesnake Key).

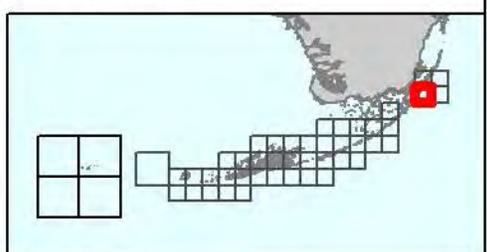
CR Recommendation - 3 Elbow Reef, North - *Elpis* Restoration
Restoration Site

- Shallow Water
- Working Group Recommendations
- Existing Marine Zones
- Areas Closed to Lobster Trapping (National Marine Fisheries Service)
- Coral Formation Protection Zones (State Parks)
- Florida Reef Resiliency Program Resilient Reefs
- Bird Nests (Various Species)

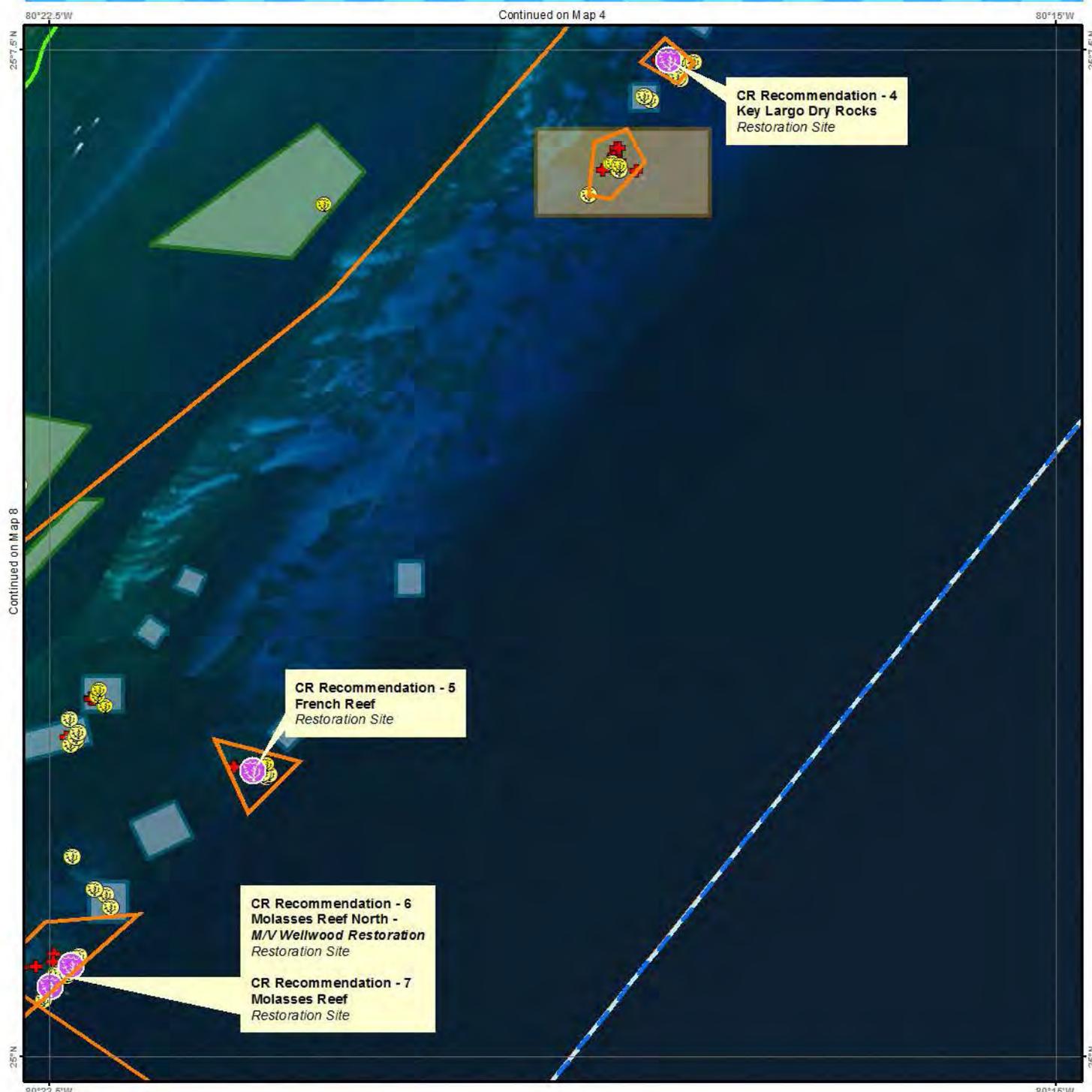
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



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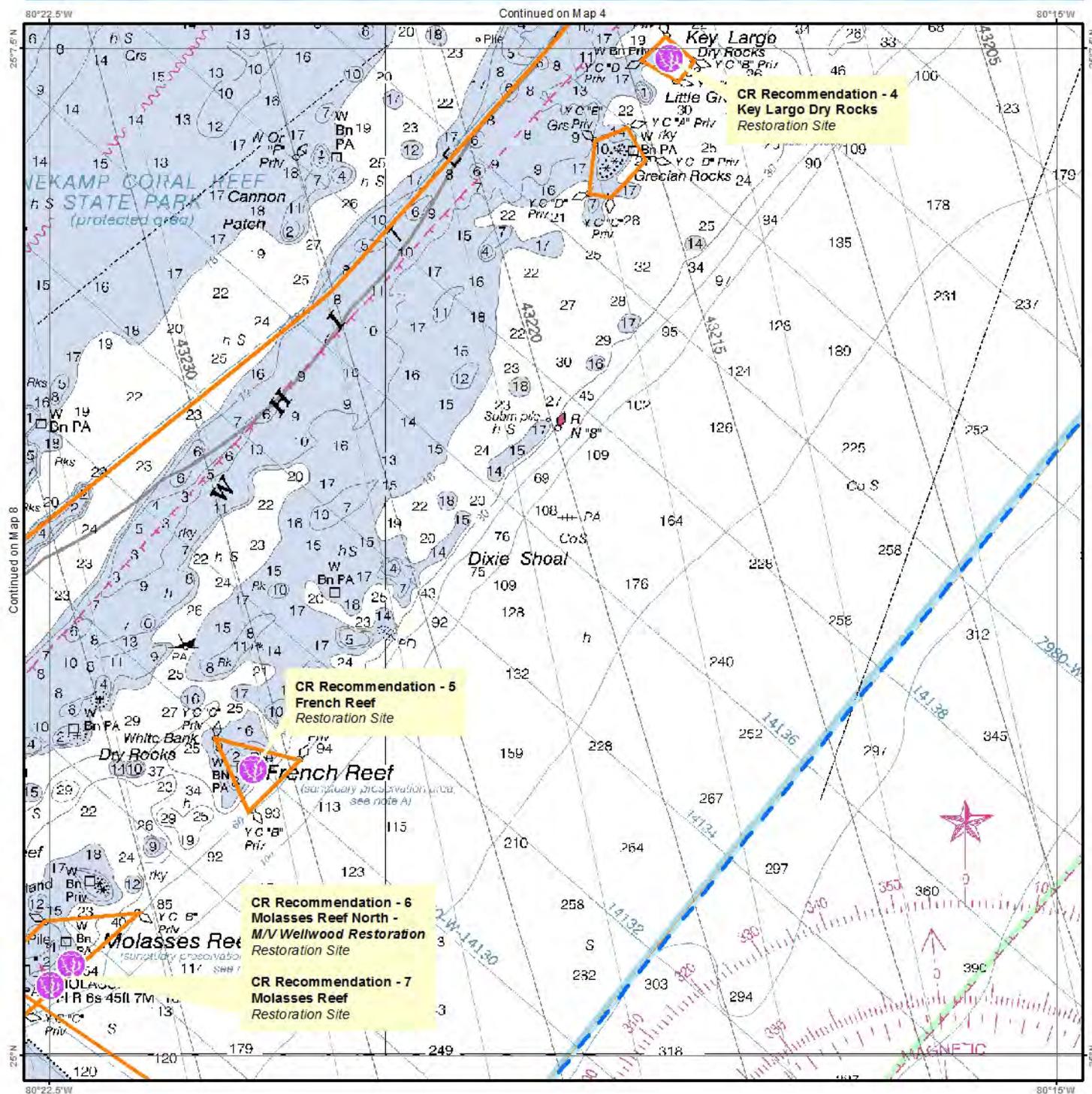
Map 5 - French Reef



Shallow Water	FKNMS Permitted Restoration Sites
Working Group Recommendations	FKNMS Vessel Groundings (2000-2012)
Coral Reef Ecosystem Restoration Working Group Recommendations	
FKNMS Boundary	
Existing Marine Zones	
Areas Closed to Lobster Trapping (National Marine Fisheries Service)	
Coral Formation Protection Zones (State Parks)	
Florida Reef Resiliency Program Resilient Reefs	

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Map 5 - French Reef



Coral Reef Ecosystem Restoration Working Group Recommendations

FKNMS Boundary

Existing Marine Zones

N

Miles

0.2 0 0.2 0.4 0.6

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Map 6 - Barnes Sound



SW Recommendation - 4 Barnes Sound, Shallow Bays
New Zone
 No Motor Zone

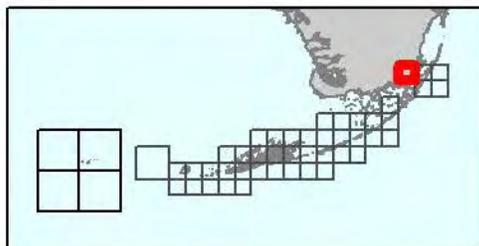
Continued on Map 3

Continued on Map 7

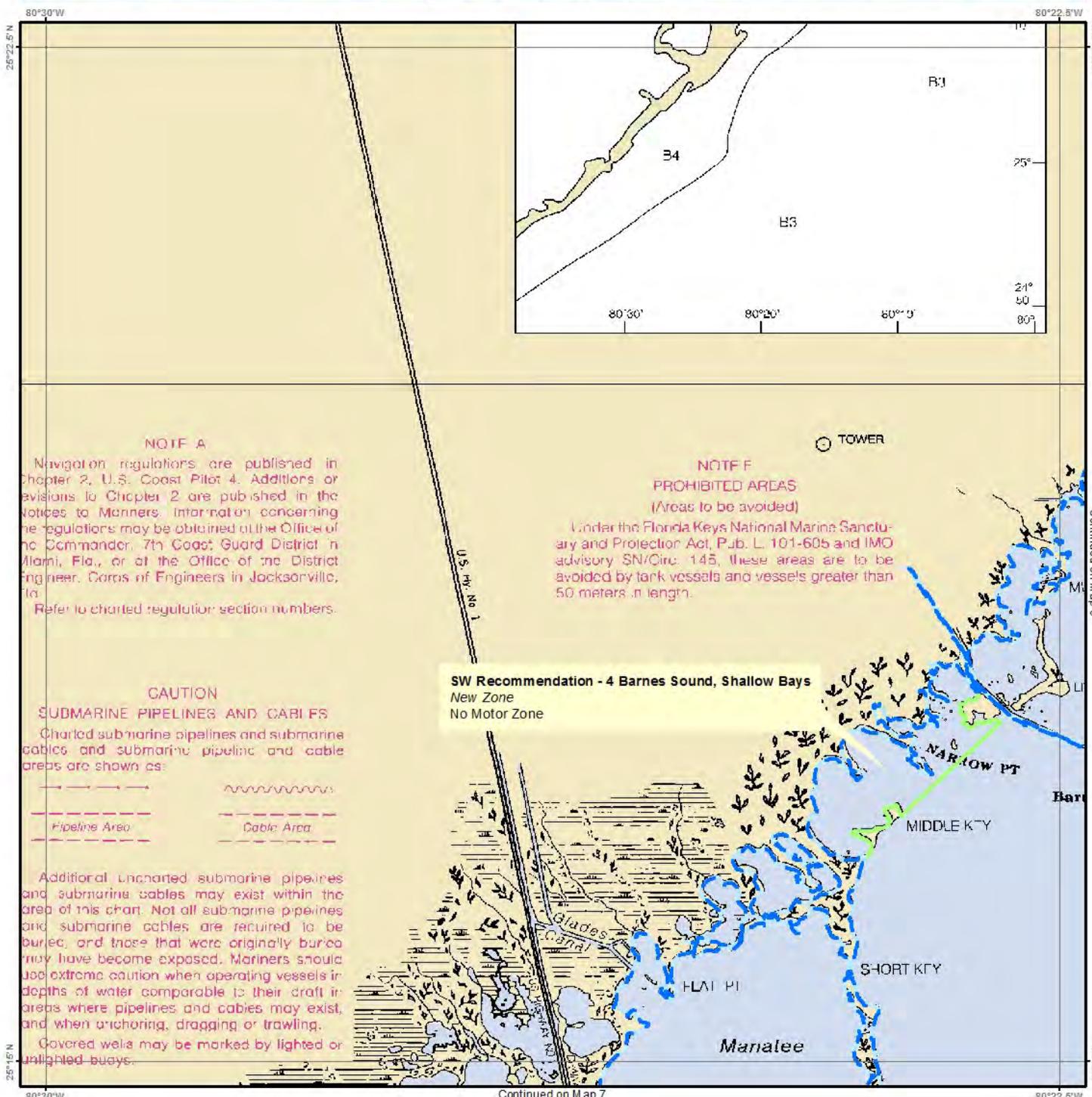
-  Shallow Water
-  Working Group Recommendations
-  FKNMS Boundary
-  FKNMS Vessel Groundings (2000-2012)



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Map 6 - Barnes Sound



NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 4. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 7th Coast Guard District in Miami, Fla., or at the Office of the District Engineer, Corps of Engineers in Jacksonville, Fla.

Refer to charted regulation section numbers.

NOTE F

PROHIBITED AREAS (Areas to be avoided)

Under the Florida Keys National Marine Sanctuary and Protection Act, Pub. L. 101-605 and IMO advisory SN/Circ. 145, these areas are to be avoided by tank vessels and vessels greater than 50 meters in length.

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

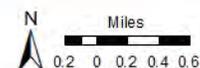


Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging or trawling.

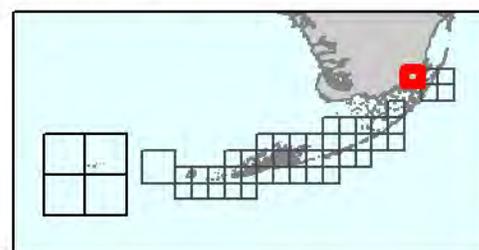
Covered wells may be marked by lighted or unlighted buoys.

SW Recommendation - 4 Barnes Sound, Shallow Bays
New Zone
No Motor Zone

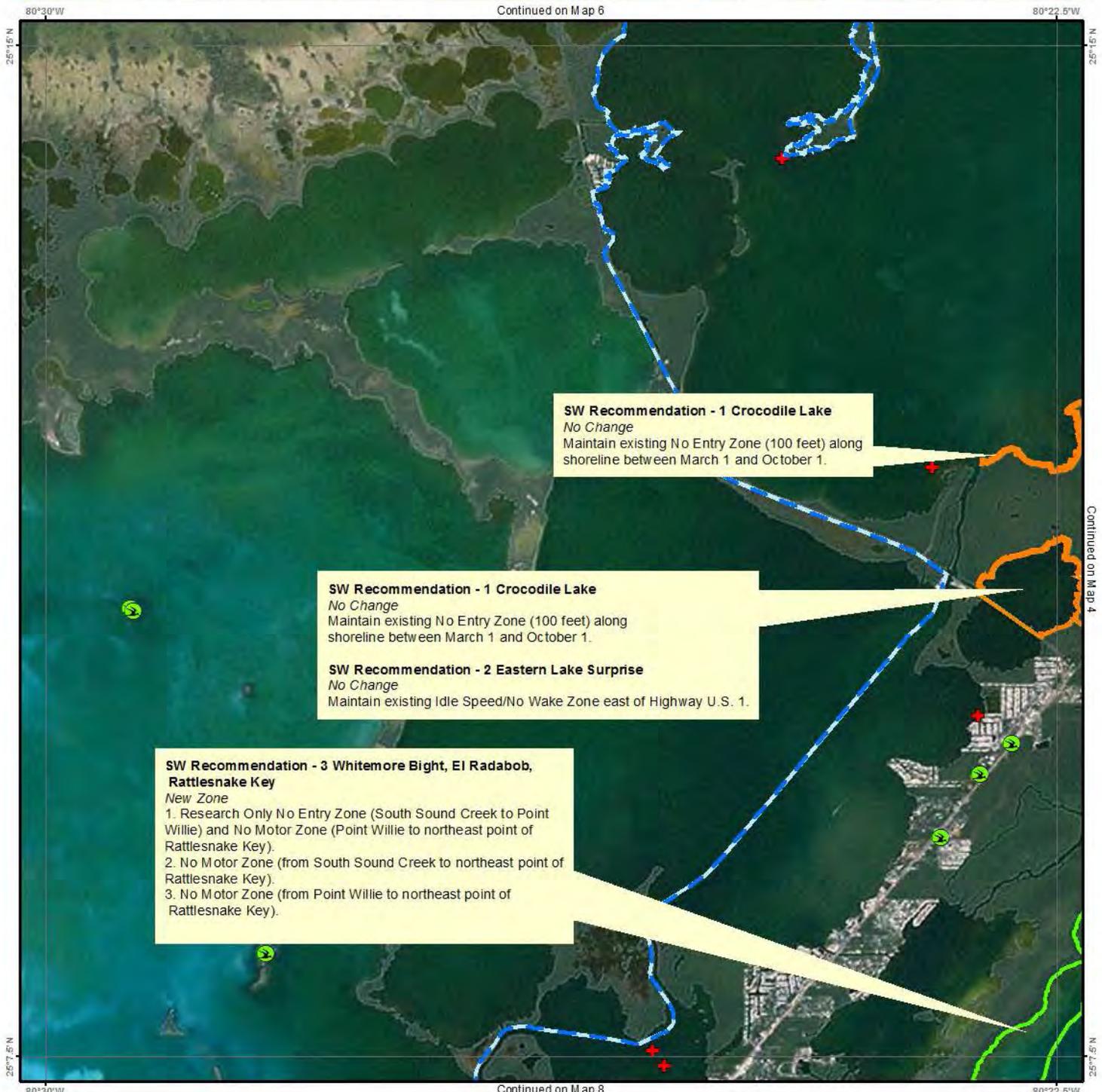
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary



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Map 7 - Blackwater Sound



SW Recommendation - 1 Crocodile Lake
No Change
 Maintain existing No Entry Zone (100 feet) along shoreline between March 1 and October 1.

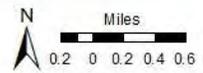
SW Recommendation - 1 Crocodile Lake
No Change
 Maintain existing No Entry Zone (100 feet) along shoreline between March 1 and October 1.

SW Recommendation - 2 Eastern Lake Surprise
No Change
 Maintain existing Idle Speed/No Wake Zone east of Highway U.S. 1.

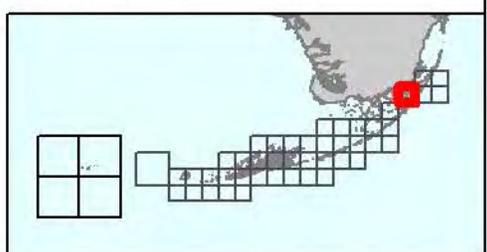
SW Recommendation - 3 Whitemore Bight, El Radabob, Rattlesnake Key
New Zone

1. Research Only No Entry Zone (South Sound Creek to Point Willie) and No Motor Zone (Point Willie to northeast point of Rattlesnake Key).
2. No Motor Zone (from South Sound Creek to northeast point of Rattlesnake Key).
3. No Motor Zone (from Point Willie to northeast point of Rattlesnake Key).

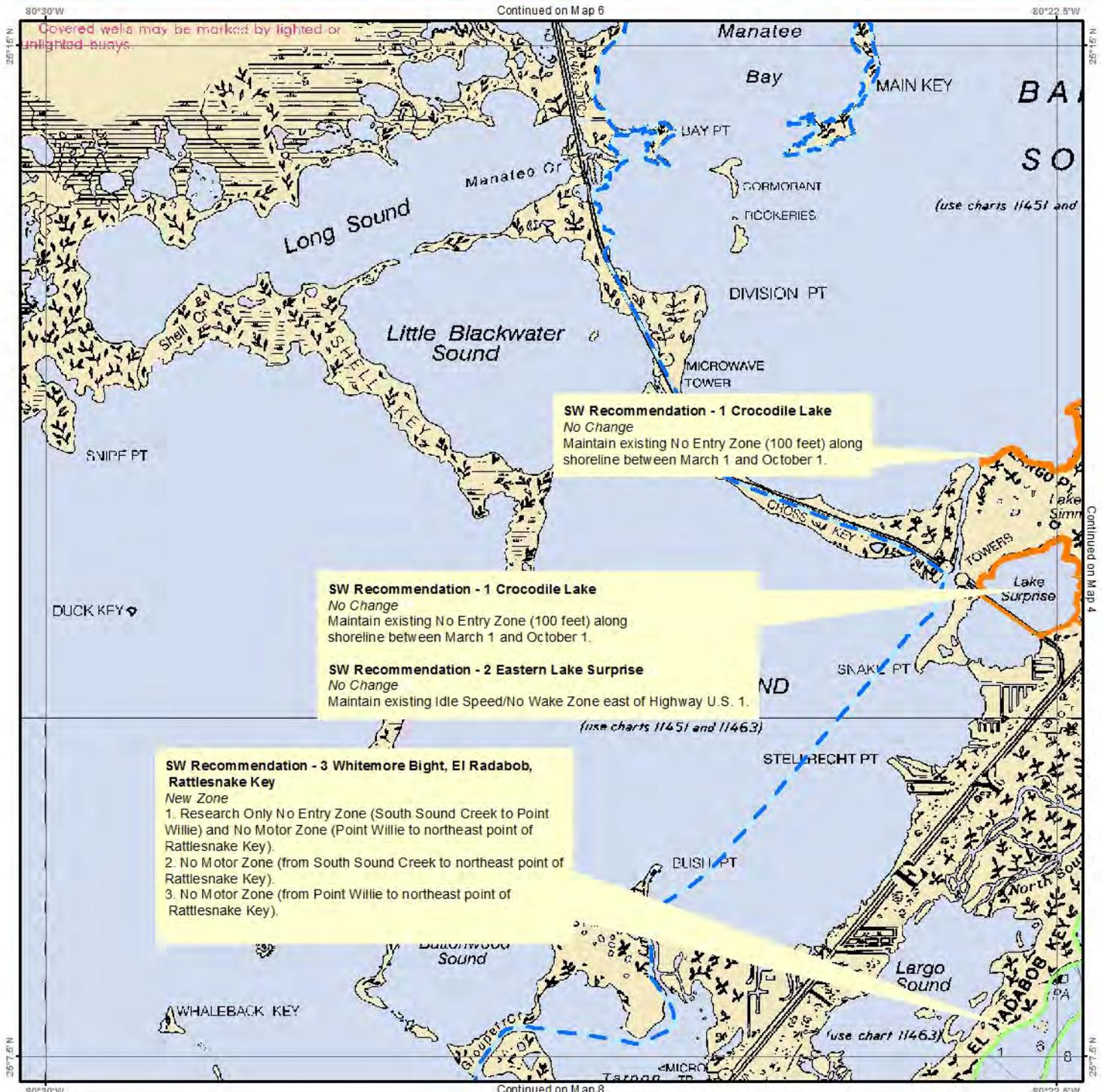
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Vessel Groundings (2000-2012)



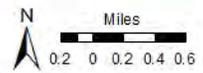
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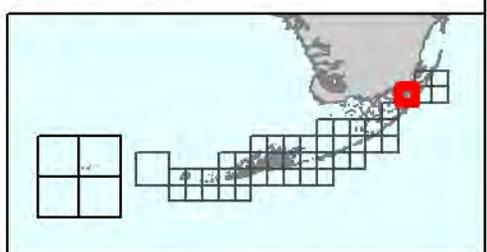
Map 7 - Blackwater Sound



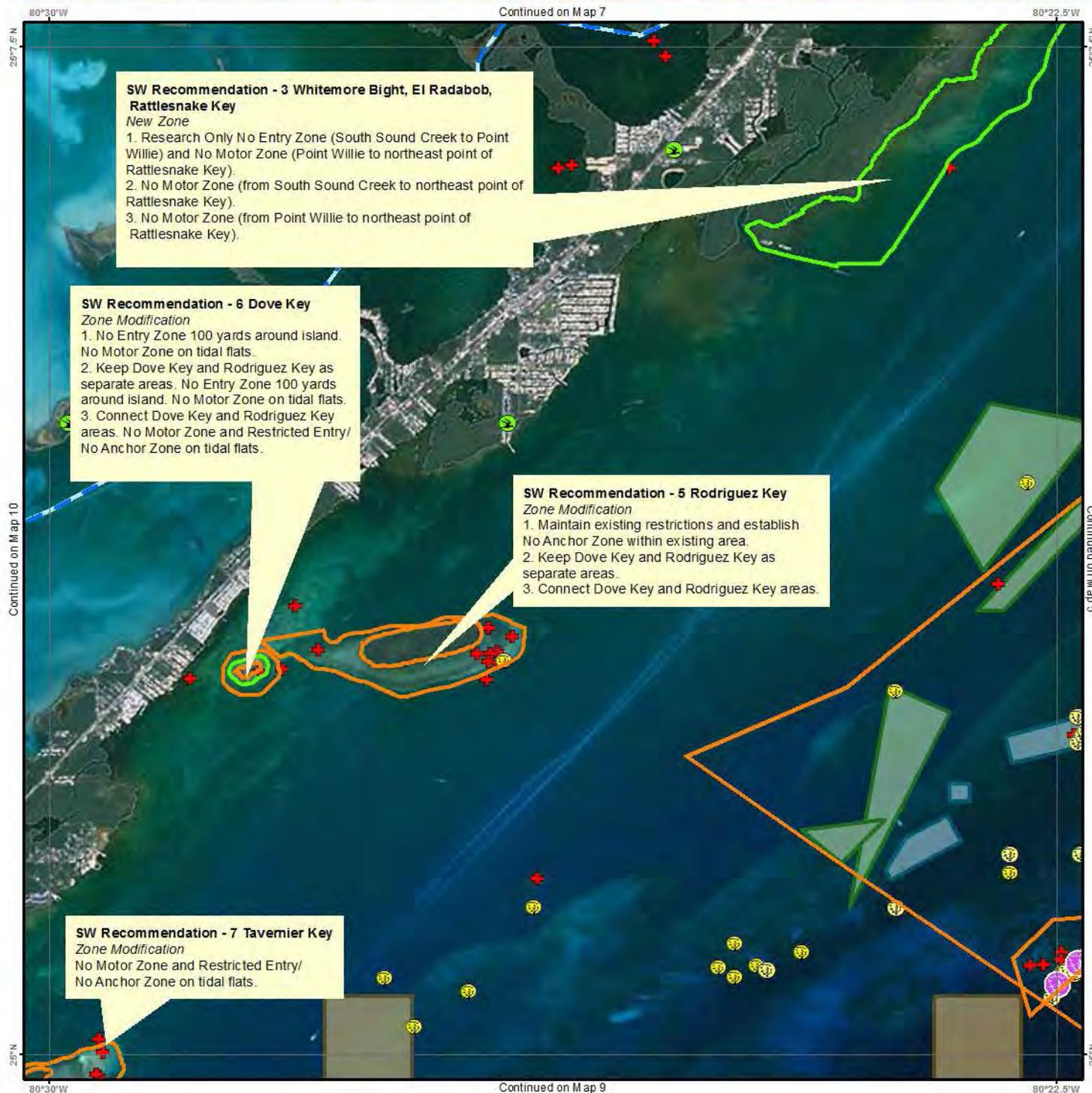
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



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Map 8 - Rodriguez Key



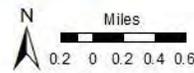
SW Recommendation - 3 Whitemore Bight, El Radabob, Rattlesnake Key
New Zone
 1. Research Only No Entry Zone (South Sound Creek to Point Willie) and No Motor Zone (Point Willie to northeast point of Rattlesnake Key).
 2. No Motor Zone (from South Sound Creek to northeast point of Rattlesnake Key).
 3. No Motor Zone (from Point Willie to northeast point of Rattlesnake Key).

SW Recommendation - 6 Dove Key
Zone Modification
 1. No Entry Zone 100 yards around island. No Motor Zone on tidal flats.
 2. Keep Dove Key and Rodriguez Key as separate areas. No Entry Zone 100 yards around island. No Motor Zone on tidal flats.
 3. Connect Dove Key and Rodriguez Key areas. No Motor Zone and Restricted Entry/ No Anchor Zone on tidal flats.

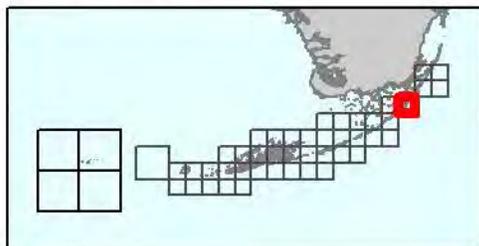
SW Recommendation - 5 Rodriguez Key
Zone Modification
 1. Maintain existing restrictions and establish No Anchor Zone within existing area.
 2. Keep Dove Key and Rodriguez Key as separate areas.
 3. Connect Dove Key and Rodriguez Key areas.

SW Recommendation - 7 Tavemier Key
Zone Modification
 No Motor Zone and Restricted Entry/ No Anchor Zone on tidal flats.

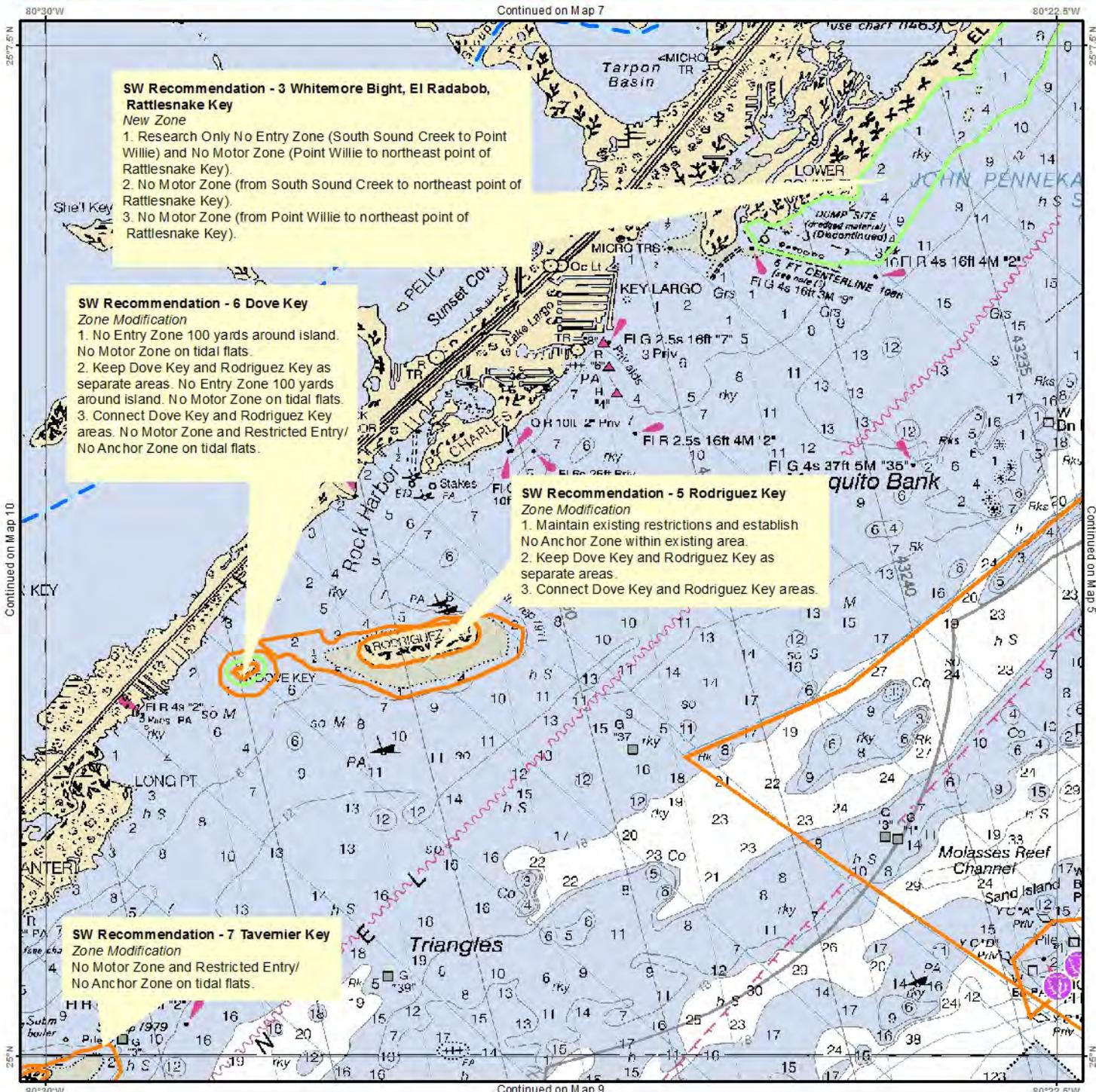
- Shallow Water
- Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Areas Closed to Lobster Trapping (National Marine Fisheries Service)
- Coral Formation Protection Zones (State Parks)
- Florida Reef Resiliency Program Resilient Reefs
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



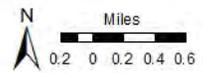
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



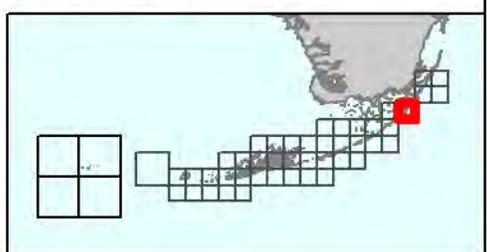
Map 8 - Rodriguez Key



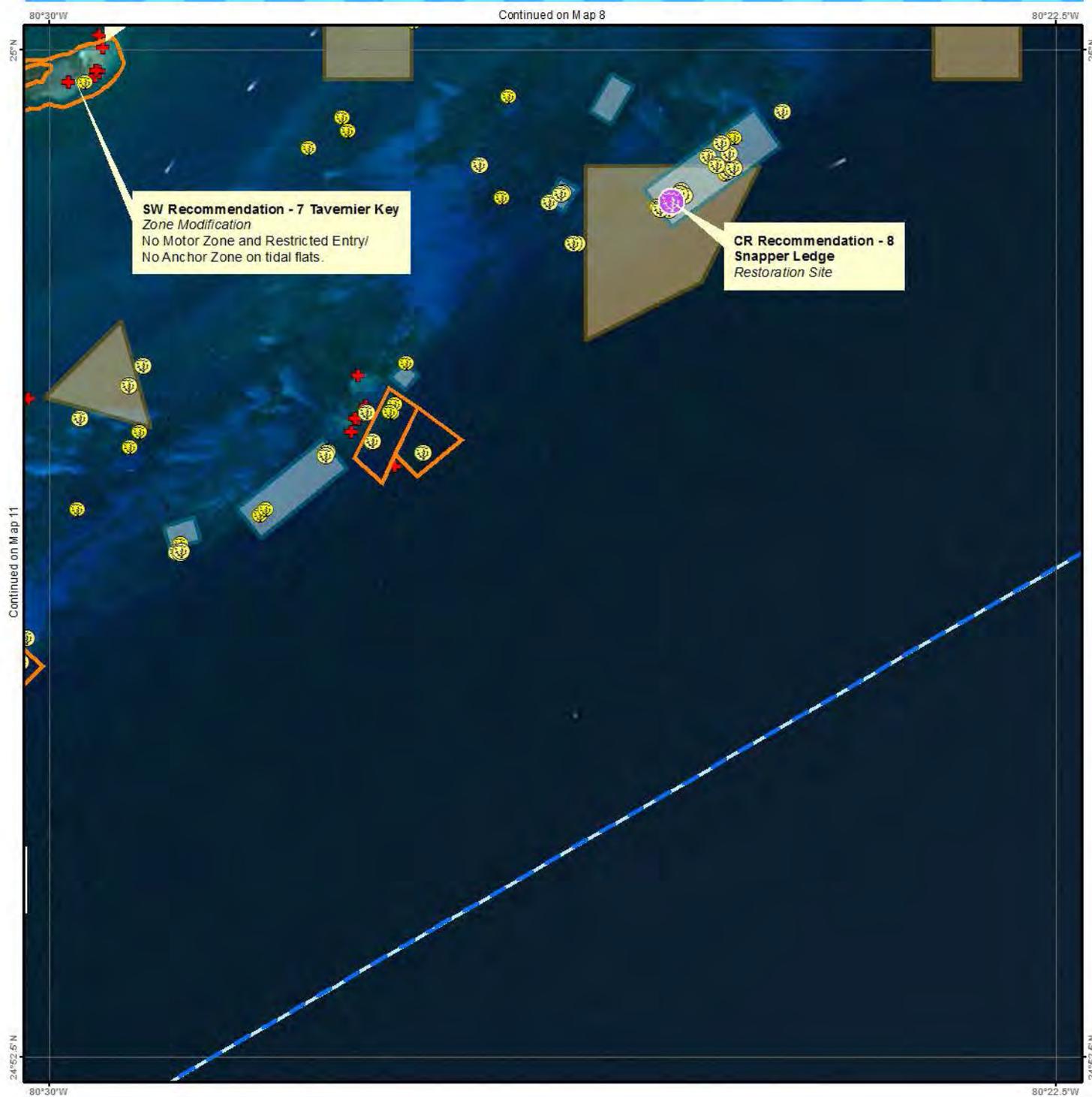
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



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Map 9 - Conch Reef



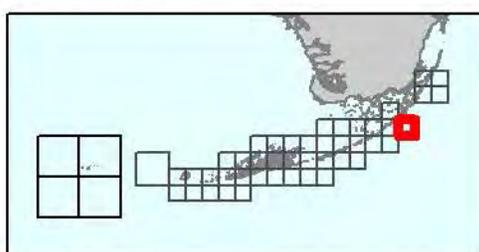
SW Recommendation - 7 Tavemier Key
Zone Modification
 No Motor Zone and Restricted Entry/
 No Anchor Zone on tidal flats.

CR Recommendation - 8
Snapper Ledge
Restoration Site

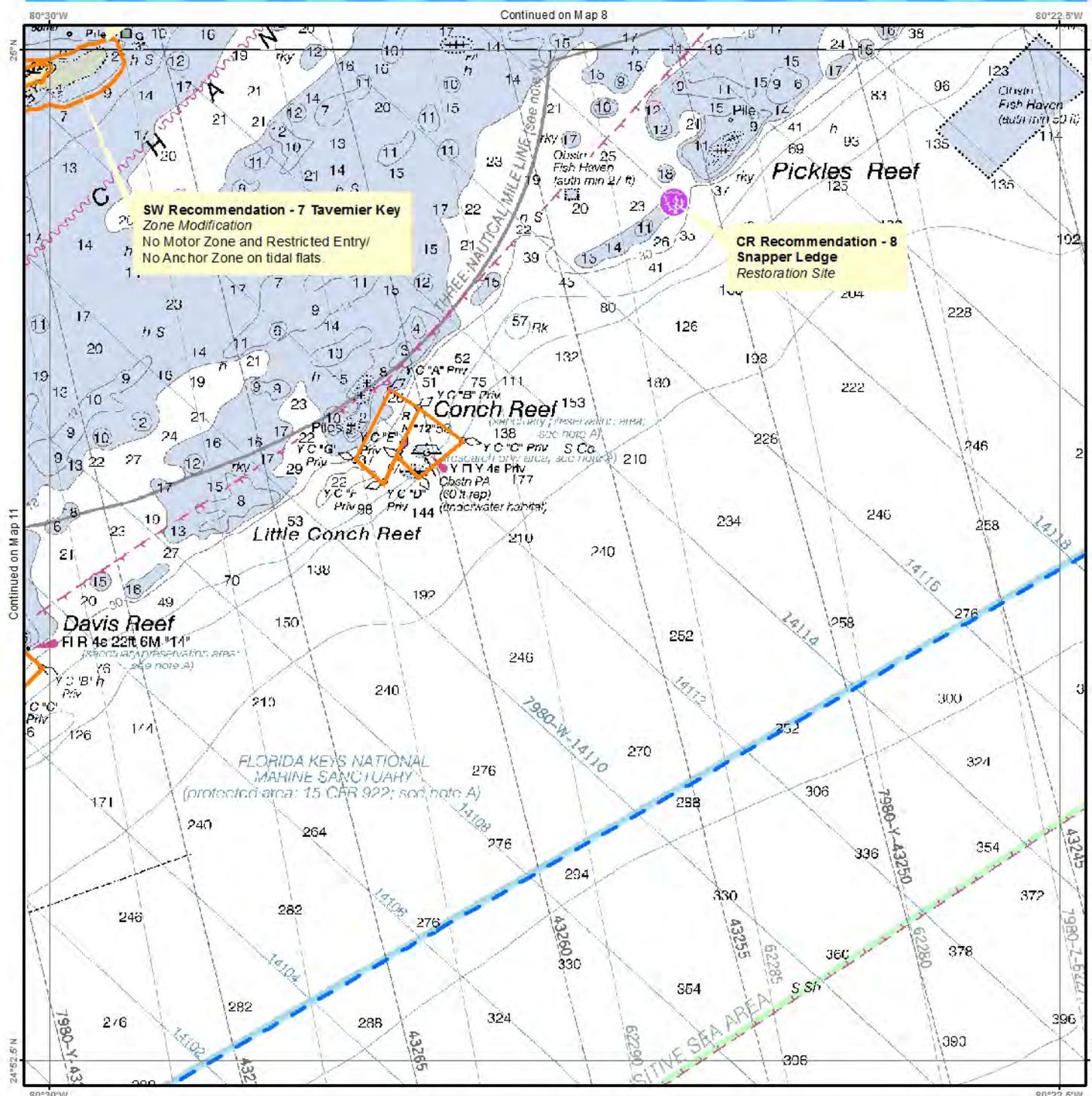
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Areas Closed to Lobster Trapping (National Marine Fisheries Service)
- Florida Reef Resiliency Program Resilient Reefs
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



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Map 9 - Conch Reef



SW Recommendation - 7 Tavemier Key Zone Modification
 No Motor Zone and Restricted Entry/
 No Anchor Zone on tidal flats.

CR Recommendation - 8 Snapper Ledge Restoration Site

Continued on Map 11

Continued on Map 8

Coral Reef Ecosystem Restoration Working Group Recommendations

FKNMS Boundary

Existing Marine Zones

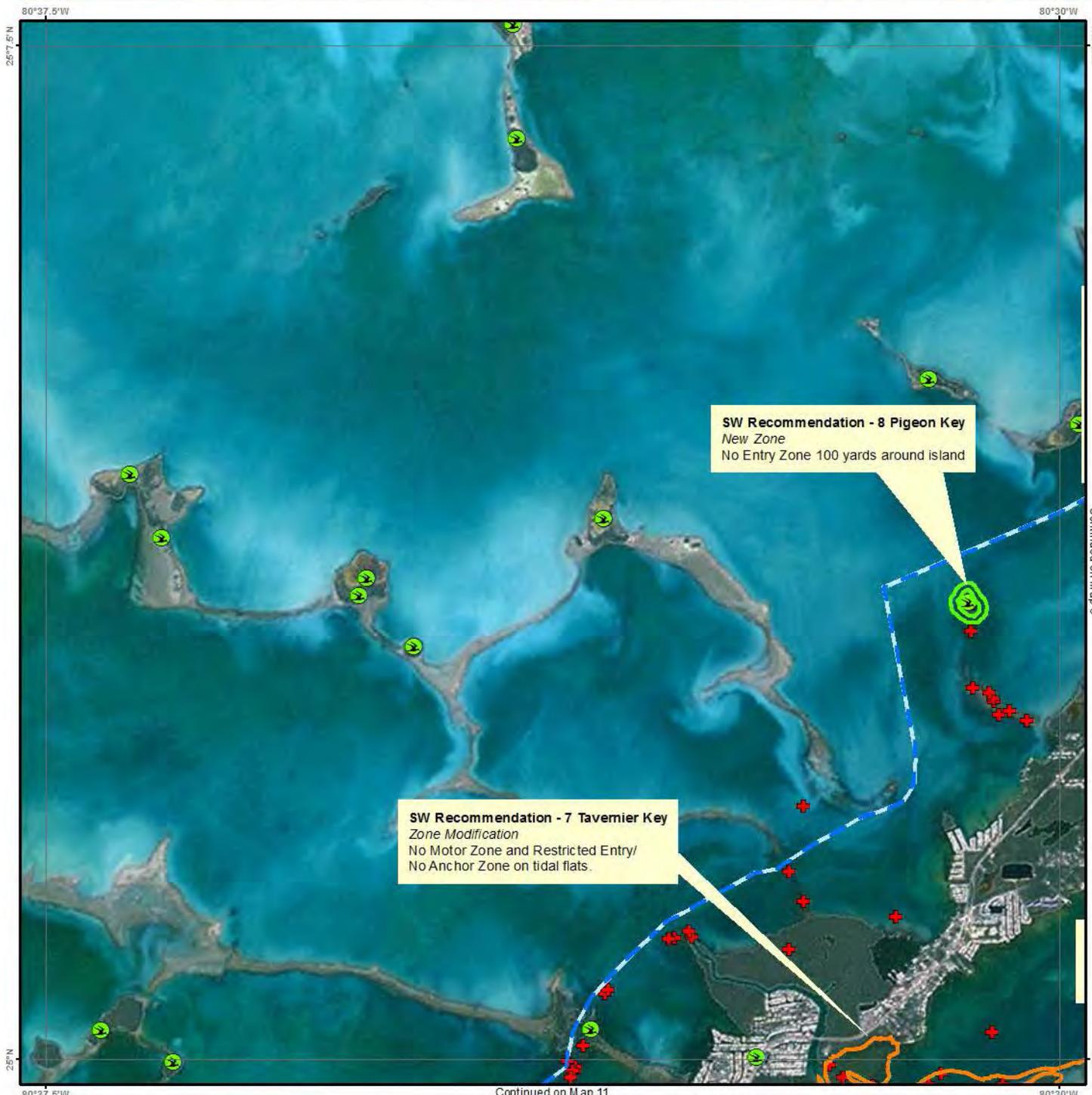
N

Miles

0.2 0 0.2 0.4 0.6

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Map 10 - Tavernier



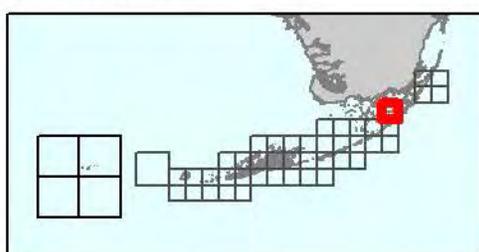
Continued on Map 8

Continued on Map 11

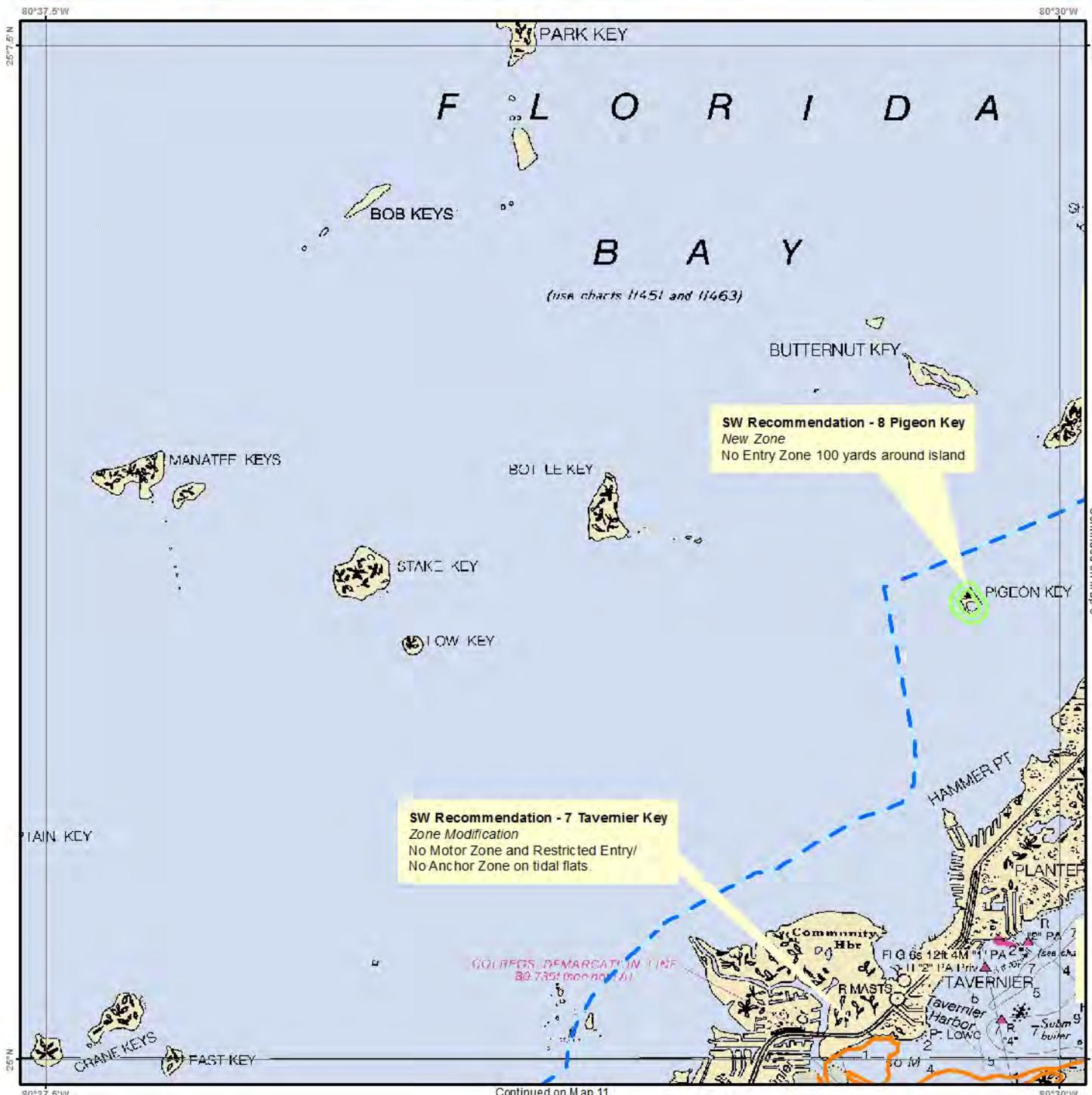
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Vessel Groundings (2000-2012)



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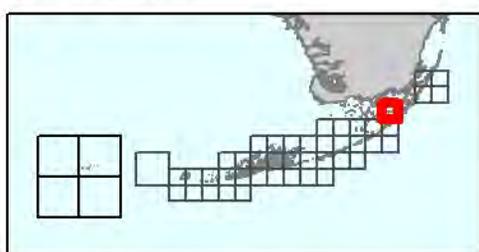
Map 10 - Tavernier



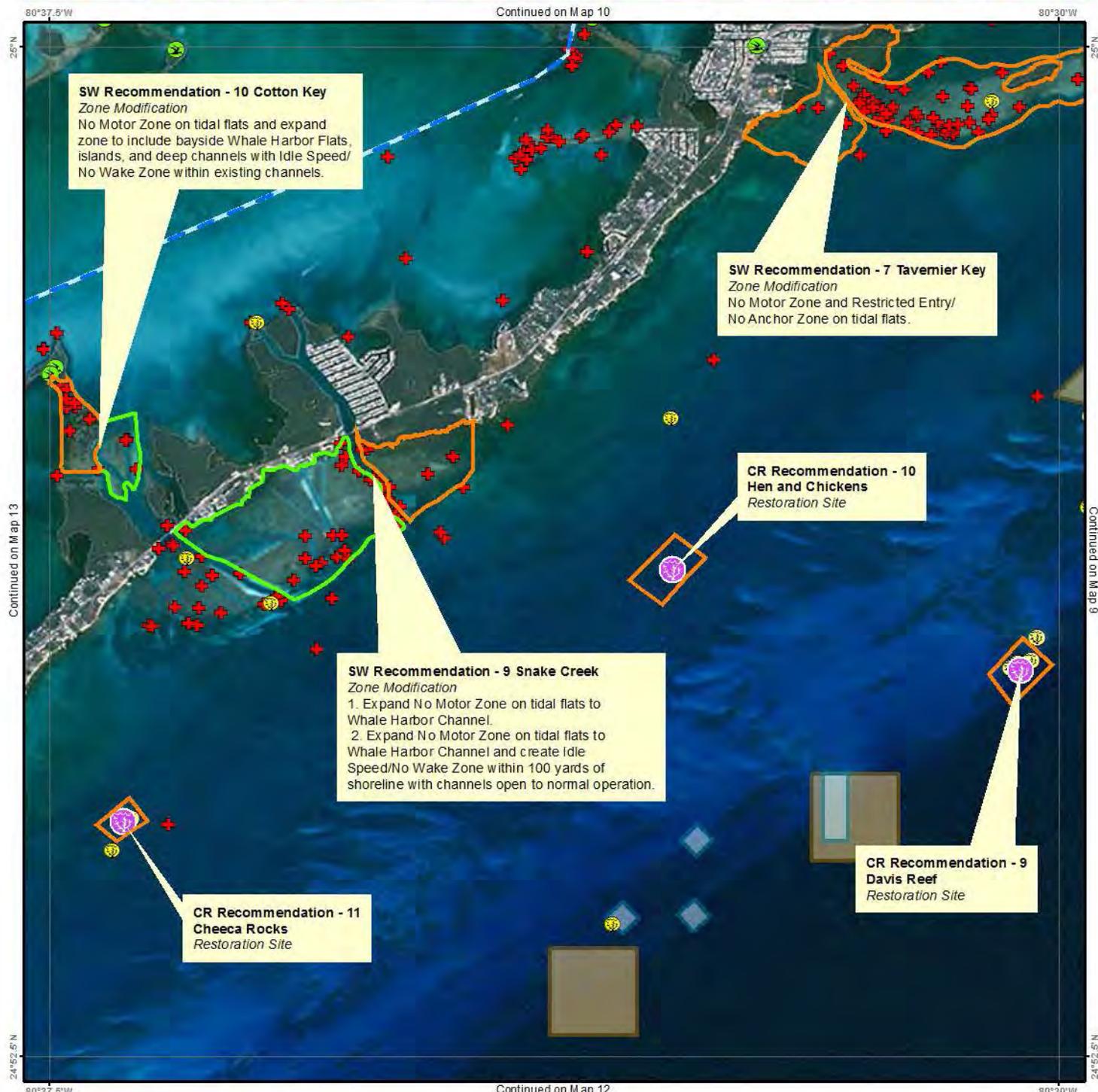
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



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Map 11 - Whale Harbor Channel



SW Recommendation - 10 Cotton Key
Zone Modification
 No Motor Zone on tidal flats and expand zone to include bayside Whale Harbor Flats, islands, and deep channels with Idle Speed/No Wake Zone within existing channels.

SW Recommendation - 7 Tavernier Key
Zone Modification
 No Motor Zone and Restricted Entry/No Anchor Zone on tidal flats.

CR Recommendation - 10 Hen and Chickens
Restoration Site

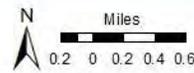
SW Recommendation - 9 Snake Creek
Zone Modification
 1. Expand No Motor Zone on tidal flats to Whale Harbor Channel.
 2. Expand No Motor Zone on tidal flats to Whale Harbor Channel and create Idle Speed/No Wake Zone within 100 yards of shoreline with channels open to normal operation.

CR Recommendation - 11 Cheeca Rocks
Restoration Site

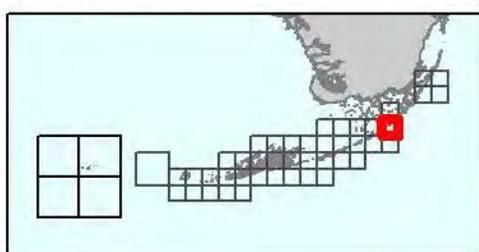
CR Recommendation - 9 Davis Reef
Restoration Site

- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Areas Closed to Lobster Trapping (National Marine Fisheries Service)
- Florida Reef Resiliency Program Resilient Reefs
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites

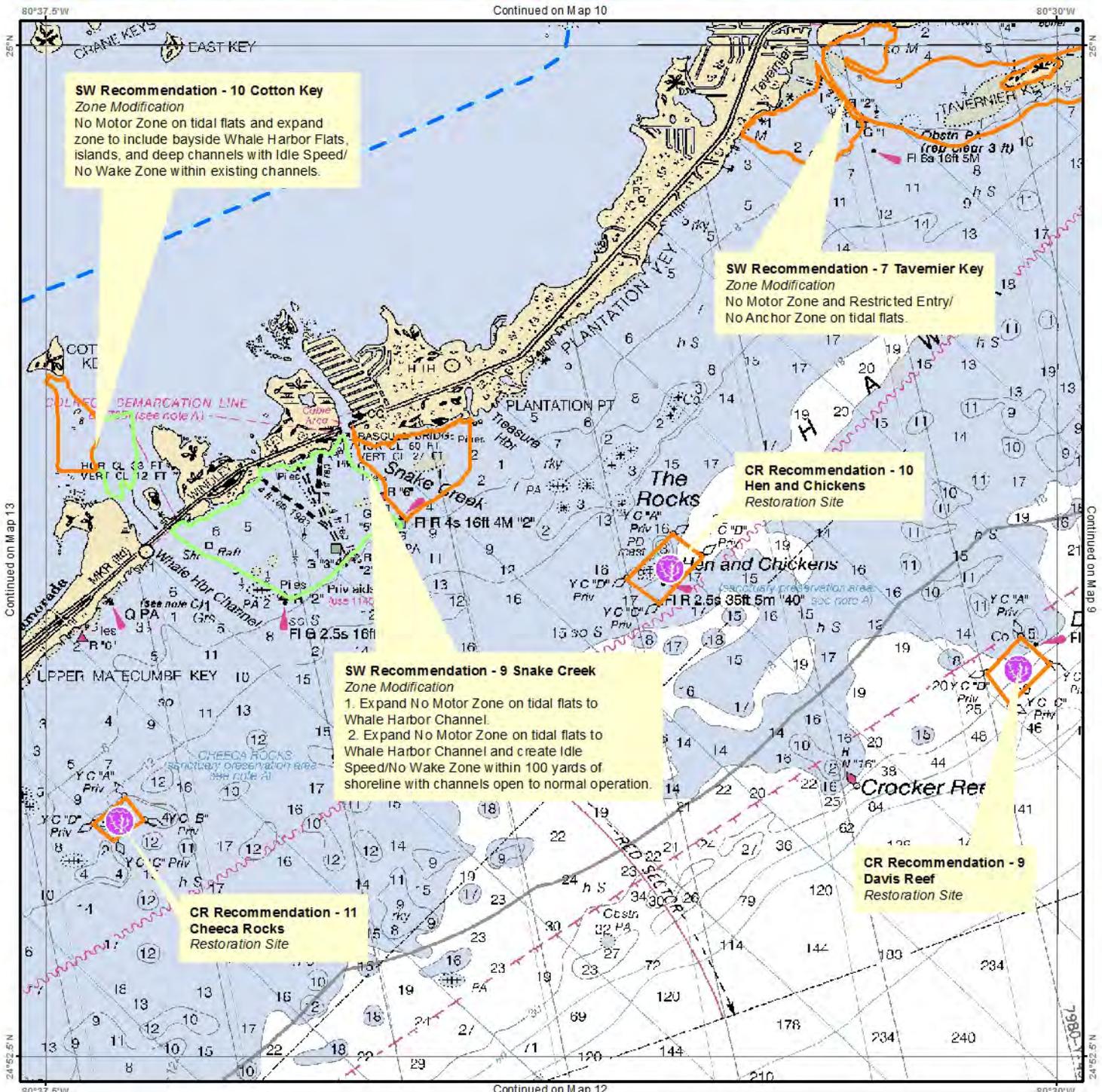
+ FKNMS Vessel Groundings (2000-2012)



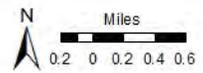
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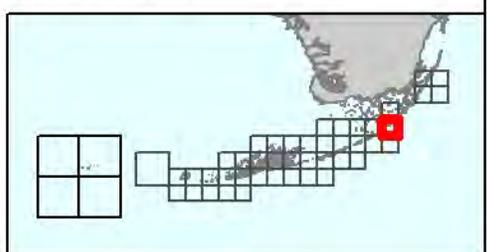
Map 11 - Whale Harbor Channel



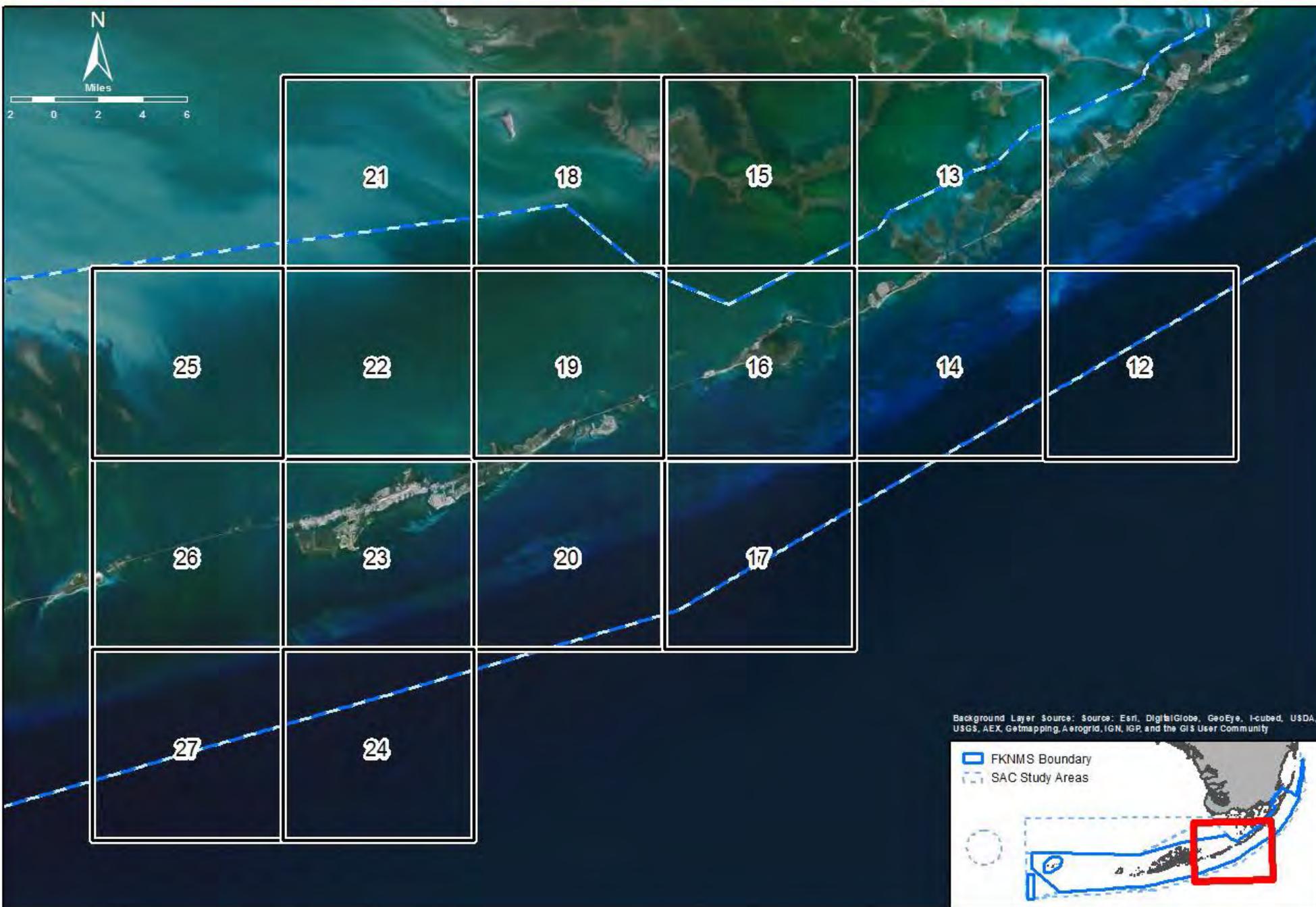
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



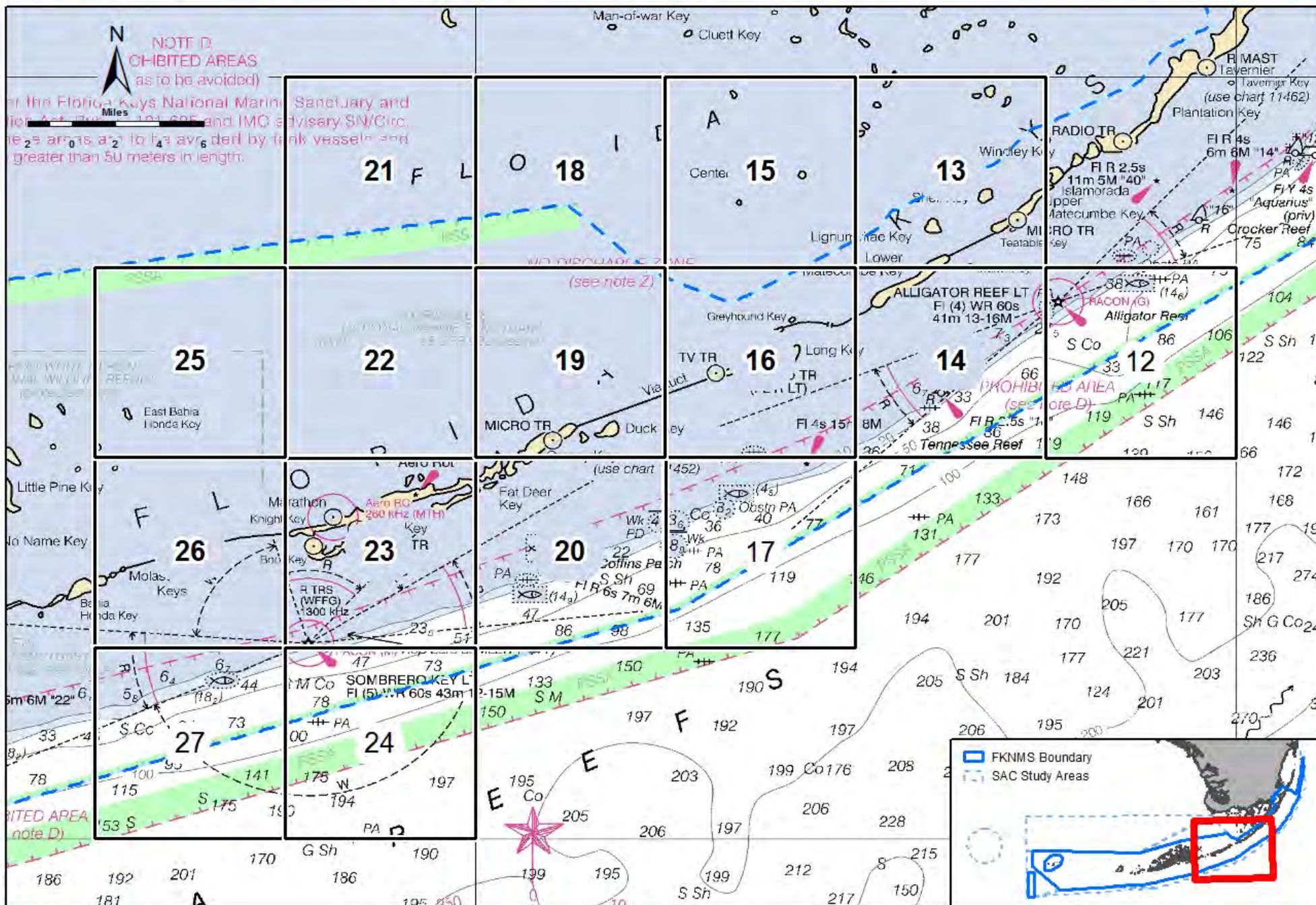
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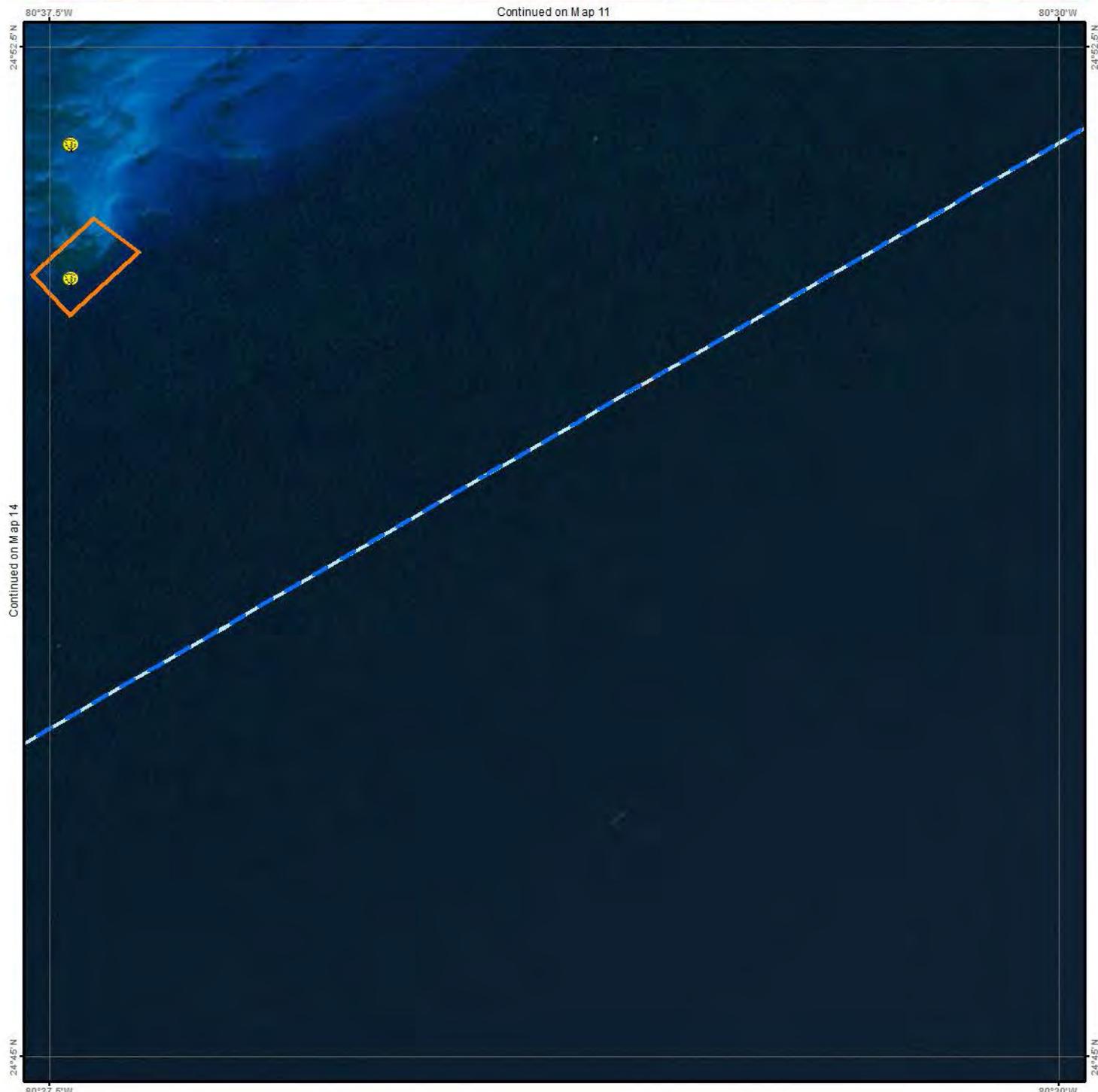
Middle Keys Region Index Map



Middle Keys Region Index Map



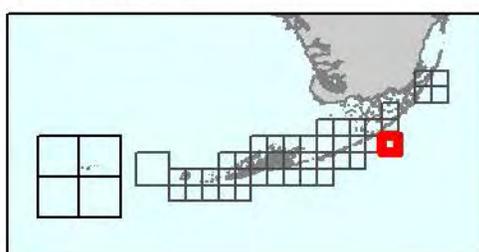
Map 12 - Alligator Reef



-  FKNMS Boundary
-  Existing Marine Zones
-  FKNMS Permitted Restoration Sites



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Map 13 - Upper Matecumbe

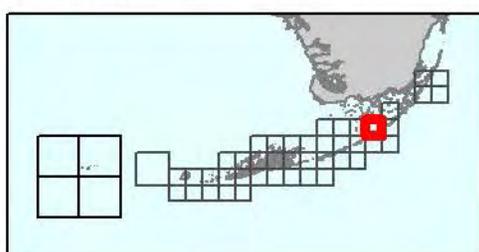


SW Recommendation - 11 Ashbey, Horseshoe Key
New Zone
 No Entry Zone 100 yards around island

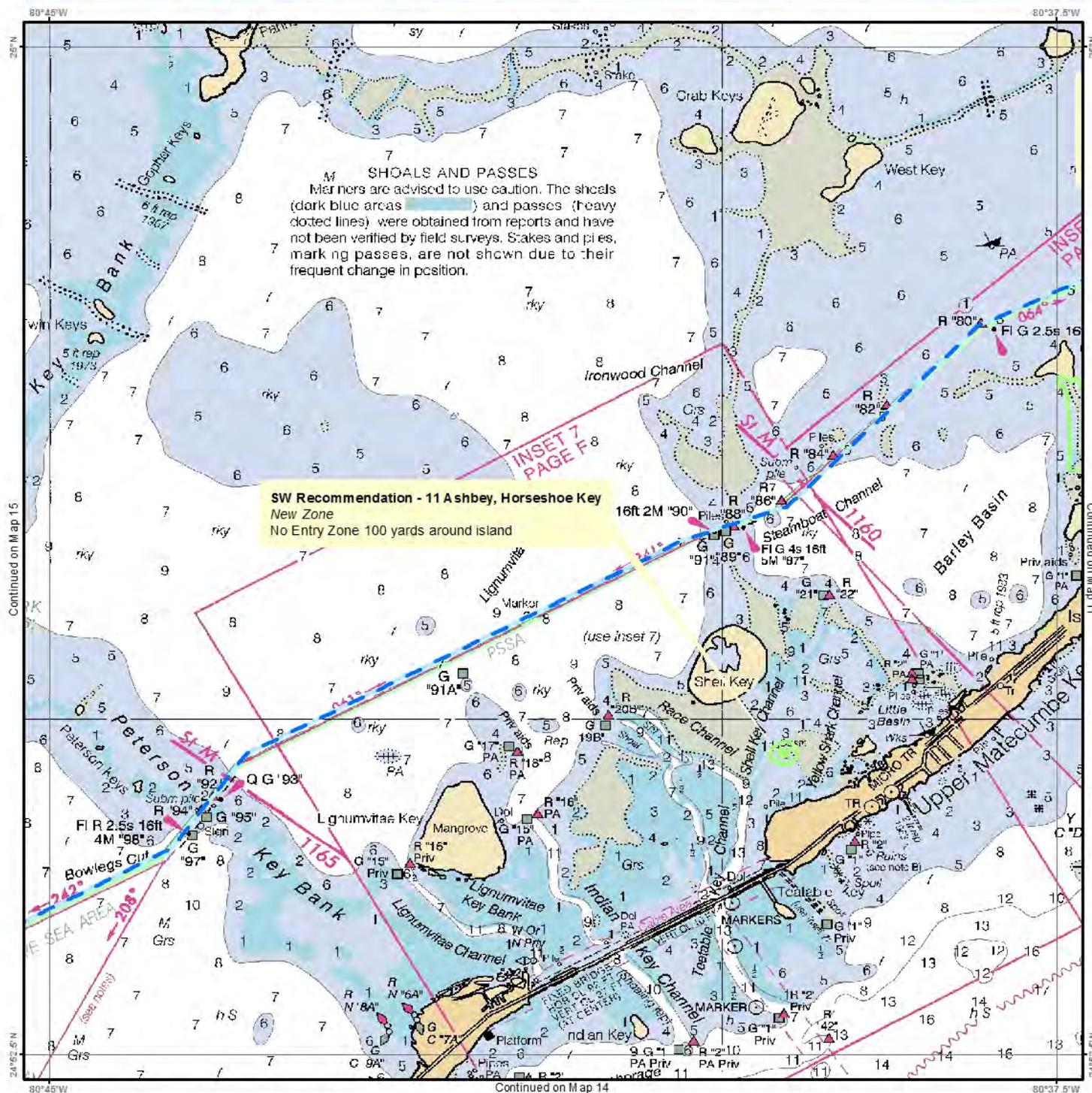
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)
- Sea Turtle Nesting Beaches Florida



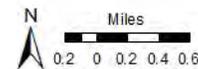
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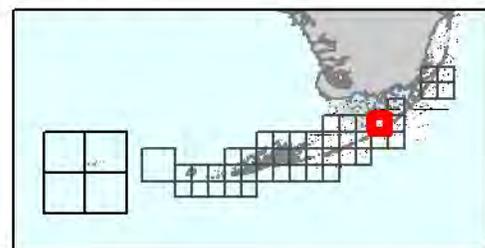
Map 13 - Upper Matecumbe



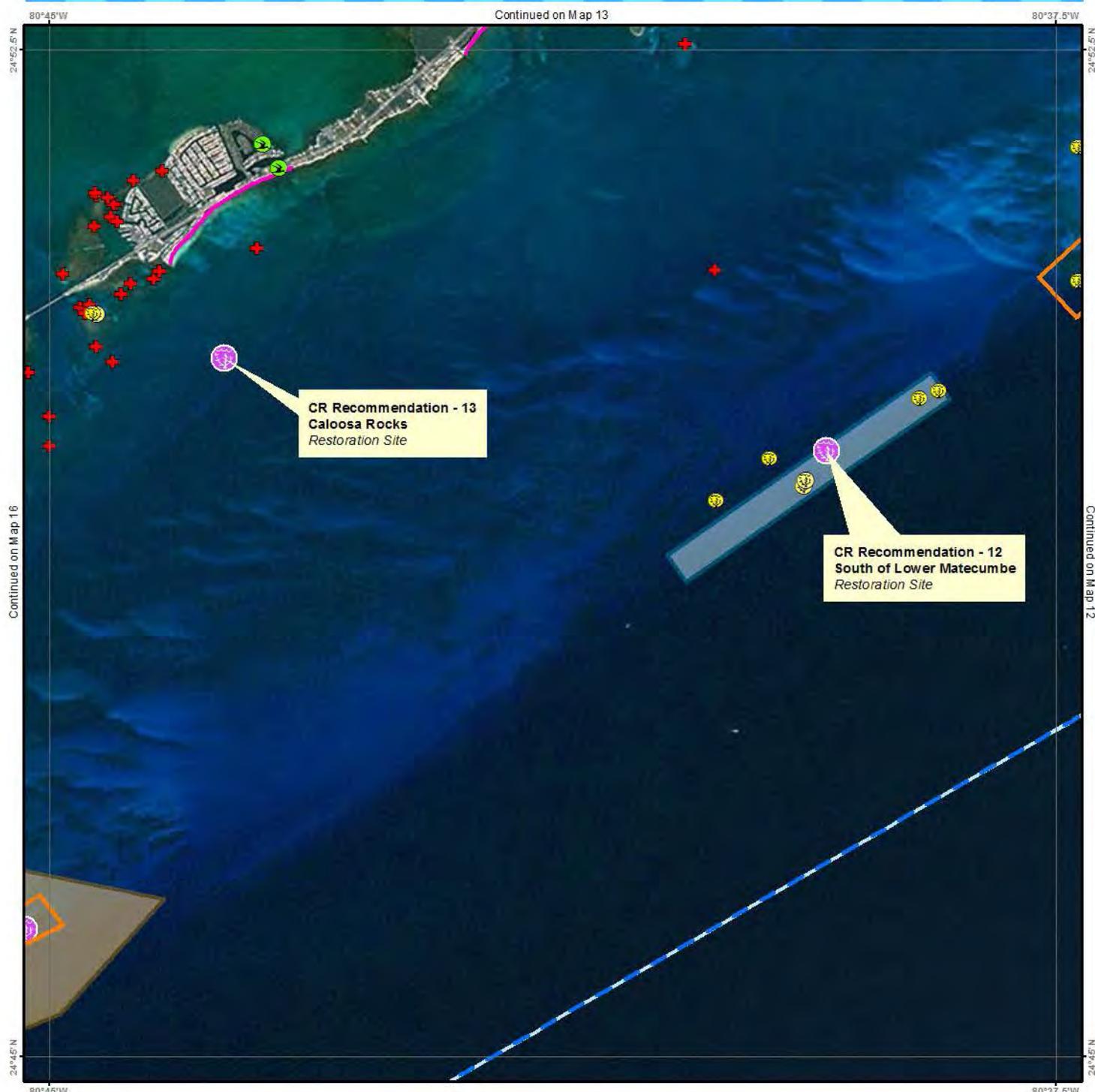
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 14 - Lower Matecumbe



Continued on Map 16

Continued on Map 13

Continued on Map 12

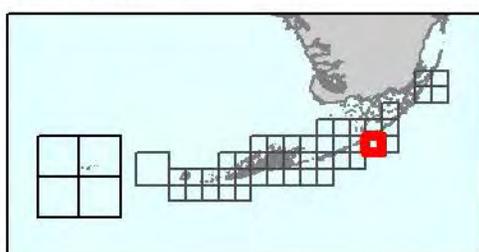
Continued on Map 12

Continued on Map 12

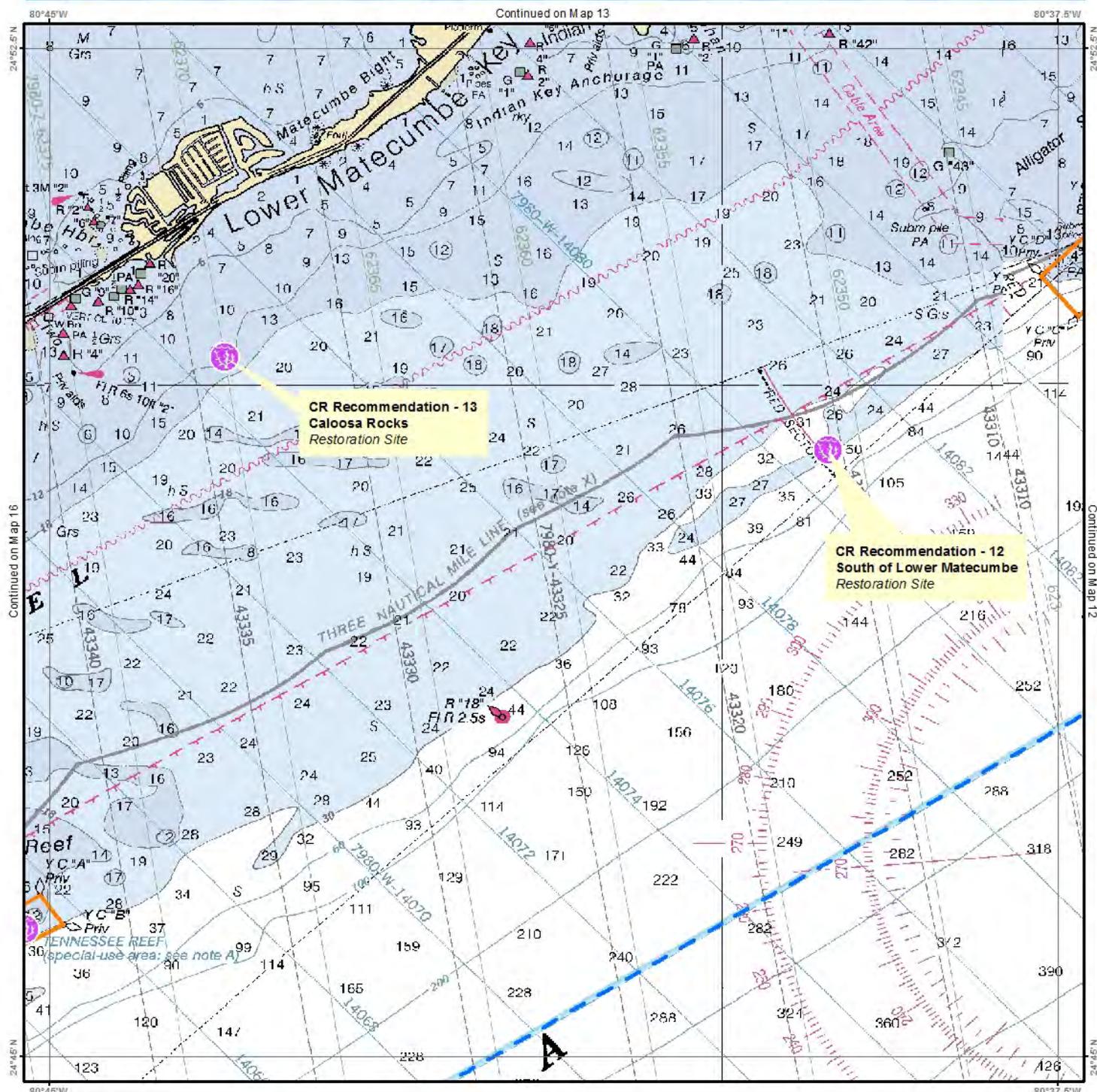
- Coral Reef Ecosystem Restoration Working Group Recommendations
- Sea Turtle Nesting Beaches Florida
- FKNMS Boundary
- Existing Marine Zones
- Areas Closed to Lobster Trapping (National Marine Fisheries Service)
- Florida Reef Resiliency Program Resilient Reefs
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



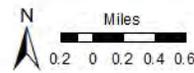
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



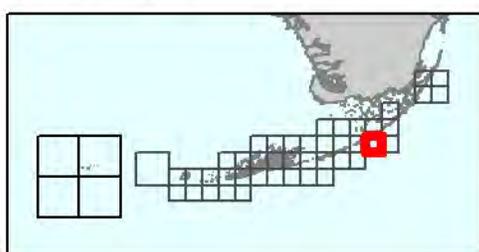
Map 14 - Lower Matecumbe



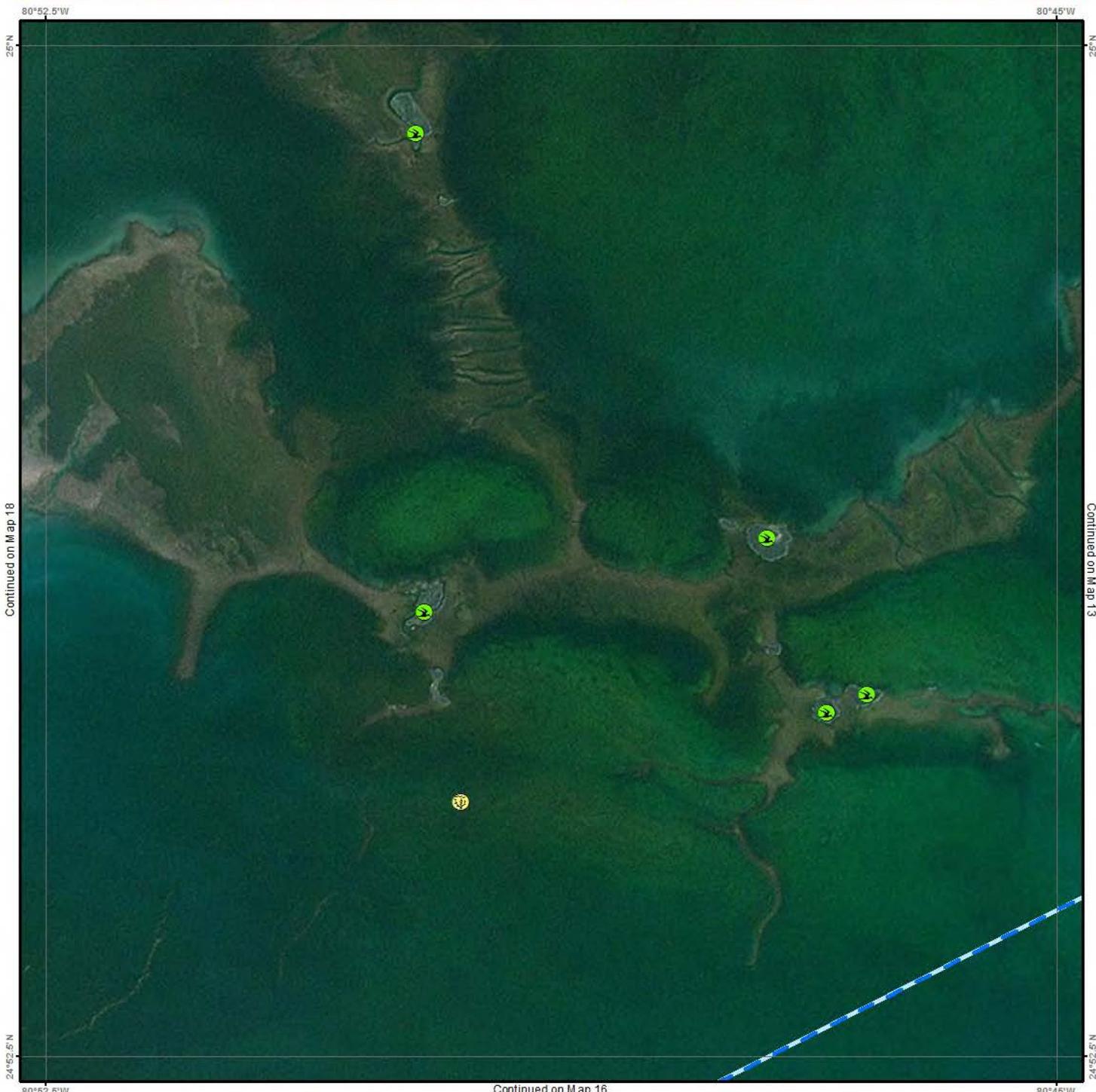
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



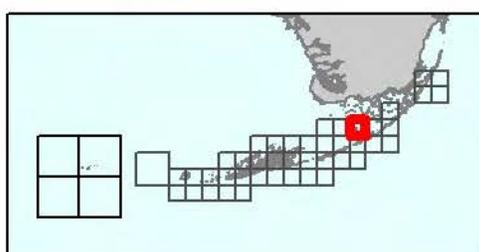
Map 15 - Arsenicker Keys, ENP



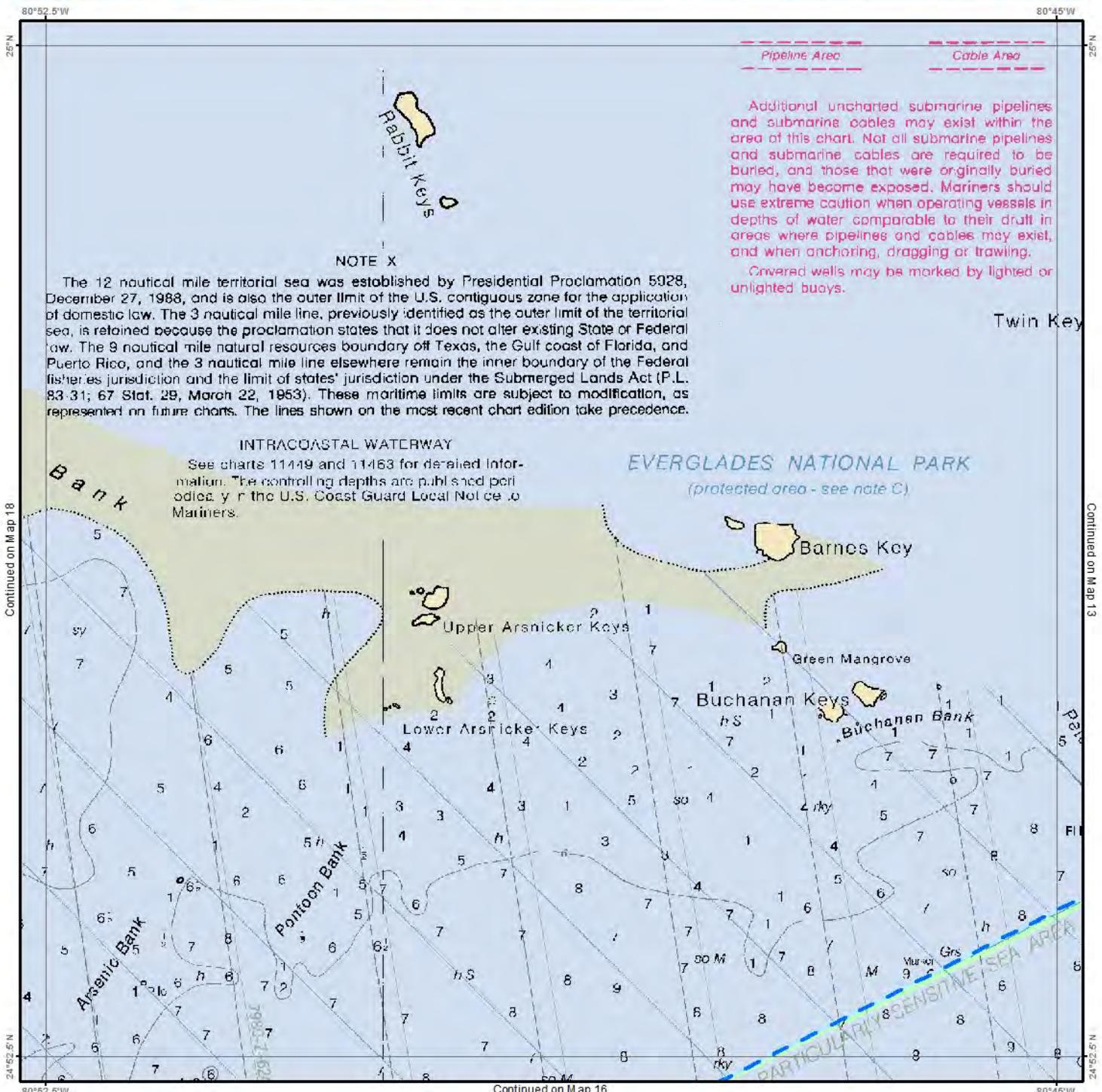
-  FKNMS Boundary
-  Bird Nests (Various Species)
-  FKNMS Permitted Restoration Sites



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 15 - Arsenicker Keys, ENP



Continued on Map 18

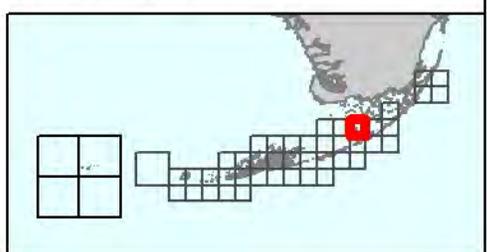
Continued on Map 13

Continued on Map 16

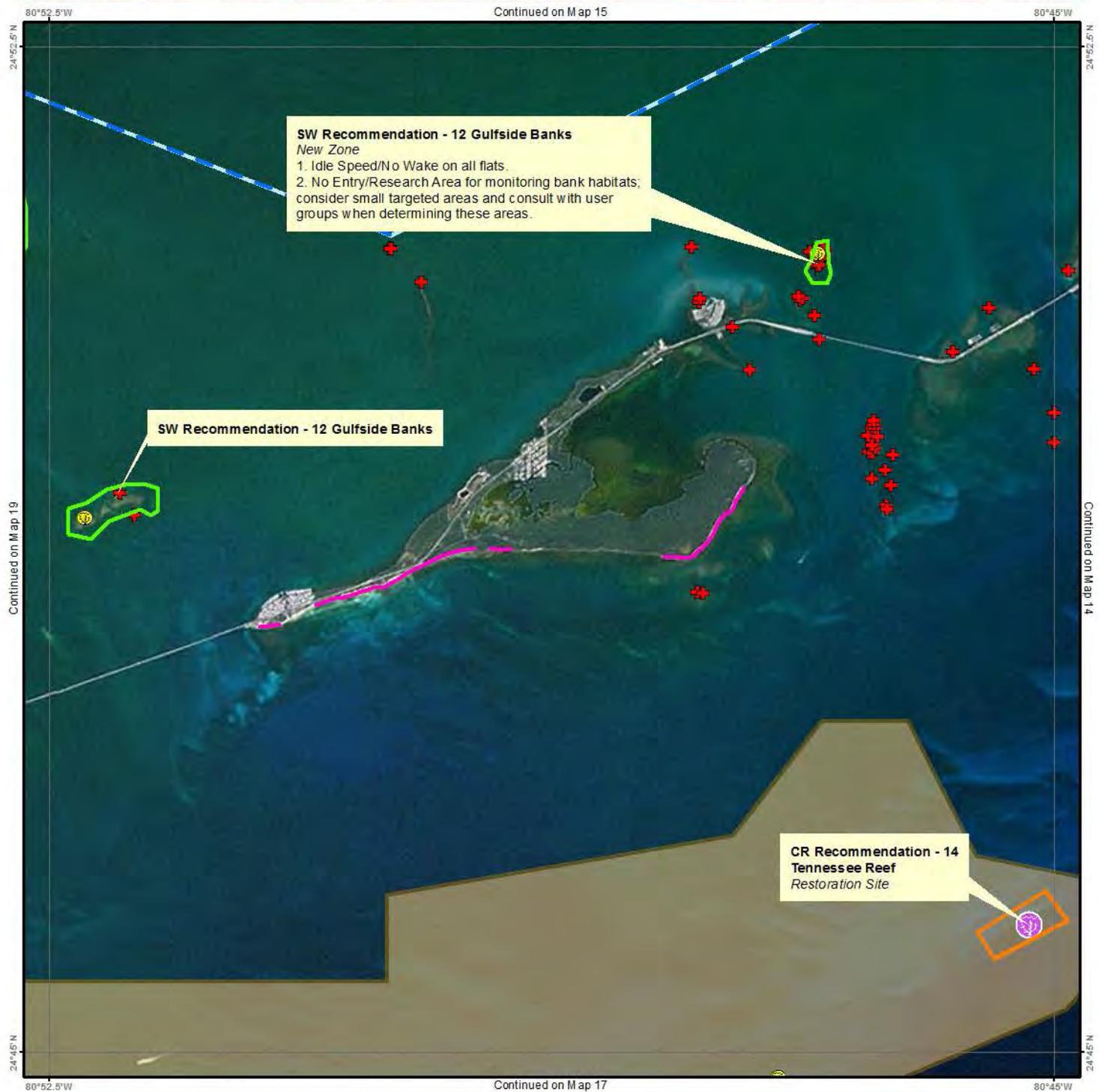
FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



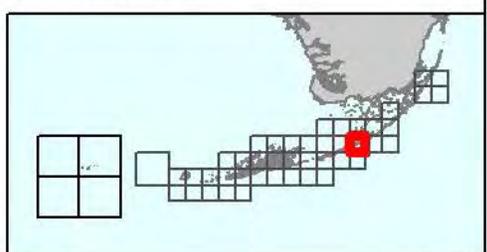
Map 16 - Long Key



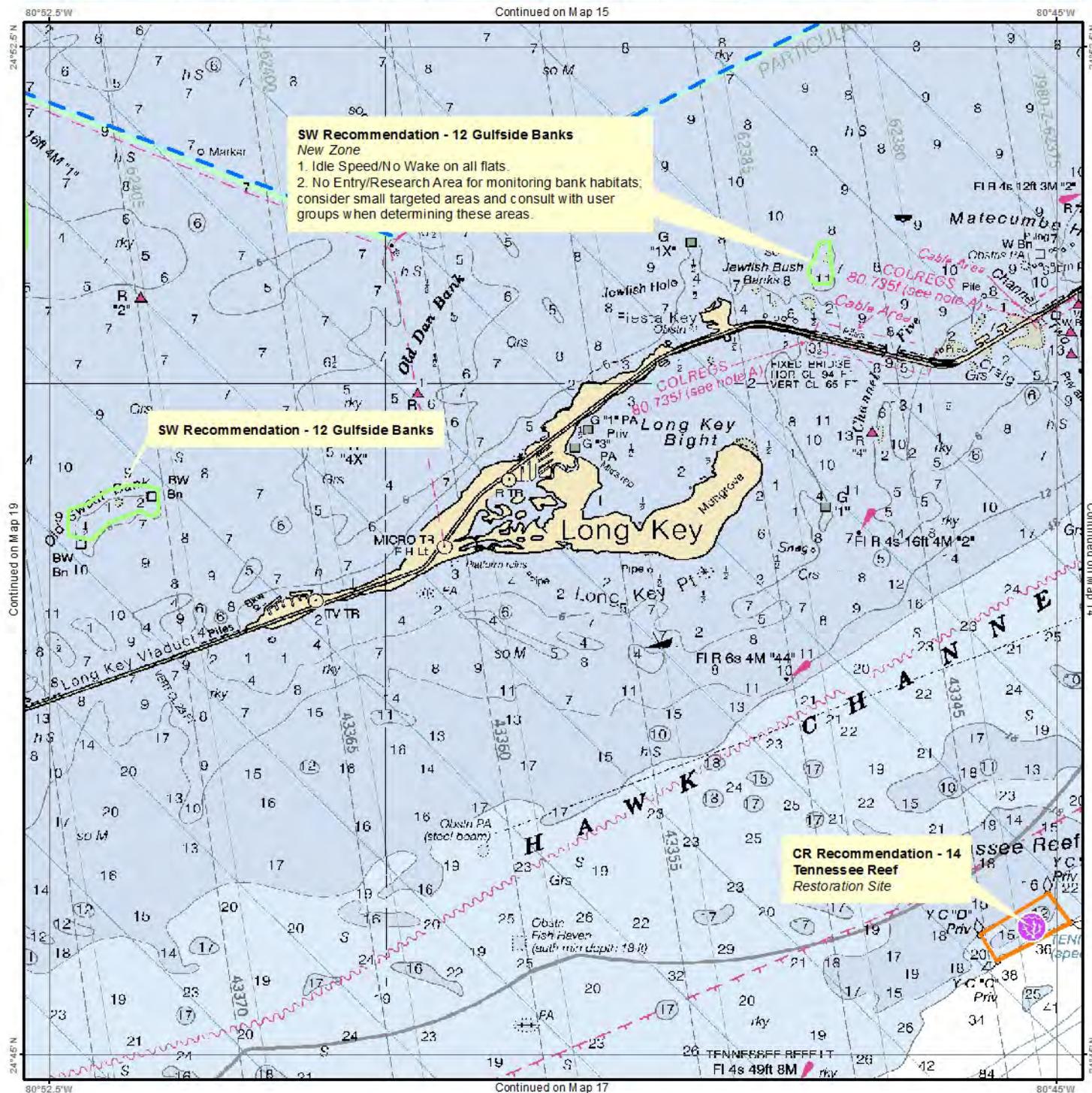
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Florida Reef Resiliency Program Resilient Reefs
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)
- Sea Turtle Nesting Beaches Florida



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



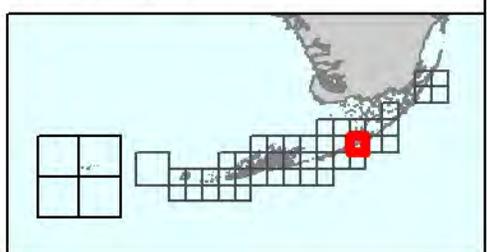
Map 16 - Long Key



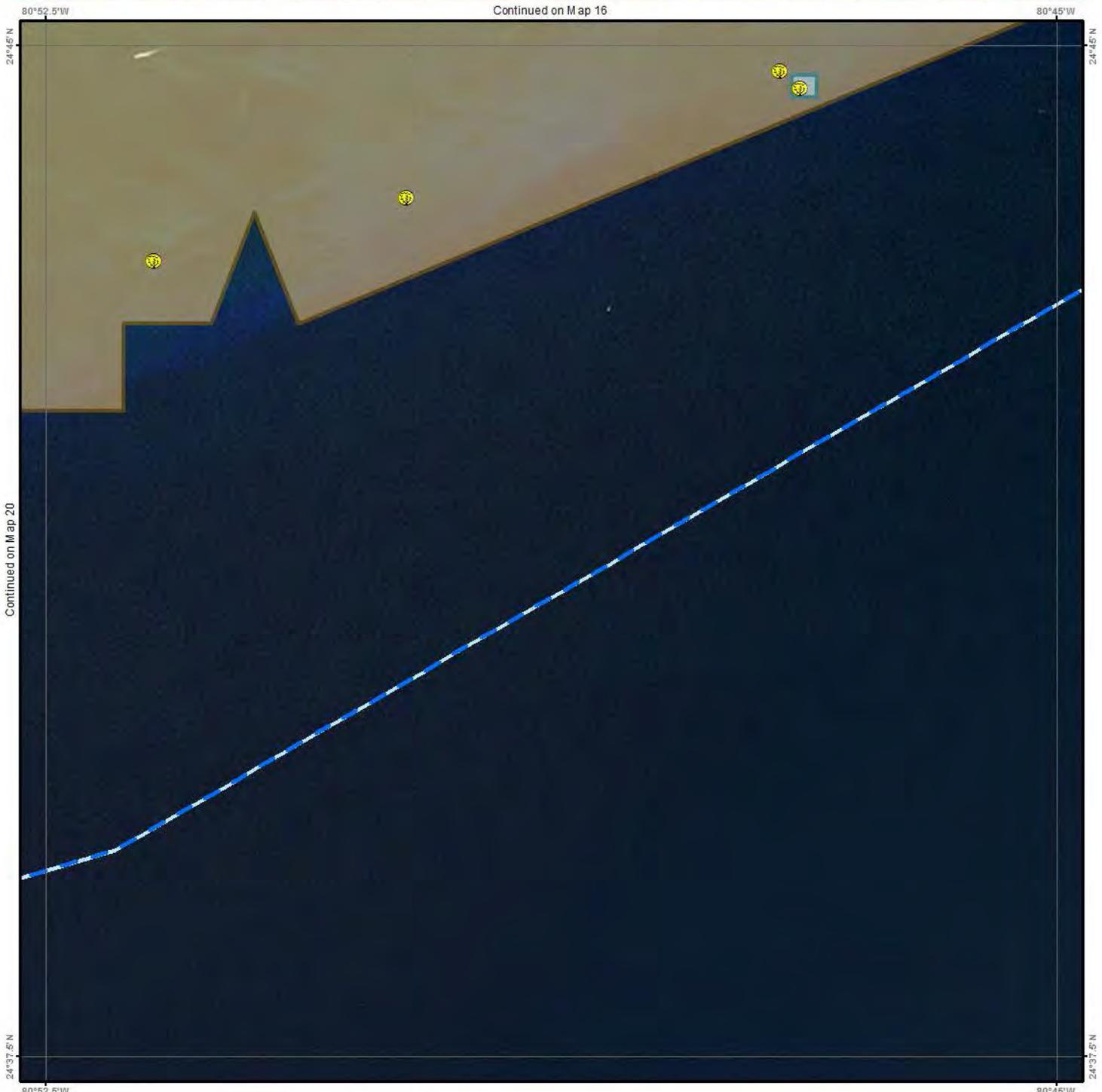
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



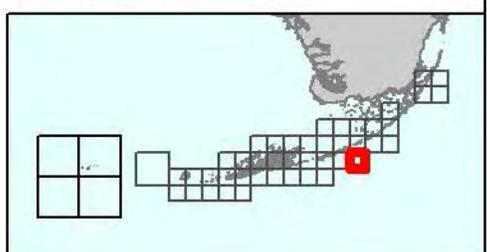
Map 17 - Tennessee Reef



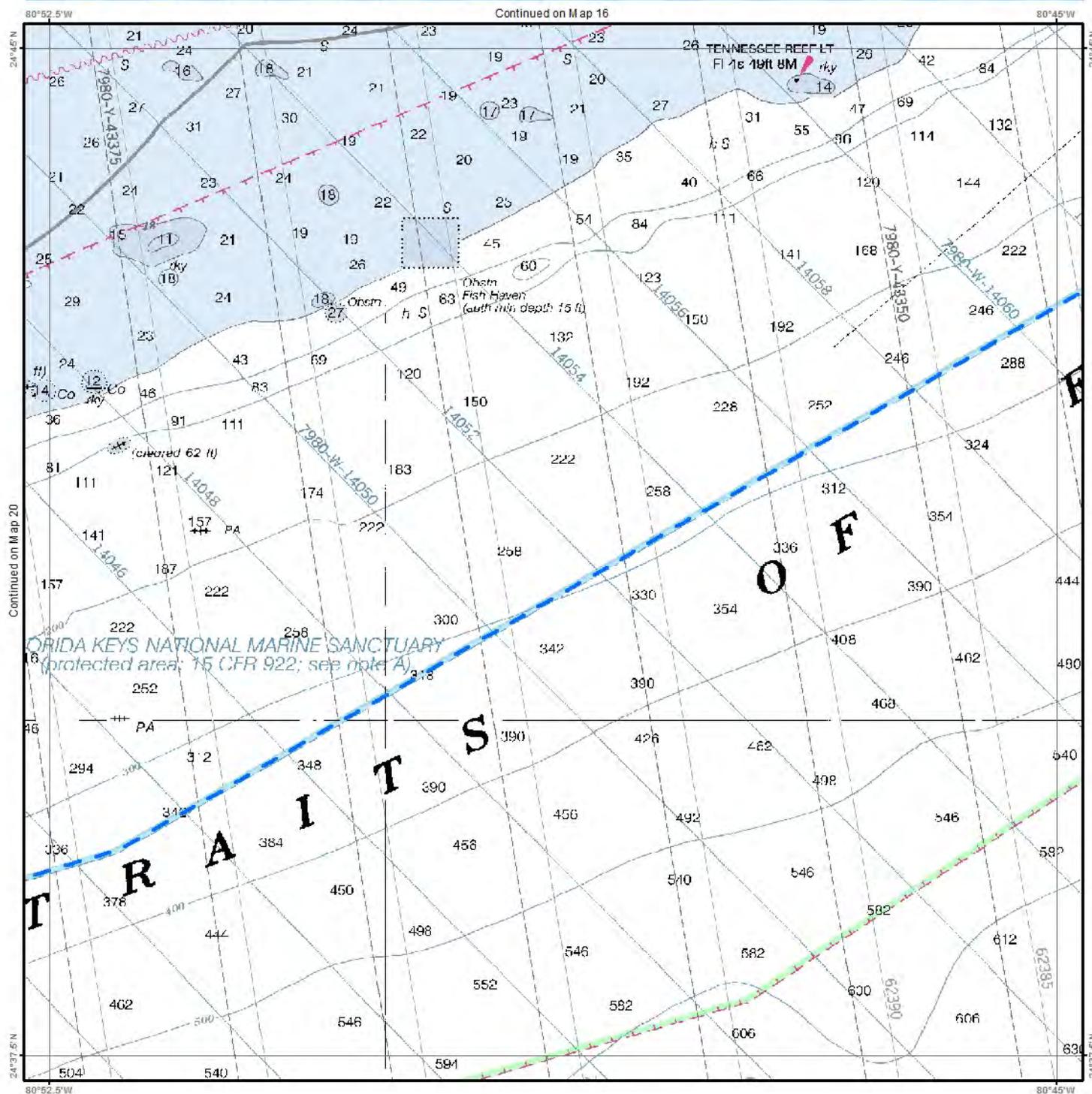
-  FKNMS Boundary
-  Areas Closed to Lobster Trapping (National Marine Fisheries Service)
-  Florida Reef Resiliency Program Resilient Reefs
-  FKNMS Permitted Restoration Sites



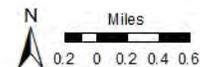
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



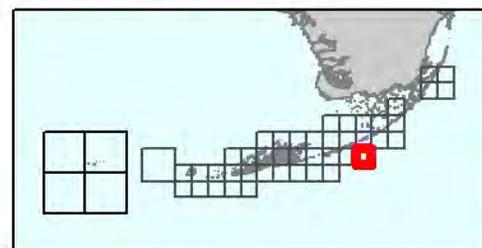
Map 17 - Tennessee Reef



FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



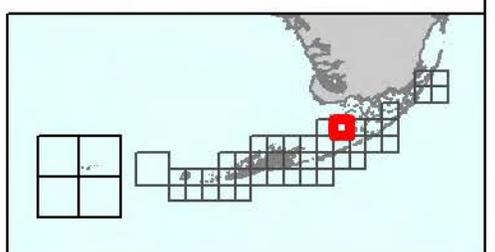
Map 18 - Sprigger Bank



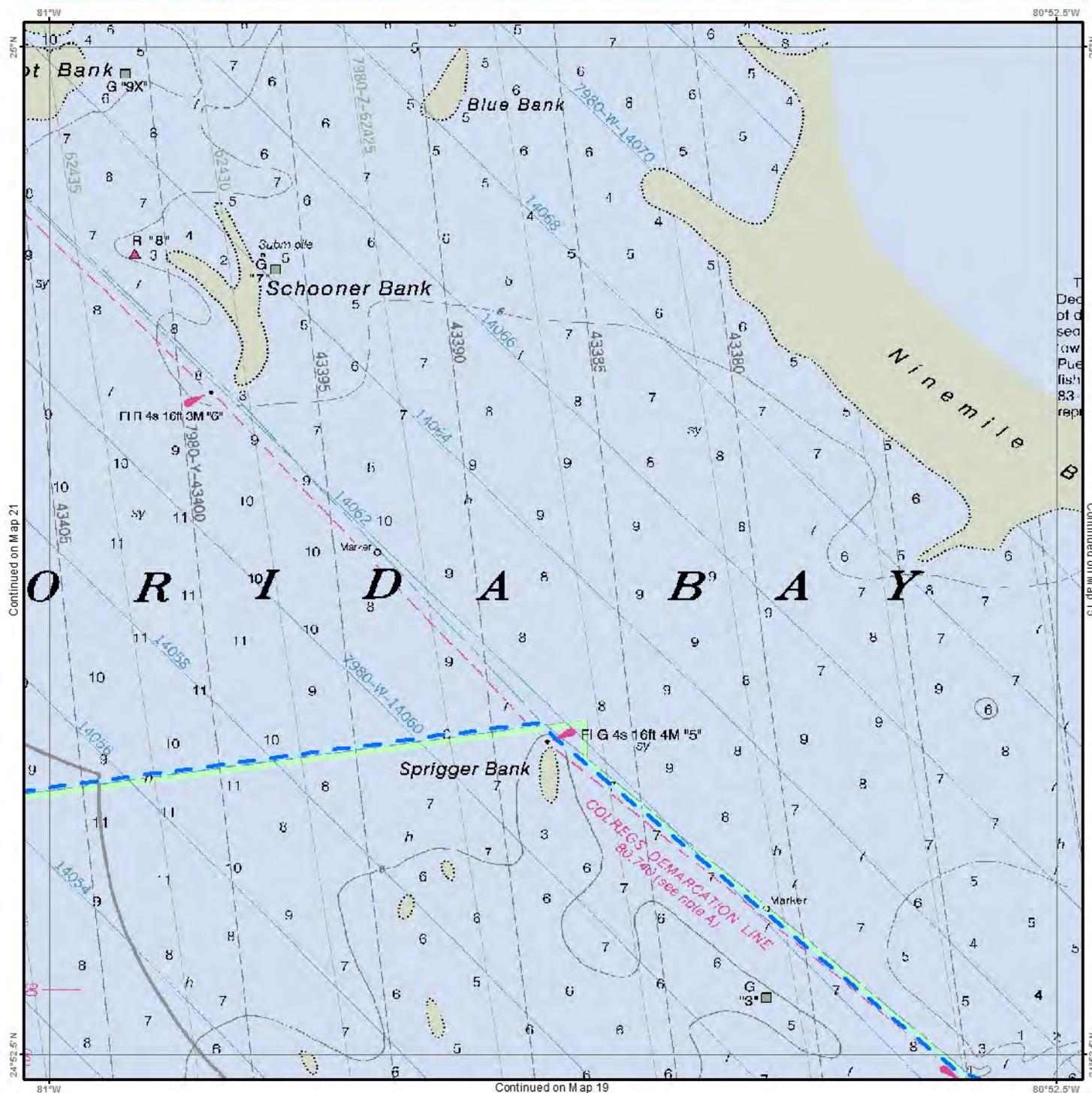
-  FKNMS Boundary
-  FKNMS Vessel Groundings (2000-2012)



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



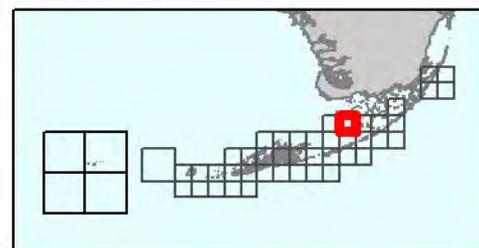
Map 18 - Sprigger Bank



FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

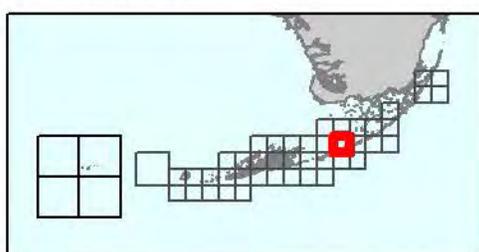


Map 19 - Grassy Key

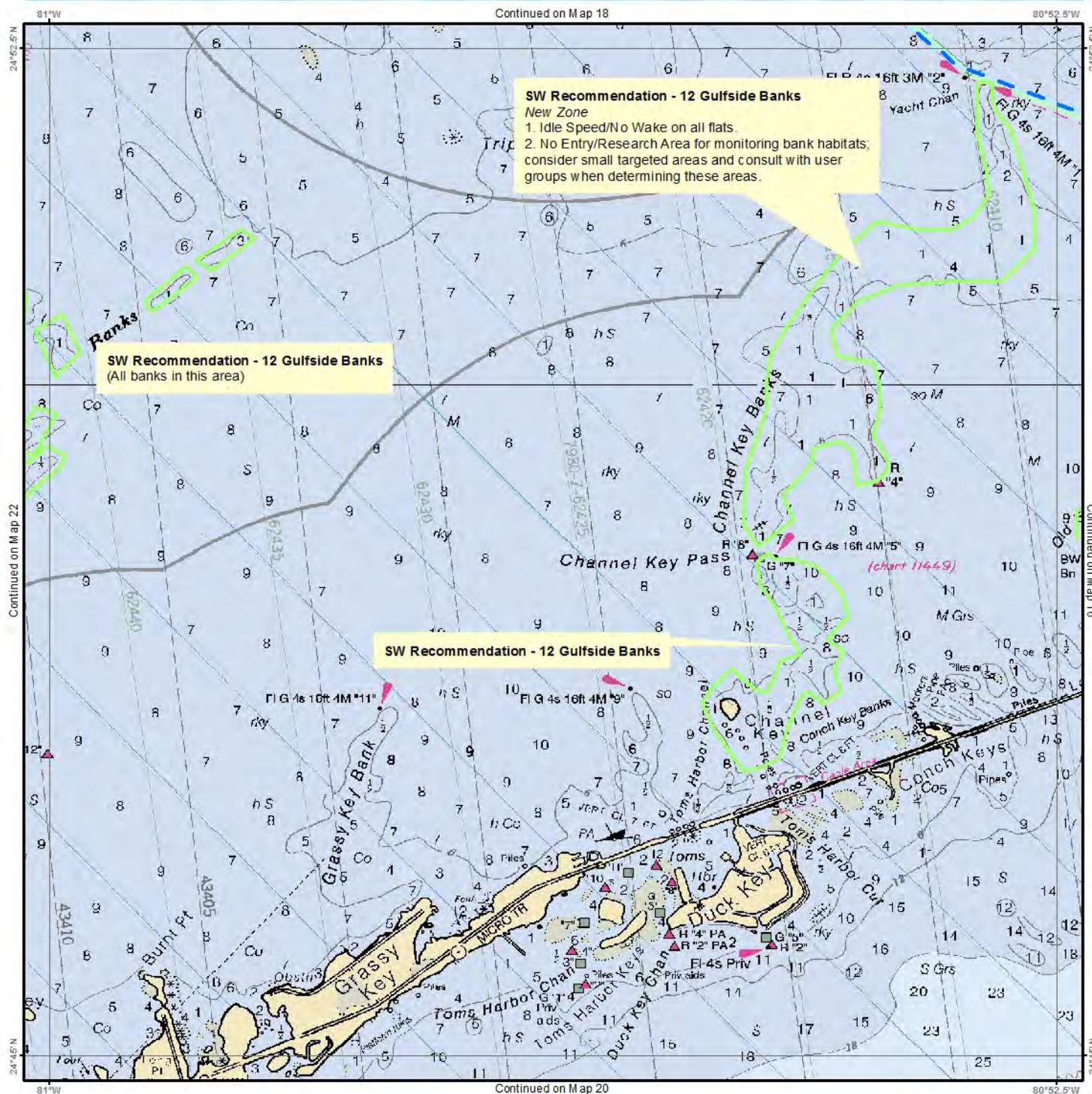


- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Florida Reef Resiliency Program Resilient Reefs
- Bird Nests (Various Species)
- FKNMS Vessel Groundings (2000-2012)

NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



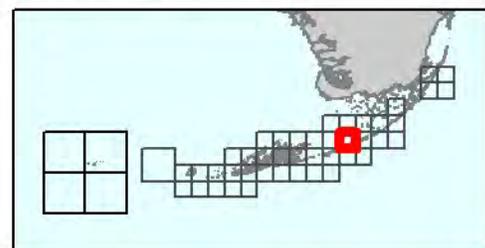
Map 19 - Grassy Key



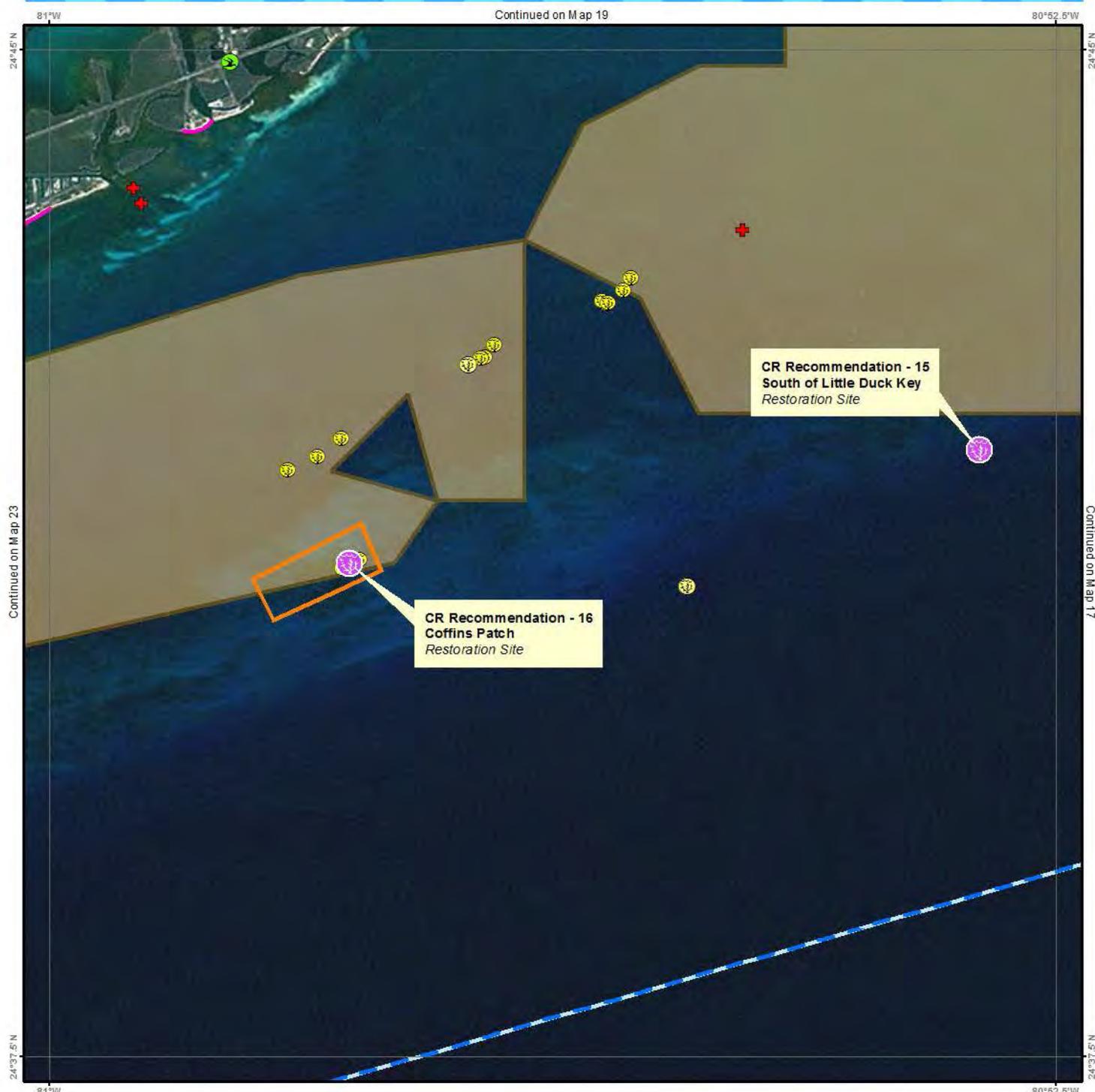
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



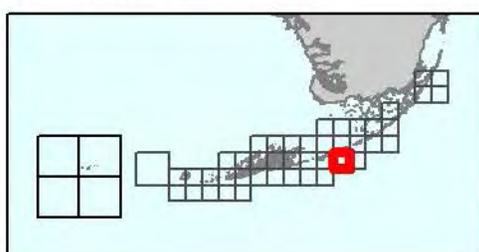
Map 20 - Coffins Patch



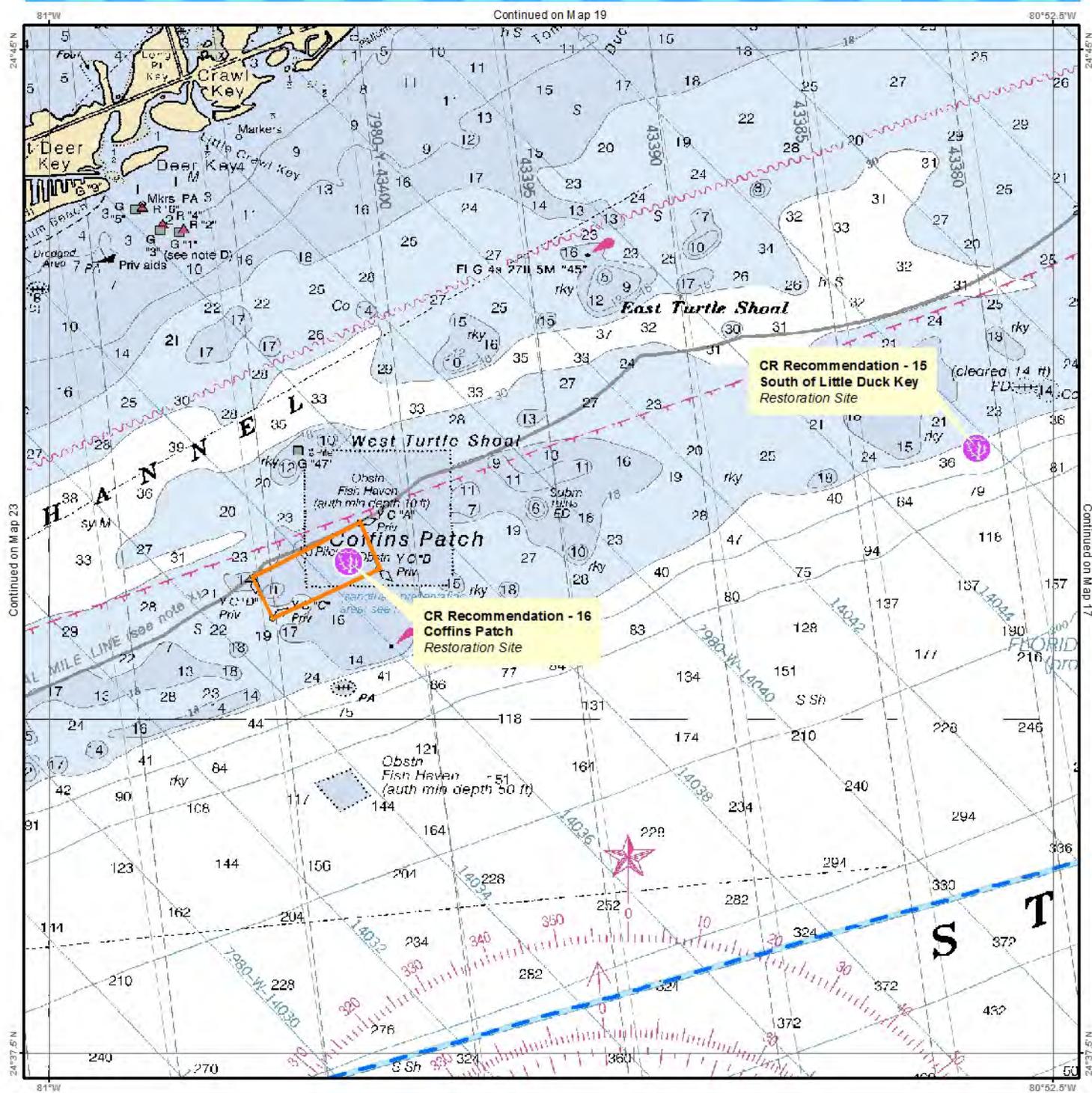
- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Florida Reef Resiliency Program Resilient Reefs
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)
- Sea Turtle Nesting Beaches Florida



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Map 20 - Coffins Patch



Continued on Map 23

Continued on Map 19

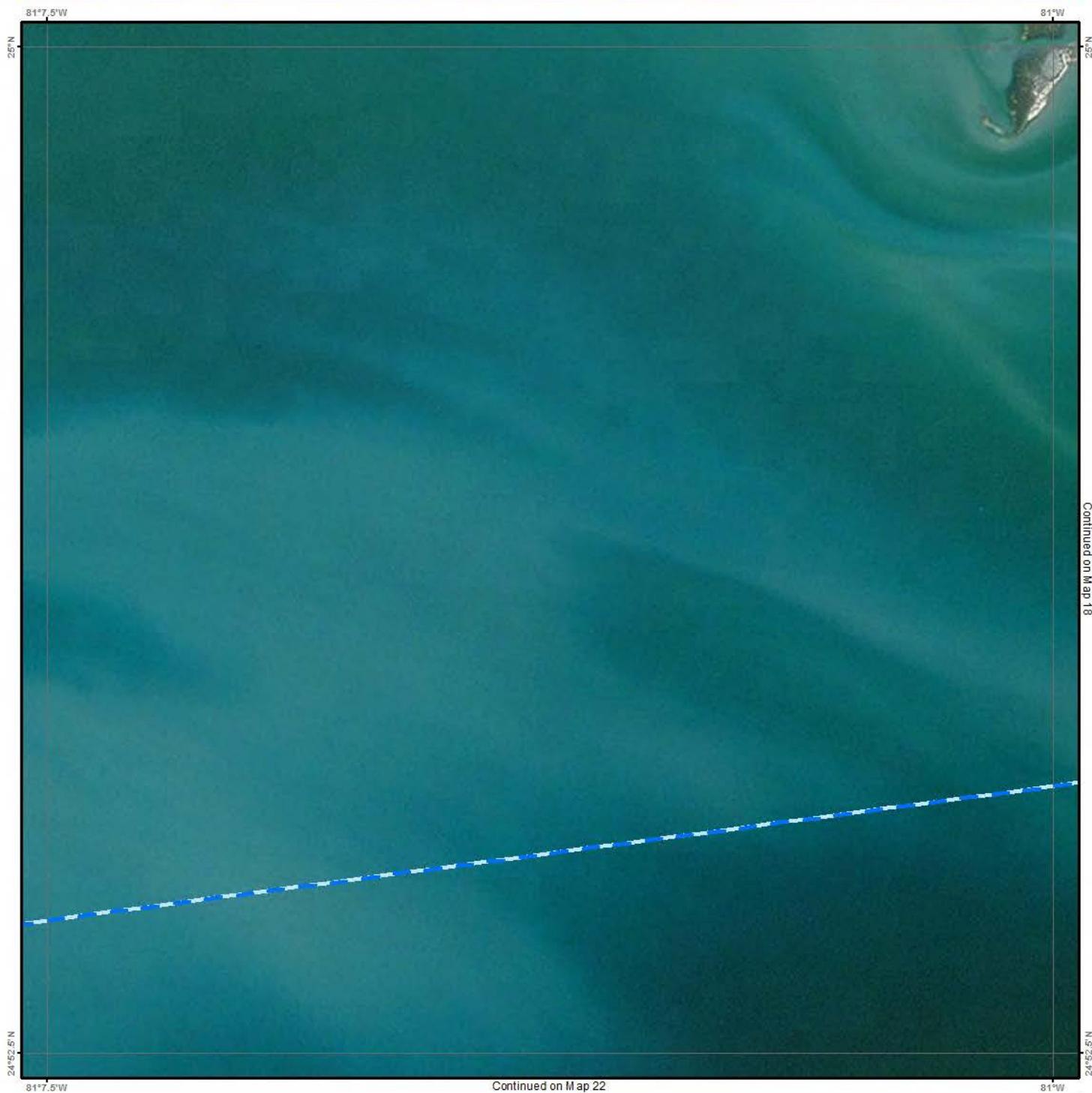
Continued on Map 17

- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones

N

NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

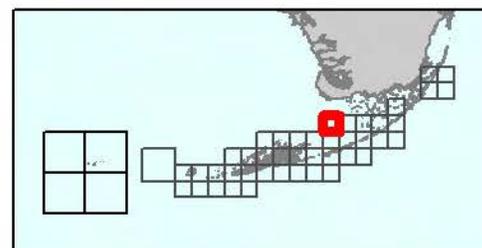
Map 21 - West Florida Shelf



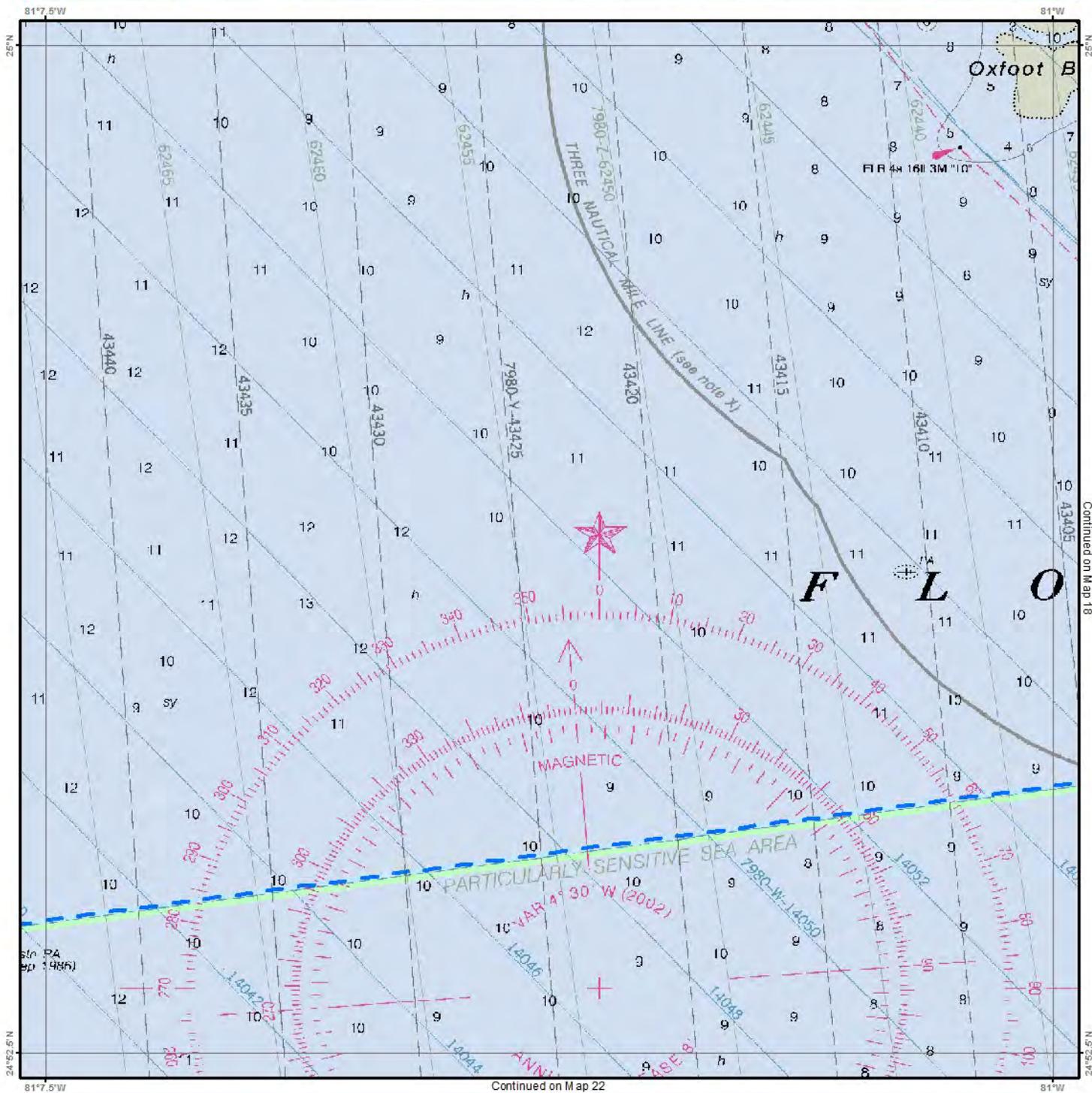
FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



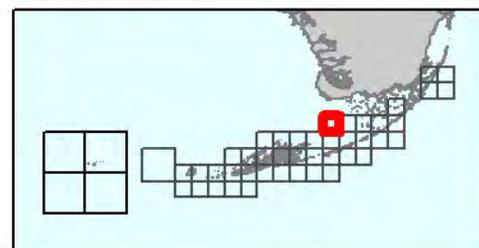
Map 21 - West Florida Shelf



FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 22 - Bamboo Banks



SW Recommendation - 12 Gulfside Banks
(All banks in this area)

SW Recommendation - 12 Gulfside Banks
New Zone
1. Idle Speed/No Wake on all flats.
2. No Entry/Research Area for monitoring bank habitats; consider small targeted areas and consult with user groups when determining these areas.

SW Recommendation - 13 Moser Channel Bank
New Zone
Idle Speed/No Wake Zone on all flats.

- Shallow Water
- Working Group Recommendations
- ⊙ FKNMS Permitted Restoration Sites
- + FKNMS Vessel Groundings (2000-2012)

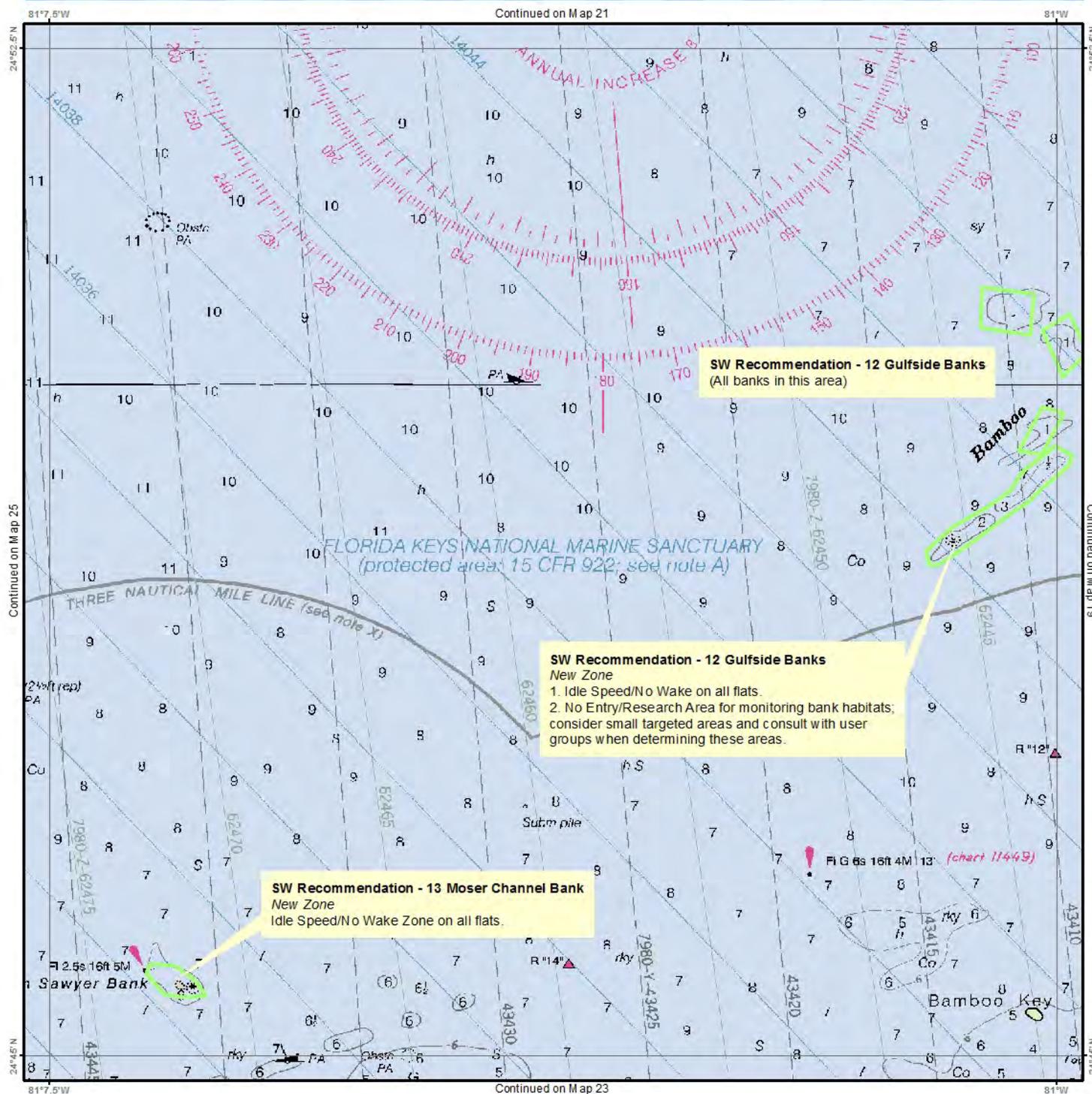
N

Miles

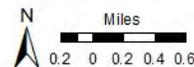
0.2 0 0.2 0.4 0.6

NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

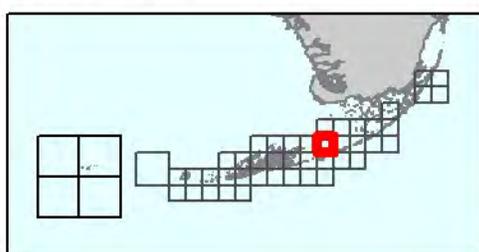
Map 22 - Bamboo Banks



Shallow Water Working Group Recommendations



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 23 - Marathon



Continued on Map 24

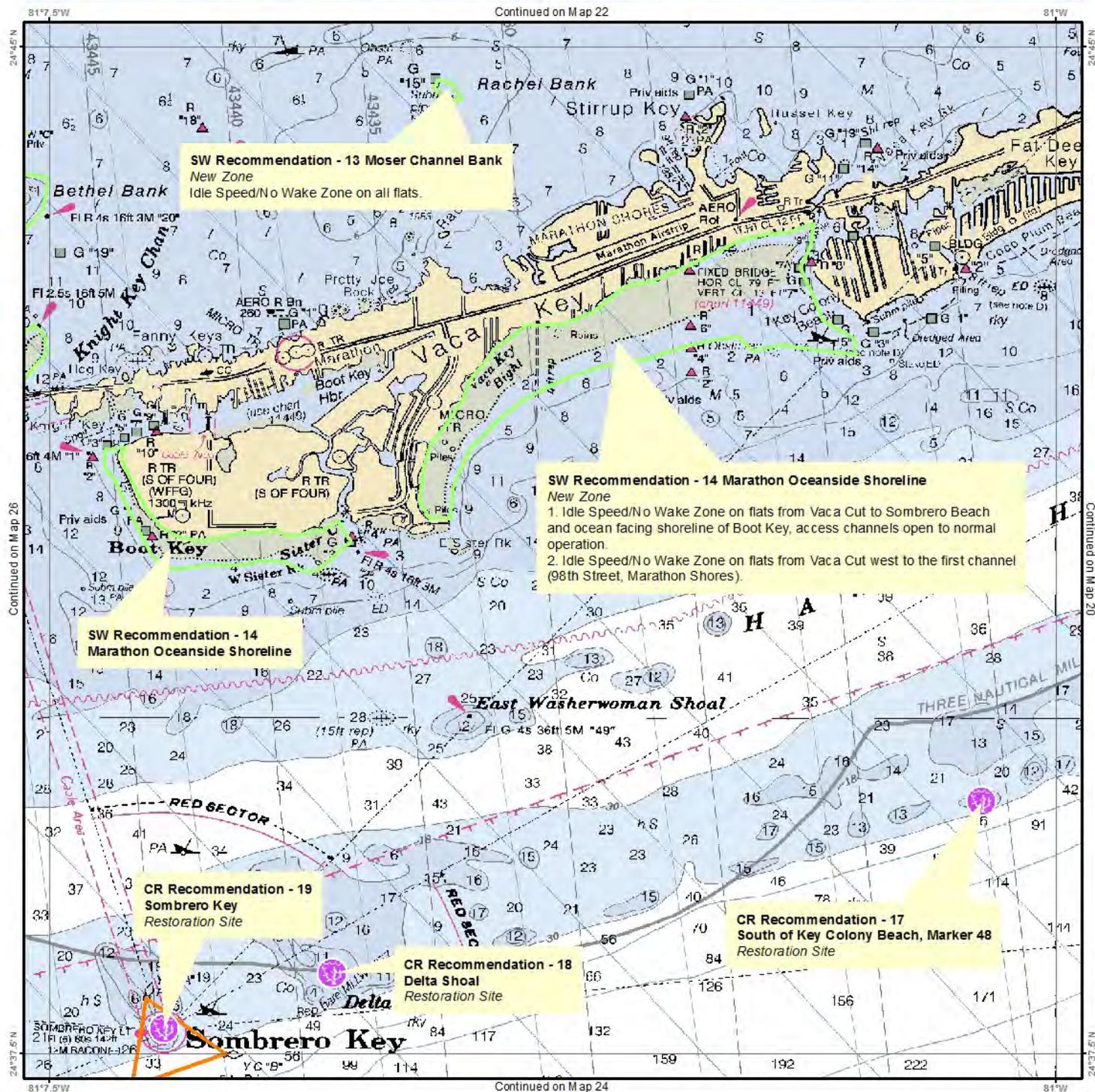
Continued on Map 24

- Shallow Water
- Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- Existing Marine Zones
- Florida Reef Resiliency Program Resilient Reefs
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- + FKNMS Vessel Groundings (2000-2012)
- ~ Sea Turtle Nesting Beaches Florida

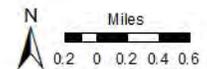
N
 Miles
 0.2 0 0.2 0.4 0.6

NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

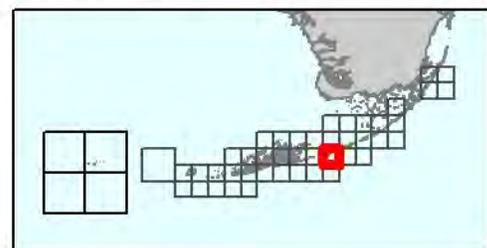
Map 23 - Marathon



- Shallow Water
- Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- Existing Marine Zones



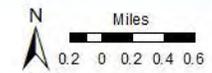
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



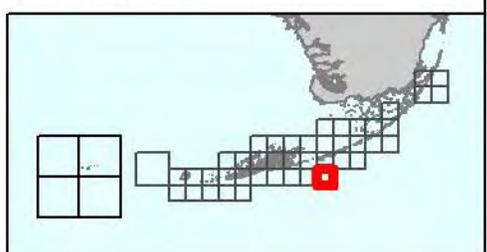
Map 24 - Sombrero Key



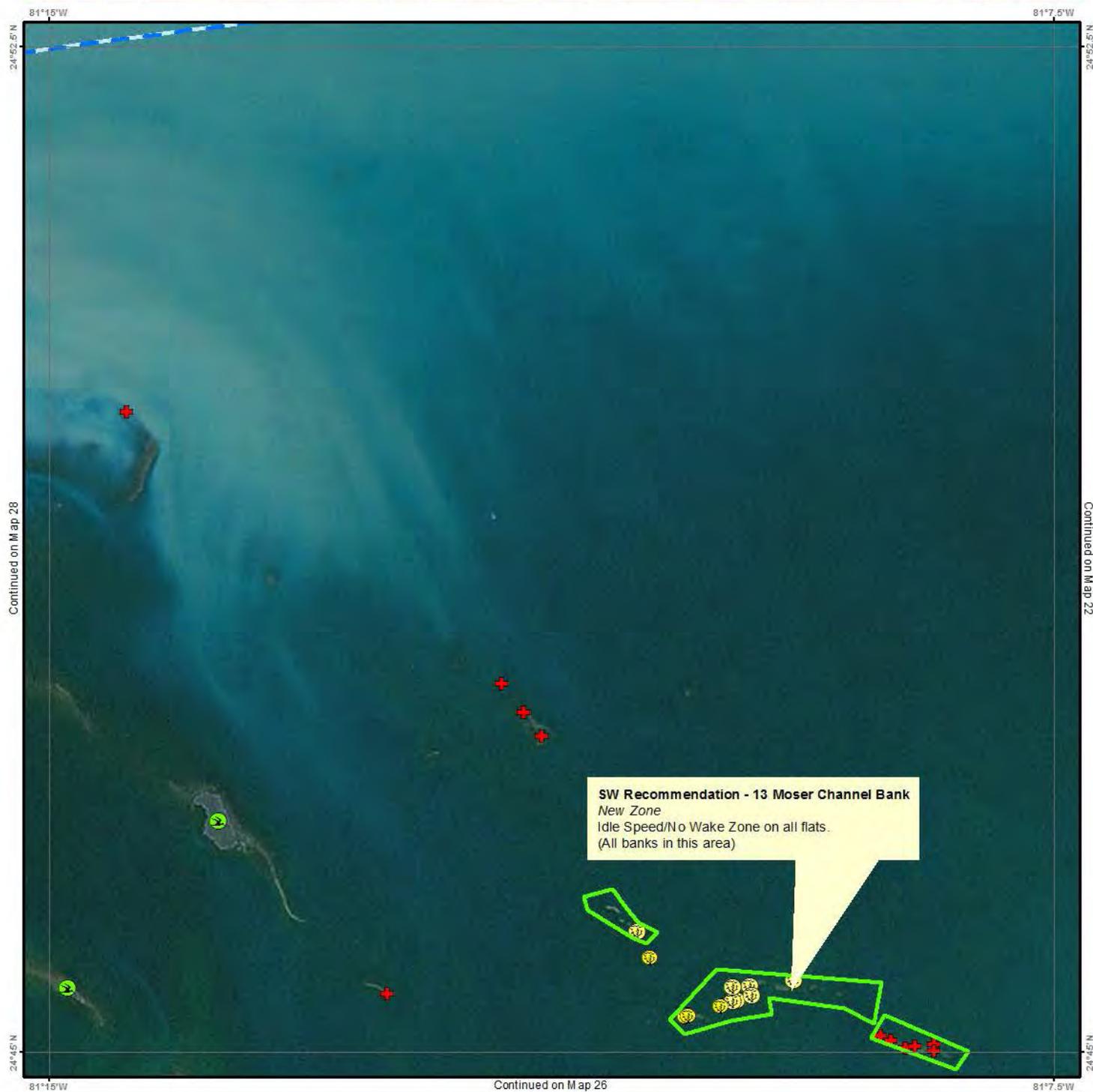
-  Coral Reef Ecosystem Restoration Working Group Recommendations
-  FKNMS Boundary
-  Existing Marine Zones
-  FKNMS Permitted Restoration Sites



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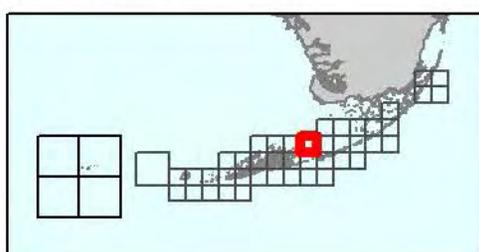
Map 25 - East Bahia Honda Key



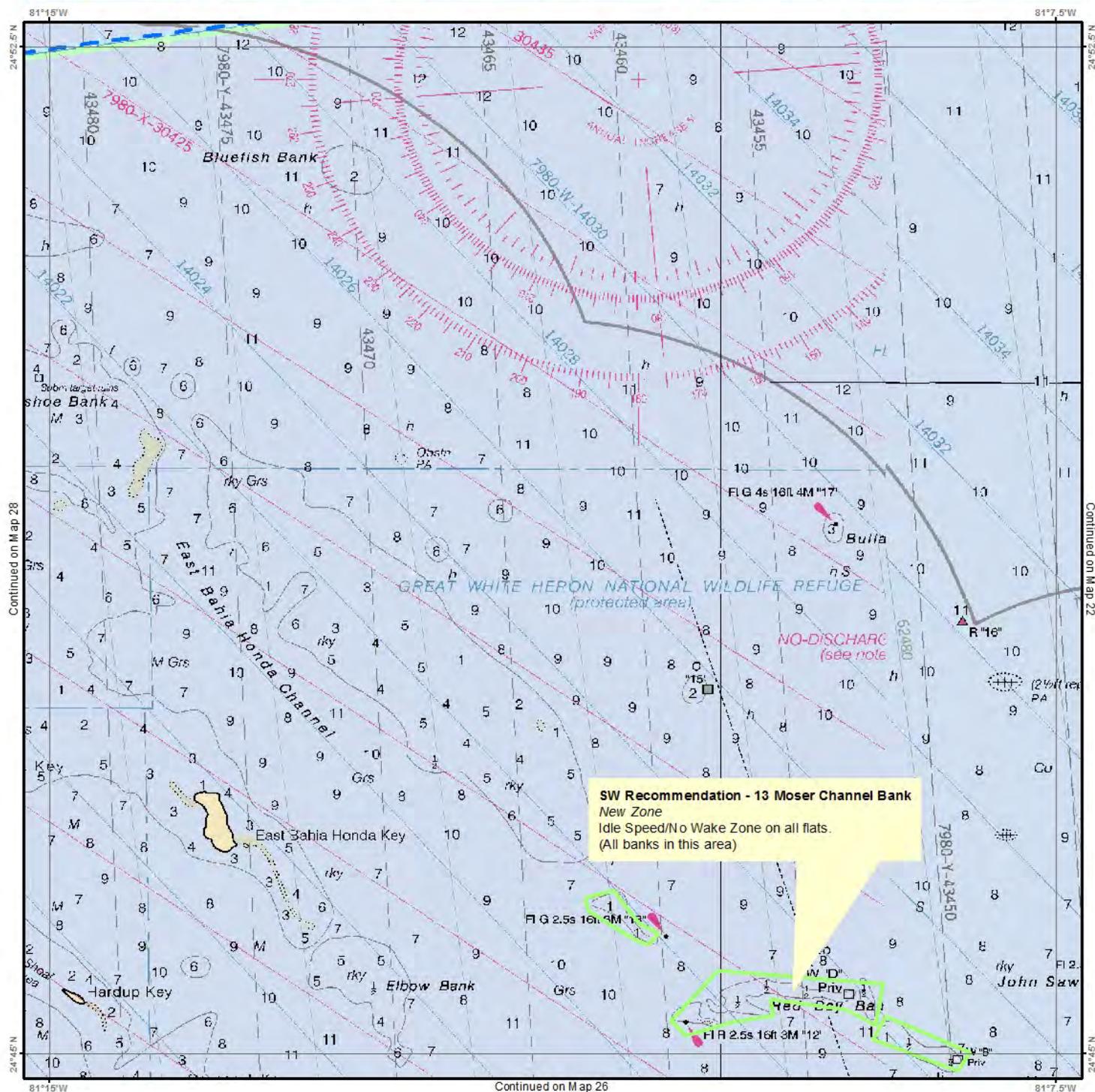
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



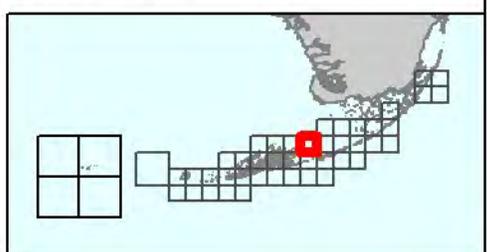
Map 25 - East Bahia Honda Key



- Shallow Water
- Working Group Recommendations
- FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 26 - Seven Mile Bridge



SW Recommendation - 13 Moser Channel Bank
New Zone
 Idle Speed/No Wake Zone on all flats.
 (All banks in this area)

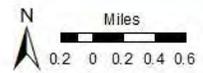
SW Recommendation - 13 Moser Channel Bank

SW Recommendation - 15 Tarpon Migration Lane
New Zone
 1. Idle Speed/No Wake Zone (April-June) along oceanside shorelines from east end of Key West to west end of Ohio Key.
 2. Idle Speed/No Wake Zone (April-June) from East Bahia Honda to 7-Mile Bridge and Boca Chica

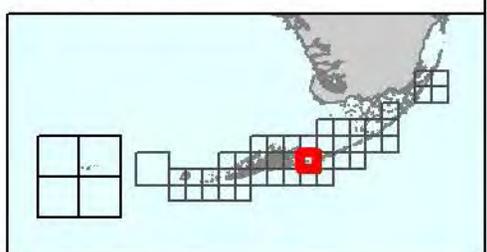
SW Recommendation - 15 Tarpon Migration Lane

SW Recommendation - 15 Tarpon Migration Lane

- Shallow Water
- Working Group Recommendations
- Florida Reef Resiliency Program Resilient Reefs
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)
- Sea Turtle Nesting Beaches Florida



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



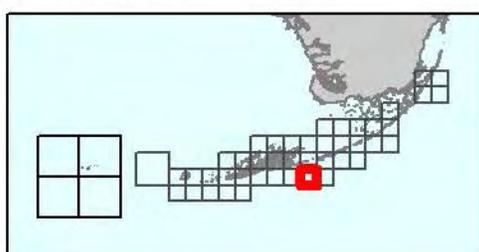
Map 27 - South of Seven Mile Bridge



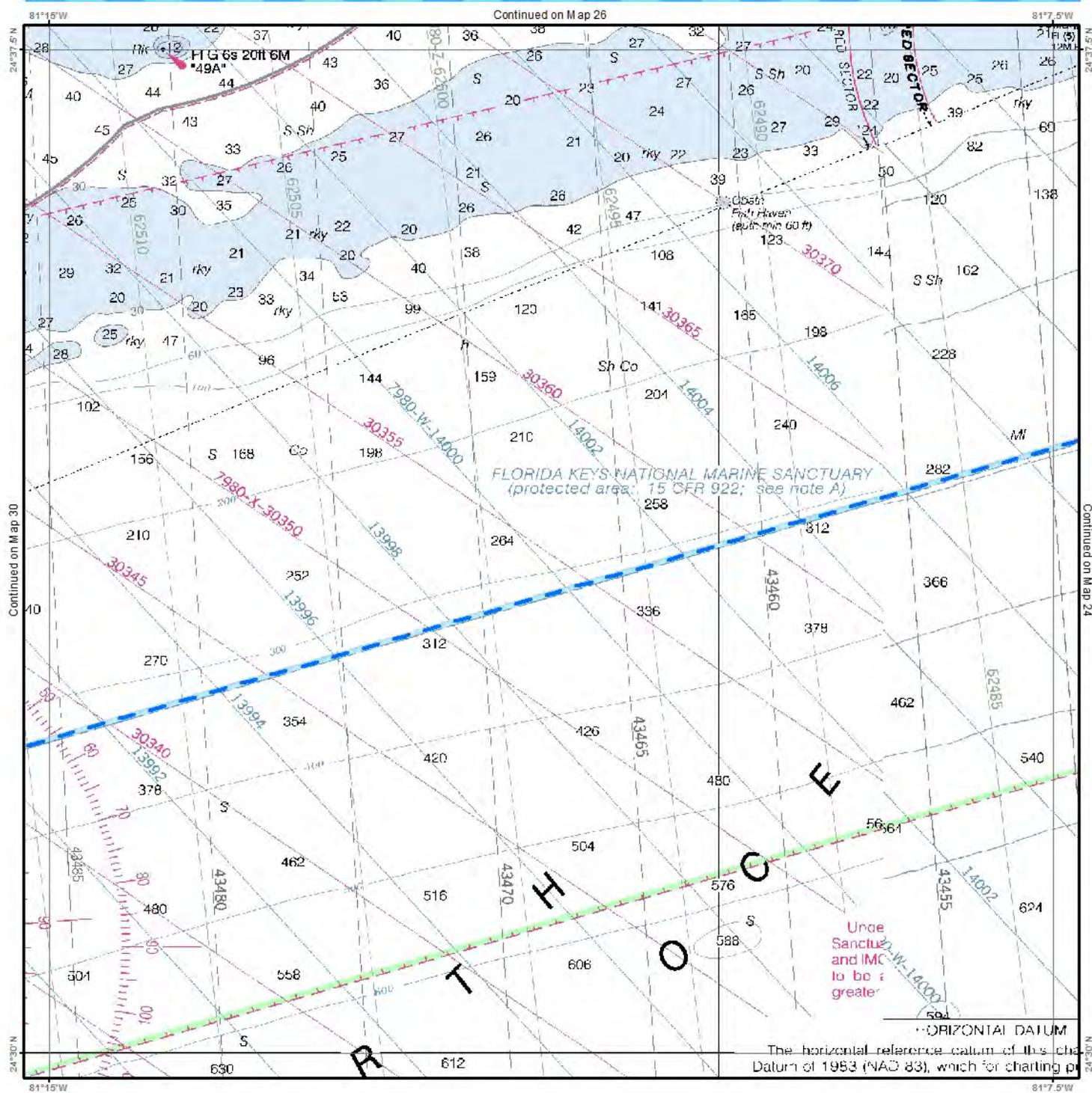
-  FKNMS Boundary
-  Areas Closed to Lobster Trapping (National Marine Fisheries Service)
-  FKNMS Permitted Restoration Sites



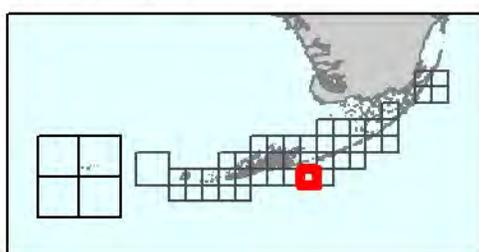
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



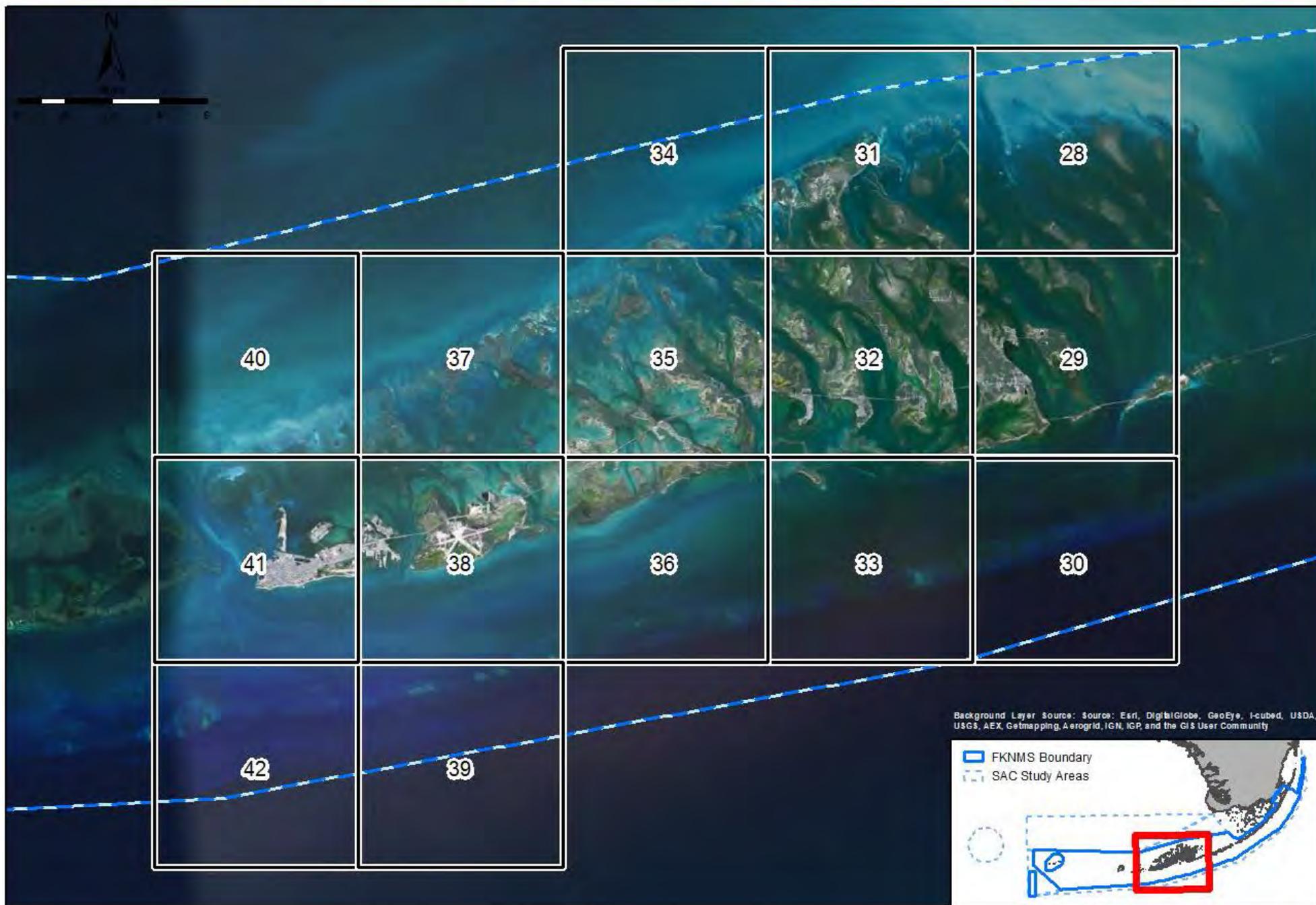
Map 27 - South of Seven Mile Bridge



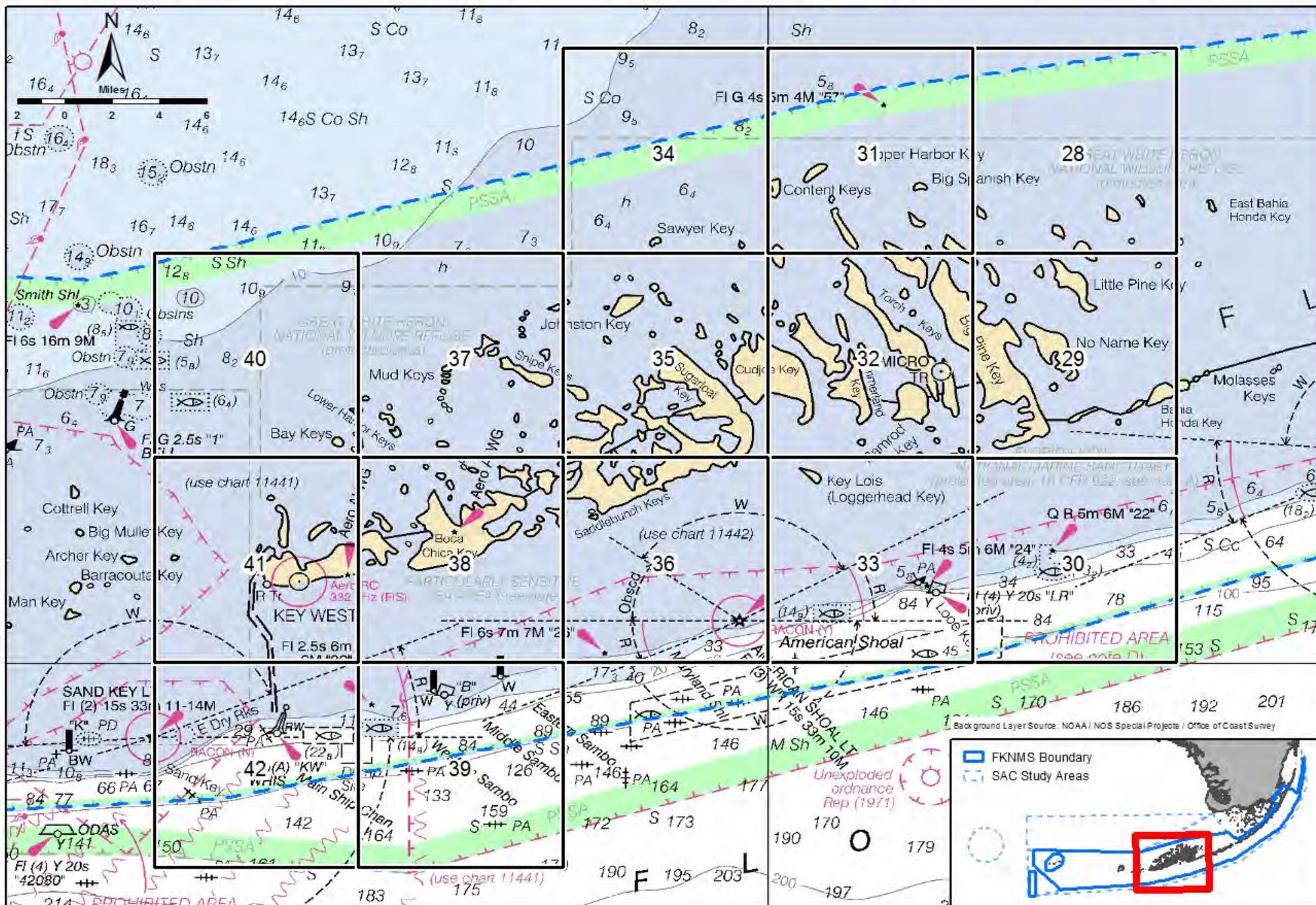
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



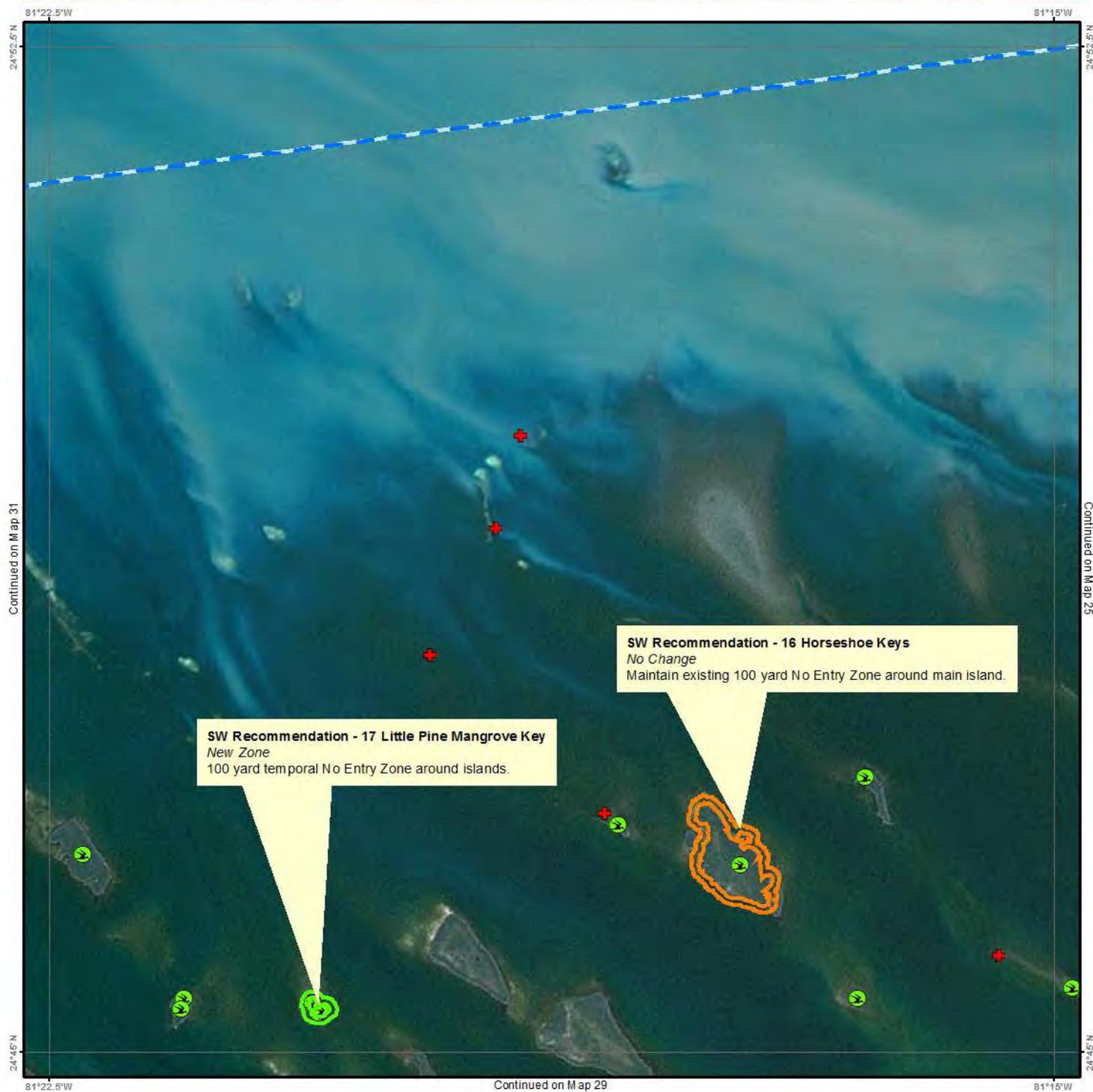
Lower Keys Region Index Map



Lower Keys Region Index Map

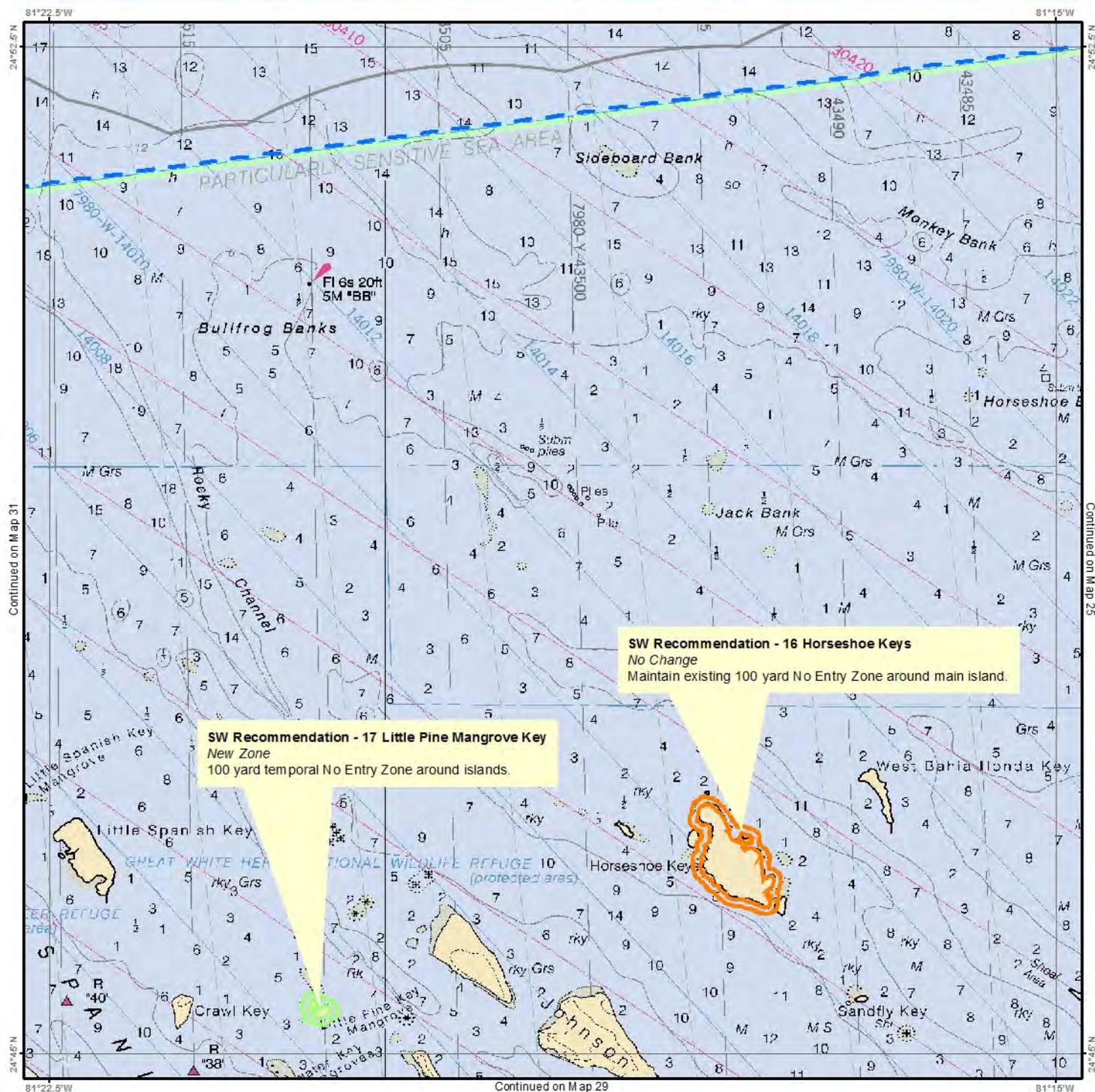


Map 28 - Horseshoe Keys



<ul style="list-style-type: none">  Shallow Water  Working Group Recommendations  FKNMS Boundary  Existing Marine Zones  Bird Nests (Various Species)  FKNMS Vessel Groundings (2000-2012) 	<p style="text-align: center;">Continued on Map 29</p>	<p style="text-align: right;">N</p> <p style="text-align: right;">Miles</p> <p style="text-align: right;">0.2 0 0.2 0.4 0.6</p> <p>NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.</p>

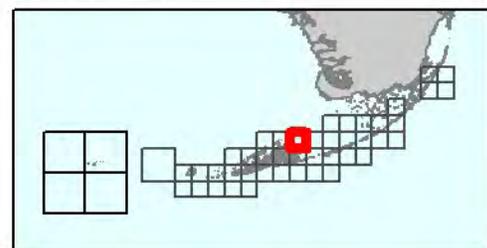
Map 28 - Horseshoe Keys



- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 29 - Big Pine Key



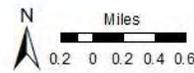
SW Recommendation - 15 Tarpon Migration Lane
New Zone
 1. Idle Speed/No Wake Zone (April-June) along oceanside shorelines from east end of Key West to west end of Ohio Key.
 2. Idle Speed/No Wake Zone (April-June) from East Bahia Honda to 7-Mile Bridge and Boca Chica

SW Recommendation - 15 Tarpon Migration Lane

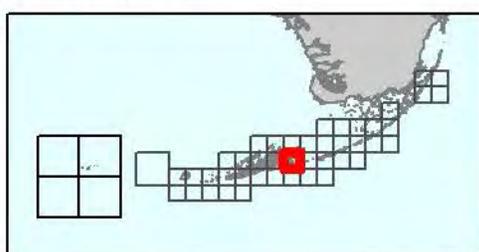
SW Recommendation - 15 Tarpon Migration Lane

SW Recommendation - 15 Tarpon Migration Lane

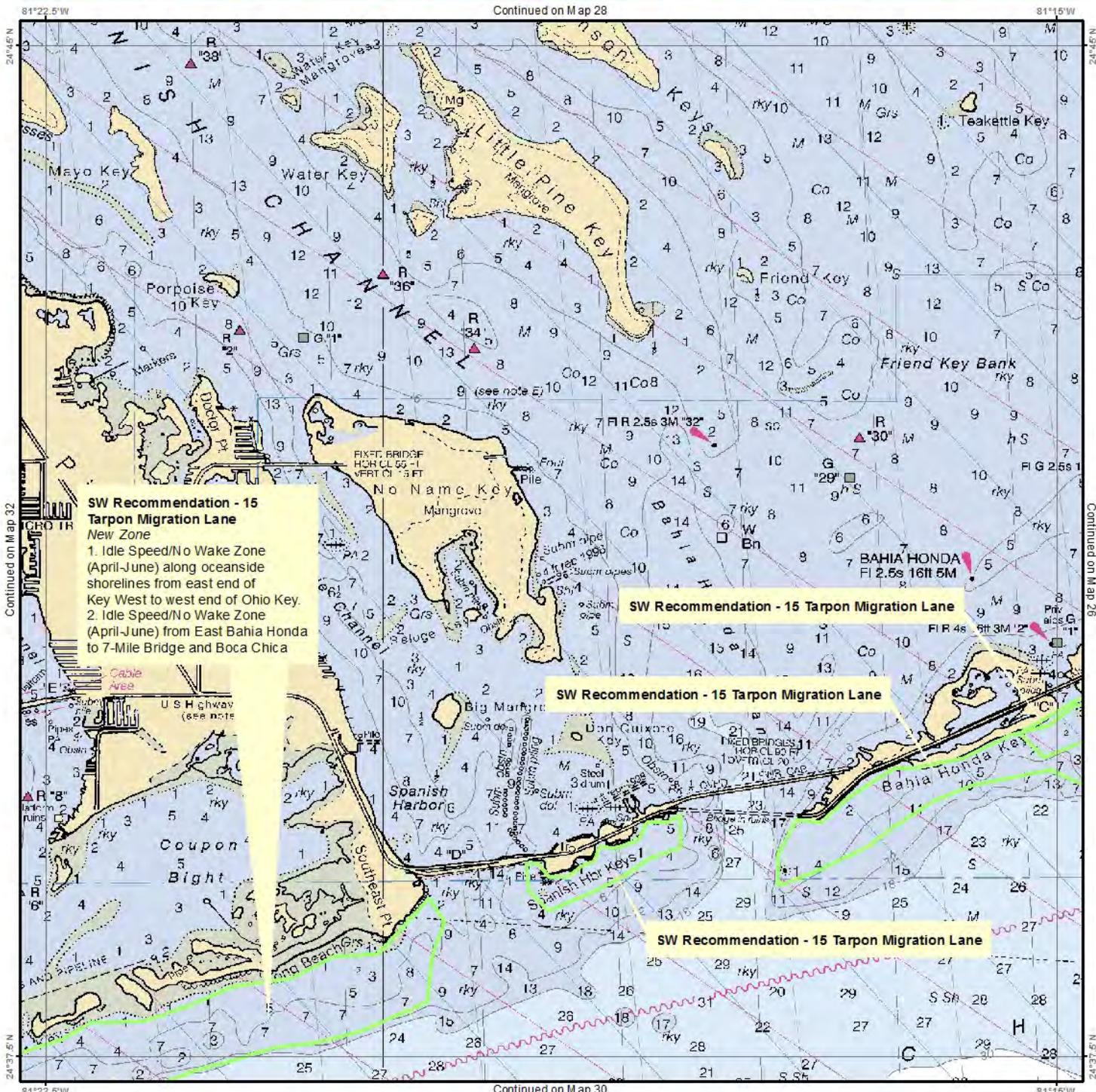
- Shallow Water
- Working Group Recommendations
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)
- Sea Turtle Nesting Beaches Florida



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Map 29 - Big Pine Key



SW Recommendation - 15 Tarpon Migration Lane New Zone

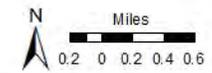
1. Idle Speed/No Wake Zone (April-June) along oceanside shorelines from east end of Key West to west end of Ohio Key.
2. Idle Speed/No Wake Zone (April-June) from East Bahia Honda to 7-Mile Bridge and Boca Chica

SW Recommendation - 15 Tarpon Migration Lane

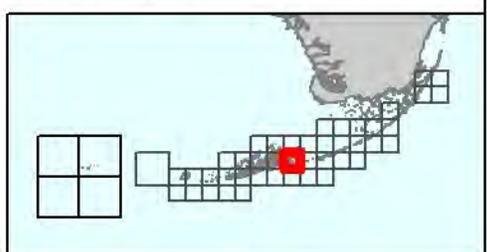
SW Recommendation - 15 Tarpon Migration Lane

SW Recommendation - 15 Tarpon Migration Lane

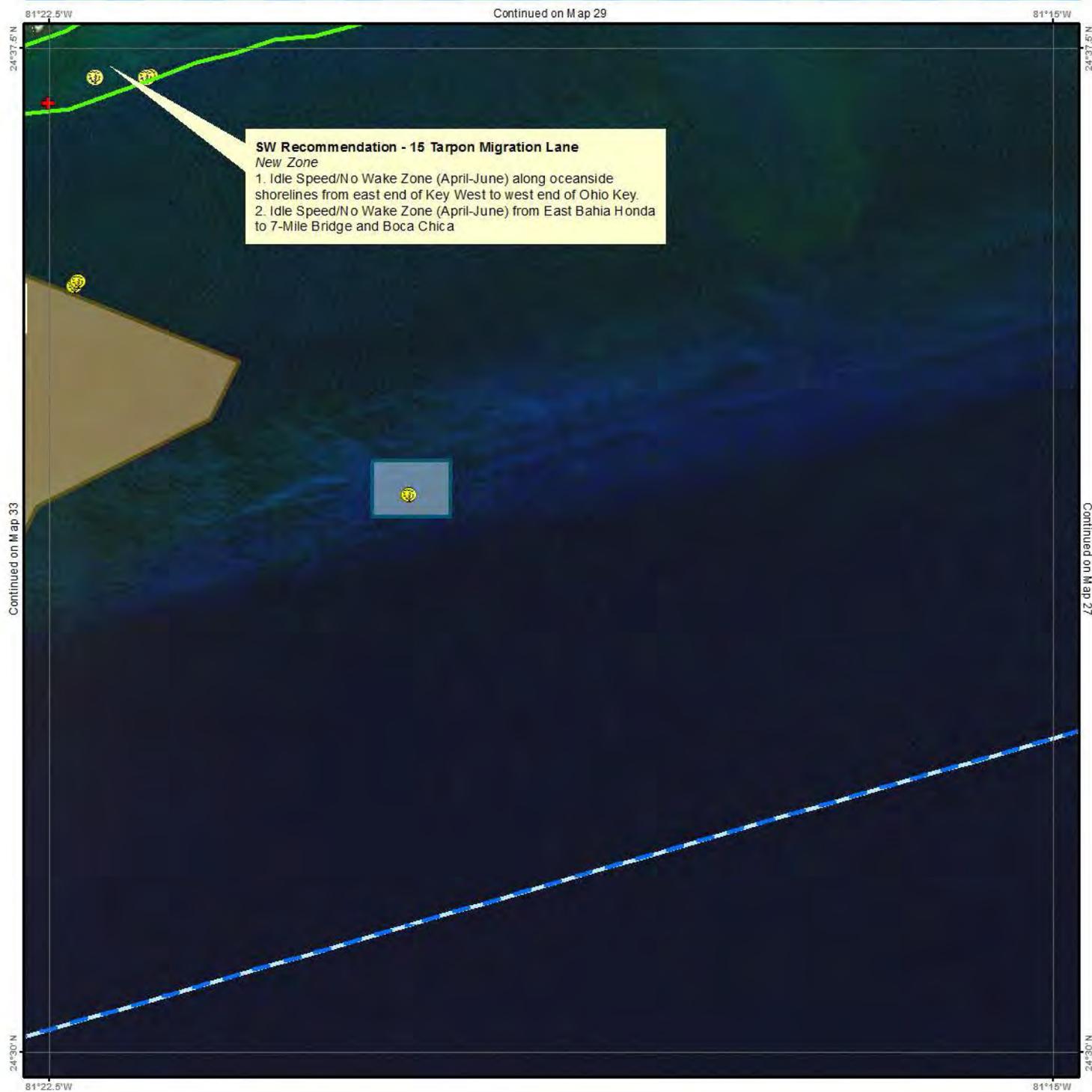
Shallow Water Working Group Recommendations



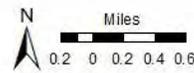
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



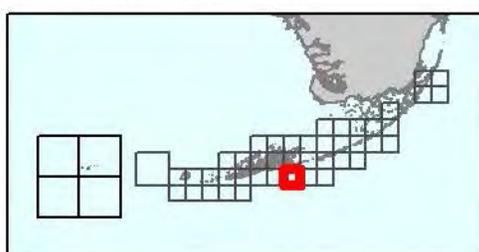
Map 30 - Big Pine Shoal



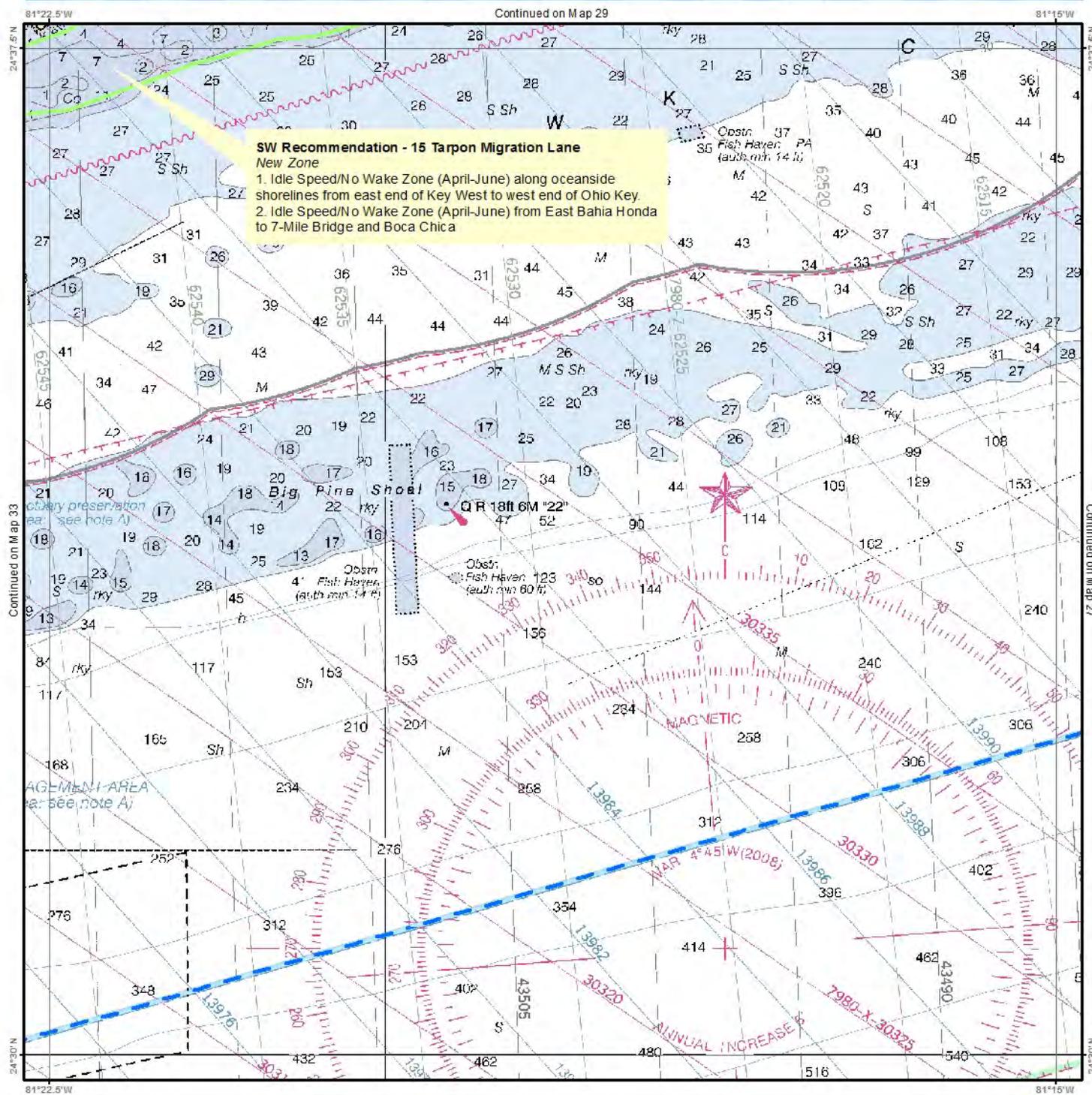
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Areas Closed to Lobster Trapping (National Marine Fisheries Service)
- Florida Reef Resiliency Program Resilient Reefs
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



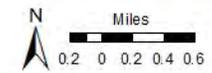
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



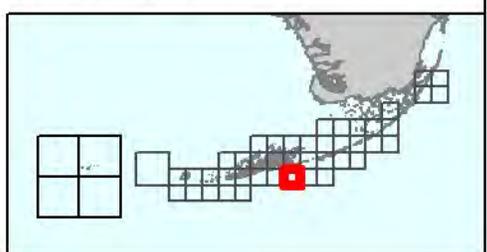
Map 30 - Big Pine Shoal



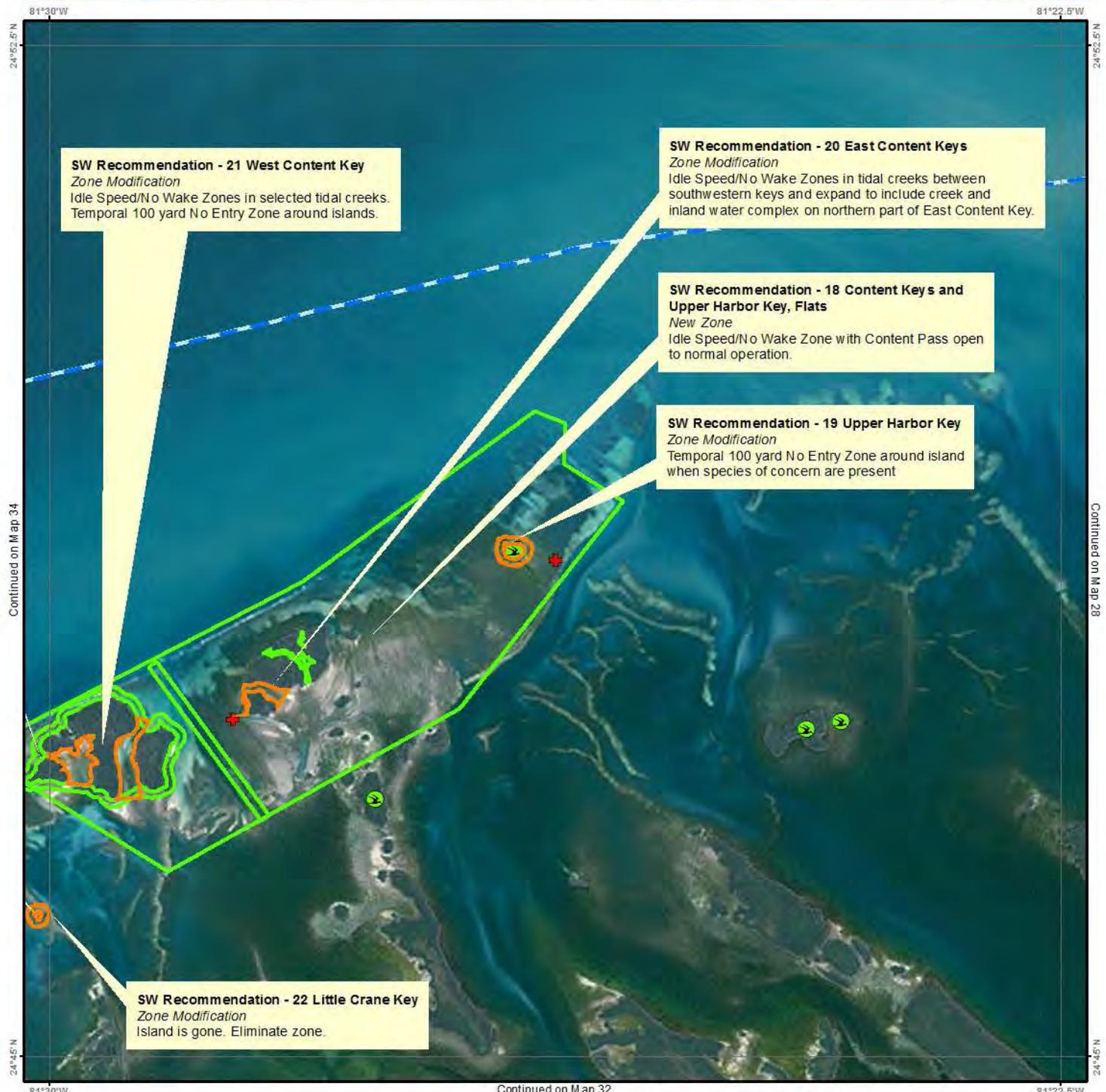
- Shallow Water
- - - Working Group Recommendations
- - - FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 31 - Content Keys



Continued on Map 34

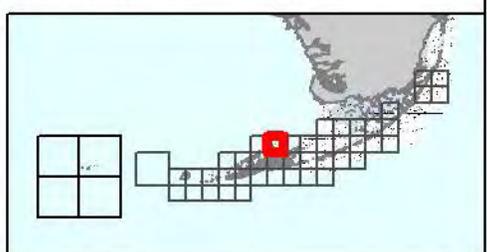
Continued on Map 28

Continued on Map 32

- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Vessel Groundings (2000-2012)

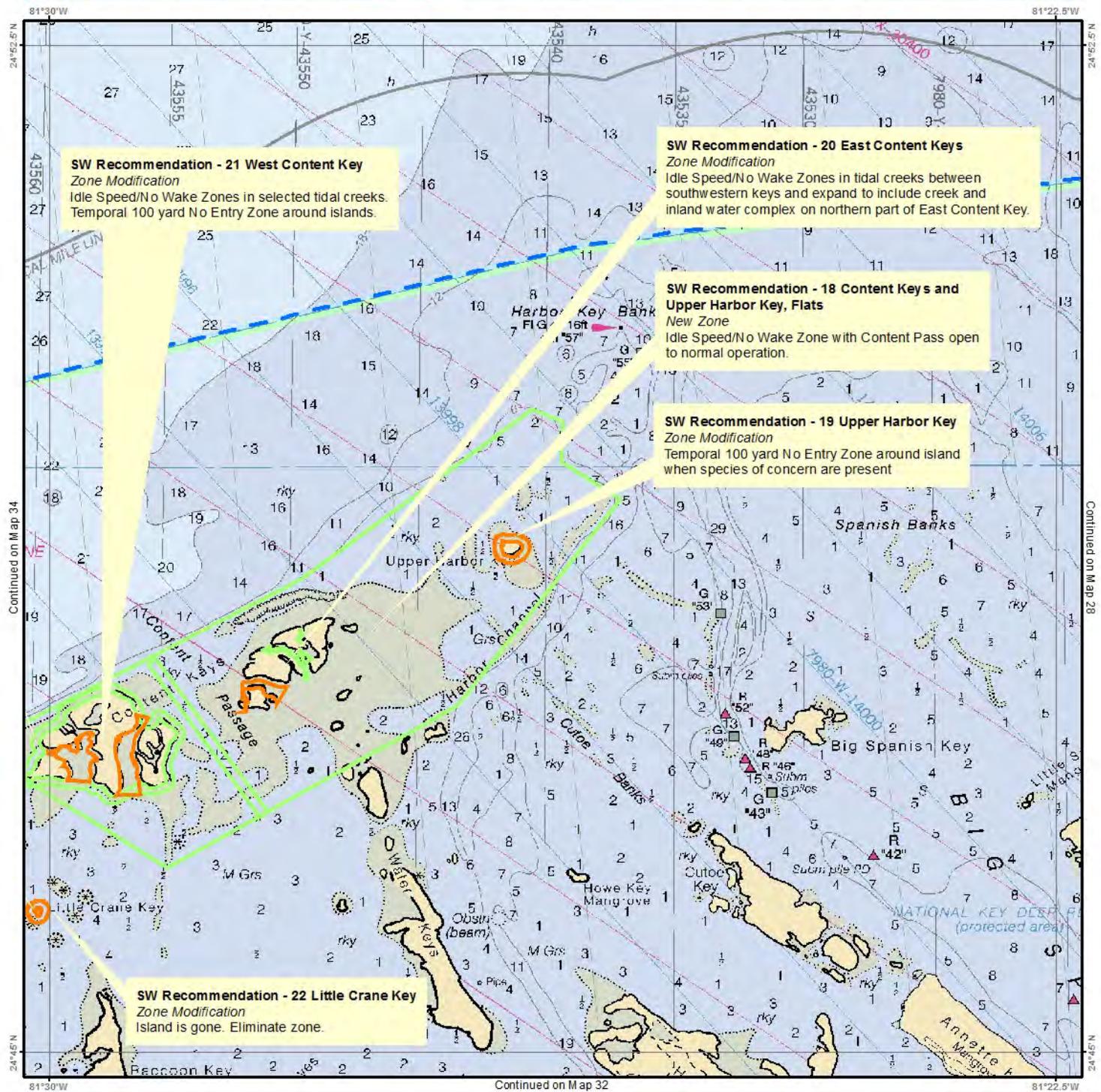


NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.





Map 31 - Content Keys

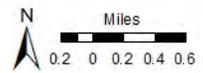


Continued on Map 34

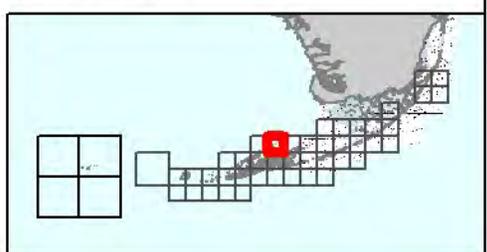
Continued on Map 28

Continued on Map 32

- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



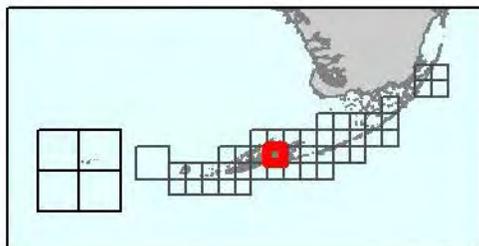
Map 32 - Summerland Key



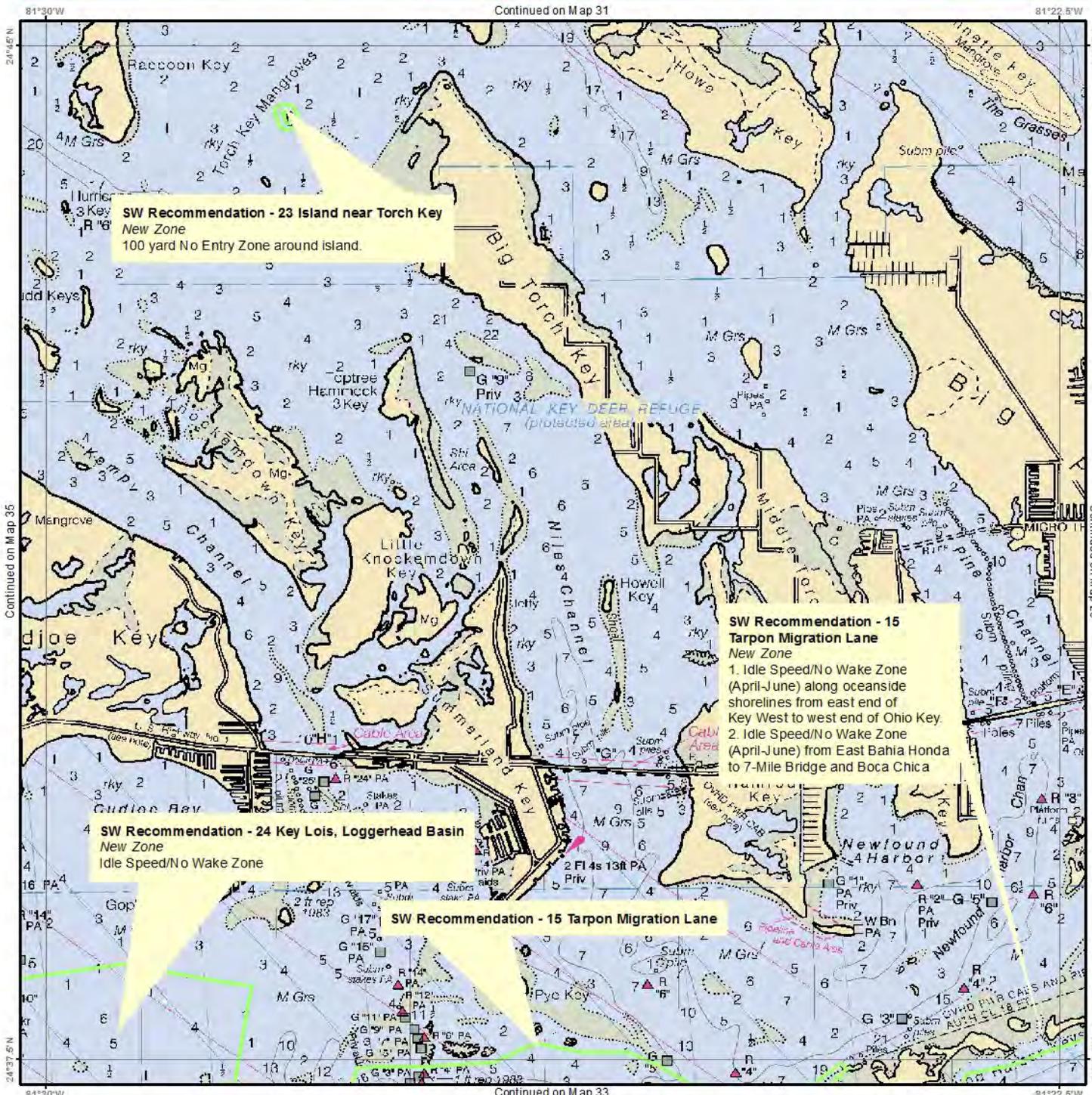
- Shallow Water
- Working Group Recommendations
- ⊙ Bird Nests (Various Species)
- + FKNMS Vessel Groundings (2000-2012)



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 32 - Summerland Key



SW Recommendation - 23 Island near Torch Key
 New Zone
 100 yard No Entry Zone around island.

SW Recommendation - 15 Tarpon Migration Lane
 New Zone
 1. Idle Speed/No Wake Zone (April-June) along oceanside shorelines from east end of Key West to west end of Ohio Key.
 2. Idle Speed/No Wake Zone (April-June) from East Bahia Honda to 7-Mile Bridge and Boca Chica

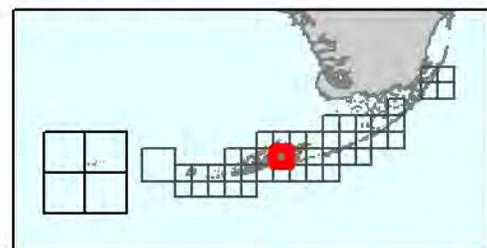
SW Recommendation - 24 Key Lois, Loggerhead Basin
 New Zone
 Idle Speed/No Wake Zone

SW Recommendation - 15 Tarpon Migration Lane

Shallow Water
 Working Group Recommendations



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



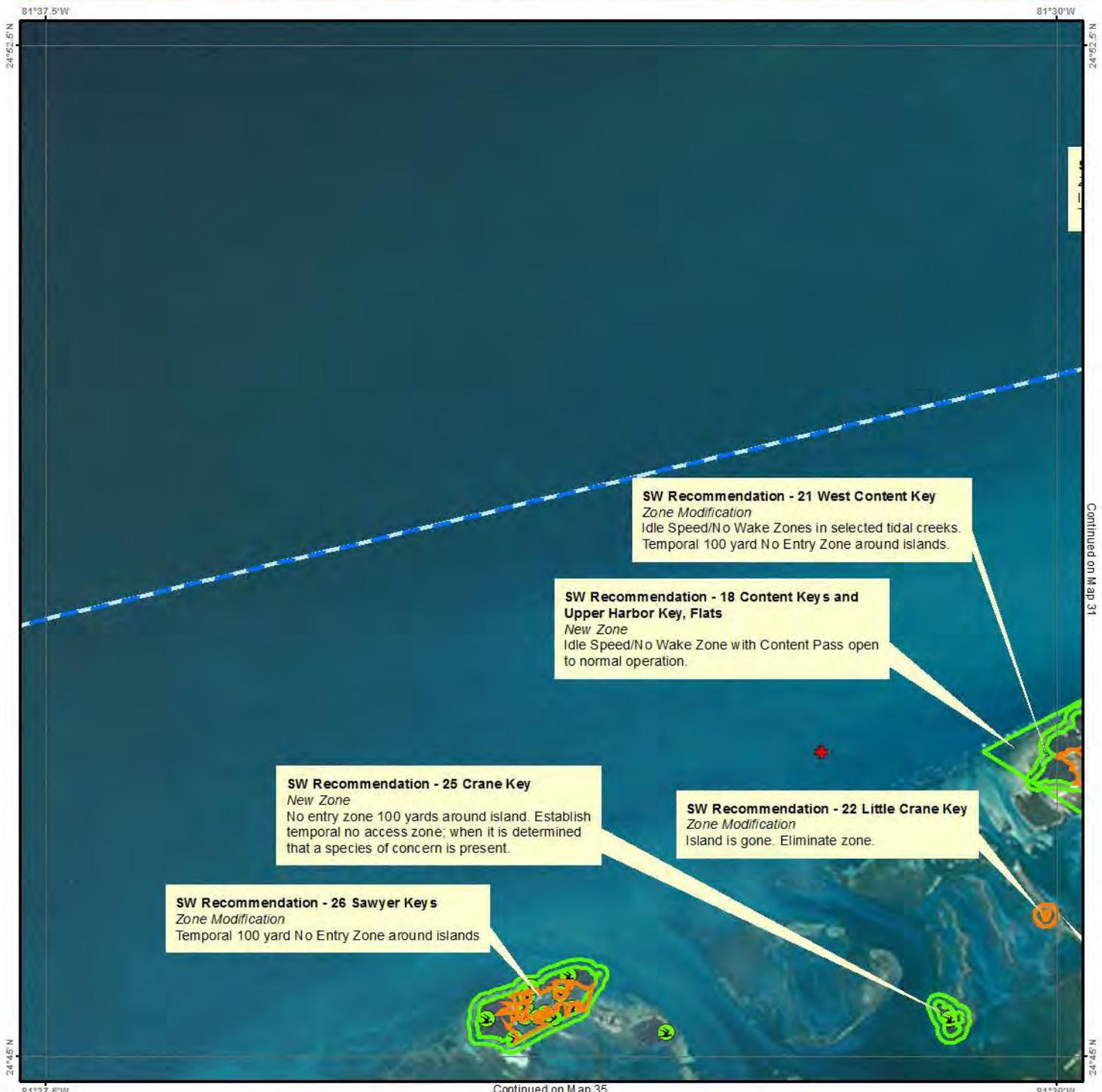
Map 33 - Looe key



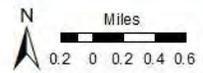
Shallow Water Working Group Recommendations	FKNMS Vessel Groundings (2000-2012)
Coral Reef Ecosystem Restoration Working Group Recommendations	
FKNMS Boundary	
Existing Marine Zones	
Areas Closed to Lobster Trapping (National Marine Fisheries Service)	
Florida Reef Resiliency Program Resilient Reefs	
FKNMS Permitted Restoration Sites	

NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

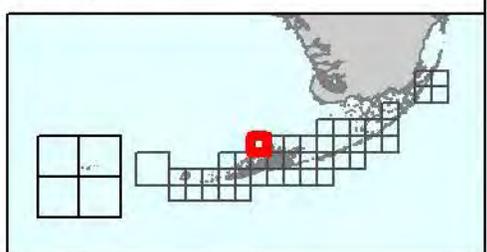
Map 34 - Sawyer Key



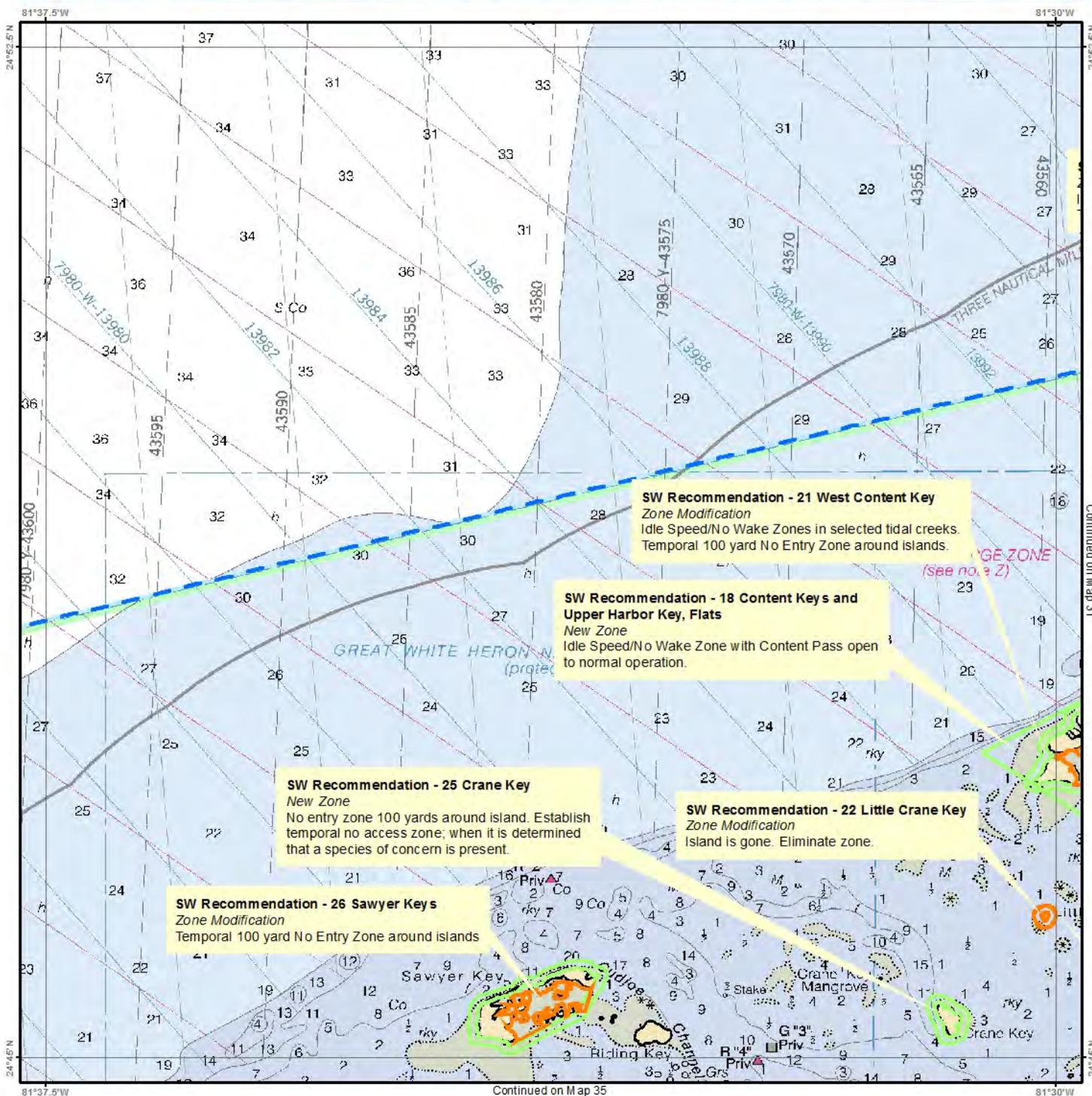
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Vessel Groundings (2000-2012)



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



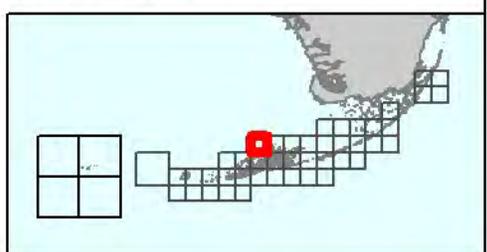
Map 34 - Sawyer Key



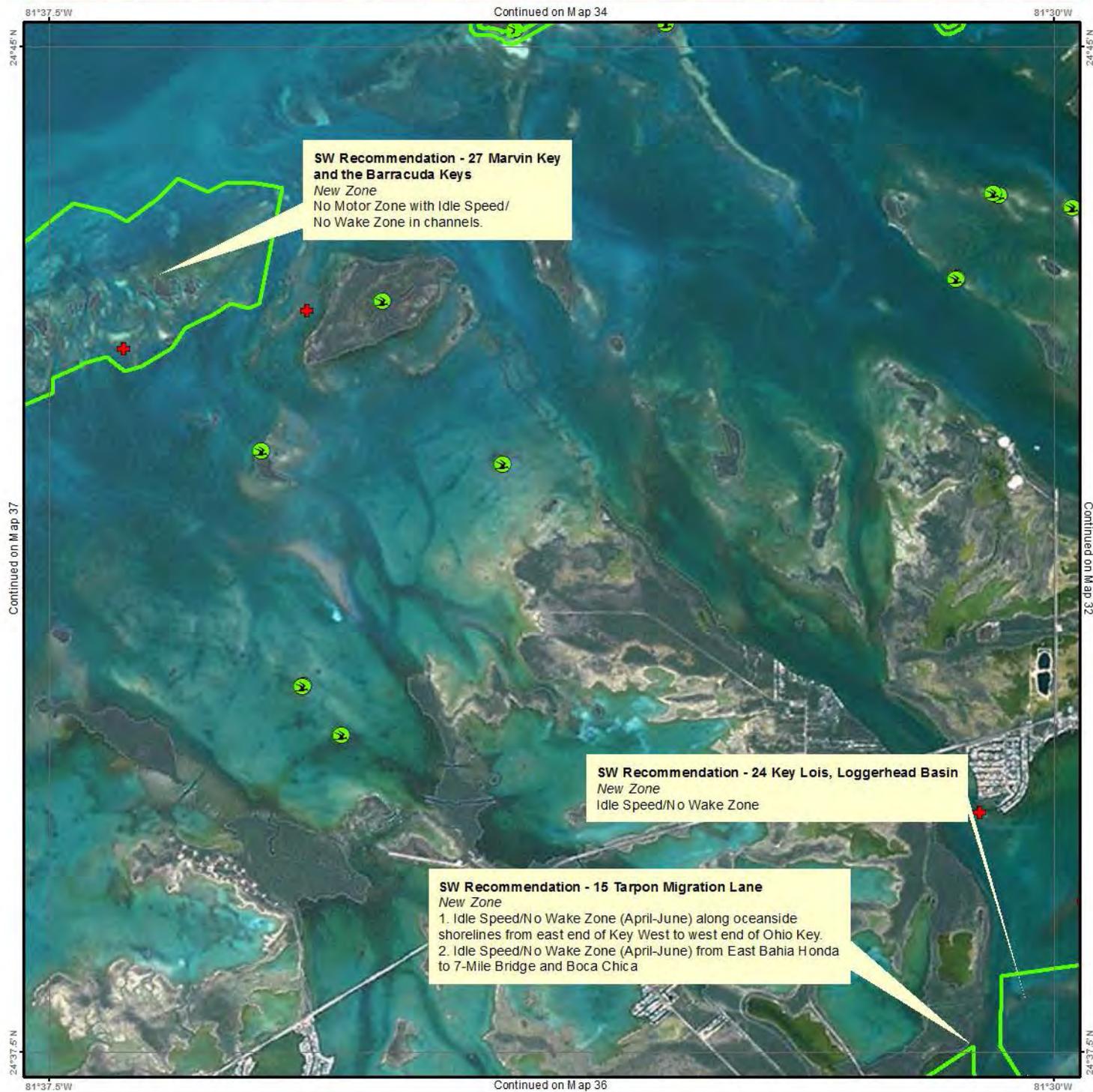
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



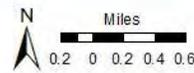
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



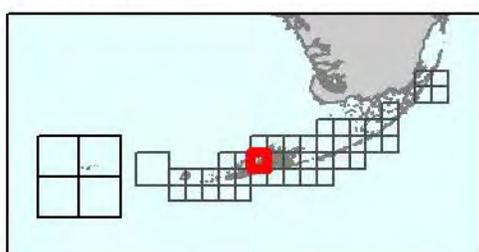
Map 35 - Sugarloaf Key



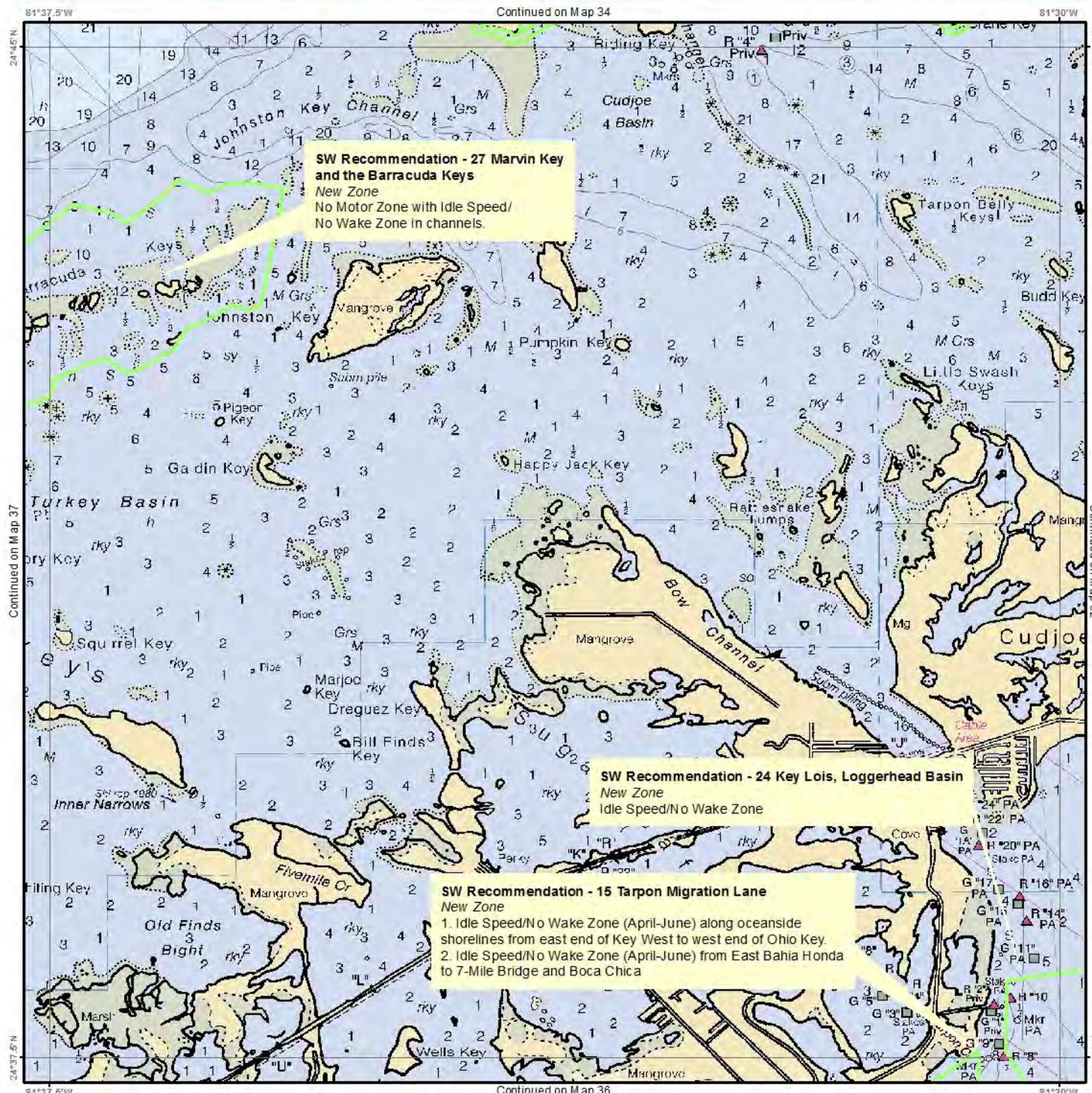
- Shallow Water
- Working Group Recommendations
- Bird Nests (Various Species)
- FKNMS Vessel Groundings (2000-2012)



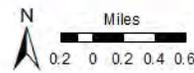
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



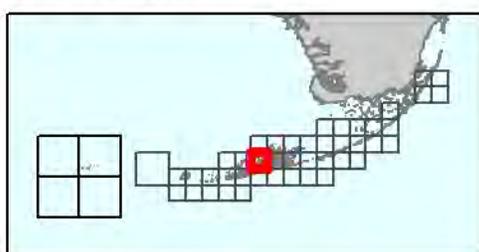
Map 35 - Sugarloaf Key



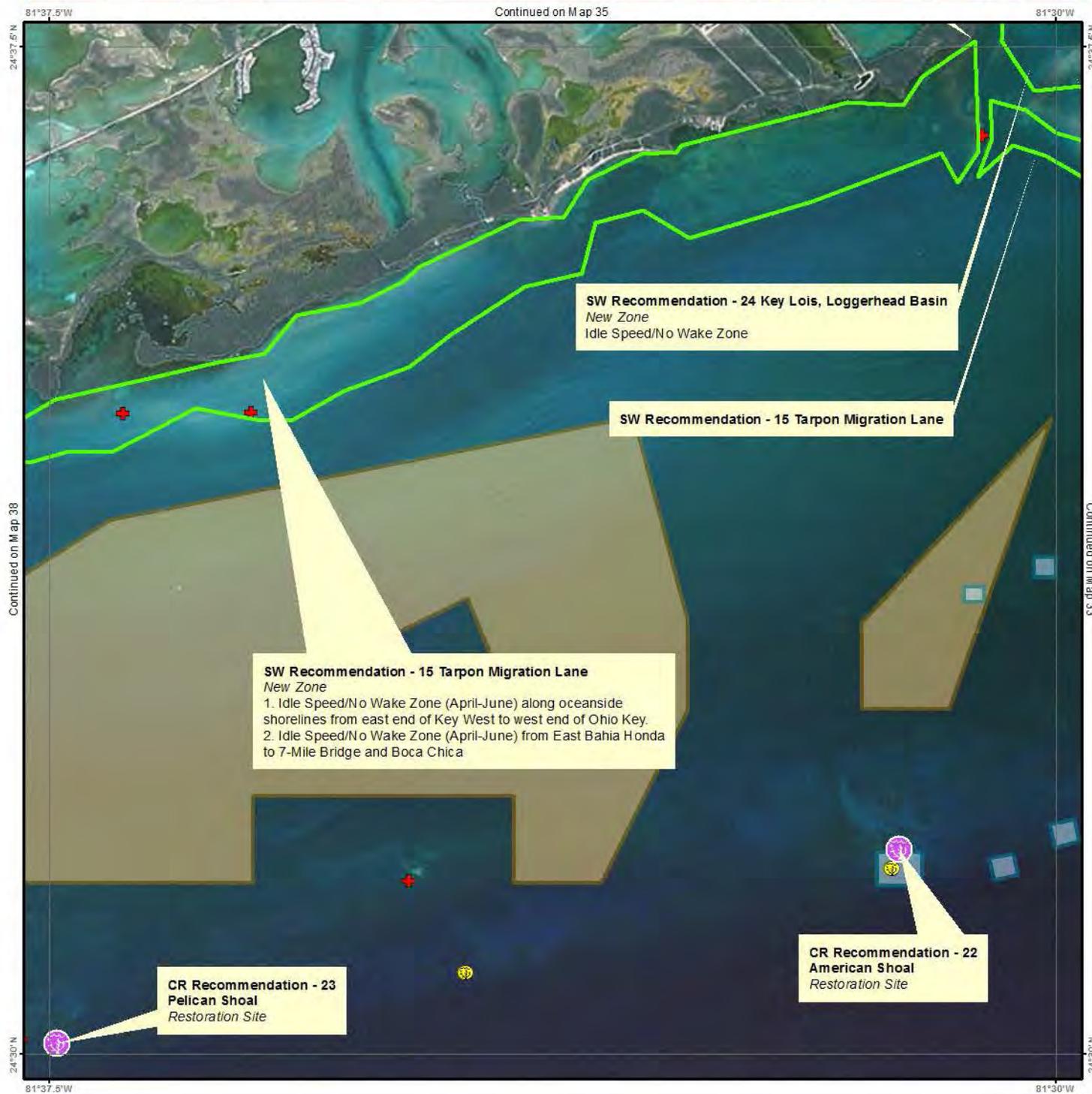
Shallow Water
 Working Group Recommendations



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

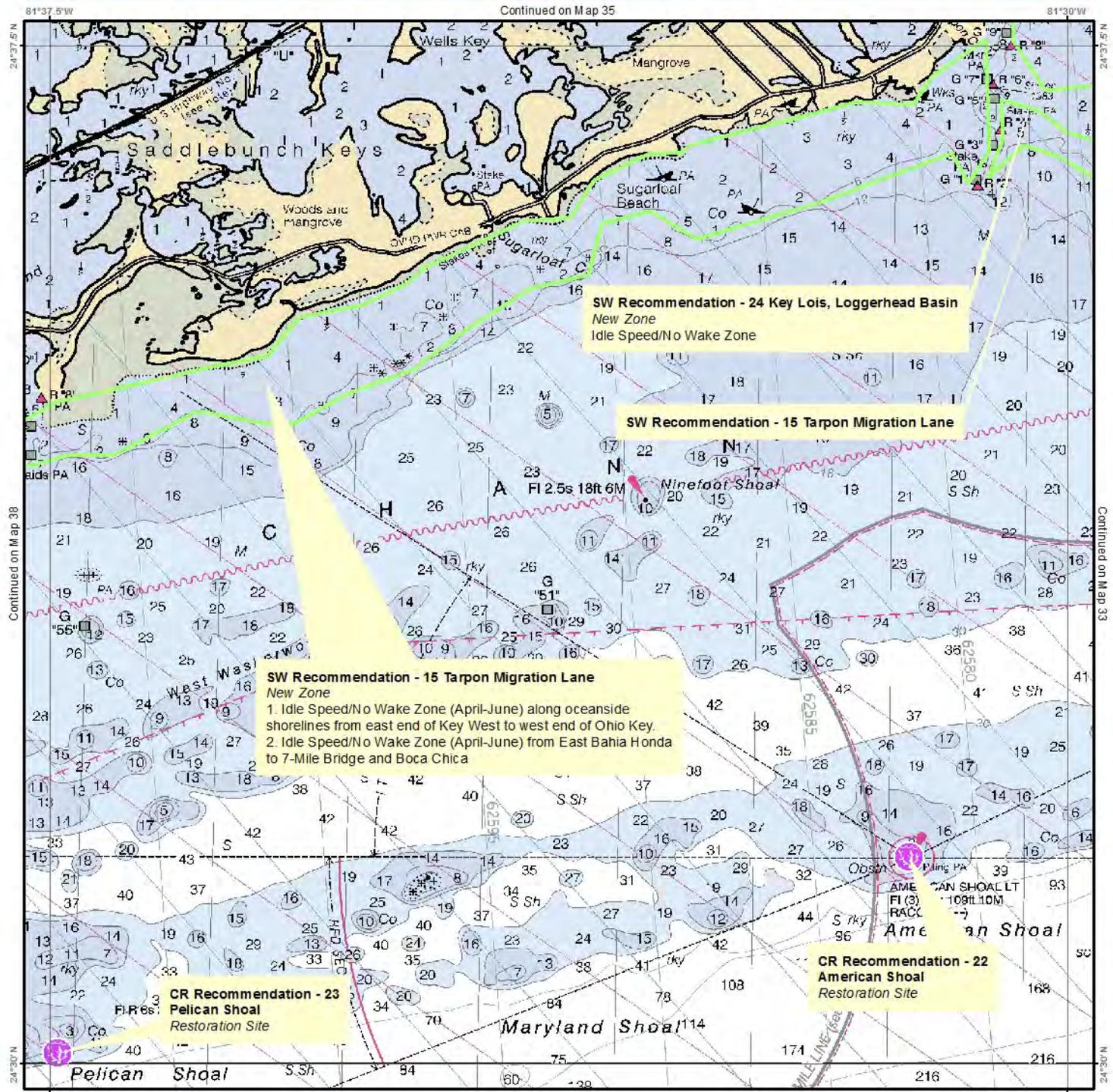


Map 36 - Saddlebunch Keys

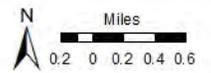


<ul style="list-style-type: none"> ■ Shallow Water Working Group Recommendations ● Coral Reef Ecosystem Restoration Working Group Recommendations ■ Areas Closed to Lobster Trapping (National Marine Fisheries Service) ■ Florida Reef Resiliency Program Resilient Reefs ● FKNMS Permitted Restoration Sites + FKNMS Vessel Groundings (2000-2012) 	<p>N</p> <p>Miles</p> <p>0.2 0 0.2 0.4 0.6</p> <p>NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.</p>
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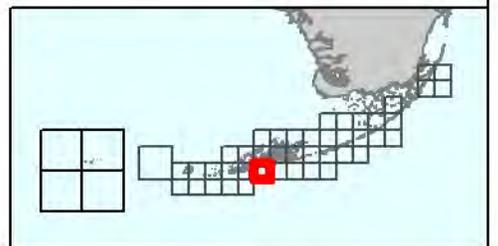
Map 36 - Saddlebunch Keys



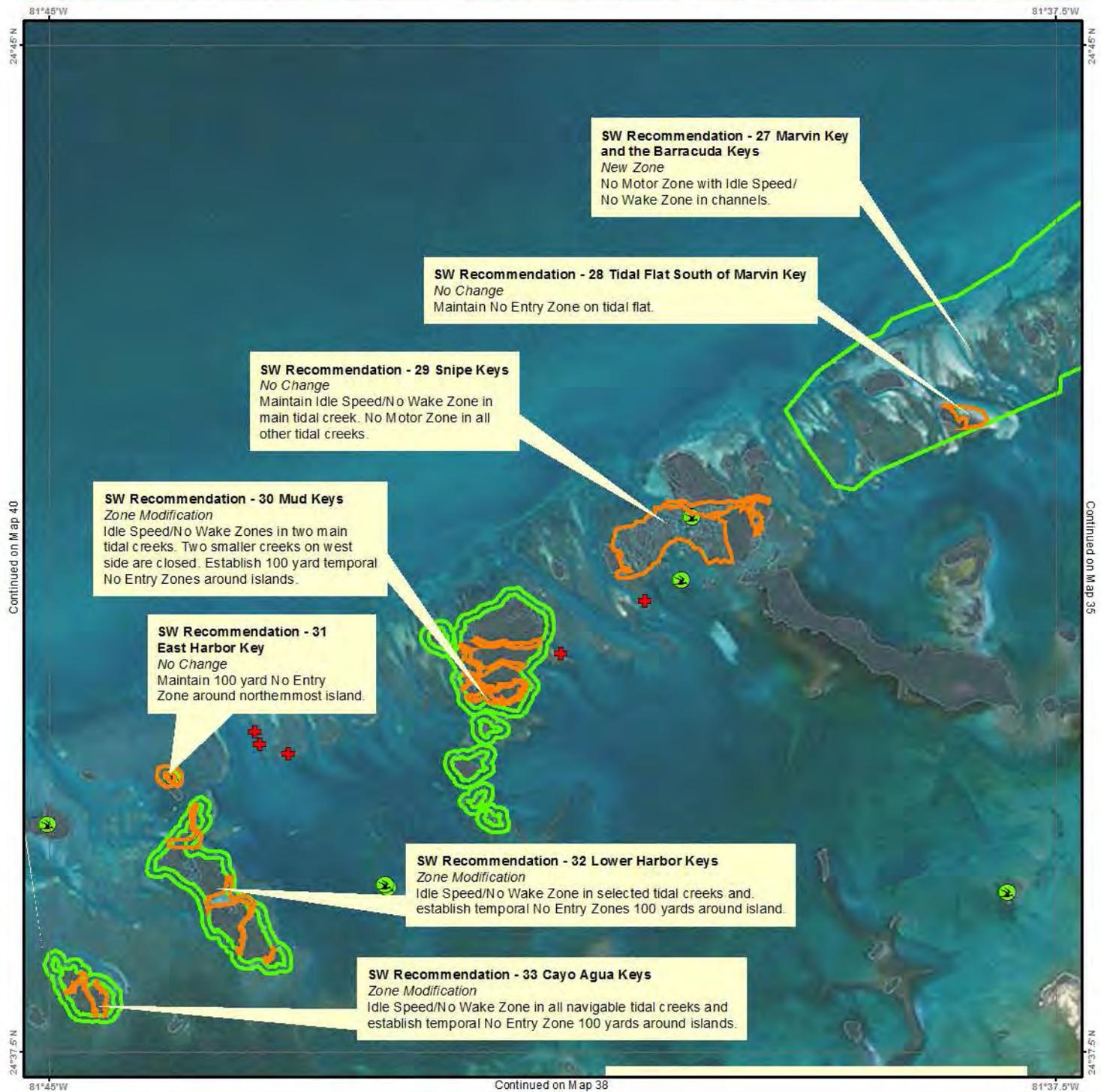
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 37 - Snipe Keys

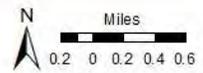


Continued on Map 40

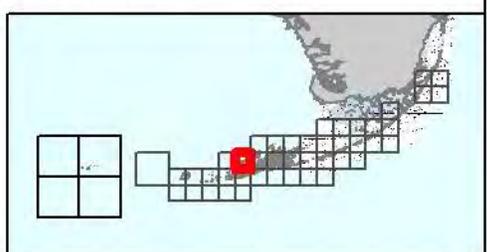
Continued on Map 35

Continued on Map 38

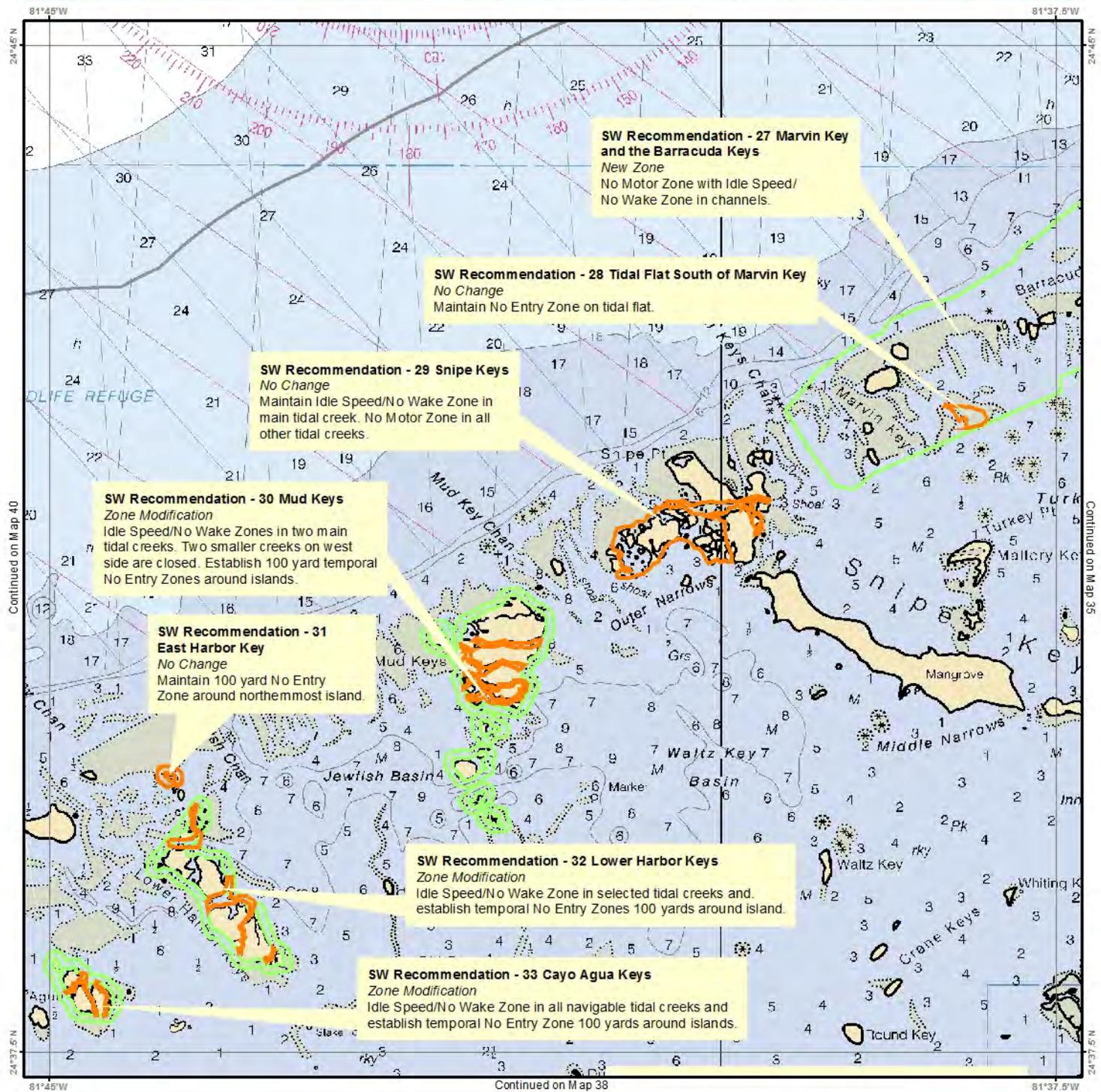
- Shallow Water
- Working Group Recommendations
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Vessel Groundings (2000-2012)



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 37 - Snipe Keys

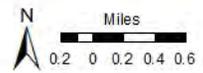


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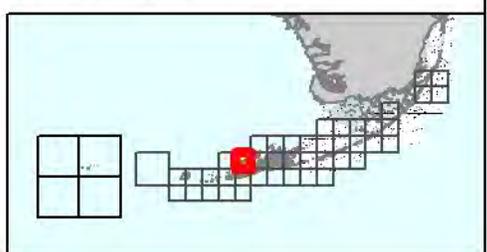
Continued on Map 35

Continued on Map 38

- Shallow Water
- Working Group Recommendations
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



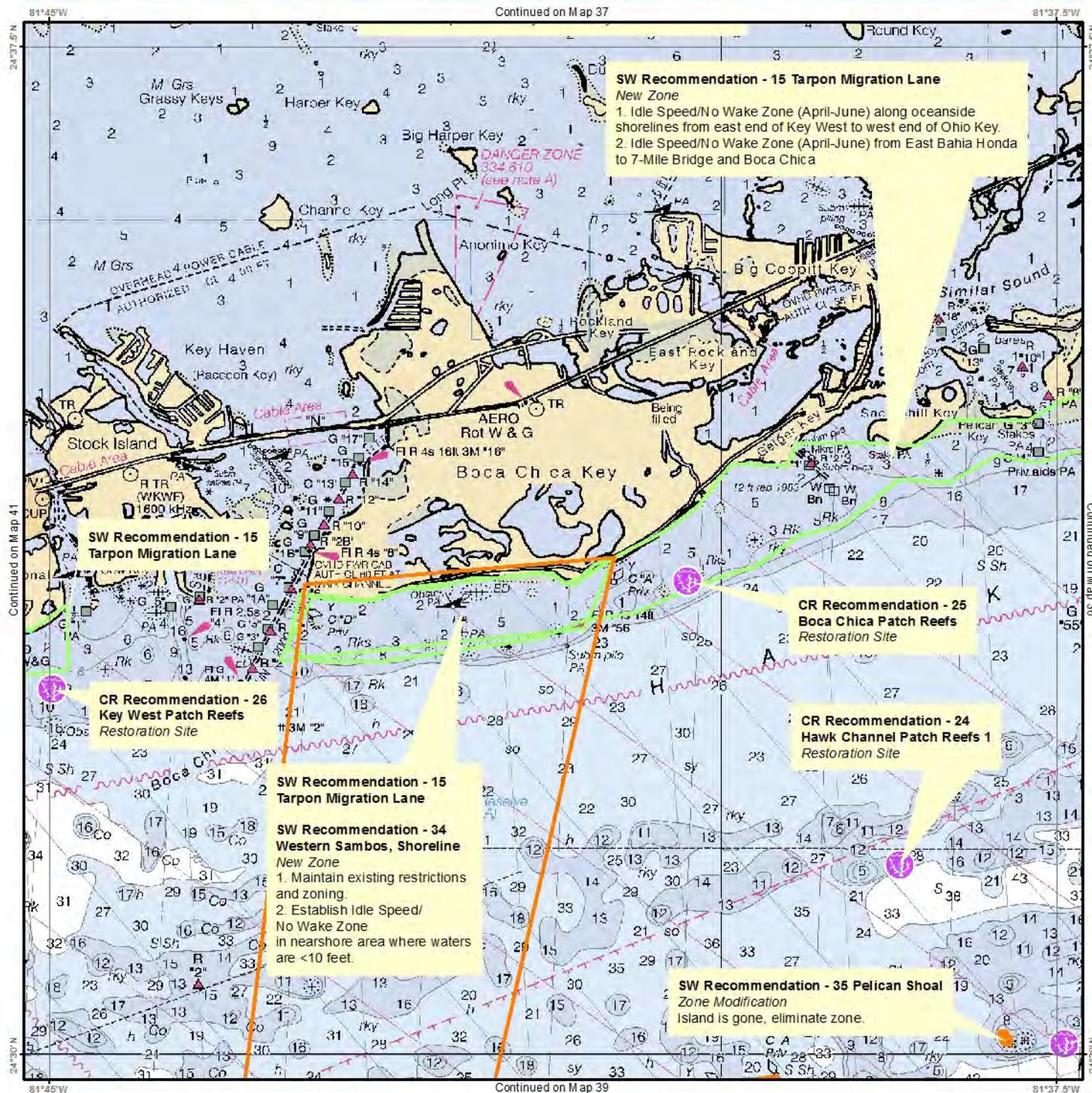
Map 38 - Boca Chica Key



	Shallow Water
	Working Group Recommendations
	Coral Reef Ecosystem Restoration Working Group Recommendations
	Existing Marine Zones
	Florida Reef Resiliency Program Resilient Reefs
	Bird Nests (Various Species)
	FKNMS Permitted Restoration Sites
	FKNMS Vessel Groundings (2000-2012)

NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

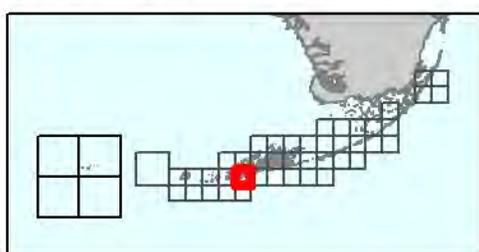
Map 38 - Boca Chica Key



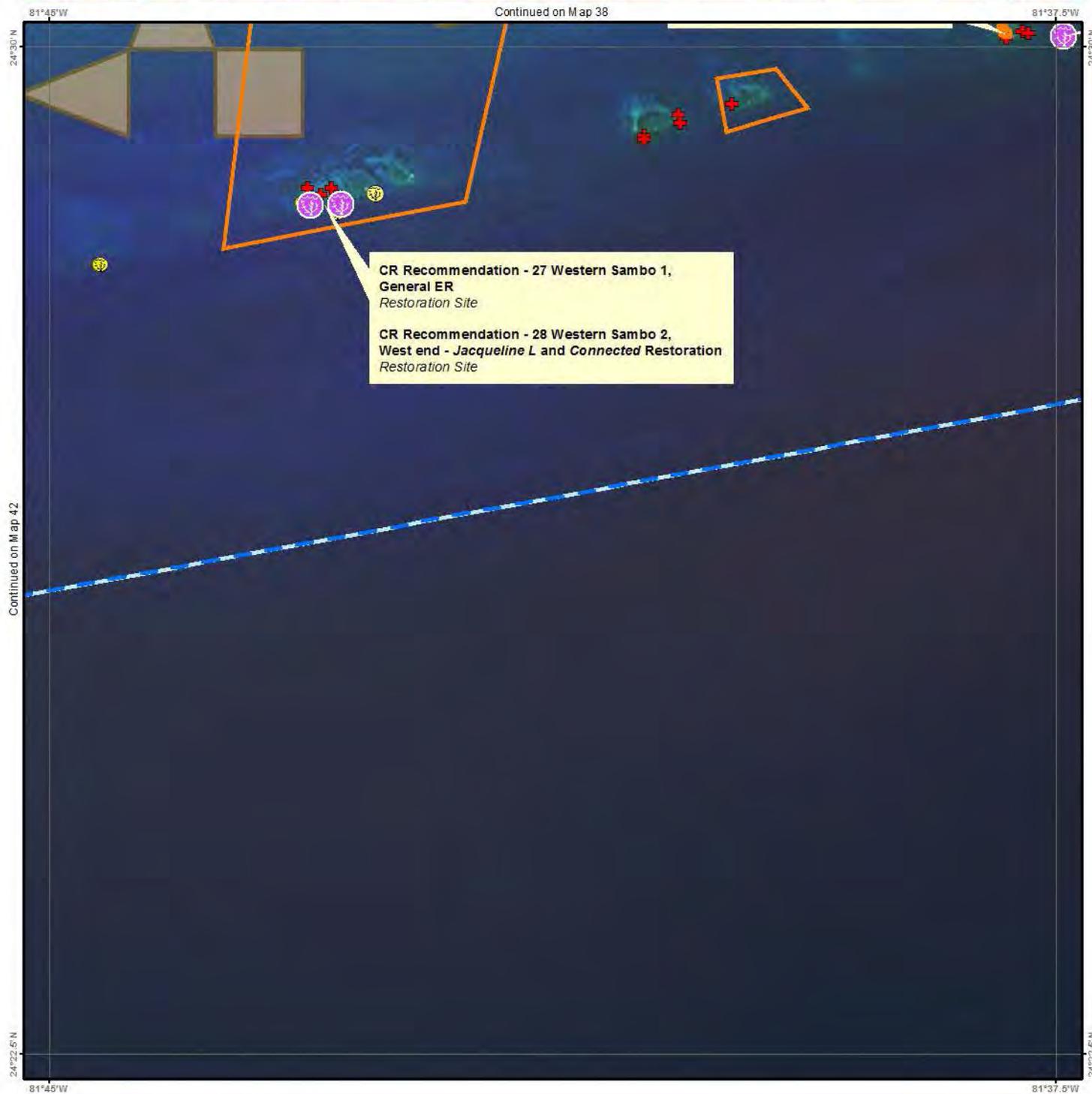
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 39 - Western Sambo



- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Florida Reef Resiliency Program Resilient Reefs
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)

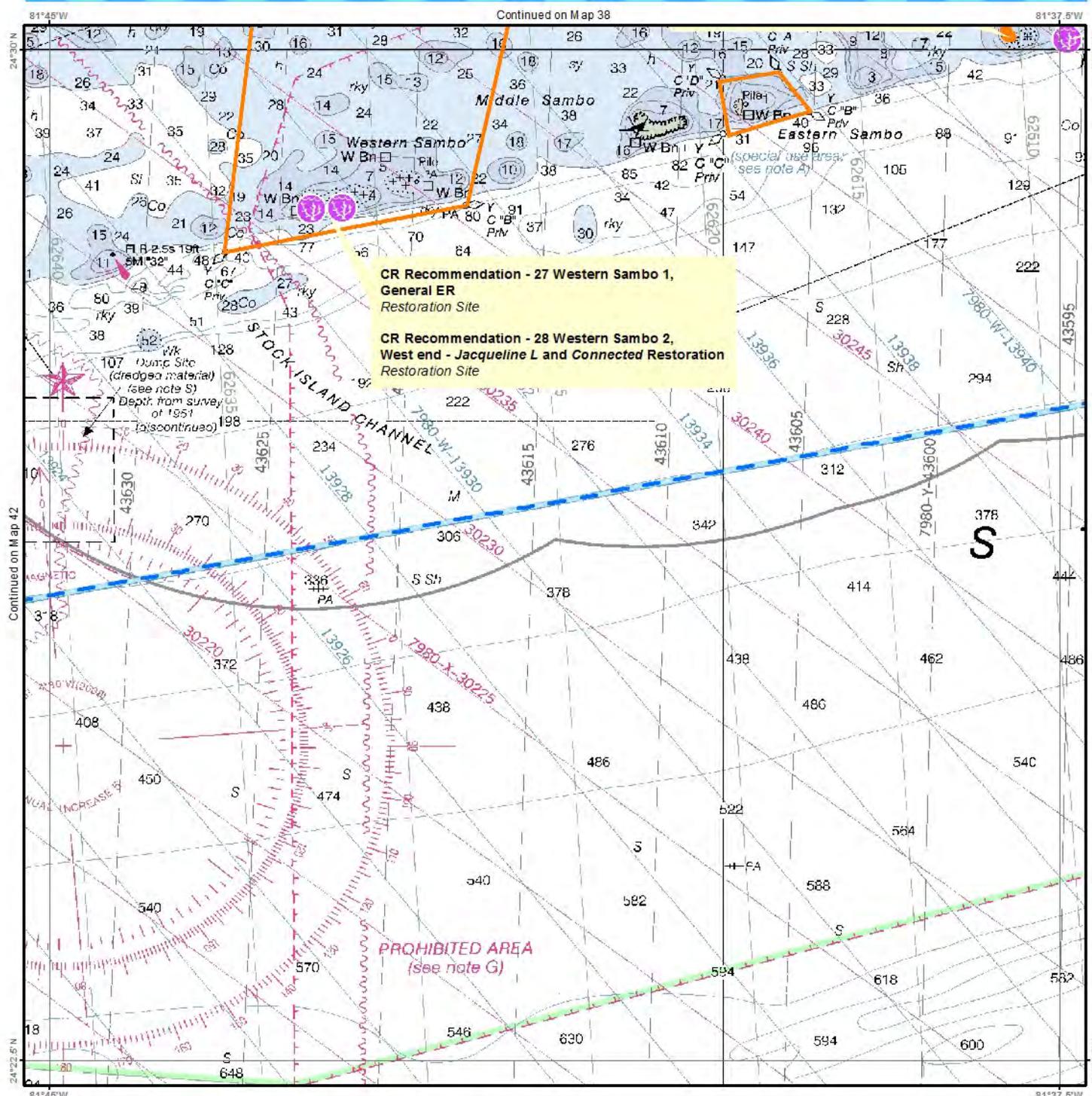
N

Miles

0.2 0 0.2 0.4 0.6

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Map 39 - Western Sambo



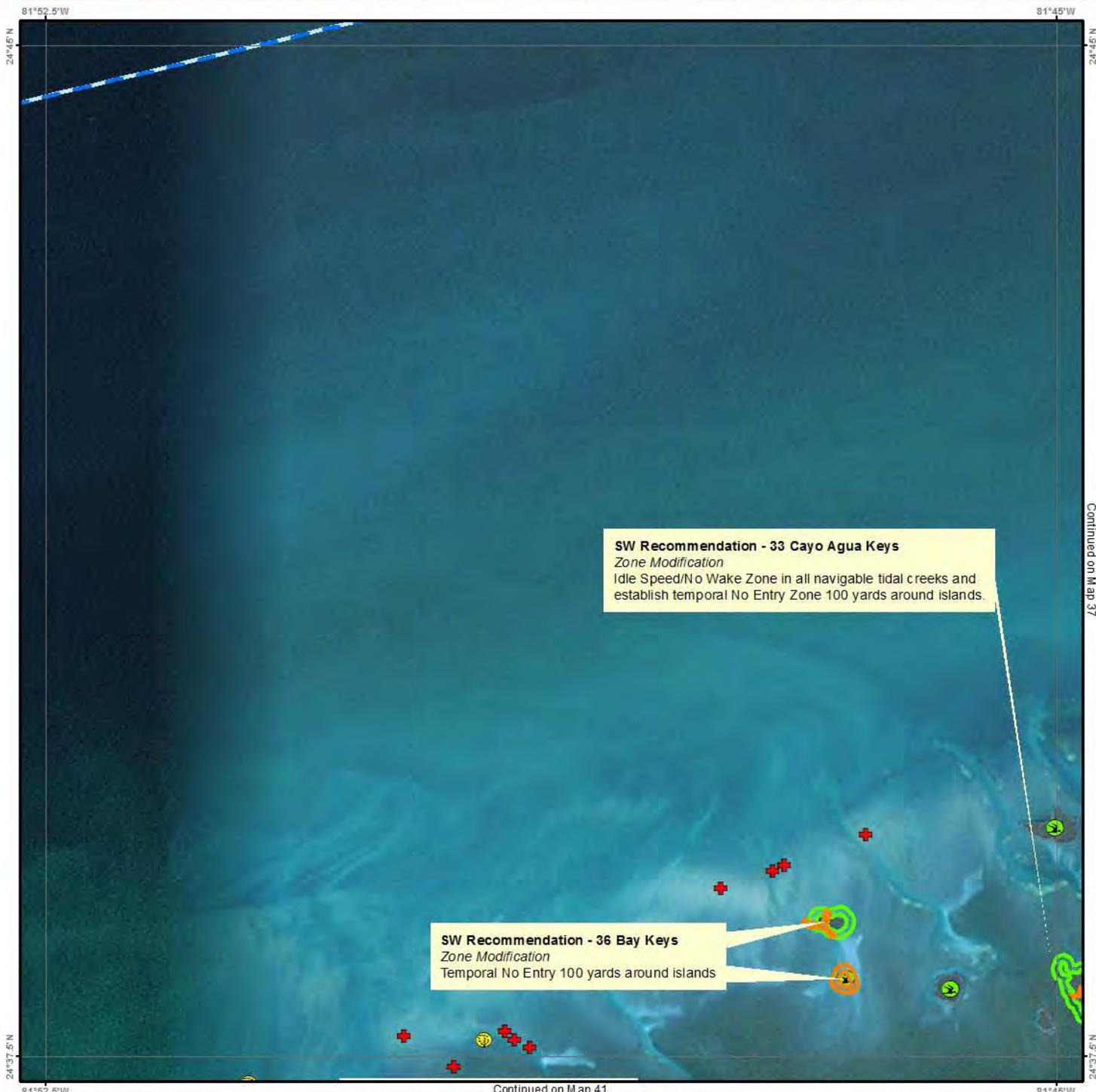
Coral Reef Ecosystem Restoration Working Group Recommendations

FKNMS Boundary

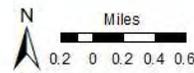
Existing Marine Zones

NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

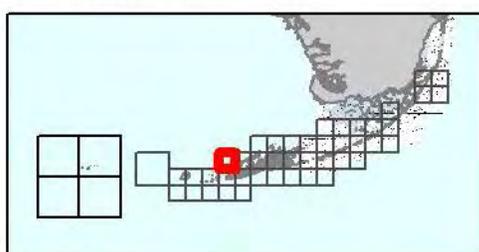
Map 40 - Bay Keys



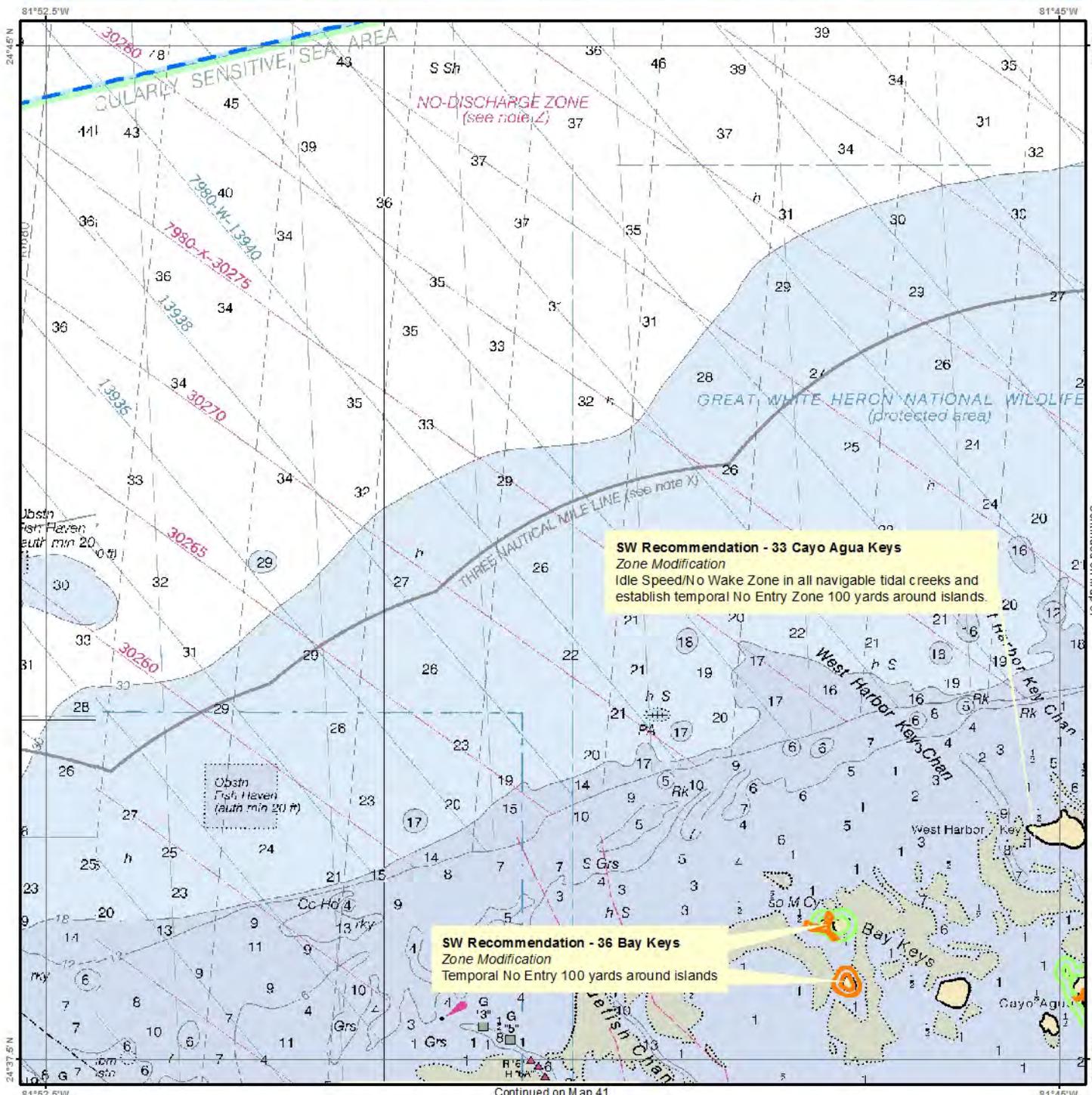
- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 40 - Bay Keys



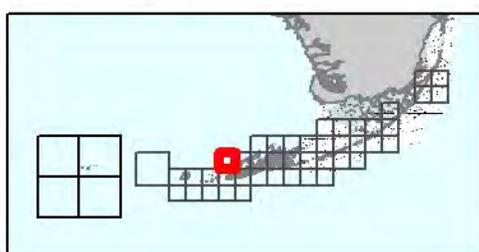
SW Recommendation - 33 Cayo Agua Keys
 Zone Modification
 Idle Speed/No Wake Zone in all navigable tidal creeks and establish temporal No Entry Zone 100 yards around islands.

SW Recommendation - 36 Bay Keys
 Zone Modification
 Temporal No Entry 100 yards around islands

- Shallow Water
- Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



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Map 41 - Key West



SW Recommendation - 37 Seaplane Basin
New Zone
 Considered by working group but recommendation was not to establish a zone.

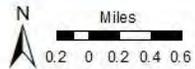
SW Recommendation - 38 Demolition Key
New Zone
 Temporal 100 yard No Entry Zone around island

SW Recommendation - 39 Pearl Basin
New Zone
 Idle Speed/No Wake Zone

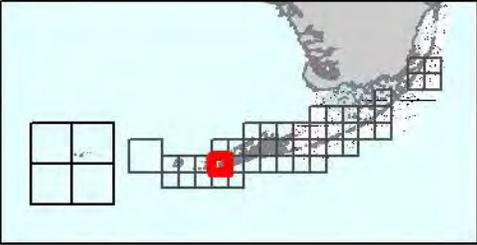
SW Recommendation - 40 Mule Key
New Zone
 Install markers at all entrances to the Lakes displaying controlling depth for the area.

SW Recommendation - 15 Tarpon Migration Lane
New Zone
 1. Idle Speed/No Wake Zone (April-June) along oceanside shorelines from east end of Key West to west end of Ohio Key.
 2. Idle Speed/No Wake Zone (April-June) from East Bahia Honda to 7-Mile Bridge and Boca Chica

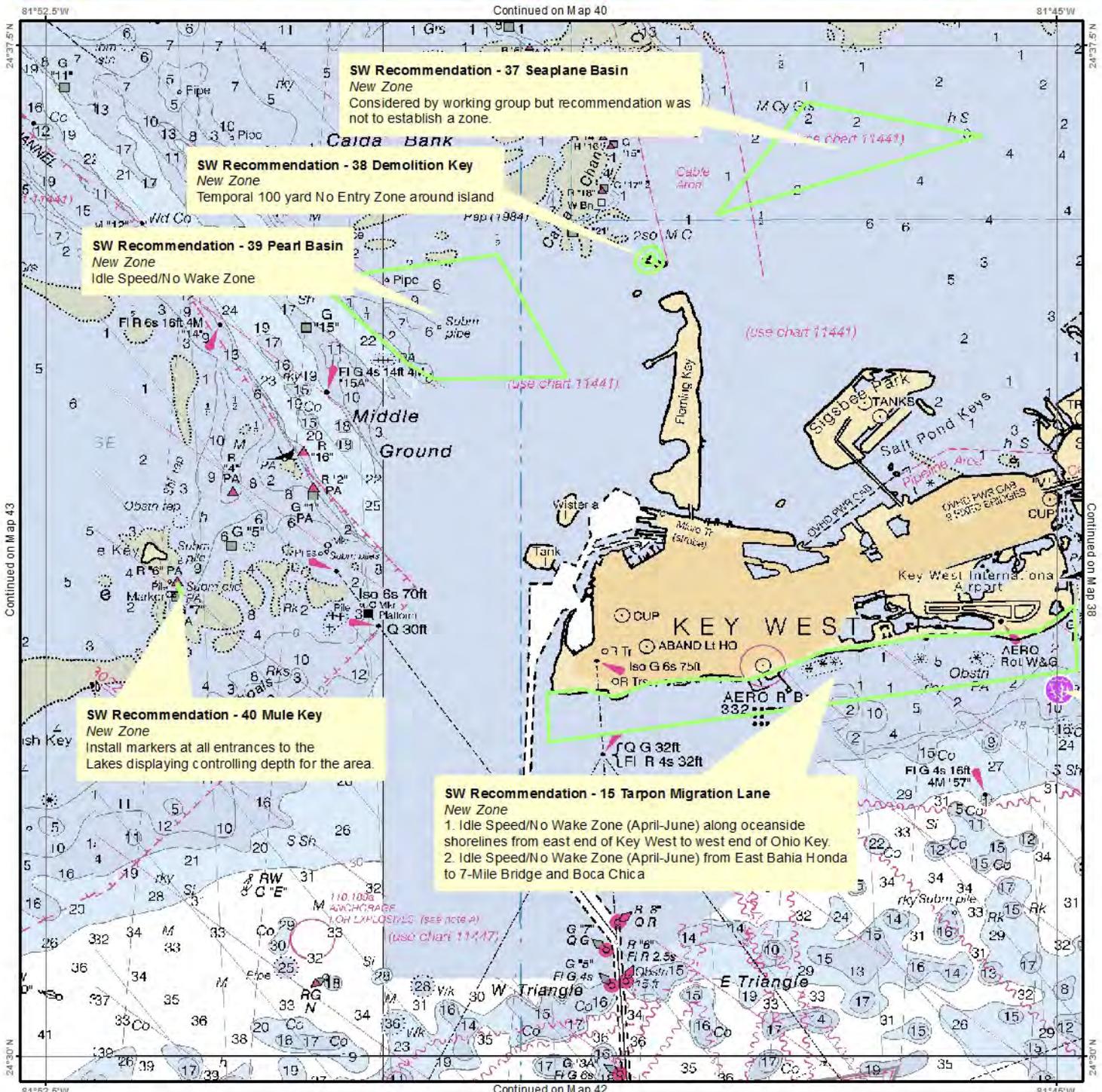
- Shallow Water
- Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- FKNMS Vessel Groundings (2000-2012)
- Sea Turtle Nesting Beaches Florida



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 41 - Key West



SW Recommendation - 37 Seaplane Basin
 New Zone
 Considered by working group but recommendation was not to establish a zone.

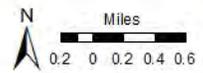
SW Recommendation - 38 Demolition Key
 New Zone
 Temporal 100 yard No Entry Zone around island

SW Recommendation - 39 Pearl Basin
 New Zone
 Idle Speed/No Wake Zone

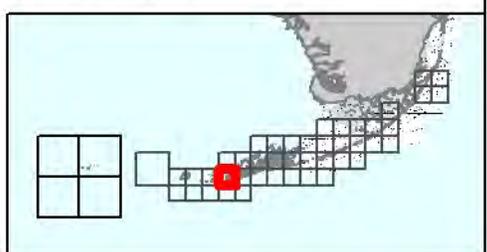
SW Recommendation - 40 Mule Key
 New Zone
 Install markers at all entrances to the Lakes displaying controlling depth for the area.

SW Recommendation - 15 Tarpon Migration Lane
 New Zone
 1. Idle Speed/No Wake Zone (April-June) along oceanside shorelines from east end of Key West to west end of Ohio Key.
 2. Idle Speed/No Wake Zone (April-June) from East Bahia Honda to 7-Mile Bridge and Boca Chica

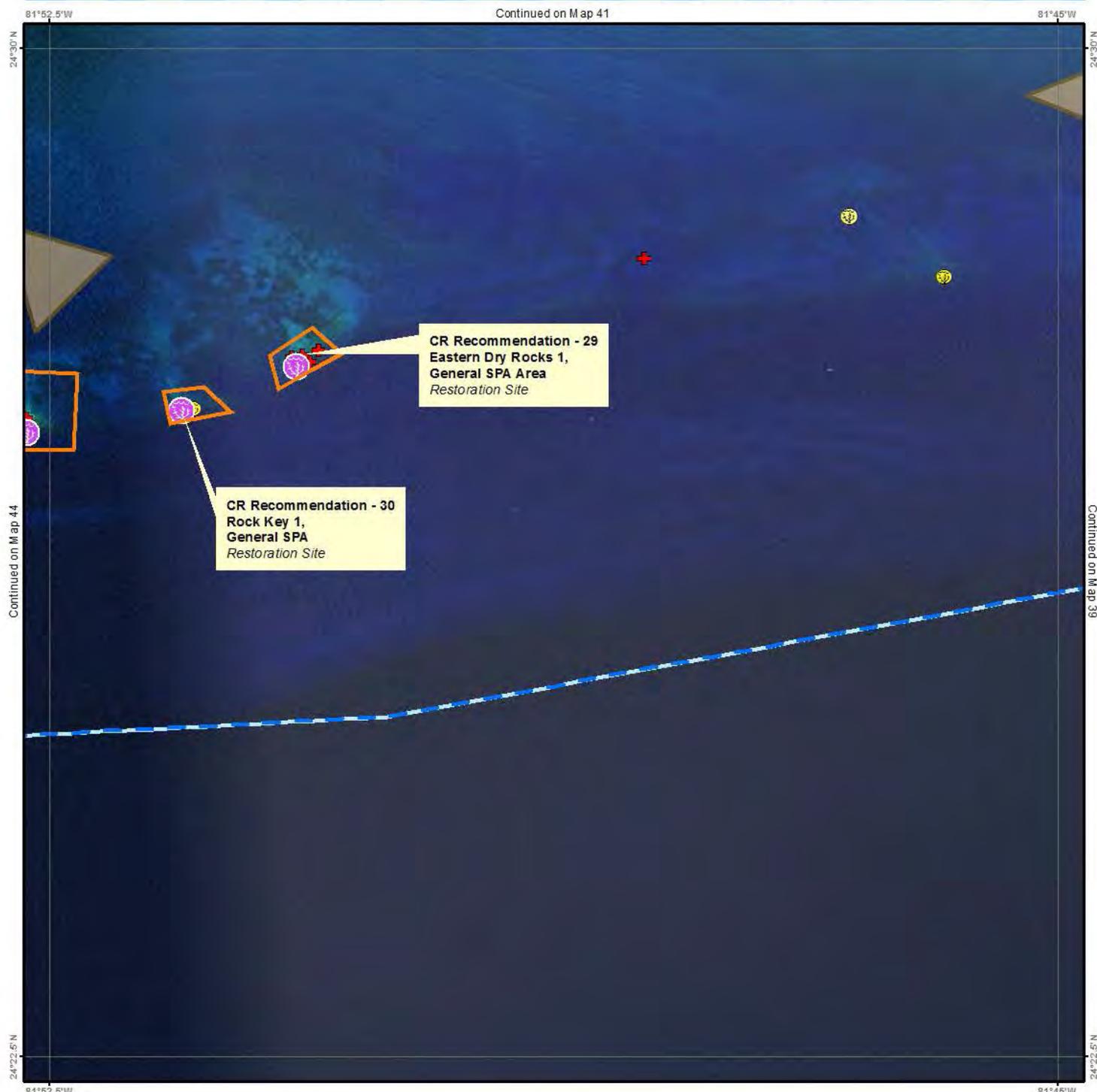
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations

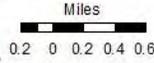
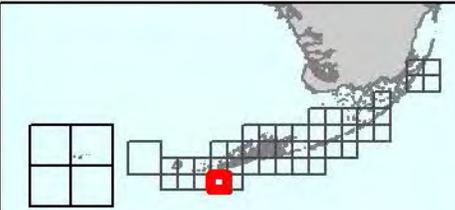


NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

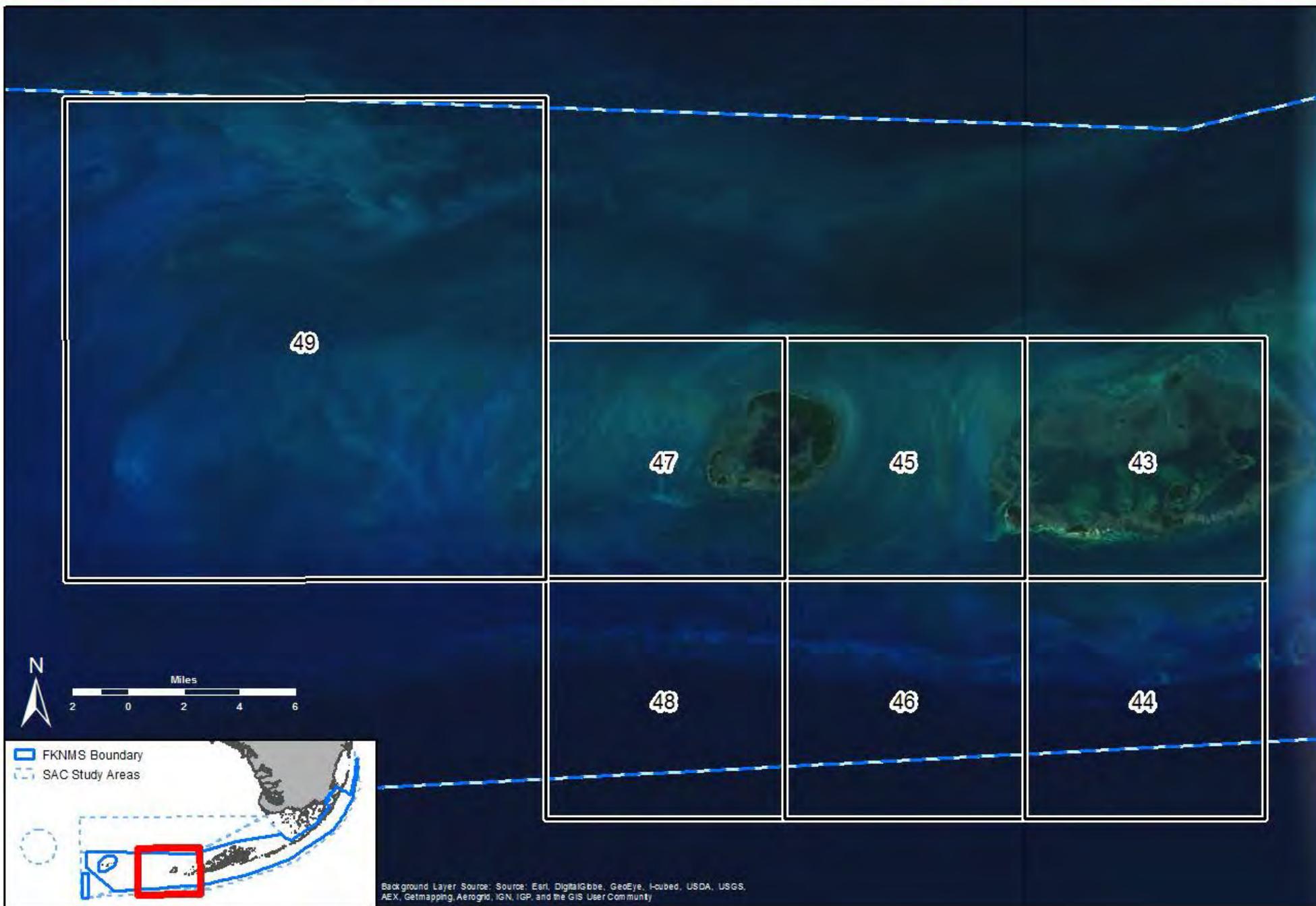


Map 42 - Eastern Dry Rocks

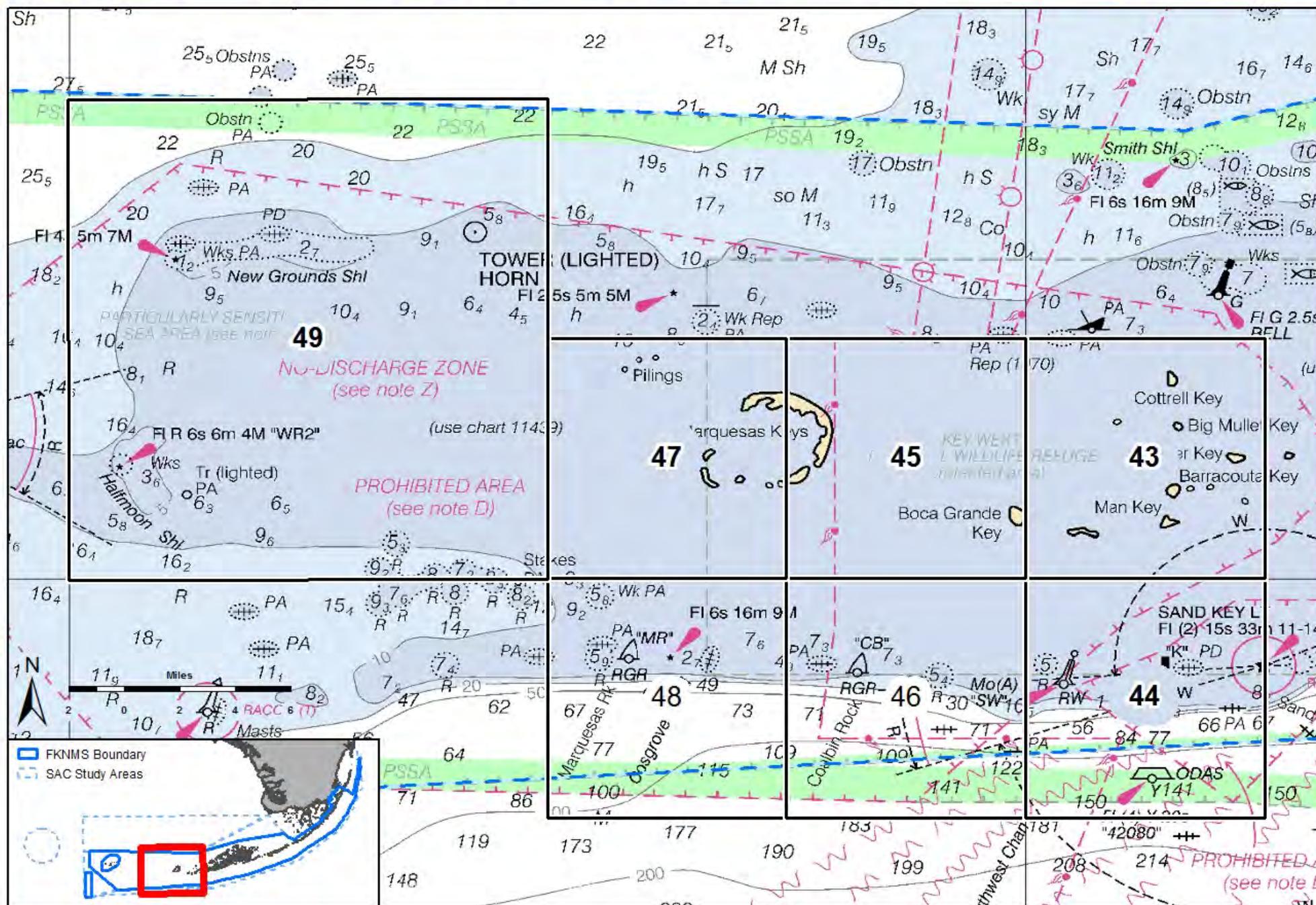


<ul style="list-style-type: none">  Coral Reef Ecosystem Restoration Working Group Recommendations  FKNMS Boundary  Existing Marine Zones  Florida Reef Resiliency Program Resilient Reefs  Bird Nests (Various Species)  FKNMS Permitted Restoration Sites  FKNMS Vessel Groundings (2000-2012) 	<div style="text-align: right;">   </div> <p>NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.</p>	
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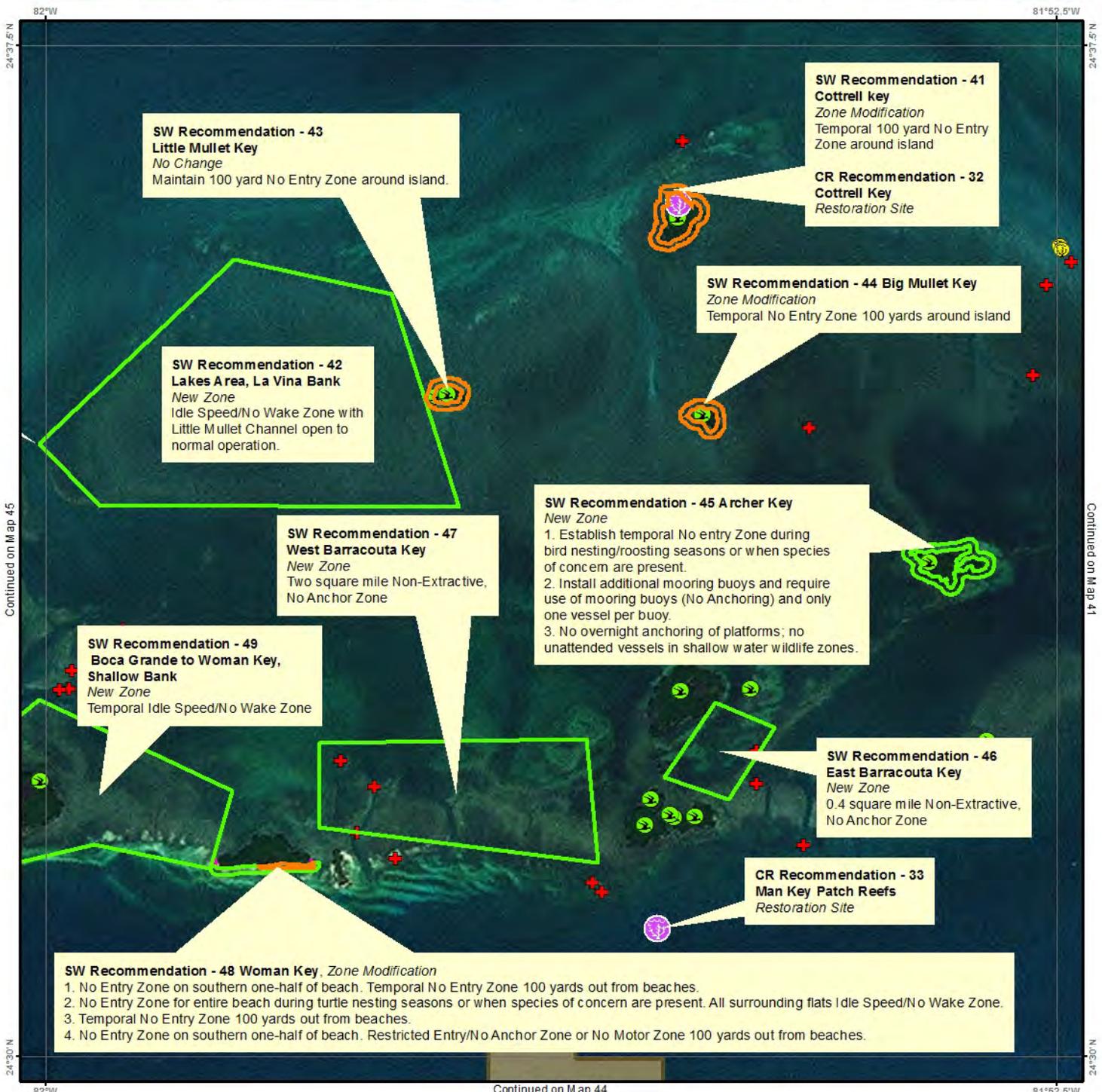
Marquesas Region Index Map



Marquesas Region Index Map



Map 43 - Cottrell Key



Continued on Map 45

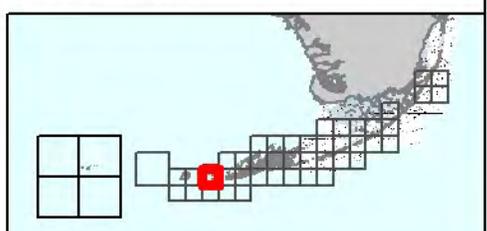
Continued on Map 41

Continued on Map 44

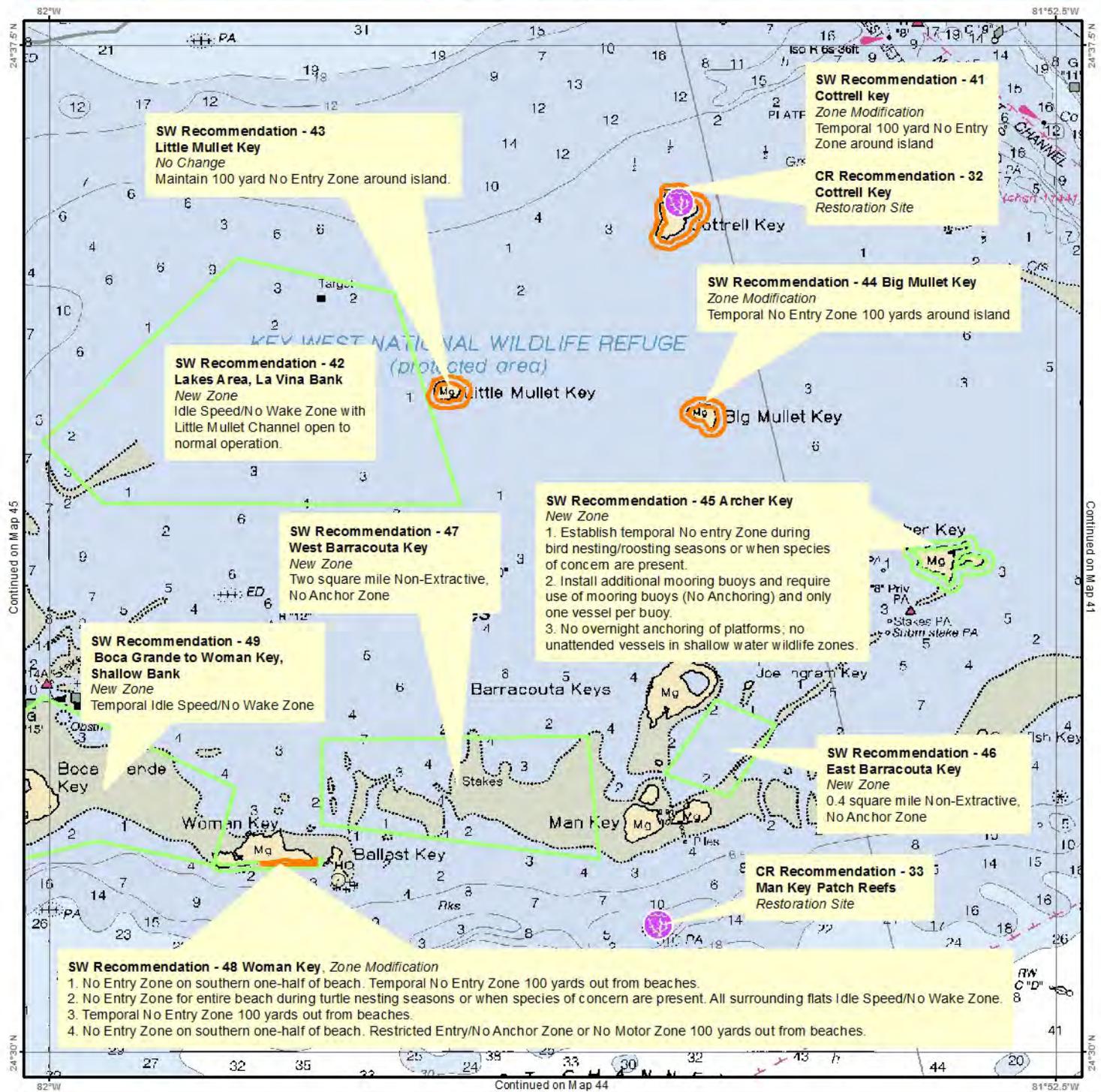
- Shallow Water
- Working Group Recommendations
- ⊕ Coral Reef Ecosystem Restoration Working Group Recommendations
- Existing Marine Zones
- Florida Reef Resiliency Program Resilient Reefs
- 🐦 Bird Nests (Various Species)
- 📍 FKNMS Permitted Restoration Sites
- + FKNMS Vessel Groundings (2000-2012)
- 🐢 Sea Turtle Nesting Beaches Florida



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 43 - Cottrell Key

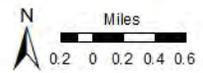


Continued on Map 45

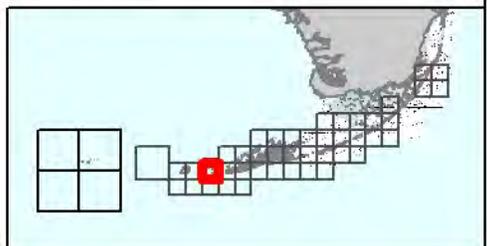
Continued on Map 41

Continued on Map 44

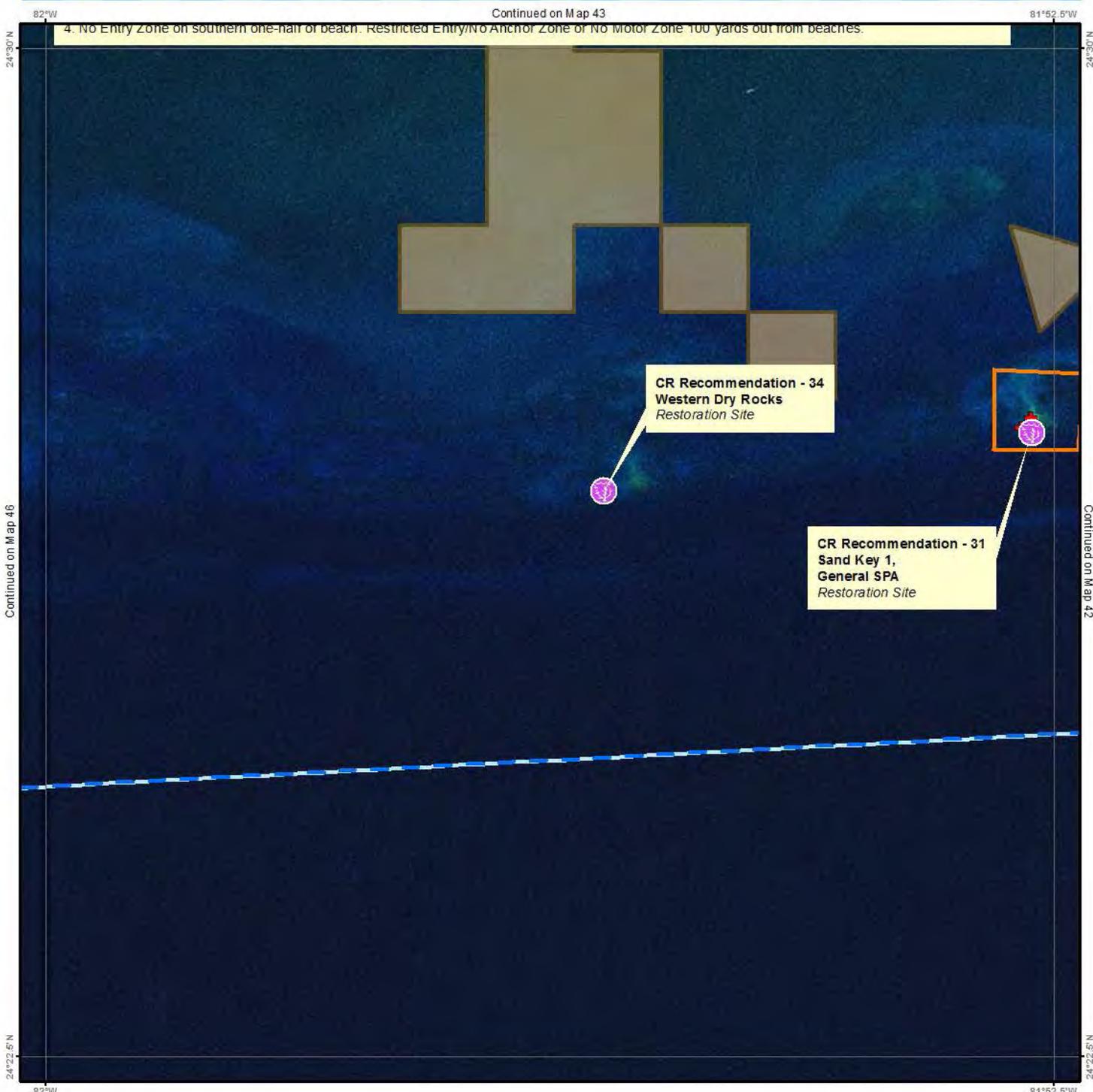
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 44 - Western Dry Rocks



Continued on Map 46

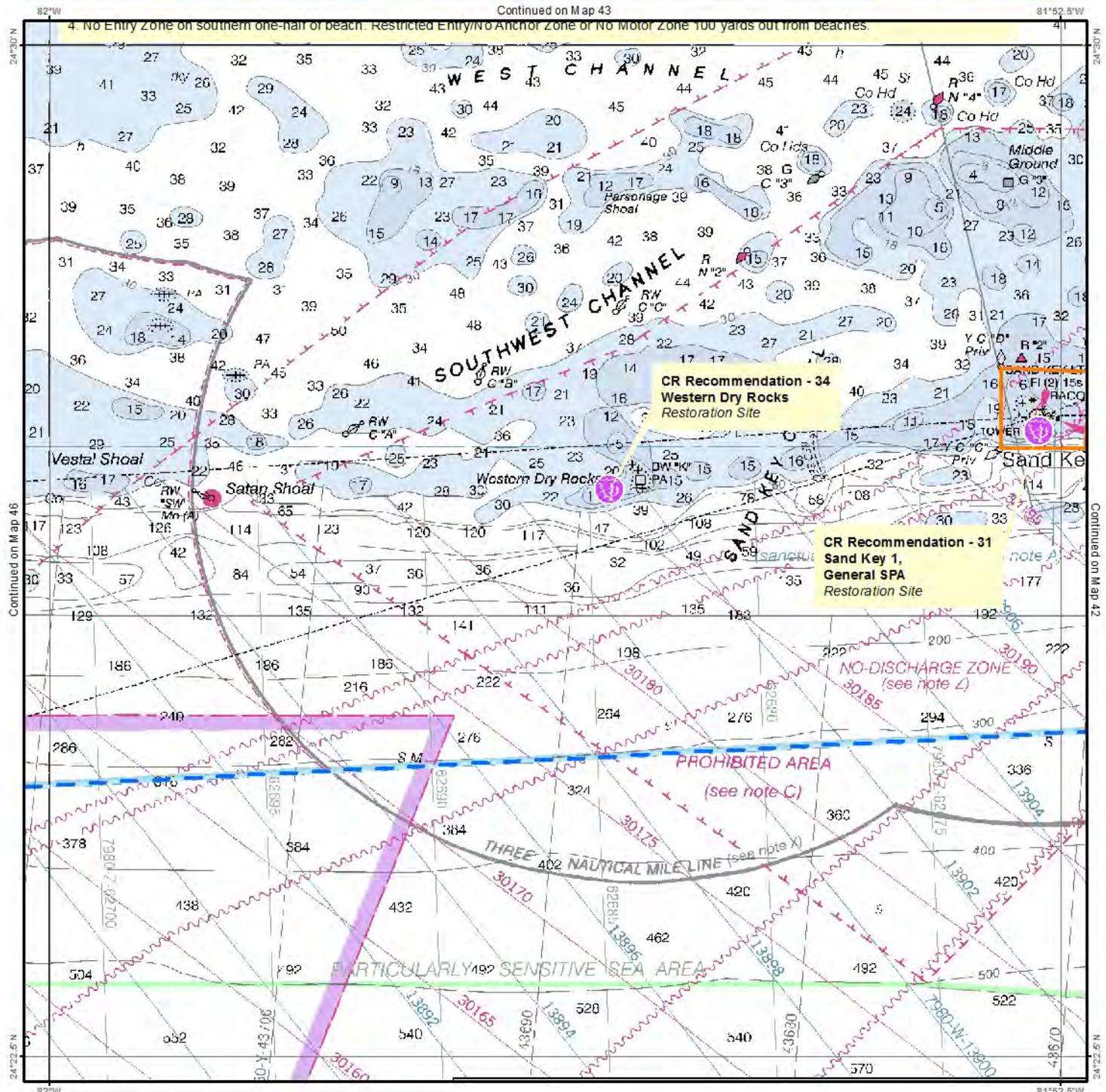
Continued on Map 42

- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones
- Florida Reef Resiliency Program Resilient Reefs
- FKNMS Vessel Groundings (2000-2012)

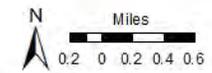
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NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.

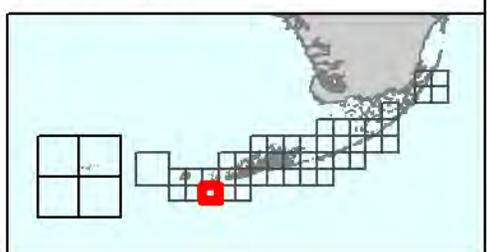
Map 44 - Western Dry Rocks



- Coral Reef Ecosystem Restoration Working Group Recommendations
- FKNMS Boundary
- Existing Marine Zones



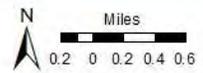
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



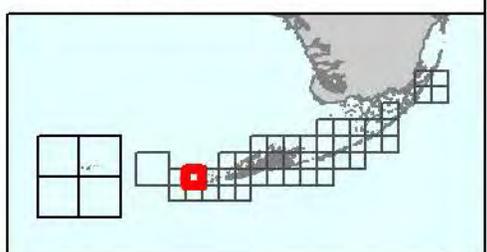
Map 45 - Boca Grande Channel



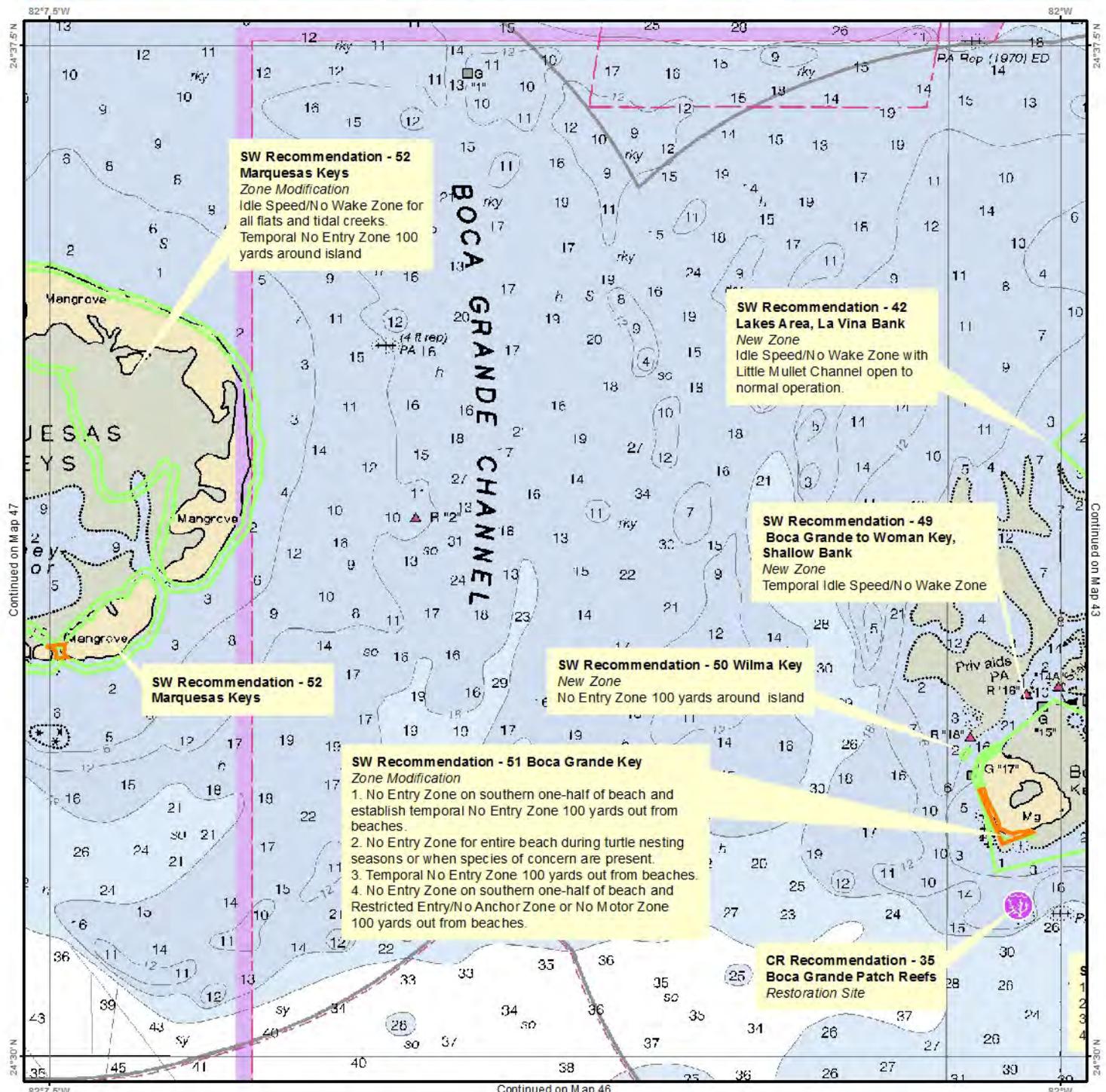
- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Vessel Groundings (2000-2012)



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 45 - Boca Grande Channel

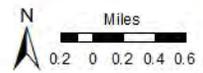


Continued on Map 47

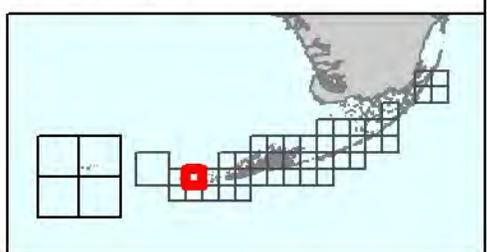
Continued on Map 43

Continued on Map 46

- Shallow Water Working Group Recommendations
- Coral Reef Ecosystem Restoration Working Group Recommendations
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



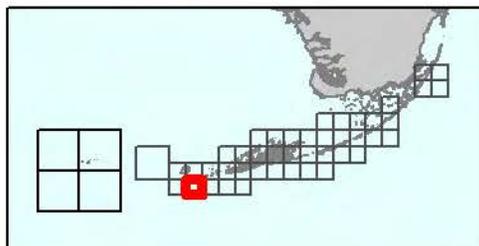
Map 46 - Coalbin Rock



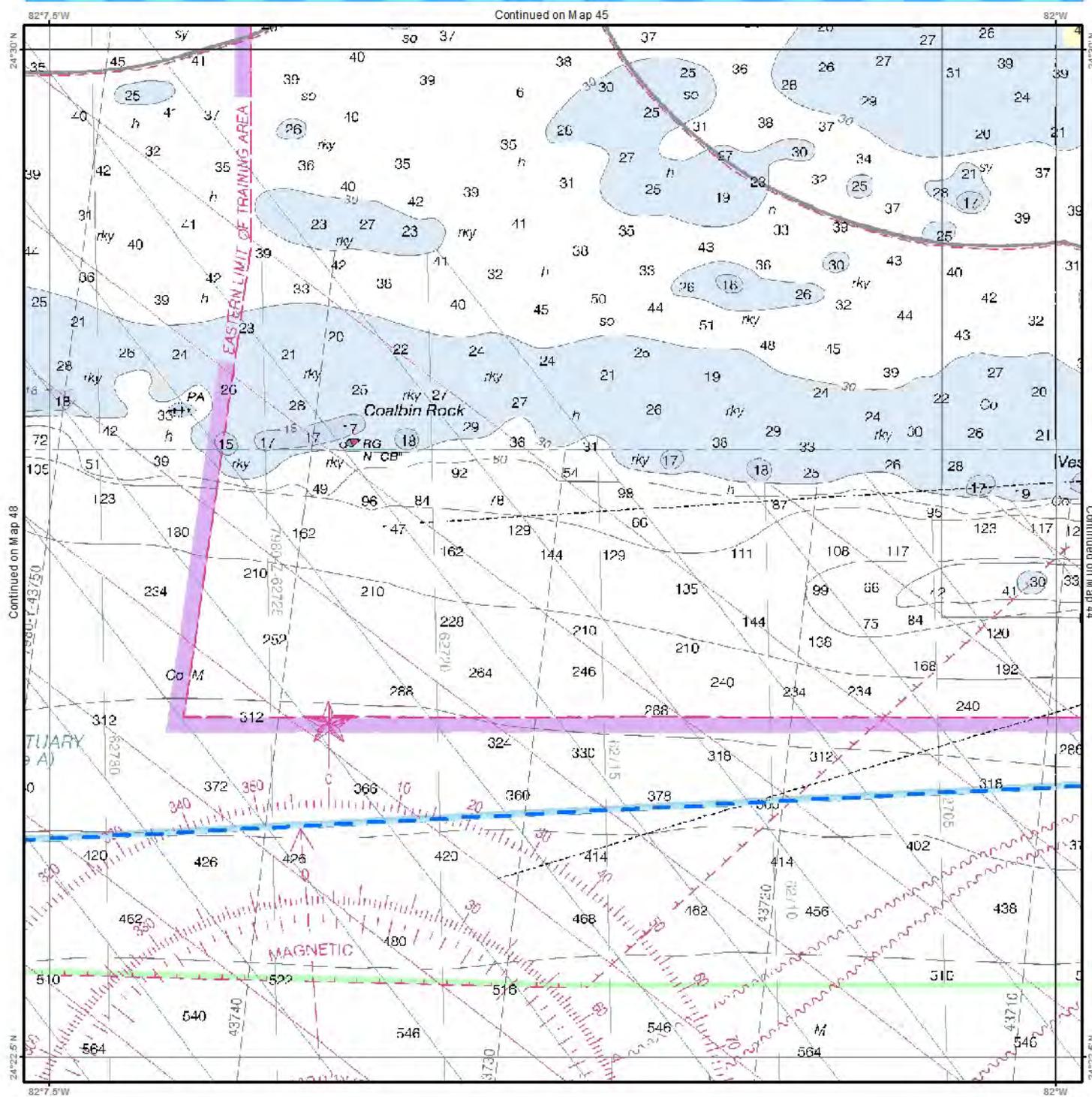
FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



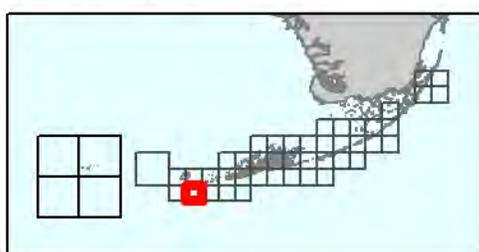
Map 46 - Coalbin Rock



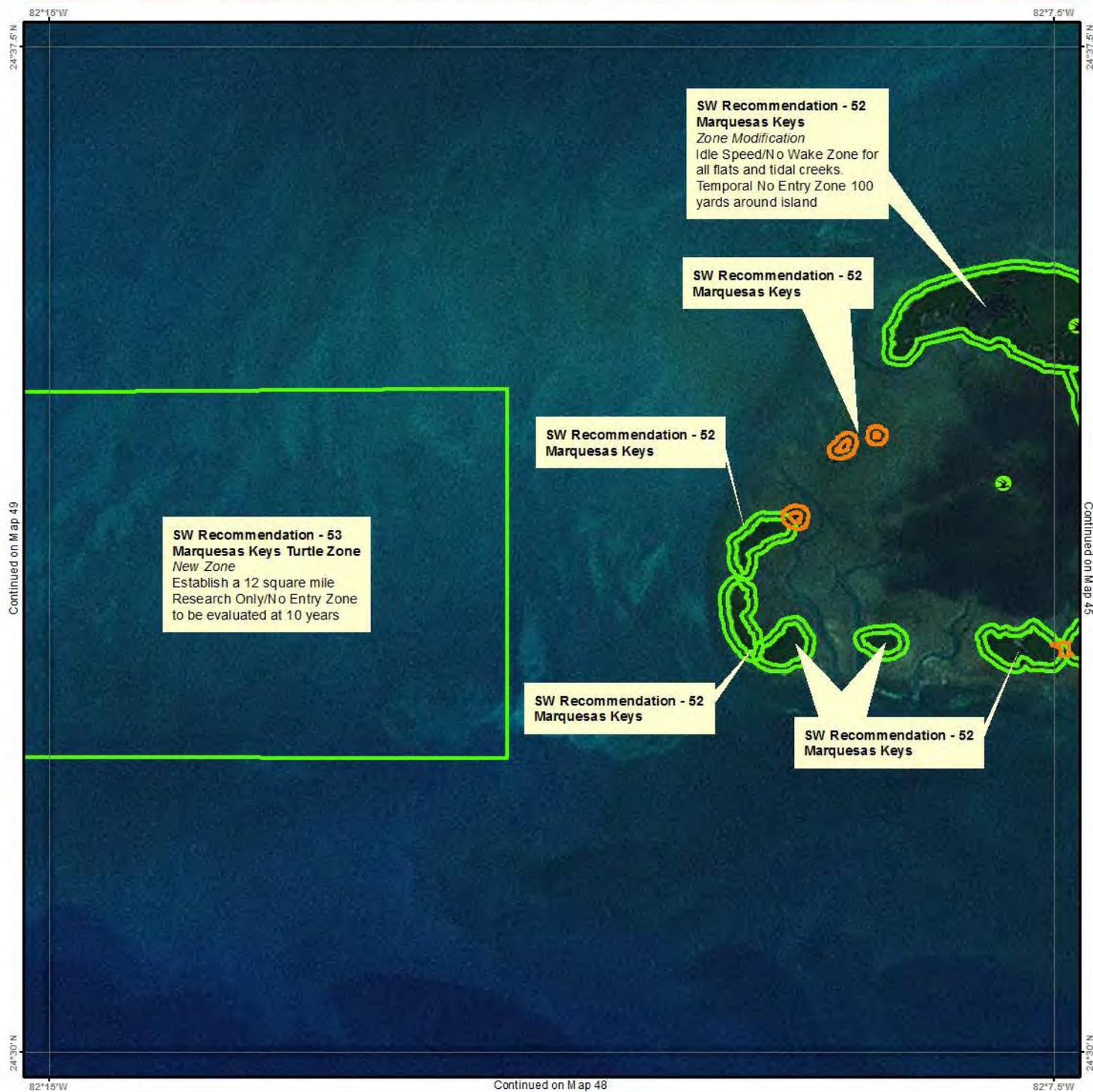
FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



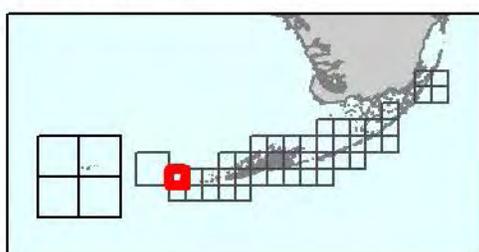
Map 47 - Marquesas Keys



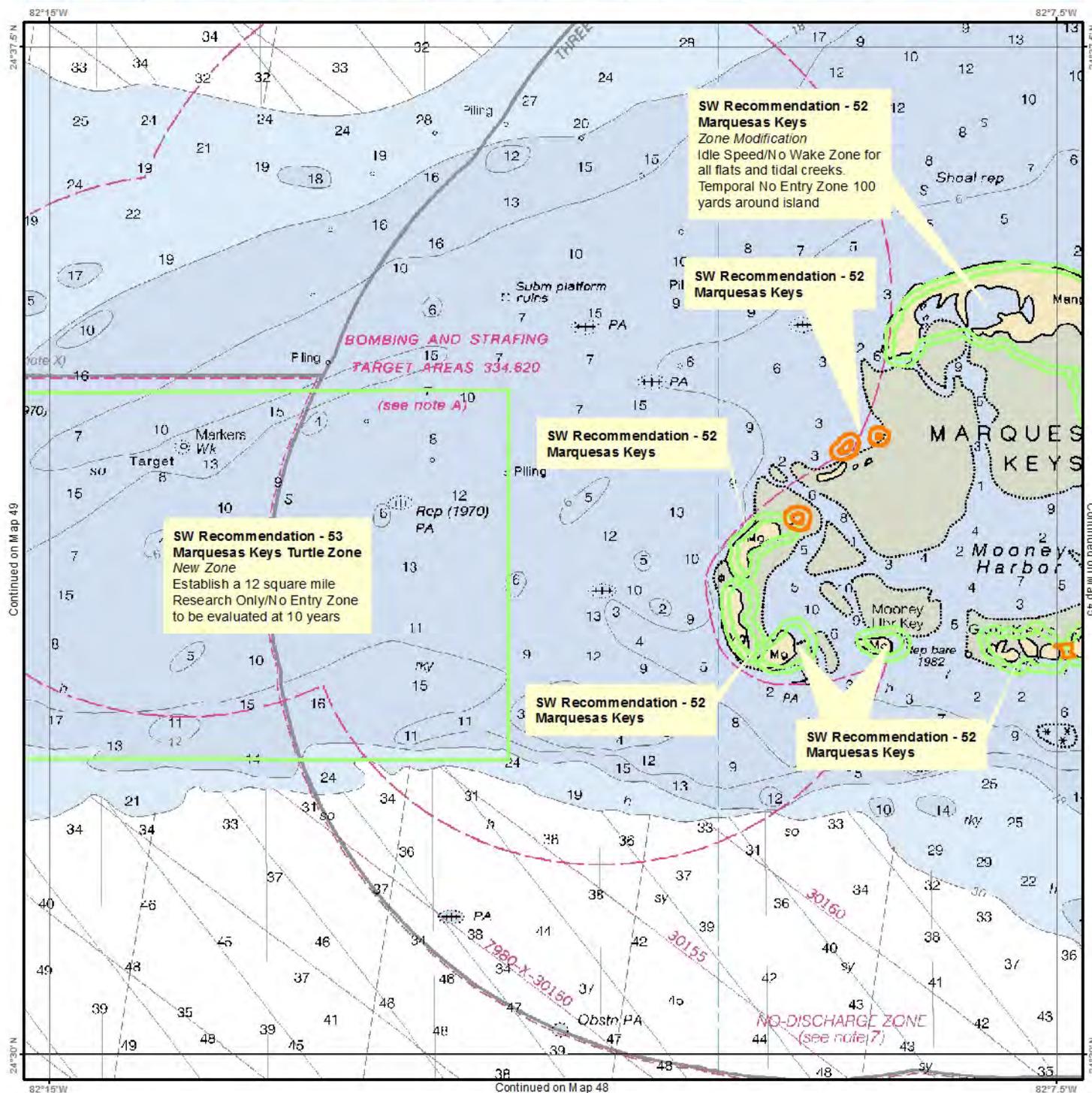
- Shallow Water
- Working Group Recommendations
- Existing Marine Zones
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 47 - Marquesas Keys

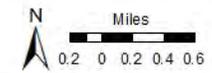


Continued on Map 49

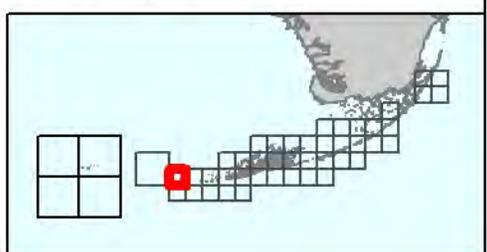
Continued on Map 45

Continued on Map 48

- Shallow Water
- Working Group Recommendations
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



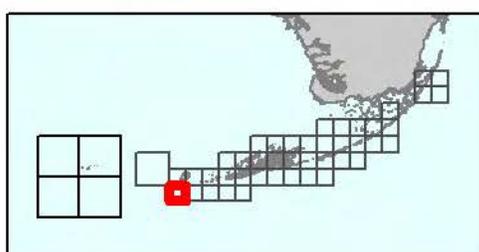
Map 48 - Cosgrove Shoal



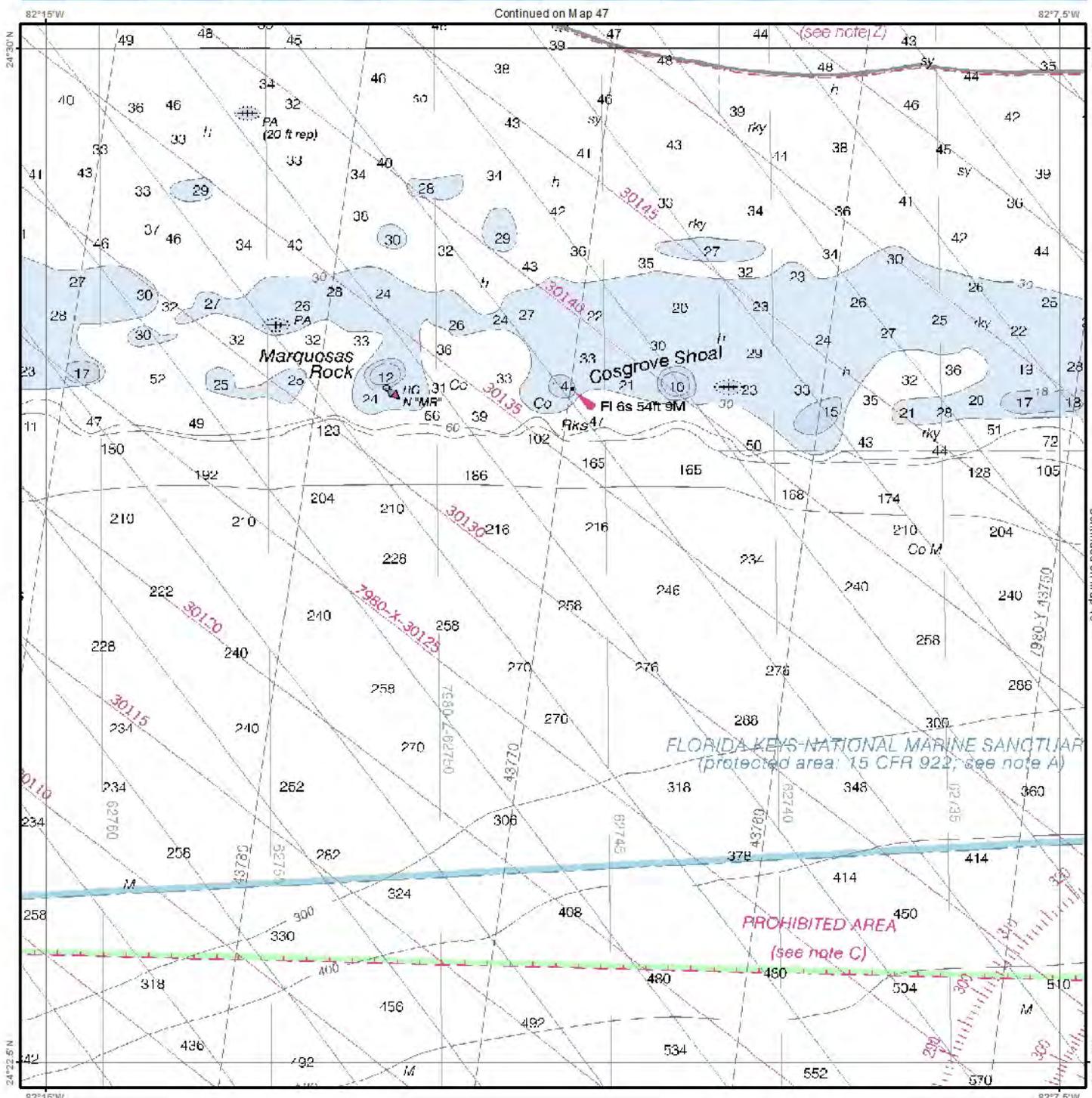
 FKNMS Boundary



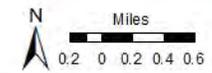
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



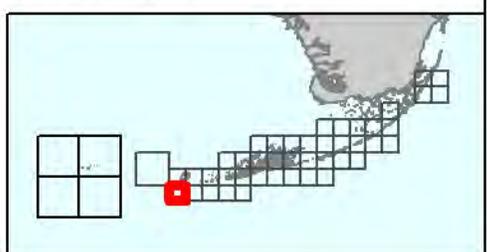
Map 48 - Cosgrove Shoal



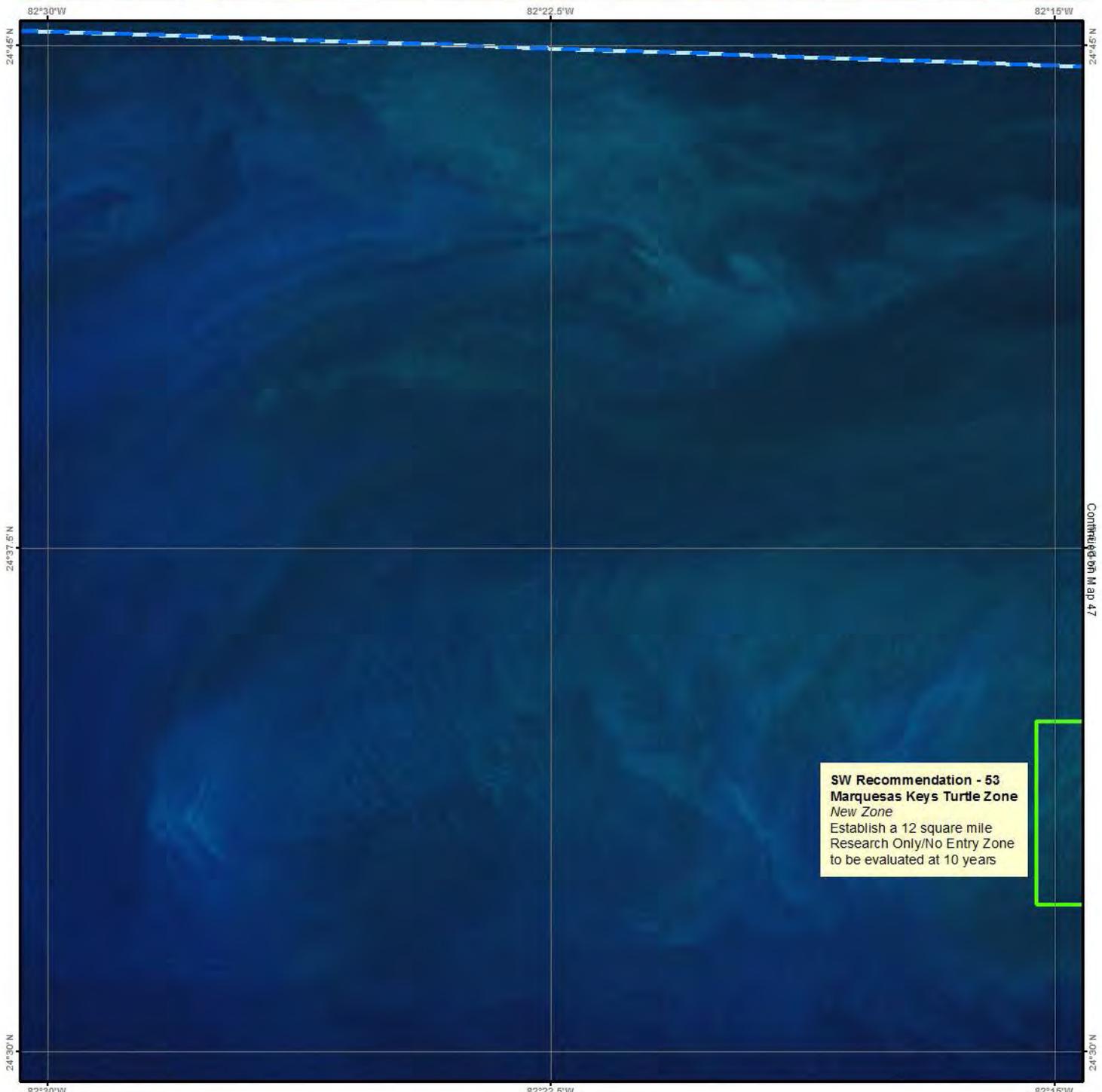
- █ Shallow Water
- - - Working Group Recommendations
- - - Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



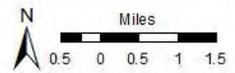
Map 49 - New Grounds Shoal



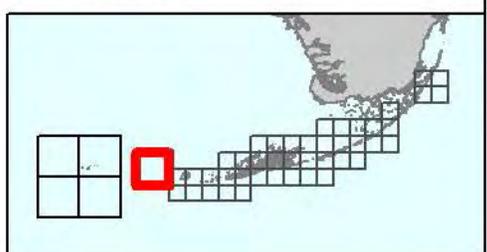
Continued on Map 47

SW Recommendation - 53
Marquesas Keys Turtle Zone
New Zone
 Establish a 12 square mile
 Research Only/No Entry Zone
 to be evaluated at 10 years

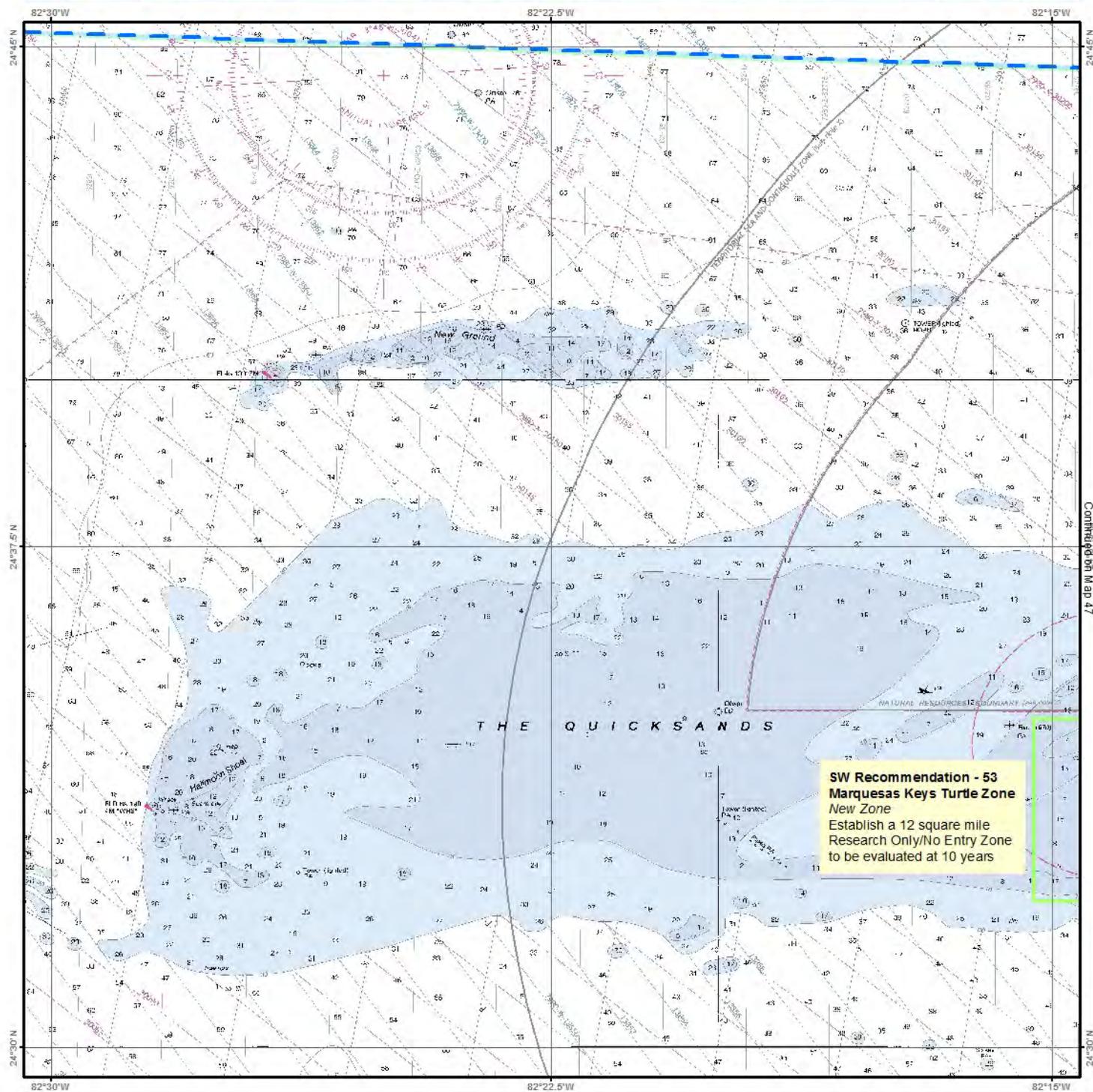
-  Shallow Water
-  Working Group Recommendations
-  FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



Map 49 - New Grounds Shoal

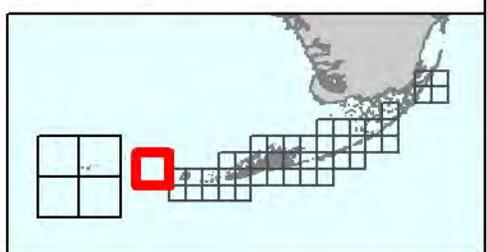


SW Recommendation - 53
Marquesas Keys Turtle Zone
New Zone
 Establish a 12 square mile
 Research Only/No Entry Zone
 to be evaluated at 10 years

- Shallow Water
- Working Group Recommendations
- FKNMS Boundary



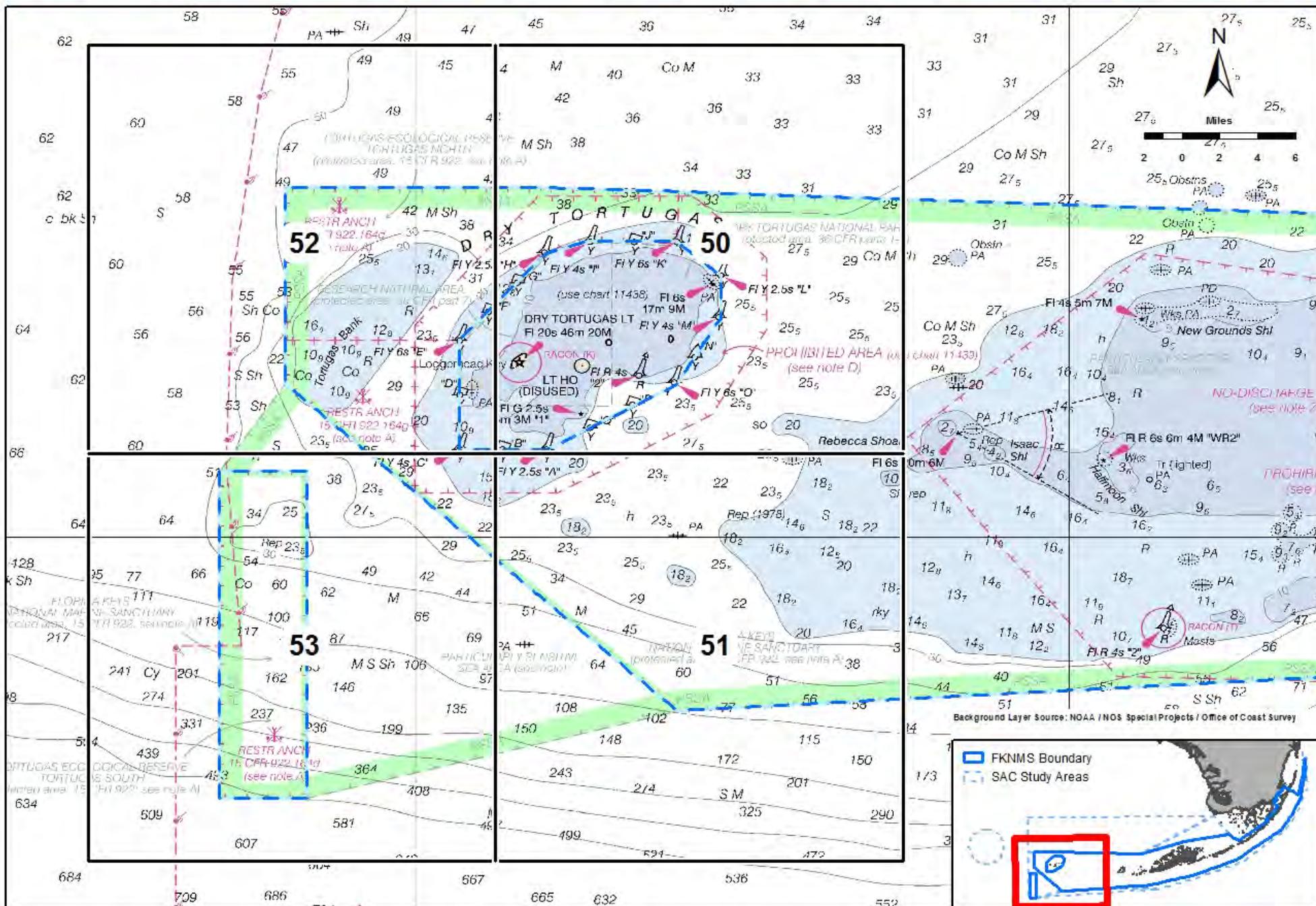
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



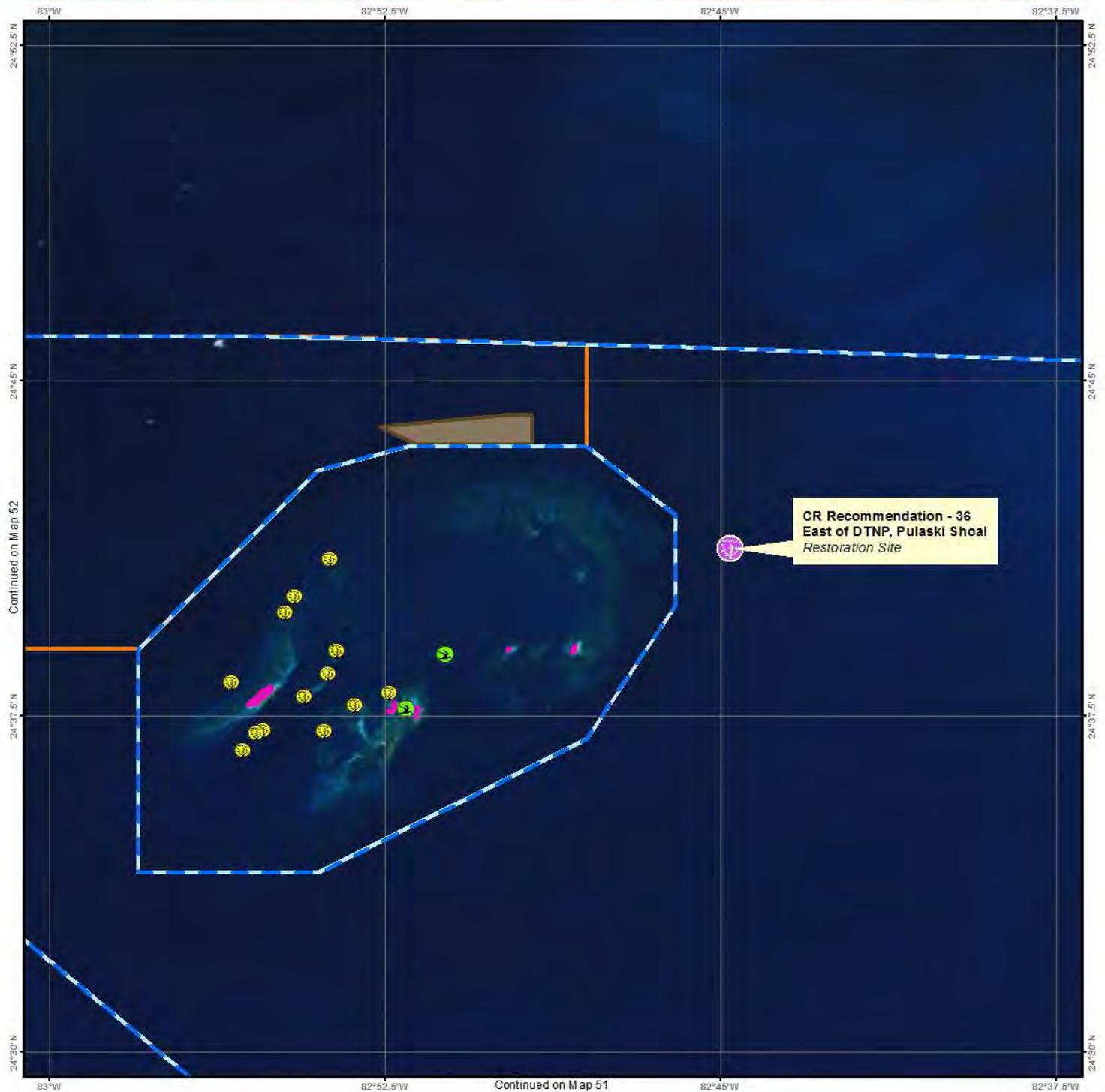
Tortugas Region Index Map



Tortugas Region Index Map

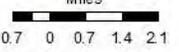
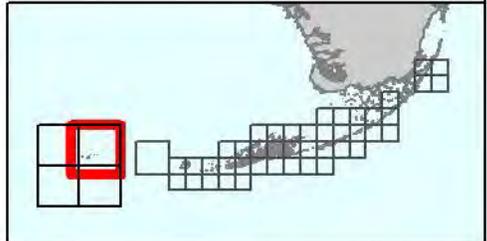


Map 50 - Tortugas NE

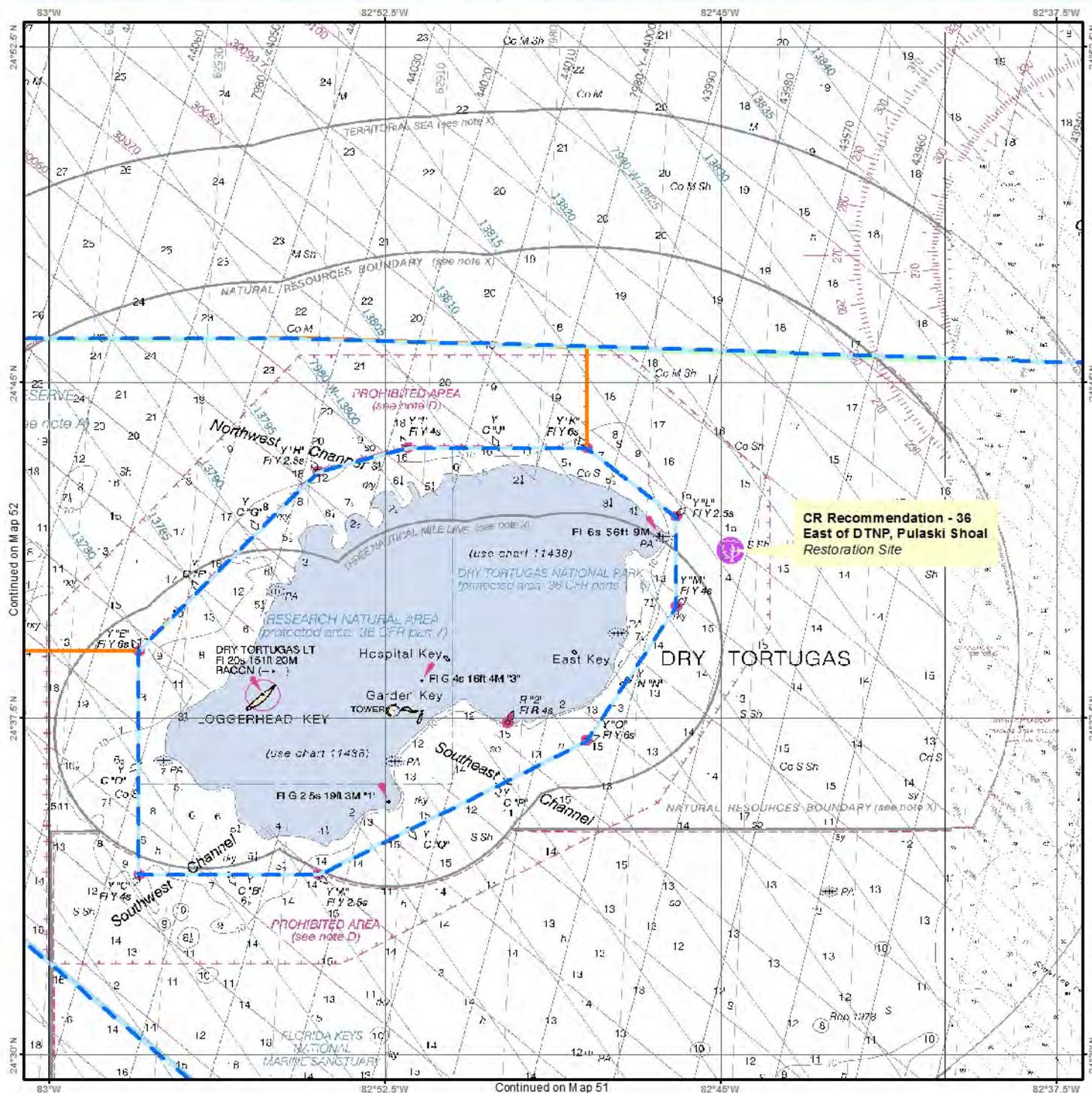


Continued on Map 52

Continued on Map 51

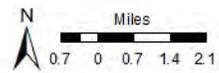
<ul style="list-style-type: none">  Coral Reef Ecosystem Restoration Working Group Recommendations  FKNMS Boundary  Existing Marine Zones  Florida Reef Resiliency Program Resilient Reefs  Bird Nests (Various Species)  FKNMS Permitted Restoration Sites  Sea Turtle Nesting Beaches Florida 	<p>N</p> 
<p>NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.</p>	
	

Map 50 - Tortugas NE

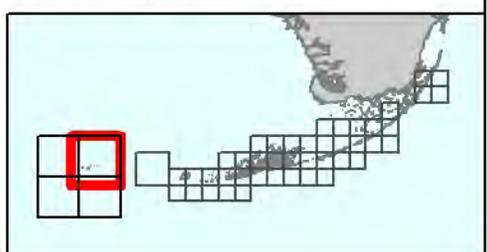


CR Recommendation - 36
 East of DTNP, Pulaski Shoal
 Restoration Site

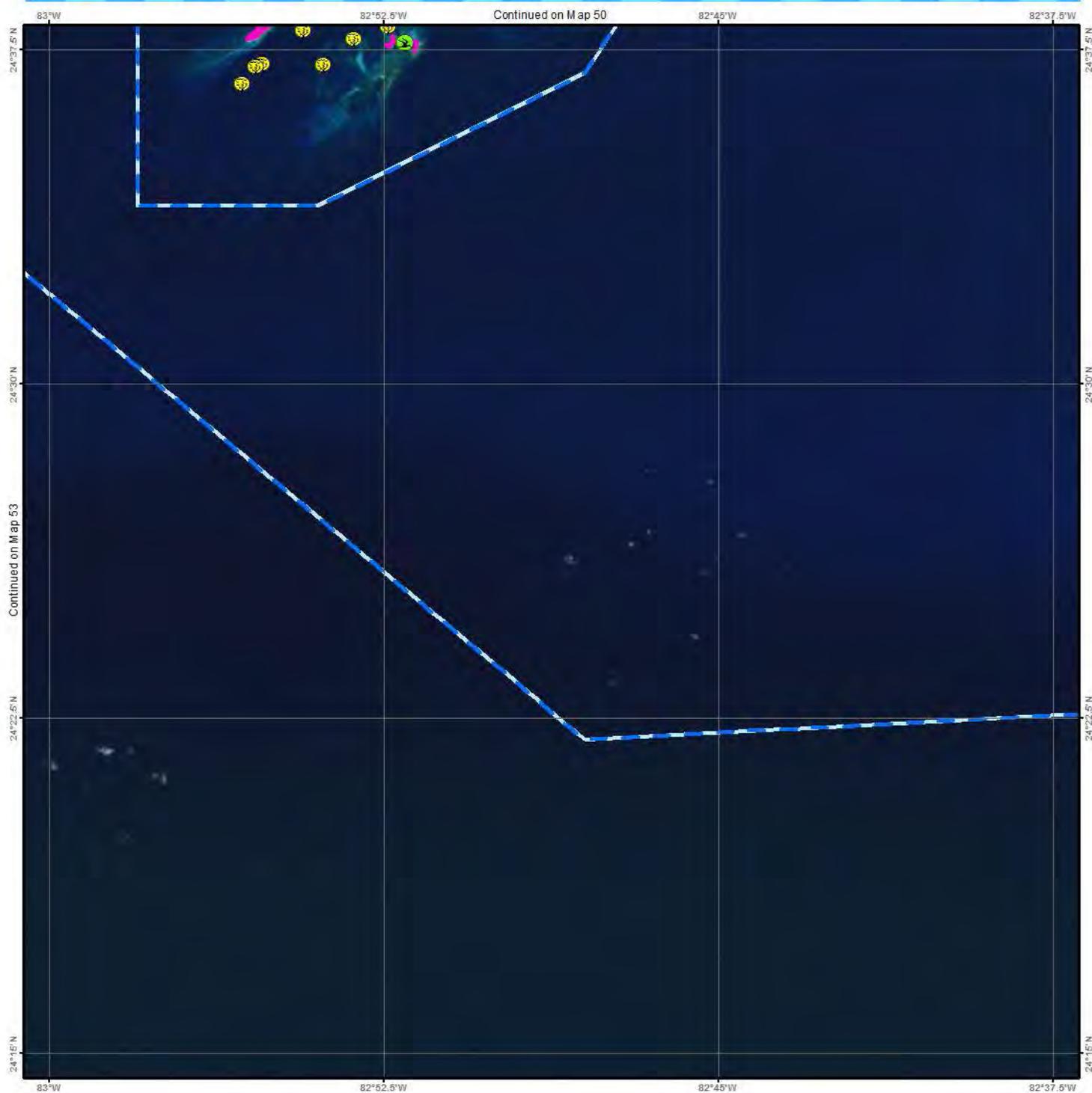
-  Coral Reef Ecosystem Restoration Working Group Recommendations
-  FKNMS Boundary
-  Existing Marine Zones



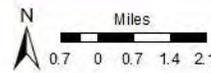
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



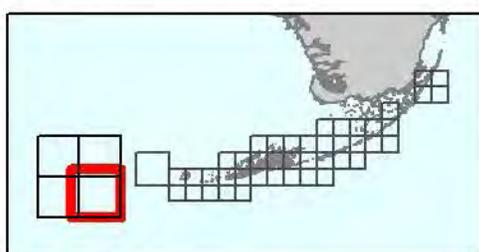
Map 51 - Tortugas SE



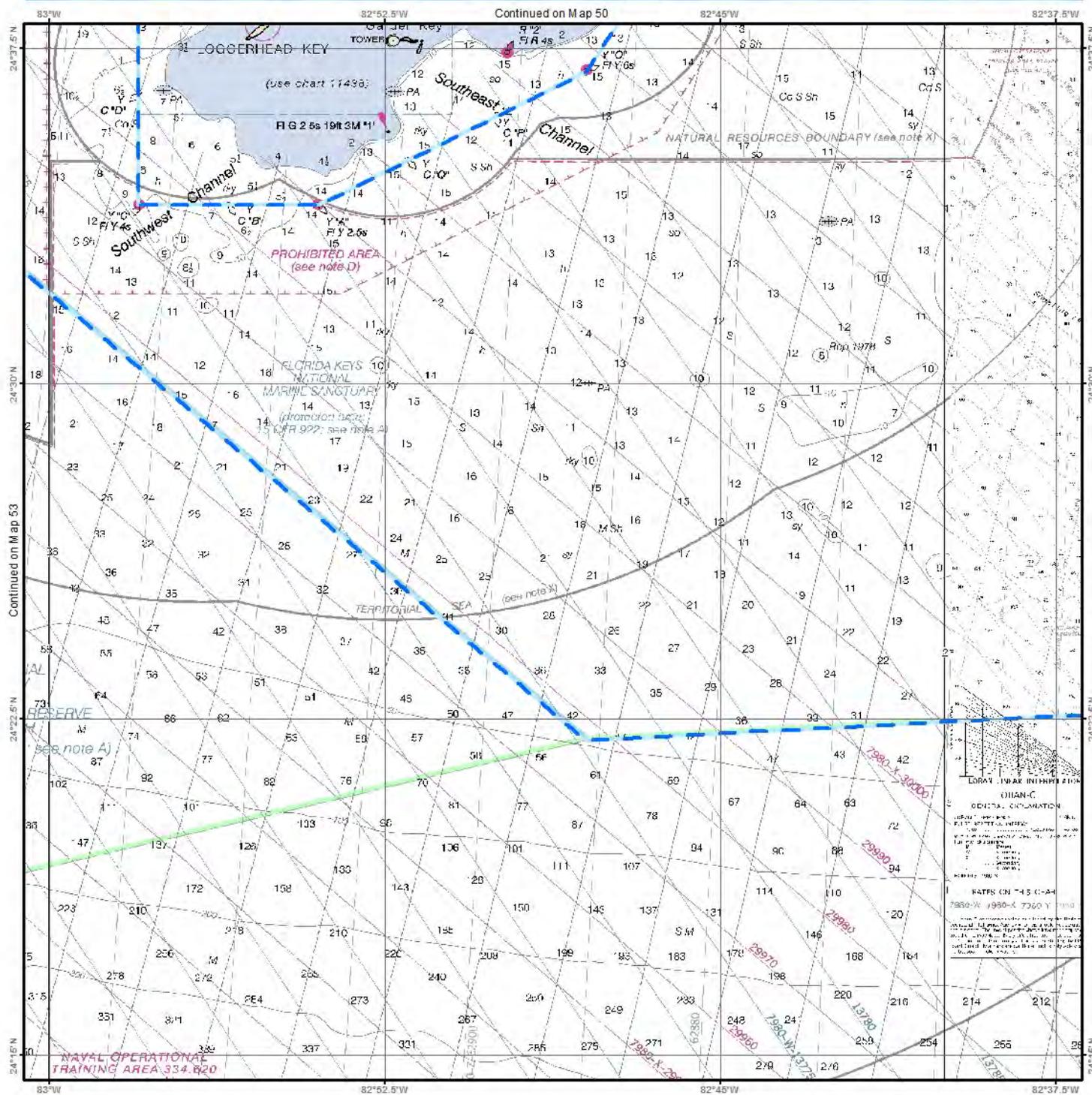
- FKNMS Boundary
- Bird Nests (Various Species)
- FKNMS Permitted Restoration Sites
- Sea Turtle Nesting Beaches Florida



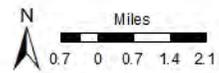
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



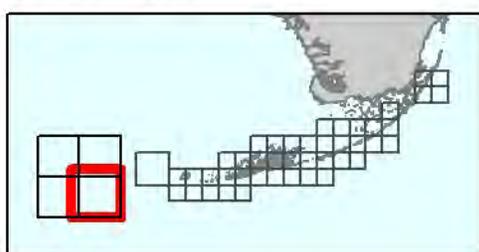
Map 51 - Tortugas SE



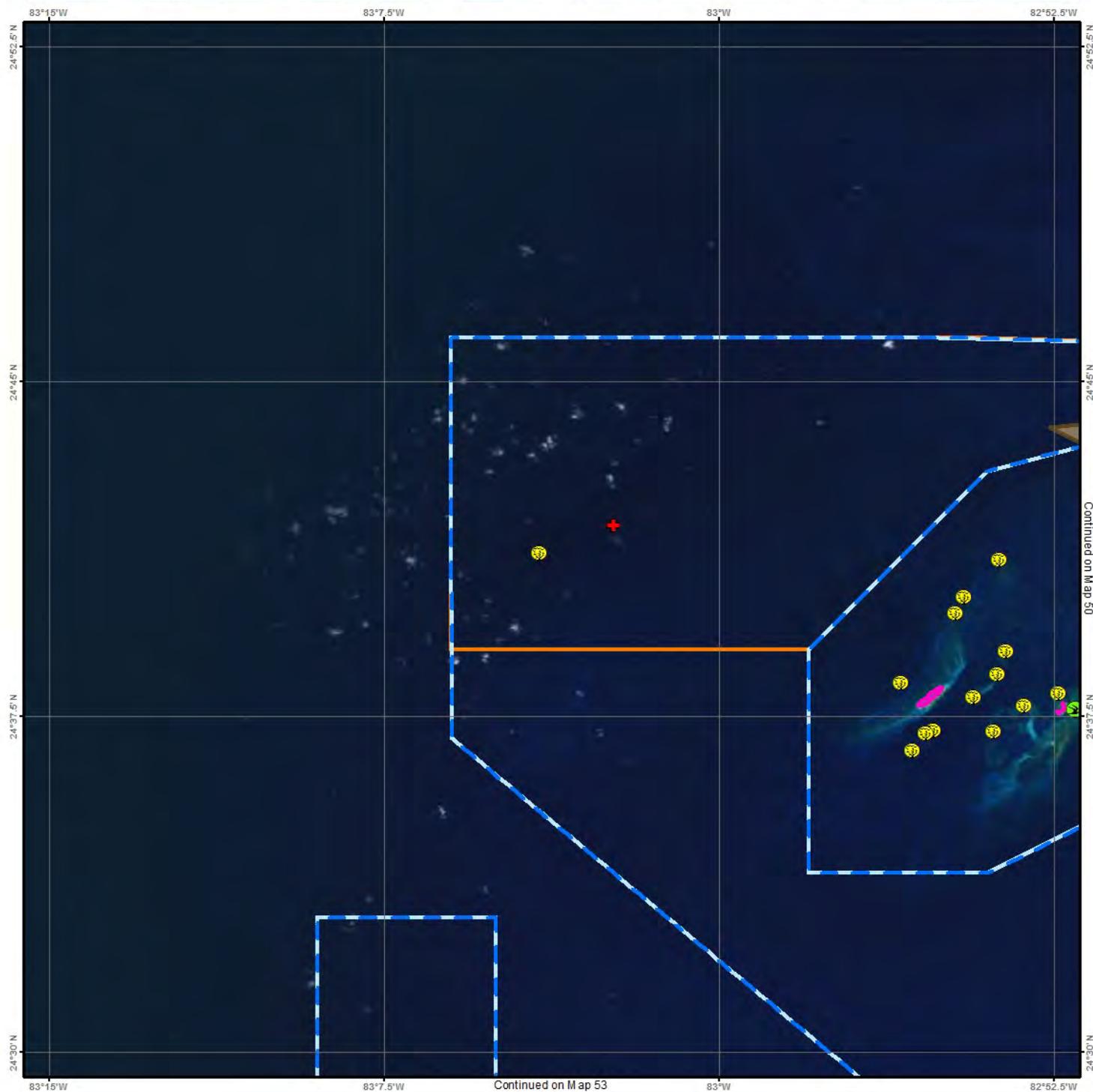
FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



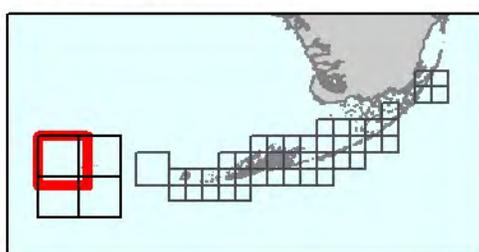
Map 52 - Tortugas NW



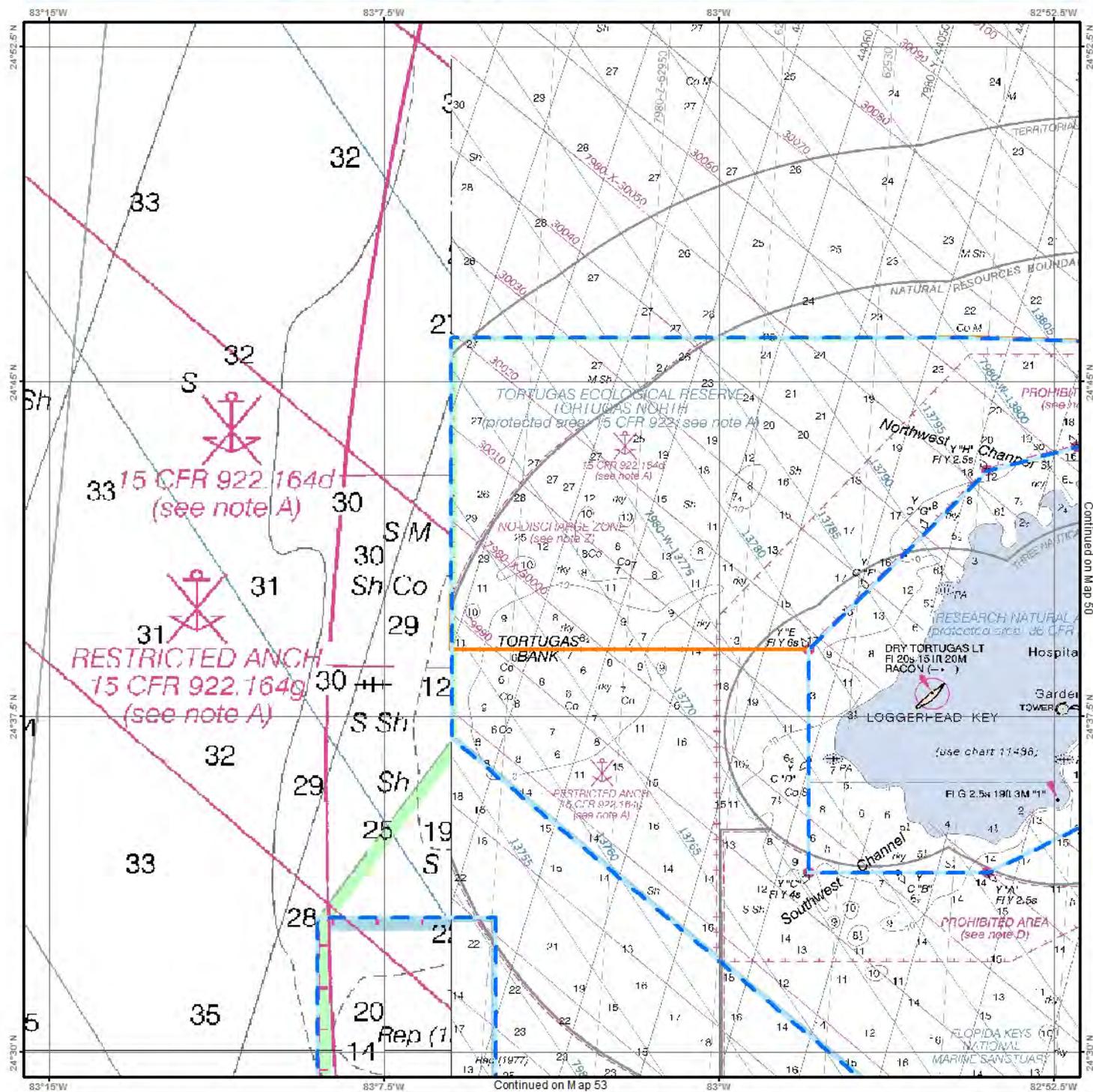
-  FKNMS Boundary
-  Existing Marine Zones
-  Florida Reef Resiliency Program Resilient Reefs
-  Bird Nests (Various Species)
-  FKNMS Permitted Restoration Sites
-  FKNMS Vessel Groundings (2000-2012)
-  Sea Turtle Nesting Beaches Florida



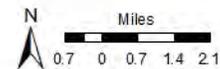
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



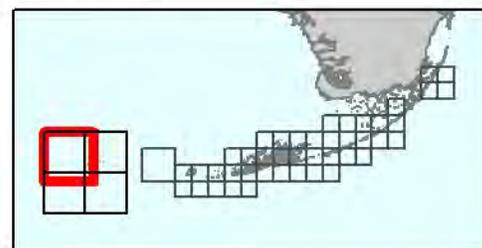
Map 52 - Tortugas NW



- FKNMS Boundary
- Existing Marine Zones



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Commission.



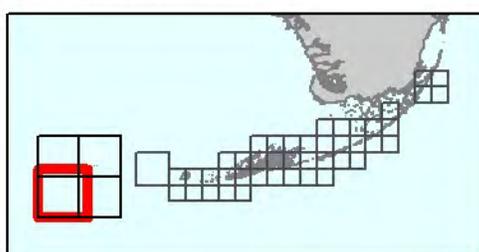
Map 53 - Tourtugas SW



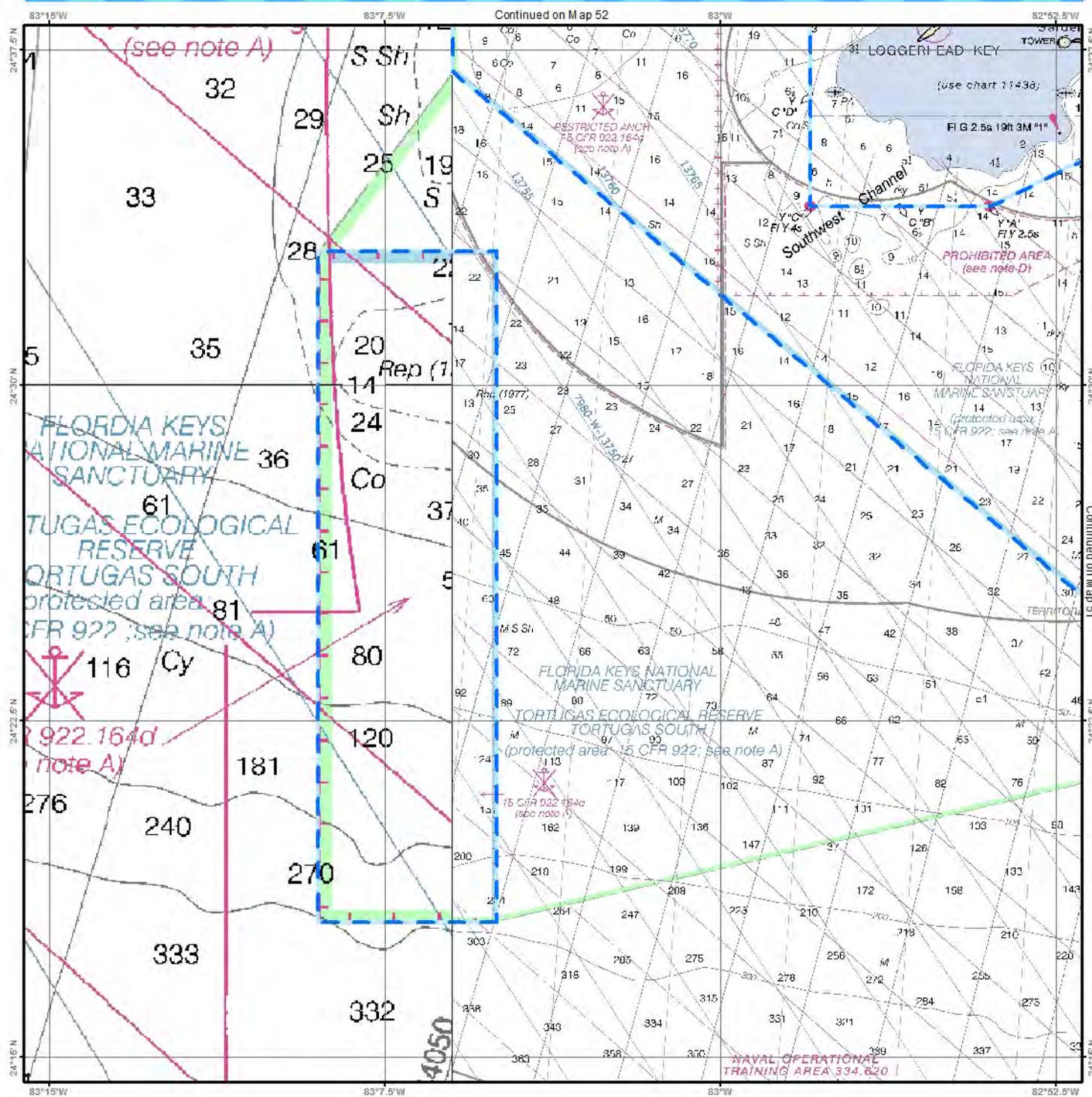
-  FKNMS Boundary
-  Bird Nests (Various Species)
-  FKNMS Permitted Restoration Sites
-  Sea Turtle Nesting Beaches Florida



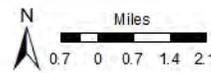
NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



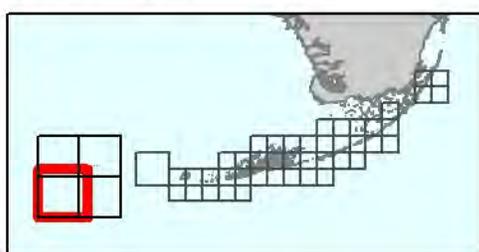
Map 53 - Tourtugas SW



FKNMS Boundary



NOTE: This map contains draft working group recommendations for consideration by the Sanctuary Advisory Council. This does not constitute a proposal or recommendation from NOAA, the U.S. Fish and Wildlife Service, or the Florida Fish and Wildlife Conservation Commission.



APPENDIX I

Florida Keys National Marine Sanctuary Marine Zoning and Regulatory Review Coral Reef Ecosystem Restoration Working Group

Recommendations for Sanctuary Advisory Council Consideration

Approved on June 12, 2013 by Coral Reef Ecosystem Restoration Working Group.

For the purposes of this recommendation, active coral reef ecosystem restoration aims to recreate, initiate, accelerate, or augment the recovery of an ecosystem that has been degraded by a range of environmental and human-induced threats and events (including but not limited to storm events, disease outbreaks, boat groundings, overfishing, phase shifts, loss of keystone herbivores, etc.). Ecological restoration is a dynamic process and should allow for the use of innovative restoration techniques. Restoration activities may include the active ecological recovery or enhancement of keystone or foundation species that create or maintain habitat or ecosystem services upon which other marine species, and people, depend. Restoration may also include the removal of species that are harmful to the ecosystem as a means of restoring balance. Ecosystem-scale restoration includes other natural communities including but not limited to: seagrass communities, mangrove communities, and hard bottom communities.

Coral Reef Ecosystem Restoration Objectives:

1. Identify specific areas and zones for active restoration of coral reef ecosystems.
2. Identify regulatory impediments and appropriate permitting conditions for active restoration of coral reef ecosystem species.
3. Identify adaptive management measures and criteria for opening areas closed for restoration purposes

Objective 1: Identify specific areas and zones for active restoration of coral reef ecosystems.

When selecting specific areas for restoration activities those zones and sites should be determined based on the criteria developed by this working group.

Coral Reef Ecosystem Restoration Zones identified by this working group are high priority areas in which to conduct restoration activities. The working group recommends that the entire reef tract within the Florida Keys National Marine Sanctuary (FKNMS) be restored and be eligible for restoration activities. However, the working group selected a suite of 105 zones for restoration and further prioritized those sites for a total of 34 priority zones. The priority zones identified are general areas within which more specific sites will be selected for actual restoration activities. When restoration activities take place:

- The actual restoration site(s) could be a much smaller area within the identified zone.
- The specific location and size of the site will be determined by the particular restoration goals and objectives for that site.
- The site will not have any additional managed access restrictions in place unless and until active restoration is underway (if site is within a current managed area (SPA, lobster Exclusion Zone, etc., those access restrictions will still apply). Any additional restrictions in place during active restoration would be lifted once the restoration goals and objectives are met.
- During site selection and permitting, managed access options selected should consider use and impact to various user groups.

I: Coral Reef Ecosystem Restoration Zone Types

Active coral reef ecosystem restoration zones will include a range of restoration activities including:

- Active (as opposed to passive) restoration:
 - aims to recreate, initiate, accelerate, or augment the recovery of an ecosystem that has been degraded (environmental and/or human induced changes have altered ecosystem structure and function). Ecological restoration is a dynamic process and should allow for the use of innovative restoration techniques. It may also involve the removal of opportunistic species that have colonized essential habitat for the target species.
- Manipulative research and restoration:
 - strategic science and manipulative experiments to advance the science of restoration

II: Management and Access Options

Active coral reef ecosystem restoration zones will allow for a range of access options and potential access restrictions. These will be dictated by the overall goals and objectives of the restoration activities, and will manage the impacts to the efforts to conduct/ maintain restoration efforts. During site selection and permitting, managed access options selected will consider use and impact to various user groups. If any site is considering restricting access or closing access, zones and sites should be determined based on the criteria developed by this working group.

Access options could include:

1. Open demonstration site / incentive site
 2. Managed access (restricted access)
 3. Closed for research
1. Demonstration Site / Incentive Site
 - Demonstration sites could be more broadly open to public access.
 - Incentive access to promote ownership of and engagement in ensuring success of restoration efforts.
 - Innovative partnerships: partner organizations, businesses, etc. provide funding to support restoration activities through a range of mechanisms including donations, user fees, outplant site maintenance assistance including free rides to the sites for practitioners and/or training a mate on the boat to assist in maintenance activities, etc.
 - User fees
 - Mooring ball sponsorship programs
 - Identify demonstration sites within restoration areas to promote visitation (enhance an interest in reef restoration)
 - Develop reef etiquette program and guidelines
 - Dive proficiency testing or minimal certification levels
 - Dive Master guided tours from Blue Star operators
 2. Managed Access (restricted access) Options:
 - Restrict access for all activities while restoration is in progress and for a set duration of time following the restoration activities to allow the site to stabilize.
 - Restrict activities that could impact the success of restoration activities (i.e. activities that may impact the benthic community).
 3. Closed for Research and Restoration
 - Restrict access (i.e. potentially closed) to allow for undisturbed monitoring sites for research and control sites to help determine the effects of human activities. (SAC Goal B.3)
 - Closed to visitation and other activities to allow for scientific research, enhance restoration activities, provide control and comparative sites, and foster natural

biodiversity for maintaining undisturbed historical ecological, biological and genetic refuges.

III: Marking and Mooring at Coral Reef Ecosystem Zones

Active coral reef ecosystem restoration zones will be marked and have access buoys based on the types of managed or incentive access of the zone.

- Marker Buoys
 - Link regulations for restoration zones to the type of marker buoy used rather than specific locations such that the marker buoys and restoration zones can easily be moved as restoration activities are shifted over time and space. The markers and hence restoration zones can be moved without revising regulations.
- Mooring Buoys
 - Determine mooring buoys numbers based on restoration type and access options.
 - No mooring buoys in areas that are closed to visitation and only allow anchoring for research or restoration practitioners
 - Limited number of mooring buoys for incentive funding entities to utilize; which could include mooring buoy sponsorship labeling
 - install subsurface buoys in lieu of anchoring for research and restoration practitioners and for use by incentive access users

IV: Criteria for Site Selection

Restoration Zones will be selected using the criteria outlined below.

Other considerations when selecting restoration zones:

- Potentially be sited in existing zones with established access restriction, marker buoys, and mooring buoys
- Consider including existing federal trap exclusion zones and existing special management zones in John Pennekamp Coral Reef State Park

Category	Marine Zoning Goals & Objectives	Criteria
Likelihood of Success	Apply the best available science and balanced, conservation based management	<p>Try to choose areas that have the necessary biological and physical characteristics needed to support the natural biological diversity of a coral reef ecosystem.</p> <p>Try to choose areas that, when restored, will support the natural ecological processes of a coral reef ecosystem.</p> <p>Try to choose areas that are accessible to ensure restoration/research activities and potential promotion of public engagement.</p>
Biodiversity & Habitat	<p>To improve the diversity of natural biological communities in the Florida Keys to protect, and, where appropriate restore and enhance natural habitats, populations and ecological processes overall in each of these sub regions Tortugas, Marquesas, Lower, Middle, and Upper Keys.</p> <p>Improve/maintain the condition of the biologically structured habitats.</p> <p>Increase abundance and condition of selected key species including in-shore patch reefs, mid-channel patch reefs, off-shore patch reef, and reef margin/fore reef.</p>	<p>Try to choose areas that contain a range of natural biological diversity and habitats necessary to sustain that biodiversity and support ecological processes in coral reef ecosystems.</p> <p>Select areas in each of the sub-regions relevant to coral reef ecosystems (Tortugas, Marquesas, Lower, Middle, and Upper Keys).</p> <p>Select areas that improve/maintain the condition of biologically structured coral reef ecosystems across the range of coral reef ecosystem habitat types (in-shore patch reefs, mid-channel patch reefs, off-shore patch reef, and reef margin/fore</p>

		reef).
Sustainability / Connectivity	Protect large, contiguous, diverse and interconnected habitats that provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life and protect and preserve all habitats and species.	Try to choose areas that contribute to protecting large contiguous, diverse and interconnected habitats that provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life.
Sufficient Size	<i>**Identify areas of sufficient size to achieve the goals of active coral reef ecosystem restoration.</i>	Try to choose areas that contribute to protecting large contiguous, diverse and interconnected coral reef ecosystem habitats. Try to choose areas that provide the area necessary to realize significant coral reef ecosystem restoration, include a range of coral reef ecosystem habitat types, and allow for a range of research/restoration activities to be conducted.
Allowable uses/ compatible uses	Minimize conflicts among uses compatible with the National Marine Sanctuary. Prevent heavy concentrations of uses that degrade Sanctuary resources.	Try to choose areas and craft regulations with the primary objective of coral reef ecosystem restoration and that minimize adverse impacts from human uses and promote achieving the above criteria. Try to choose areas and craft regulations that minimize user conflict and prevent use related impacts to coral reef ecosystem restoration efforts or that further degrade Sanctuary resources. Try to choose areas that are accessible to ensure restoration/research activities and potential promotion of public engagement.
Reference Area/ Monitoring Sites	Provide undisturbed monitoring sites for research and control sites to help determine the effects of human activities.	Try to choose areas that would serve as undisturbed monitoring sites for research, and control sites to help determine the effects of human activities. Try to choose areas that contribute to protecting large contiguous, diverse and interconnected habitats that provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life.
Enforcement/ compliance	<i>**Try to choose areas and craft regulations that would facilitate enforcement and encourage compliance.</i>	Try to choose areas and craft regulations that would facilitate enforcement and encourage compliance. Try to choose areas and craft regulations that would promote public engagement, education, and support of the goals of coral reef ecosystem restoration zones.

Objective 2: Identify regulatory impediments and appropriate permitting conditions for active restoration of coral reef ecosystem species

- Develop an On-line Permitting System (May be restricted by Office of Management and Budget rule related to collection of Personal Identifiable Information)
 - All agencies that are involved can review
 - Central reporting

- Information exchange
- Project status
- Simple process to extend, renew, or adapt permit
- Create and utilize an interdisciplinary advisory committee
 - To guide the permit process.
 - Create a more collaborative process for developing restoration work and reviewing prior to submitting for permitting
 - Develop restoration criteria that can be used for all groups
 - Develop best management practices
 - Identify the range of potential activities and species that will be affected; both direct and indirect to inform the FKNMS Environmental Impact Statement
 - Permitting should allow for innovative/ adaptive restoration techniques
 - During site selection and permitting, managed access options selected should consider use and impact to various user groups.
 - Permitting agencies should review permit for impact to various uses and user groups.
- Streamline permit process
 - Allow for simple modifications
 - Potential ease of permitting if locations are predetermined
 - Establish “qualified” practitioner permitting requirements
 - Consider extending the length of permit period. Consider streamlining permit renewals
 - Consider more rapid ability to permit projects particularly when funding is time sensitive
- Consider use of the FKNMS permit through which “qualified” practitioners could operate (general Programmatic Environmental Impact Statement exists)
- Permitting should allow for innovative/ adaptive restoration techniques

Objective 3: Identify adaptive management measures and criteria for opening areas closed for restoration purposes

Adaptive management is used as a systematic process for improving environmental management policies and practices and emphasizes the need to change with the environment and to learn from doing. Adaptive management will be applied to managing active coral reef ecosystem restoration zones within the FKNMS to change the status of existing zones and to add new zones as needed based on clear goals, objectives and adaptive management triggers.

I: Restoration / Research Goals & Objectives

Coral reef ecosystem restoration zones, when established, will have clear goals and objectives. These goals and objectives are intended to provide guidance for managing the zones and changing the management and access restrictions as appropriate. Goals and objectives will be specific to each zone and/or site.

II: Adaptive Management Triggers and Criteria

The following could provide a change in management of current active coral reef ecosystem restoration zones or provide the trigger to designate a new zone for active coral reef ecosystem restoration.

- New technology is developed that allows more species to be considered within the restoration scheme and/or new types of restoration activities to be conducted
- Change in the listing status of a species under the Endangered Species Act
- Changes in condition of an existing restoration zone or other area of FKNMS. Types of changes could include:
 - vessel grounding/anchoring
 - algae outbreak
 - invasive species
 - cold weather
 - storms
 - disease

- bleaching
 - other human impacts (e.g., oil spills)
- Some measurable goals and/or objectives that were set as part of the restoration plan has been met
- Restoration effort fails to the point that the site is determined unsuitable for further restoration efforts.

III: Adaptive Management Response

Once the particular adaptive management triggers or criteria are met, a range of adaptive management responses could be implemented including:

- Change the access options based on shifting needs of restoration efforts (see Management and Access Options for details)
 - Restrict activities that could impact success of restoration activities
 - Restrict access during times of restoration effort
 - Restrict access (i.e. potentially closed) to allow for undisturbed monitoring sites for research and control sites to help determine the effects of human activities. (SAC Goal B.3)
 - Lift restrictions
- Monitor restoration zones to help increase understanding of the contribution of various stresses to the restored natural resources.

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REGION	LOCATION	Habitat Type - Goals & Objectives	Habitat Description	Resources Present/Condition	Existing Access Restrictions	Working Group Comments / Site Selection Criteria	Site Information
Upper Keys	Turtle Reef, Pennekamp (East Ocean Reef)	Mid-Channel patch reef - State Waters	Aggregate Reef, Individual or Aggregated Patch Reef, Pavement, Seagrass, Unconsolidated Sediment	Acroporids: staghorn, elkhorn	<ul style="list-style-type: none"> FPS/John Pennekamp State Park Existing Management Area/Lobster Trapping Exclusion Zone No FKNMS Existing Management Area/SPA (FKNMS mooring buoys present) State Waters: 3 mooring buoys in Pennekamp, (5 installed/ maintained by FKNMS) 	<ul style="list-style-type: none"> East of Ocean Reef (circled, aka Turtle Rocks) Minimal use - low visitation Historic presence of Acroporids: staghorn, elkhorn FKNMS Vessel Grounding Restoration site: <i>Bad Boyz</i> FKNMS CREMP monitoring program thermograph station; existing long-term monitoring data available 	A mid-channel patch reef managed as part of the FPS John Pennekamp Coral Reef State Park. The site is a linear complex of aggregated coral patch reefs, located approx. 3.1 nm southeast of Ocean Reef Club within State waters. Accessible from Ocean Reef and Card Sound via Angelfish Creek, it is visited primarily by Ocean Reef residents and charter operators conducting baitfishing activity on the backreef. The proposed site partially overlaps the no lobstering zone, so consumptive activities are limited.
Upper Keys	Carysfort Reef - North	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Individual or Aggregated Patch Reef, Pavement, Seagrass, Unconsolidated Sediment	Acroporids present: staghorn, elkhorn; degraded Acroporids, recovering, recruitment - elkhorn	<ul style="list-style-type: none"> Existing Management Area: SPA is the largest (1.5 nm2) 	<ul style="list-style-type: none"> Minimal use - low visitation, hard to get to/remote Permitted/Coral Restoration Foundation - outplant sites Historic presence of Acroporids: elkhorn, staghorn; degraded but recruitment underway, recovering FKNMS Vessel Grounding Restoration sites; vessel grounding hot spot FKNMS CREMP, CDC monitoring program stations, thermograph station; existing long-term monitoring data available 	Carysfort/South Carysfort Reef is one of the best developed reef systems in the Keys and is the largest of all SPAs. It contains a spur and groove reef, including well-developed stands of elkhorn coral, patch reefs and rubble. Historic Carysfort Lighthouse nearby, the site is located 5.6 nm off Key Largo. Accessible from Ocean Reef and Card Sound via Angelfish Creek. Some diving and fishing occur in the area, but little conflict among users.
Upper Keys	Elbow Reef, North Elpis	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Unconsolidated Sediment	Acroporids: staghorn, elkhorn; degraded, vessel grounding - restoration monitoring data available as of 2008; Acroporid research data available	<ul style="list-style-type: none"> Adjacent and outside Existing Management Area: SPA (0.3 nm2) 	<ul style="list-style-type: none"> Low use - Low visitation Permitted/Coral Restoration Foundation - outplant sites Close to existing nursery Historic presence of Acroporids: elkhorn, staghorn FKNMS Vessel Grounding Restoration site: <i>Elpis</i>, degraded Long-term restoration monitoring site, existing data available as of 2008 Known long-term research stations; Acroporid research data available 	A well-defined spur and groove reef with healthy deepwater corals. The SPA located 5.5 nm off Key Largo, and 5 nm east of Rattlesnake Key. The SPA includes reef crest, rubble horns and extends out to the 30' depth contour. Lobster, ballyhoo fishermen use the area, significant recreational fishing adjacent to, and seaward of the reef. Minimal conflict between users, because not heavily used. The proposed site encompasses the <i>Elpis</i> grounding restoration site.
Upper Keys	Key Largo Dry Rocks	Reef Margin/Fore Reef	Individual or Aggregated Patch Reef, Pavement, Seagrass, Unconsolidated Sediment		<ul style="list-style-type: none"> Existing Management Area: SPA is very small (0.05 nm2) 	<ul style="list-style-type: none"> High use - heavy visitation; rough weather - high windy day use Permitted/Coral Restoration Foundation - existing outplanting sites Historic presence of Acroporids: elkhorn, staghorn Anchoring issues need to be addressed, in seagrass area FKNMS Permitted Restoration site FKNMS Vessel Grounding sites; vessel grounding hot spot - degraded 	A small spur and groove fore reef with stands of elkhorn coral (historically), and home to the "Christ of the Deep" statue. The SPA is ringed with mooring buoys, and located approx. 4.6 nm east of El Radabob Key, off Key Largo, seaward of Higdon's Reef/White Banks, extending to the 30-foot depth contour. The site has excellent accessibility from Key Largo's Port Largo, and Largo Sound via North and South Sound Creeks and hosts commercial diving, snorkeling and fishing activities.
Upper Keys	French Reef	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment	Acroporids present: staghorn, elkhorn; Acroporid research data available	<ul style="list-style-type: none"> Existing Management Area: SPA is small (0.1 nm2) Existing Management Area: NOAA NMFS Lobster Trapping Exclusion Zone (portion outside SPA) 	<ul style="list-style-type: none"> Heavy use area Permitted/Coral Restoration Foundation - existing outplanting sites Historic presence of Acroporids: elkhorn, staghorn FKNMS Permitted Restoration sites FKNMS Vessel Grounding Restoration site Known long-term research stations; Acroporid research data available 	The spur and groove reef includes rubble fields to the 60-foot depth contour, and contains many caves and arches. The SPA is located 6 nm off Key Largo. The site has excellent accessibility from Key Largo's Port Largo, and Largo Sound via North and South Sound Creeks and hosts commercial diving, snorkeling and fishing activities. Lobster fishermen use the surrounding areas.
Upper Keys	Molasses Reef	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment	economic data available	<ul style="list-style-type: none"> Existing Management Area: SPA (0.3 nm2) 	<ul style="list-style-type: none"> Heavy use, highest visitation (next to Sand Key) Economic data available (51 K visitors/year) Area of concentrated charter dive operators' use Permitted/Coral Restoration Foundation - existing outplanting sites Closer proximity to existing coral nursery FKNMS CREMP, CDC monitoring program stations, thermograph stations; existing long-term monitoring data available (extensive) 	A spur and groove reef that includes a significant number of boulder corals and a deep wall. Located 6 nm off Key Largo, adjacent to the historic Molasses Reef Light and the south white shoal marker. The SPA is highly accessible from Key Largo's Port Largo, and Largo Sound via North and South Sound Creeks and the most heavily visited reef in the Upper Keys for diving. It serves to reduce diver and hook-and-line fishermen conflicts.
Upper Keys	Molasses Reef - North Wellwood Restoration	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Unconsolidated Sediment	Acroporids present: staghorn, elkhorn; monitoring data available; degraded, vessel grounding	<ul style="list-style-type: none"> Existing Management Area: SPA (0.3 nm2) 	<ul style="list-style-type: none"> Low use, low visitation Permitted/Coral Restoration Foundation - existing outplanting sites Closer proximity to existing coral nursery Historic presence of Acroporids: elkhorn, staghorn FKNMS Vessel Grounding Restoration site: <i>M/V Wellwood</i>, degraded Long-term restoration monitoring site, existing data available FKNMS CREMP, CDC monitoring program stations, thermograph stations; existing long-term monitoring data available (extensive) 	A spur and groove reef that has been heavily degraded by a large ship grounding. Located 6 nm off Key Largo, adjacent to the historic Molasses Reef Light and the north white shoal marker. The SPA is highly accessible from Key Largo's Port Largo, and Largo Sound via North and South Sound Creeks. The north end is visited less frequently and has undergone several phases of structural and biological restoration since the grounding injury in 1984.

REGION	LOCATION	Habitat Type - Goals & Objectives	Habitat Description	Resources Present/Condition	Existing Access Restrictions	Working Group Comments / Site Selection Criteria	Site Information
Upper Keys	Snapper Ledge	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Unconsolidated Sediment	Acroporids present: staghorn, elkhorn; active restoration; good condition	<ul style="list-style-type: none"> No FKNMS Existing Management Area/SPA (2 mooring buoys present, installed/maintained by FKNMS) Existing Management Area: NOAA NMFS Lobster Trapping Exclusion Zone 	<ul style="list-style-type: none"> Heavy use - by divers, charter operators Permitted/Coral Restoration Foundation - Nursery and existing outplanting sites Historic presence of Acroporids: elkhorn, staghorn Source of parent colonies for nurseries FKNMS Permitted Restoration sites 	This patchy spur and groove reef is a popular site with the dive operators. Located 5.4 nm off Tavernier, just southwest of Pickles Reef. CRF began its Snapper Ledge elkhorn nursery in 2009, and has proven successful producing hundreds of elkhorn colonies a year. Known for it's large population of Snapper often seen at the northwest tip of the patch. In addition to charter dive and fishing operators, the site is used by recreational divers and fishermen.
Upper Keys	Hen and Chickens	Mid-Channel patch reef	Individual or Aggregated Patch Reef, Pavement, Seagrass	Mountain star, boulder corals; degraded - cold spells; Acroporids: Elkhorn	<ul style="list-style-type: none"> Existing Management Area: SPA is small (0.2 nm2) 	<ul style="list-style-type: none"> High use - heavy visitation Cold spell 2010 mortality - degraded (also 1970) Vulnerable to extreme temperatures Historic presence of Acroporids: elkhorn, staghorn Mountainous star, boulder corals present FKNMS monitoring program thermograph station; existing long-term monitoring data available 	A unique mid-channel patch reef complex with mounds of star corals showing signs of damage/decline. The SPA is 2 nm off Plantation Key, in the middle of Hawks Channel. It is easily accessible, with mooring buoys, and a high-use, low-conflict zone. Commercial and recreational snorkelers and divers are the primary users.
Upper Keys	Davis Reef	Reef Margin/Fore Reef (Transitional, low relief)	Aggregate Reef, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment		<ul style="list-style-type: none"> Existing Management Area: SPA is small (0.2 nm2) (Research Closure suggested) 	<ul style="list-style-type: none"> Heavy use area Permitted/FWRI Restoration - Nursery, existing outplanting sites and active research site Historic presence of Acroporids FKNMS Permitted Restoration sites 	Low-relief transitional reef with well-developed gorgonian coral. The SPA, located 4 nm off Plantation Key, helps to protect unique deepwater corals. It is easily accessible and heavily used. Used by Islamorada's divers, recreational fishermen, a few tropical fish collectors, and commercial fishermen offshore.
Middle Keys	Cheeca Rocks	Inshore Patch Reef	Aggregate Reef, Individual or Aggregated Patch Reef, Scattered Coral/Rock in Unconsolidated Sediment, Seagrass	degraded, vessel groundings	<ul style="list-style-type: none"> Existing Management Area: SPA is small (0.05 nm2) 	<ul style="list-style-type: none"> Permitted/Coral Restoration Foundation - outplant sites FKNMS Permitted Restoration sites FKNMS Vessel Grounding Restoration sites; vessel grounding hot spot - degraded 	The SPA is the only zone in the Middle Keys designated to protect inshore patch reefs. Located 0.5 nm off Upper Matecumbe Key (Islamorada). An easily accessible site, heavily used, especially by visitors to Cheeca Lodge. Primary uses include diving, snorkeling and education. No major consumptive users, a few tropical fish collectors displaced.
Middle Keys	South of Lower Matecumbe	Reef Margin/Fore Reef	Individual or Aggregated Patch Reef, Pavement, Seagrass, Unconsolidated Sediment	Acroporids: staghorn	<ul style="list-style-type: none"> No FKNMS Existing Management Area/SPA Existing Management Area: NOAA NMFS Lobster Trapping Exclusion Zone 	<ul style="list-style-type: none"> Permitted/Coral Restoration Foundation - existing outplanting sites Historic presence of Acroporids: staghorn FKNMS Permitted Restoration sites 	A linear reef margin complex located 4.4 nm south of Upper Matecumbe Key, 3.8 nm southeast of Lower Matecumbe and approx. 1.5 nm southwest of Alligator Reef Light. Habitat consists of aggregate patch reefs with transitional, intermediate reef characteristics of a very faint drowned spur and groove reef that tapers off to deep reef. This reef type is typical of the Middle Keys, marking the geological transition from the shallower reefs of the Upper Keys. Consumptive activities allowed, except within lobster trapping exclusion zones.
Middle Keys	Caloosa Rocks	Inshore Patch Reef	Individual or Aggregated Patch Reef, Pavement, Seagrass		<ul style="list-style-type: none"> No FKNMS Existing Management Area/SPA 	<ul style="list-style-type: none"> Mountainous star, boulder corals present 	An inshore patch reef consisting of a complex of large mounds of star coral. The site is located 0.7 nm southeast of the southern tip of Lower Matecumbe Key, along the inside edge of Hawks Channel and encompasses a portion of the seagrass community nearby. Consumptive activities are allowed, heavily used by recreational fishermen and charter fishing operators out of Islamorada.
Middle Keys	Tennessee Reef	Reef Margin/Fore Reef	Aggregate Reef, Pavement	Acroporids: staghorn	<ul style="list-style-type: none"> Existing Management Area: Research Only designated special-use zone (0.2 nm2) No mooring buoys present 	<ul style="list-style-type: none"> Historic presence of Acroporids: staghorn Deep Reef Spur and Groove FKNMS CREMP monitoring program stations, thermograph station; existing long-term monitoring data available 	A deep, drowned spur and groove reef, extending seaward to the 30-foot depth contour encompassing unique deepwater, slow-growth corals and sponges. A "Research Only" zone located 4 nm south of Long Key. A low-use, inaccessible site with no mooring buoys, not a prime dive spot. Located in the path of Florida Bay waters and also an area with good water quality. Fishing and lobster trapping inshore.
Middle Keys	South of Little Duck Key	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Seagrass, Unconsolidated Sediment		<ul style="list-style-type: none"> No FKNMS Existing Management Area/SPA 	<ul style="list-style-type: none"> Large rectangle, multiple reefs FKNMS Maritime Heritage Program research & Shipwreck Trail site: <i>Adeline Baker</i> shipwreck; one spar buoy and a single mooring buoy present, installed/maintained by FKNMS 	A linear reef margin complex along the southwest end of the proposed zone that fringes an intermediate to deep, drowned spur and groove reef system exhibiting transitional reef features. Three additional reef margin features to the northeast along the reef tract are included, also exhibiting the same drowned spur and groove system. The site is located just seaward of the <i>Adeline Baker</i> shipwreck, and 4 nm south-southeast of Duck Key. Consumptive activities are allowed.

REGION	LOCATION	Habitat Type - Goals & Objectives	Habitat Description	Resources Present/Condition	Existing Access Restrictions	Working Group Comments / Site Selection Criteria	Site Information
Middle Keys	Coffins Patch	Offshore Patch Reef	Aggregate Reef, Individual or Aggregated Patch Reef, Reef Rubble, Seagrass, Unconsolidated Sediment	Pillar coral present	<ul style="list-style-type: none"> Existing Management Area: SPA (0.4 nm²) 	<ul style="list-style-type: none"> Permitted/TNC - FWRI Restoration Site - existing outplanting sites Pillar corals present here, significant population 	Characteristic of an offshore patch reef, the reef includes rare pillar coral, other unique corals and a rubble field on the back reef. The SPA is located 4 nm south of Grassy Key or southeast of Key Colony Beach. It's easily accessible, low-use and visited by divers, and formerly recreational fishermen, treasure hunters and tropical fish collectors.
Middle Keys	South of Key Colony Beach/Marker 48 Reef	Mid-Channel Patch Reef	Individual or Aggregated Patch Reef, Pavement, Seagrass, Unconsolidated Sediment		<ul style="list-style-type: none"> No FKNMS Existing Management Area/SPA (FKNMS mooring buoys present, 3 are installed/maintained by FKNMS) 	<ul style="list-style-type: none"> FKNMS Grounding Restoration Site: concrete debris removal Approx. 1 nm north of Permitted/TNC-FWRI Restoration/Nursery, outplant site; and Pillar coral restoration research site FKNMS CREMP monitoring program stations; existing long-term monitoring data available 	A mid-channel patch reef system of individual and clusters of aggregated coral heads with distinct halos surrounded by a dense seagrass community. The site is located approx. 1.4 nm south of the tip of Key Colony Beach and encompasses "Marker 48" along the edge of Hawks Channel. The reef is adjacent to red daymarker 48, and is easily accessible to residents of Key Colony beach, and Marathon via Vaca Cut. Consumptive activities are allowed.
Middle Keys	Delta Shoal	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment		<ul style="list-style-type: none"> No FKNMS Existing Management Area/SPA No mooring buoys present 	<ul style="list-style-type: none"> Permitted/TNC - FWRI Restoration Site - existing outplanting sites FKNMS Permitted Restoration site: Diadema research, (FWC/FWRI) FKNMS Maritime Heritage Program & Shipwreck Trail site: <i>North American</i> shipwreck; one spar buoy and a single mooring buoy present, installed/maintained by FKNMS 	A spur and groove fore reef, with a prominent rubble berm, that drops off as an intermediate, drowned spur and groove reef to the 30-foot depth contour. The site is located approx. 3.3 nm south of Boot Key (Marathon), and 1 nm northeast of the historic Sombrero Lighthouse. Used heavily by recreational, charter and commercial fishermen and divers, consumptive activities are allowed.
Middle Keys	Sombrero Key	Reef Margin/Fore Reef	Spur and Groove, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment		<ul style="list-style-type: none"> Existing Management Area: SPA is small (0.2 nm²) 	<ul style="list-style-type: none"> FKNMS Vessel Grounding site: <i>Corinthia</i> FKNMS CREMP, CDC monitoring program stations, thermograph station; existing long-term monitoring data available 	A spur and groove reef with stands of elkhorn, reef crest and rubble field. The SPA is located 3.5 nm seaward of Boot Key (Marathon), and includes the historic Sombrero Lighthouse. Diving and snorkeling occurs in this high-use area. Catch-and-release trolling allowed, recreational fishing off the back and sides of the reef, commercial fishing seaward. The SPA serves to reduce diver and recreational fishing user conflicts.
Lower Keys	Newfound Harbor SPA S/V Bateau Duhe Voyager - Bela Zeky Restorations	Inshore Patch Reef	Individual or Aggregated Patch Reef, Pavement	boulder corals, Acroporids present: elkhorn; degraded - vessel groundings, cold spell	<ul style="list-style-type: none"> Existing Management Area: SPA is small (0.1 nm²), proposed sites are within, and outside 		This SPA is the only inshore patch reef complex protected in the Lower Keys, and contains a series of nearshore patch reefs located less than 0.5 nm from the entrance of Newfound Harbor. It is centered on two patch reefs along the shoreline of the western Newfound Harbor Keys, adjacent to flashing red channel marker 50, with the seaward extent along the 18-foot depth contour. Good accessibility, low user numbers, but a high-use area for environmental education, and formerly bait fishing, and spearfishing.
Lower Keys	Looe Key Reef SPA R/V Columbus Iselin Restoration	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Reef Rubble, Unconsolidated Sediment	Acroporids present: staghorn, elkhorn; degraded - hurricanes, disease, vessel groundings	<ul style="list-style-type: none"> Existing Management Area: SPA (0.3 nm²) 	<ul style="list-style-type: none"> High use, heavy visitation, heavily utilized; 38 mooring buoys, 2-3 boats per buoy during periods of high use Historic presence of Acroporids: elkhorn, staghorn; degraded - hurricanes, diseases FKNMS Vessel Grounding Restoration site: R/V <i>Columbus Iselin</i>, mooring buoy #17 spur; long-term restoration monitoring site, existing data available FKNMS Vessel Grounding sites; vessel grounding hot spot - degraded FKNMS CREMP, CDC monitoring program and known long-term research stations, thermograph stations; ongoing research and existing long-term monitoring data available (extensive) 	A classic shallow spur and groove reef, the SPA expands protection to include transitional, intermediate reefs seaward to the 45-foot depth contour line, and a large seagrass community bordered by rubble fields and horns landward. It's located 5.5 nm south of Ramrod Key, 8.8 nm southwest of Bahia Honda Key, is easily accessible and well-marked by flashing red reef light/marker 24.
Lower Keys	American Shoal Reef	Reef Margin/Fore Reef		Acroporids present: staghorn	<ul style="list-style-type: none"> No FKNMS Existing Management Area/SPA No mooring buoys present Existing Management Area: NOAA NMFS Lobster Trapping Exclusion Zone, encompassed within proposed site 	<ul style="list-style-type: none"> Permitted/Mote Marine Lab Restoration Site - existing outplanting sites Historic presence of Acroporids: staghorn, <i>Acropora</i> rubble present 	A faint spur and groove reef, representing an extensive transitional, intermediate reef, including a large back reef rubble zone and large northwest rubble horn. Historic American Shoal Lighthouse nearby, the reef is located 5.5 nm south of Sugarloaf Keys, and 6.6 nm west of Looe Key. Consumptive activities other than lobster trapping (within zoned portion) are allowed.

REGION	LOCATION	Habitat Type - Goals & Objectives	Habitat Description	Resources Present/Condition	Existing Access Restrictions	Working Group Comments / Site Selection Criteria	Site Information
Lower Keys	Pelican Shoal	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Reef Rubble, Land, Seagrass, Unconsolidated Sediment		<ul style="list-style-type: none"> • FKNMS Wildlife Management Area, no FKNMS SPA present 	<ul style="list-style-type: none"> • Historic presence of Acroporids: extensive, acres • Potential upstream recruitment for the rest of the Middle, Upper Keys • FKNMS Vessel Grounding sites present 	A faint, drowned spur and groove reef adjacent to the Wildlife Management Area, designated over the small rubble island important for nesting birds. Located 4.4 nm southeast of Boca Chica Key, 4.8 nm south of Saddlebunch Keys. No access restriction extends 50 meters offshore (April 1-August 31). Consumptive activities are allowed (observe no access rules).
Lower Keys	Boca Chica Patch Reefs	Inshore Patch Reef	Aggregate Reef, Individual or Aggregated Patch Reef, Pavement, Seagrass, Unconsolidated Sediment	Acroporids present, but died 2010 - staghorn; degraded - cold spell, vessel groundings	<ul style="list-style-type: none"> • No FKNMS Existing Management Area/SPA • No mooring buoys present 	<ul style="list-style-type: none"> • Low use • Cold spell 2010 mortality - <i>Acropora cervicornis</i> • Vulnerable to hot and cold weather • Historic presence of Acroporids: staghorn, degraded • Mountainous star, boulder corals present • FKNMS Vessel Grounding Restoration site: <i>Lagniappe</i>; vessel grounding hot spot - degraded; also the <i>Whiz</i> and an orphan grounding site 2012 • FKNMS CREMP monitoring program stations nearby; existing long-term monitoring data available (Jaap Reef - GPS coordinates available) 	An extensive complex of inshore patch reefs that includes individual and large aggregated clusters of star and brain boulder corals. Located along the Boca Chica beach shoreline, the patch reefs are approx. 0.5 nm offshore, with the southwest end of the patch just northeast of flashing red channel marker 56 marking the edge of Hawks Channel. The site is utilized mostly by nearby residents of Boca Chica Key, Tamarac Park, and Geiger Key for snorkeling, kayaking, fishing and spearfishing. Consumptive activities are allowed.
Lower Keys	Hawk Channel Patch Reefs 1 East of W. Sambos ER	Mid-Channel Patch Reef	Aggregate Reef, Individual or Aggregated Patch Reef, Pavement, Seagrass, Unconsolidated Sediment	good condition	<ul style="list-style-type: none"> • No FKNMS Existing Management Area/SPA • No mooring buoys present 	<ul style="list-style-type: none"> • Large polygon north of Middle Sambos, Eastern Sambos, and Pelican Shoal; also south of Boca Chica Patch Reefs • Big coral heads in good condition • FKNMS CREMP monitoring stations nearby; existing long-term monitoring data available (West Washerwoman Shoal, northeast - GPS coordinates available) 	A large area encompassing an extensive mid-channel patch reef system, consisting of individual and clusters of aggregated coral heads with distinct halos surrounded by dense seagrass communities and hardbottom areas. The site is located approx. 2 nm south of Boca Chica Key, and 2.3 nm south of Tamarac Park/Geiger Key and the southern tip of Saddlebunch Keys, and just west of West Washerwoman shoal, in the middle of Hawks Channel. The complex includes healthy boulder corals, rarely visited due to poor visibility. Commercial lobster fishermen use the area extensively. Consumptive activities are allowed.
Lower Keys	Western Sambo 1 (larger general EMA)	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Individual or Aggregated Patch Reef, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment	Acroporids present: Elkhorn, staghorn; degraded - vessel groundings	<ul style="list-style-type: none"> • Existing Management Area: Ecological Reserve (9 nm²) 	<ul style="list-style-type: none"> • Permitted/FKCC-Coral Restoration Foundation - existing outplanting sites • Historic presence of Acroporids: elkhorn, staghorn - degraded • FKNMS Permitted Restoration site: FL Aquarium and FKNMS - <i>Miss Beholden</i> vessel grounding; existing long-term monitoring data available • FKNMS Vessel Grounding Restoration sites: <i>Jacqueline L, Connected</i> - degraded; monitoring data available as of 2009 • FKNMS Vessel Grounding sites; vessel grounding hot spot - degraded • FKNMS CREMP, CDC monitoring program stations, thermograph stations; existing long-term monitoring data available 	A well developed spur and groove reef, part of an FKNMS Ecological Reserve that includes the greatest habitat diversity in the Lower Keys. The fore reef proposed zone is located 4.3 nm south of Boca Chica Key at the southern tip of the ER, west of Eastern and Middle Sambos Reefs, in a region of the Keys that has (historically) some of the best water quality along the reef tract. Protection displaced lobster fishermen, commercial and recreational fishermen, tropical marine life collectors and spearfishing. Consumptive activities are allowed only in the portions of this proposed zone that lie outside, or south and west of the ER.
Lower Keys	Western Sambo 2 (West End) JACQUELINE L, CONNECTED Restorations	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Reef Rubble, Seagrass	Acroporids present: Elkhorn, staghorn; existing data available - 2009	<ul style="list-style-type: none"> • Existing Management Area: Ecological Reserve (9 nm²) 	<ul style="list-style-type: none"> • Historic presence of Acroporids: elkhorn, staghorn - degraded • FKNMS Vessel Grounding Restoration sites: <i>Jacqueline L, Connected</i> - degraded; monitoring data available as of 2009 • FKNMS Vessel Grounding sites; vessel grounding hot spot - degraded • FKNMS CREMP, CDC monitoring program stations, thermograph stations; existing long-term monitoring data available 	A well developed spur and groove reef, part of an FKNMS Ecological Reserve that includes the greatest habitat diversity in the Lower Keys. The fore reef proposed zone is located 4.3 nm south of Boca Chica Key at the southern tip of the ER, west of Eastern and Middle Sambos Reefs, in a region of the Keys that has (historically) some of the best water quality along the reef tract. This proposed zone is focused on the west end of the shallow fore reef and reef crest, degraded by vessel grounding injuries and heavily used by the charter diving and snorkeling operators.
Lower Keys	Key West Patch Reefs	Inshore Patch Reef	Artificial, Aggregate Reef, Pavement, Land, Seagrass, Unconsolidated Sediment		<ul style="list-style-type: none"> • No FKNMS Existing Management Area/SPA 	<ul style="list-style-type: none"> • Mountainous star, boulder corals present • Inshore Patch Reef - selection criteria consideration • Large polygon south of Trumbo Point NAS, Casa Marina, the Key West Int'l Airport and Stock Island, extending to Boca Chica Channel • FKNMS Vessel Grounding sites present 	A large complex of inshore patch reefs, encompassing an extensive area along the shoreline of Key West extending from Boca Chica Channel to the Trumbo Point Navy Base seaward to the edge of Hawks Channel. Patch reefs are located from 0.3 to 0.7 nm offshore. Consumptive activities are allowed.

REGION	LOCATION	Habitat Type - Goals & Objectives	Habitat Description	Resources Present/Condition	Existing Access Restrictions	Working Group Comments / Site Selection Criteria	Site Information
Lower Keys	Eastern Dry Rocks 1 (general SPA area)	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Reef Rubble, Seagrass, Unconsolidated Sediment	Acroporids present: Elkhorn, Staghorn; active natural recruitment	● Existing Management Area: SPA is small (0.1 nm2)	<ul style="list-style-type: none"> ● Permitted/FKCC-Coral Restoration Foundation - existing outplanting sites ● Coral Nursery needed nearby ● Historic presence of Acroporids: elkhorn, staghorn; extensive, acres - degraded; active natural recruitment, especially backreef area ● FKNMS Vessel Grounding sites present 	A spur and groove bank reef, the SPA is located between the 4-foot-deep reef flat area and 30-foot depth contour, 5.2 nm southwest of Key West. The reef is easily accessible from Key West, and of high economic value to the charter fishing, sportfishing, diving and lobster fishing communities. High user conflicts are reduced by SPA designation.
Lower Keys	Rock Key 1 (general SPA area)	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment	Acroporids present: Elkhorn, Staghorn	● Existing Management Area: SPA is small (0.1 nm2)	<ul style="list-style-type: none"> ● Permitted/FKCC-Coral Restoration Foundation - existing outplanting sites ● Coral Nursery needed nearby ● Historic presence of Acroporids: elkhorn, staghorn; extensive, acres - degraded ● FKNMS Vessel Grounding sites present: <i>Island Diver</i>; vessel grounding hot spot - degraded ● FKNMS Vessel Grounding & Restoration sites: <i>Italian Stallion, Paradiso</i> restoration site; existing restoration monitoring data available ● FKNMS CREMP, CDC monitoring program stations; existing long-term monitoring data available 	A spur and groove bank reef, the SPA is located between the reef crest and 30-foot depth contour, 5.8 nm southwest of Key West. The reef is easily accessible from Key West, and of high economic value to the charter fishing, sportfishing, diving and lobster fishing communities. High user conflicts are reduced by SPA designation.
Lower Keys	Sand Key 1 (general SPA area)	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Individual or Aggregated Patch Reef, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment	Acroporids present: Elkhorn, Staghorn	● Existing Management Area: SPA (0.5 nm2)	<ul style="list-style-type: none"> ● Permitted/FKCC-Coral Restoration Foundation - existing outplanting sites ● Coral Nursery needed nearby ● Historic presence of Acroporids: elkhorn, staghorn; extensive, acres - degraded ● FKNMS Vessel Grounding sites present ● FKNMS vessel grounding hot spot - degraded ● FKNMS CREMP, CDC monitoring program stations, thermograph station; existing long-term monitoring data available 	A spur and groove bank reef, the largest of the three Key West SPAs, sits adjacent to the historic Sand Key Lighthouse. It is located 6.5 nm southwest of Key West and extends from the reef flat to between the 30- and 60-foot depth contours. The reef is easily accessible from Key West, and of high economic value to the users. Catch and release trolling is allowed in the SPA and portions of the rubble ridges remain open to consumptive activities.
Marquesas	Cottrell Key	Backcountry, Hardbottom	Aggregate Reef, Pavement, Mangrove, Seagrass, Unconsolidated Sediment	Boulder/brain corals, Acroporids present: staghorn; carpet anemones; all degraded - Blackwater	● FKNMS Wildlife Management Area nearby, no FKNMS SPA present ● FKNMS mooring buoys present, installed/maintained by FKNMS	<ul style="list-style-type: none"> ● Blackwater event mortality - degraded ● Historic presence of Acroporids: staghorn; significant amounts ● Boulder, brain corals present; carpet anemones ● FKNMS Vessel Grounding site: <i>Lady Ann</i> 2011 ● A long way from any proposed nurseries 	A hardbottom area consisting of aggregate coral reef, ledges, pavement, mangroves, and seagrass communities. Located 7.2 nm northwest of Key West, 0.3 nm northwest of Cottrell Key, which is a Wildlife Management Area with a 300-foot no motor zone. The site is used primarily by charter dive operators on bad weather days.
Marquesas	Western Dry Rocks	Reef Margin/Fore Reef	Spur and Groove, Aggregate Reef, Individual or Aggregated Patch Reef, Pavement, Reef Rubble, Seagrass, Unconsolidated Sediment	Acroporid: Elkhorn, Staghorn; degraded	<ul style="list-style-type: none"> ● No Existing Management Areas present/SPA ● FKNMS mooring buoys present, installed/maintained by FKNMS 	<ul style="list-style-type: none"> ● Least visited of all outside reefs (in the Key West Area) ● Historic presence of Acroporids: formerly huge elkhorn stands, staghorn stands - degraded ● Logistically very challenging site to work 	A classic spur and groove reef that is relatively small, with a well-developed rubble horn and several mooring buoys. West of Sand Key (2.6 nm), it is located 4.8 nm south of Man Key and 8.6 nm southwest of Key West. The reef is accessible from Key West, but is visited by charter operators when visibility is better than nearby reefs. Consumptive activities are allowed.
Marquesas	Man Key Patch Reefs	Inshore Patch Reefs	Individual or Aggregated Patch Reef		● No FKNMS Existing Management Area/SPA	<ul style="list-style-type: none"> ● Mountainous star, boulder coral heads present ● Inshore Patch Reef - selection criteria consideration ● A long way from any proposed nurseries 	An aggregate of inshore patch reefs, located nearshore approximately 0.3 nm seaward of Man Key, and 6 nm west of Key West. Consumptive activities are allowed.
Marquesas	Boca Grande Patch Reef	Inshore Patch Reefs	Individual or Aggregated Patch Reef		● No FKNMS Existing Management Area/SPA	<ul style="list-style-type: none"> ● Nice coral heads ● Inshore Patch Reef - selection criteria consideration ● A long way from any proposed nurseries ● FKNMS monitoring program thermograph station: nearby; existing long-term monitoring data available (Boca Grande Channel) 	An aggregate of inshore patch reefs, located nearshore approximately 0.4 nm seaward of Boca Grande Key, and roughly 10.5 nm west of Key West. Traditionally used by spearfishermen and snorkelers. Consumptive activities are allowed.
Dry Tortugas	East of DTNP Pulaski Shoals	Coral Reef slope, hardbottom	Aggregate Reef, Unconsolidated Sediment	Acroporid: staghorn; existing data available	● No Existing FKNMS Management Areas/SPA	<ul style="list-style-type: none"> ● Low use, low visitation ● Good control site ● Historic presence of Acroporids: staghorn ● Tortugas Gyre - importance for coral reefs to the east, northeast (Marquesas, Lower, Upper, Middle Keys) ● Logistically very challenging site to work ● FKNMS monitoring program stations: Pulaski Shoals - CREMP, CDC; long-term monitoring data available 	Placeholder for work outside Dry Tortugas NP, (no reef specified). Pulaski shoal is an intermediate to deep reef slope located off the northwest corner of DTNP. It is listed due to existing data available from FKNMS monitoring programs, it being the site of the <i>C/S Mavro Vetric</i> large vessel grounding November 1989 and known historic presence of Acroporids. Consumptive activities are allowed.

REGION	LOCATION	Habitat Type - Goals & Objectives	Habitat Description	Resources Present/Condition	Existing Access Restrictions	Working Group Comments / Site Selection Criteria	Site Information
Dry Tortugas	Dry Tortugas National Park		Individual or Aggregated Patch Reef	Acroporid: staghorn; existing data available, photo-documentation	<ul style="list-style-type: none"> • NPS Existing Management Area: presently doing restoration 	<ul style="list-style-type: none"> • Historic presence of Acroporids: staghorn; anywhere less than 60 feet used to be entirely staghorn, photo-documentation available • Logistically very challenging site to work • FKNMS Monitoring program stations: multiple CREMP, CDC stations within the park; long-term monitoring data available 	(no site specified)

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APPENDIX II

Florida Keys National Marine Sanctuary Marine Zoning and Regulatory Review Shallow Water Wildlife and Habitat Protection Working Group

Recommendations for Sanctuary Advisory Council Consideration

Approved on June 11, 2013 by Shallow Water Wildlife and Habitat Protection Working Group.

Shallow Water Wildlife and Habitat Protection Objectives:

1. Evaluate existing Wildlife Management Areas for effectiveness in protecting wildlife and their habitats under current as well as emerging public uses and environmental conditions; recommend status quo, modification, and/or new areas.
2. Develop recommendations considering existing regulations and zoning – mainly use of vessel restrictions on access, anchoring, speed, and channel marking – to further protect seagrass and critical shallow water habitats in Florida Keys National Marine Sanctuary (FKNMS).
3. Address concentrated uses that diminish and destroy seagrass and shallow water habitats.
4. Identify where high impact activities known to occur should be allowed and encouraged for public and private uses.
5. Identify seagrass and shallow water habitat areas for exclusion to allow for research control areas.
6. Evaluate mangrove habitat protection for bird nesting.
7. Reduce damage to natural resources from improper vessel salvage methods.

Recommendations for long-term management of zones designed to protect shallow water wildlife and associated habitat include:

1. Establish a standing Sanctuary Advisory Council Wildlife and Habitat Protection working group.
 - a. Determine qualitative and where appropriate quantitative metrics to evaluate effectiveness of zones
 - b. Provide strategic guidance for adaptive management of zones
2. Incorporate adaptive management mechanisms for shallow water wildlife and habitat protection zones to allow for effective and adequate resource protection (bird nesting and roosting, turtle foraging and nesting, ephemeral habitat used by species of concern, etc.)
3. Recommendations for zoning and management measures to protect shallow water wildlife and associated habitats should be proactive and not limited by bureaucracy, funding, or enforcement limitations.

Recommendations for Objectives 1-6

In considering zones for shallow water wildlife and habitat protection, the working group

1. identified resources of concern,
2. determined current or potential impacts to those resources,
3. identified uses compatible with protecting those resources, and
4. Identified access restrictions intended to minimize impacts to those resources.

The working group used the following specific criteria to evaluate existing Wildlife Management Areas and make recommendations for potential modifications to the current zones and identify potential new areas:

Category	Marine Zoning Goals & Objectives	Shallow Water WG Objectives	Criteria
Biodiversity & Habitat	<p>To improve the diversity of natural biological communities in the Florida Keys to protect, and, where appropriate restore and enhance natural habitats, populations and ecological processes overall and in each of these sub regions Tortugas, Marquesas, Lower, Middle, and Upper Keys.</p> <p>Improve/maintain the condition of the biologically structured habitats.</p> <p>Increase abundance and condition of selected key species.</p>	<p>Evaluate existing Wildlife Management Areas for effectiveness in protecting wildlife and their habitats under current as well as emerging public uses and environmental conditions.</p> <p>Evaluate mangrove habitat protection for bird nesting.</p>	<p>Try to choose areas that would contain a range of shallow water natural biological diversity, ecological processes, and habitats necessary to sustain that biodiversity.</p> <p>Select areas in each of the sub-regions relevant to shallow water habitats Tortugas, Marquesas, Lower, Middle, and Upper Keys.</p>
Sustainability / Connectivity	<p>Protect large, contiguous, diverse and interconnected habitats that provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life and protect and preserve all habitats and species.</p> <p>Increase abundance and condition of selected key species.</p>	<p>Evaluate existing Wildlife Management Areas for effectiveness in protecting wildlife and their habitats under current as well as emerging public uses and environmental conditions.</p> <p>Evaluate mangrove habitat protection for bird nesting.</p>	<p>Try to choose areas that protect large contiguous, diverse and interconnected habitats that provide natural spawning, nursery, and permanent residence areas for the replenishment and genetic protection of marine life.</p>
Allowable uses/ compatible uses	<p>To facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities.</p> <p>Minimize conflicts among uses compatible with the National Marine Sanctuary.</p> <p>Prevent heavy concentrations of uses that degrade Sanctuary resources.</p>	<p>Address concentrated uses that diminish and destroy seagrass and shallow water habitats.</p> <p>Identify where high impact activities known to occur should be allowed and encouraged for public and private uses.</p> <p>Evaluate existing Wildlife Management Areas for effectiveness in protecting wildlife and their habitats under current as well as emerging public uses and environmental conditions.</p> <p>Reduce damage to natural resources from improper vessel salvage methods.</p>	<p>Try to choose areas and craft regulations with the primary objective of resource protection that minimize adverse impacts from human uses and promote achieving the above criteria.</p> <p>Try to choose areas and craft regulations that minimize user conflict and prevent heavy concentrations of uses that degrade Sanctuary resources.</p>
Socio-Economic Impacts	<p>To facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities.</p> <p>Achieve a vibrant ecologically sustainable ecosystem and economy.</p>	<p>Address concentrated uses that diminish and destroy seagrass and shallow water habitats.</p> <p>Identify where high impact activities known to occur should be allowed and encouraged for public and private uses.</p> <p>Reduce damage to natural resources from improper vessel salvage methods.</p>	<p>Try to choose areas and craft recommendations that would serve to minimize adverse socio-economic impacts on established users of resources in the areas and achieve a vibrant ecologically sustainable ecosystem and economy.</p>
Reference Area/ Monitoring *Not specifically identified by working group	<p>Provide undisturbed monitoring sites for research and control sites to help determine the effects of human activities.</p>	<p>Identify seagrass and shallow water habitat areas for exclusion to allow for research control areas.</p>	<p>Try to choose areas that would serve as undisturbed monitoring sites for research and control sites to help determine the effects of human activities.</p> <p>Research control or monitoring sites should be designed with a specific research question to be addressed and have specific criteria to determine success and length of closure.</p>
Enforcement/compliance	<p>Reduce stresses from human activities by establishing areas that restrict access to sensitive wildlife populations and habitats.</p>	<p>Develop recommendations considering existing regulations and zoning – mainly use of vessel restrictions on access, anchoring, speed, and channel marking – to further protect seagrass and critical shallow water habitats</p>	<p>Try to choose areas and craft regulations that would facilitate enforcement and encourage compliance.</p>

The following zones, associated access restrictions, and management options are recommended:

1. When considering zoning areas for shallow water wildlife and habitat consider impacts of uses including trap fishing, debris, sponge harvesting, among other uses, including ecotourism operations.
 - Conduct analysis for economic impact to existing users, balance of use and small-scale user impacts
 - Based on analysis identify zones for non-extraction (clearly define for purposes of a range of uses, including catch and release)
2. Zone Types and Access Restrictions
 - Identify zones, manage and enforce by the types of access and access restrictions compatible with the goals of natural resource protection.
[the below terms represent “purpose and intent” of access restrictions; final access restriction and definition will be consistent with State regulations]
 - Motor (distinct from navigation/access channel)
 - Motor with idle (clarify speed)
 - Pole/troll/paddle
 - Pole/troll/paddle/no motor on boat
 - Closed
 - Where possible and appropriate:
 - Use buffer zones and idle speed zones to enhance shallow water wildlife protection,
 - Ensure adequate access/transit channels between (and, if needed within) zones
 - Make larger contiguous zones (for example: Rodriguez and Dove Keys)
 - Identify and designate zones that include and protect a range of resources (for example: shallow seagrass, beach, nesting habitat, etc.)
 - Utilize non-extraction zones for shallow water wildlife protection
 - Create consistent and fair access restrictions; when one type of use is restricted, restrict all uses
 - Strive to differentiate kinds of use and any potential impact to resources from that use
 - When proposing access restrictions consider allowing uses that are compatible with shallow water resource protection goals
 - Identify and designate zones closed for research and purposes and associated reference sites:
 - Consider other comparable open sites
 - Identify and designate specific zones as reference areas
 - Monitor and assess on a regular basis (5-years) to inform adaptive management of zones
 - Identify areas of severe seagrass scarring and use this data to determine if there should be additional zoning, better channel marking, etc. in these areas to reduce these impacts;
 Updated scarring maps should be created to address this issue
 - Restoration or Restoration/Research Only areas should be considered to allow for manipulative experiments
 - When establishing research only zones, consult with user groups
 - Consider a balance of areas restricted or closed for certain high use/high impact activities (for example: if sand bar sites are closed, prioritize sites for closure and provide comparable open sites).
 - Encourage that National Wildlife Refuge take a proactive approach in managing human activity that could negatively impact near-shore and shallow water resources of concern (for example: bird nesting and roosting, turtle foraging and nesting, ephemeral habitat

used by species of concern, aquatic resources including fish and coral, etc.).

3. Marking, Mooring, and Use of Zones

- Ensure adequate marking of zones
- Allow only one vessel per mooring buoy as a management tool for access restriction
- No anchoring where mooring buoys are provided within zones for shallow water wildlife and habitat; allow for anchoring where there are safe areas to anchor and will not impact shallow water resources (recognized need to balance use and the potential unintended movement to and anchoring in other areas if anchoring is not allowed in these zones, consider potential impact to these additional areas)
- Identify what constitutes an anchor (i.e. use of push poles/power poles)
- Address managed mooring fields
- No overnight platforms, unattended vessels and equipment within zones for shallow water wildlife and habitat.
- Consider channel marking for established travel lanes where sea grass damage is prevalent and boat travel is unavoidable (gate style)
- Consider creation of "intelligent" markers. Use a color coded system to indicate depth, and perhaps even alter restrictions (ex. If a certain color is visible then idle only, another color it is closed, another open access)

4. Adaptive Management

- Incorporate adaptive management mechanisms to allow for effective and adequate resource protection (for example: bird nesting and roosting, turtle foraging and nesting, ephemeral habitat used by species of concern, aquatic resources including fish and coral, etc.)
 - Use temporal zoning as appropriate; however consider permanent zoning based on resource protection goals
 - Include buffer zones of appropriate size around key resources
 - Consider associating zone and zone restrictions with a specific type of buoy rather than lines on a map (allows buoys and zones to be moved as needed for specific resource protection goals)
- Incorporate adaptive management mechanisms that are proactive in addressing shifting and new high use and high impact activities that have a negative impact on shallow water wildlife and habitats.
 - Social gathering places or “Party Zones” should be identified and limited to their existing footprints. New emerging islands/sandbars (e.g. Wilma Key) should be immediately closed to human use. Please see tables in Appendix A for detailed recommendations for each zone.

The working group recommends that the following existing Wildlife Management Area no longer be zoned:

Little Crane Key
Pelican Shoal

The working group recommends that the following existing Wildlife Management Areas remain with no changes to size, location, or access restrictions:

Crocodile Lake
Eastern Lake Surprise
Horseshoe Key (Lower Keys)

Tidal Flat South of Marvin Key
Snipe Keys
East Harbor Key
Little Mullet Key

The working group recommends that the following existing Wildlife Management Areas be modified:

Rodriguez Key
Dove Key
Tavernier Key
Snake Creek
Cotton Key
Upper Harbor Key
East Content Keys
West Content Keys
Sawyer Keys
Mud Keys
Lower Harbor Keys
Cayo Agua Keys
Western Sambo (Ecological Reserve)
Bay Keys
Cottrell Key
Big Mullet Key
Woman Key
Boca Grande Key
Marquesas Keys

The working group recommends that the new zones be established:

Whitmore Bight/El Radabob Key/Rattle Snake Key
Barnes Sound-Shallow bays in northwest corner of Barnes Sound
Pigeon Key-Florida Bay
Ashbey/Horseshoe Key (Middle Keys)
Gulfside Banks
Moser Channel Banks
Marathon Oceanside Shoreline from Vaca Cut to Sombrero Beach and ocean facing shoreline of
Boot Key
Tarpon Wildlife Migration Lane
Little Pine Mangrove Key
Content Keys and Upper Harbor Key
Island near Torch Key
Key Lois (Loggerhead Basin)
Crane Key
Marvin Key and the Barracuda Keys
Demolition Key
Pearl Basin
Mule Key
Lakes Area (La Vina Bank)
Archer Key
East Barracouta Key Flats

West Barracouta Key Flats
Boca Grande Key to Woman Key Shallow Bank
Wilma Key
Marquesas Key

Objective 7: Reduce damage to natural resources from improper vessel salvage methods.

The working group recognizes that the overarching consideration when conducting salvage operations is to remove the vessel, ensure safety of operations, and minimize natural resource injury.

Recommendations:

Use the successful and established programs at Biscayne Bay National Park as guidance to implement a towing and salvage permit program in FKNMS.

Specific recommendations include:

- Establish a Sanctuary Advisory Council Towing and Salvage working group to focus on this issue and ensure continued dialog and coordination among the towing and salvage community and FKNMS.
- Clearly define terms (use existing/standard definitions)
 - Towing
 - Salvage
 - Derelict vessel and wreck removal
 - Include clarification of what constitutes “illegal” towing and salvage operations
- Define dynamic versus static situations to clarify requirements and response approach for salvage operations and derelict vessel removal
- Include standard operating procedures (use C-Port guidance and Biscayne National Park, United States Coast Guard (USCG), etc.)
 - Qualifications / licensing
 - Notification
 - Recovery plan
 - Standard range of equipment
- Enhance and promote partnerships among towing and salvage community as well as other managing partners (C-Port, Biscayne National Park, USCG)
 - Change culture
 - Develop best management practices/solutions
 - Create incentives for compliance, self-enforcement and education
 - Promote training
- Promote innovation of techniques
- Allow for adaptive management
 - Create mechanisms for feed-back loops that allow improvements/changes based on lessons learned from towing/salvage

Area	Purpose	Existing Access Restrictions/Regulation	Recommendation	Description of Modification	Zone Type (Consistent with State of Florida Language)	Objectives	Consensus
Existing Areas							
Crocodile Lake	Decrease disturbance of a number of threatened or endangered species including American Crocodile and West Indian Manatee.	No-access buffer zone (100 feet) along shoreline between March 1 and October 1.	Status Quo	Recommendation 1: Maintain existing restrictions. Recommendation 2: Eliminate No Access Zone and establish 300' Idle Speed/No Wake Zone Along Shoreline.	No Entry Zone (100 feet) along shoreline between March 1 and October 1. Idle Speed/No Wake Zone (100 feet) along shoreline between March 1 and October 1.	1, 2	Recommendation 1
Eastern Lake Surprise	Decrease disturbance of American Crocodile and West Indian Manatee.	Idle speed only/no-wake zone east of highway U.S. 1.	Status Quo	Maintain existing restrictions.	Idle Speed/No Wake Zone east of highway U.S. 1.	1, 2	Consensus
Rodriguez Key	Decrease disturbance of a variety of birds, bonefish, and other desirable fish species.	No-motor zone on tidal flats.	Modify	Recommendation 1: Maintain existing restrictions and establish No Anchor Zone within existing area. Recommendation 2: Keep Dove Key and Rodriguez Key as separate areas. Recommendation 3: Connect Dove Key and Rodriguez Key areas. Recommendation 4: Close area at either Rodriguez or Tavernier Key. Not tenable	No Motor Zone and establish Restricted Entry/No Anchor Zone on tidal flats. No Entry Zone on tidal flats.	1, 2, 3, 6 1, 2, 4, 6	Consider 1, 2, and 3
Dove Key	Decrease disturbance of a variety of birds, bonefish, and other desirable fish species.	No-motor zone on tidal flats; area around the two small islands closed.	Modify	Recommendation 1: Determine if closed area is appropriate. Recommendation 2: Keep Dove Key and Rodriguez Key as separate areas. Recommendation 3: Connect Dove Key and Rodriguez Key areas.	No Entry Zone 100 yards around island and No Motor Zone on tidal flats. No Entry Zone 100 yards around island and No Motor Zone on tidal flats. No Motor Zone and establish Restricted Entry/No Anchor Zone on tidal flats.	1, 2, 3, 6 1, 2, 3, 6	Consider 1, 2, and 3
Tavernier Key	Decrease disturbance of a variety of birds, bonefish, and other desirable fish species.	No-motor zone on tidal flats.	Modify	Recommendation 1: Maintain existing restrictions and establish a No Anchor Zone within the existing area. Recommendation 2: Close area at either Rodriguez Key or Tavernier Key.	No Motor Zone and establish Restricted Entry/No Anchor Zone on tidal flats. No Entry Zone on tidal flats.	1, 2, 3, 6 1, 2, 4, 6	Recommendation 1
Snake Creek	Decrease the disturbance of a variety of bird using the area for nesting/roosting/feeding and protect shallow water habitat used by bonefish, permit, tarpon, and other desirable fish species.	No-motor zone on tidal flat.	Modify	Recommendation 1: Maintain existing restrictions, expand zone to Whale Harbor Channel. Recommendation 2: Maintain existing restrictions, expand zone to Whale Harbor Channel and create Idle Speed/No Wake Zone within 300' of shoreline; allow use of transit channels.	No Motor Zone. No Motor Zone and Idle Speed/No Wake Zone within 100 yards of shoreline, with channels open to normal operation.	1, 2, 4	Recommendation 1, 2
Cotton Key	Decrease disturbance of nesting/roosting pelicans, cormorants, 4 species of herons, frigate birds, bonefish, and other desirable fish species.	No-motor zone on tidal flat.	Modify	Maintain existing No Motor Zone, extend to include bayside Whale Harbor Flats, islands, and deep channels, and establish Idle Speed/No Wake Zone in channels.	No Motor Zone with Idle Speed/No Wake Zone within existing channels.	1, 2, 6	Consensus
Horseshoe Key	Decrease disturbance of nesting White Crown Pigeon, Heron, Willet, and Osprey.	No-access buffer zone (300 feet) around main island (main island closed by Department of the Interior).	Status Quo	Maintain existing No Access Zone.	No Entry Zone 100 yards around island.	1, 2, 6	Consensus
Upper Harbor Key	Decrease disturbance of Ospreys, Frigate Birds, Double-Crested Cormorants, and wading birds.	No-access buffer zone (300 feet) around entire key.	Modify	Establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus
East Content Keys	Decrease disturbance of Herons and White Ibis.	Idle speed only/no-wake zones in tidal creeks between southwesternmost keys.	Modify	Maintain existing Idle Speed/No Wake Zone and expand to include creek and inland water complex on northern part of East Content Key.	Idle Speed/No Wake Zone.	1, 2, 6	Consensus
West Content Keys	Decrease disturbance of nesting Ospreys and wading birds.	Idle speed only/no-wake zones in selected tidal creeks; no-access buffer zone in one cove.	Modify	Maintain existing Idle Speed/No Wake Zone and establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Idle Speed/No Wake Zone in selected tidal creeks and establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus
Little Crane Key	Decrease disturbance of roosting Frigate Birds and nesting Great Egrets and Double-Crested Cormorants.	No-access buffer zone (300 feet) around entire key.	Modify	Confirm that island is gone and eliminate zone.	Eliminate zone	1, 2, 6	Consensus
Sawyer Keys	Decrease disturbance of nesting Ospreys, 11 species of wading birds, and staging area for migrant shorebirds.	Tidal creeks on south side closed.	Modify	Establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus

Area	Purpose	Existing Access Restrictions/Regulation	Recommendation	Description of Modification	Zone Type (Consistent with State of Florida Language)	Objectives	Consensus
Existing Areas							
Tidal flat south of Marvin Key	Decrease disturbance of resting shorebirds.	No-access buffer zone on tidal flat.	Status Quo	Maintain existing restrictions.	No Entry Zone.	1, 2, 3, 4	Consensus
Snipe Keys	Decrease disturbance of Little Blue Herons, Terns, and various shorebirds.	(i) Idle speed only/no-wake zone in main tidal creek; (ii) no-motor zone in all other tidal creeks.	Status Quo	Maintain existing Idle Speed/No Wake Zone and No Motor Zone.	Idle Speed/No Wake in main tidal creek and No Motor Zone in all other creeks.	1, 2, 6	Consensus
Mud Keys	Decrease disturbance of nesting and roosting Ospreys, roosting Frigate Birds, and Great White Heron rookery.	(i) Idle speed only/no-wake zones in the two main tidal creeks; (ii) two smaller creeks on west side closed.	Modify	Maintain existing Idle Speed/No Wake Zone and closed areas in creeks and establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Idle Speed/No Wake Zone in two main tidal creeks; No Entry Zones in western tidal creeks; and establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus
East Harbor Key	One of the only Bald Eagle nesting islands.	No-access buffer zone (300 feet) around northernmost island.	Status Quo	Maintain existing No Access Zone.	No Entry Zone 100 yards around island.	1, 2, 6	Consensus
Lower Harbor Keys	Decrease disturbance of nesting and roosting Great White Herons, Double-Crested Cormorants, Osprey, and other wading birds.	Idle speed only/no-wake zones in selected tidal creeks.	Modify	Maintain existing Idle Speed/No Wake Zone in creeks and establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Idle Speed/No Wake Zone in selected tidal creeks and establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus
Cayo Agua Keys	Decrease disturbance of nesting/roosting Great White Herons and Ospreys.	Idle speed only/no-wake zones in all navigable tidal creeks.	Modify	Maintain existing Idle Speed/No Wake Zone and establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Idle Speed/No Wake Zone and establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus
Western Sambo	The Western Sambo Ecological Reserve contains the greatest habitat diversity in the Lower Keys. Significant coral features include spur-and-groove formations, bank reefs, and nearshore patch reefs. Western Sambo has one of the last remaining stands of living elkhorn coral in the Lower Keys, a species once abundant throughout the Keys.	Prohibited activities include: discharging any matter except cooling water or engine exhaust; fishing by any means; removing, harvesting, or possessing marine life; touching/standing on coral; anchoring on coral or attached organisms; anchoring on living or dead coral or any attached organism, anchoring when a mooring buoy is available.	Modify	Recommendation 1: Maintain existing restrictions and zoning.	Ecological Reserve	1, 2, 4	Recommendation 1, 2
				Recommendation 2: Northern quadrant (<10') should be Idle Speed/No Wake Zone.	Idle Speed/No Wake Zone in northern quadrant where waters are <10'.		

Area	Purpose	Existing Access Restrictions/Regulation	Recommendation	Description of Modification	Zone Type (Consistent with State of Florida Language)	Objectives	Consensus
Existing Areas							
Pelican Shoal	Decrease disturbance of bird nesting site.	No-access buffer zone out to 50 meters from shore between April 1 and August 31 (shoal closed by the Florida Game and Freshwater Fish Commission).	Modify	Island is gone, eliminate zone.	Eliminate zone	1	Consensus
Bay Keys	Decrease disturbance of nesting/roosting Great White, Tri-Color, and Little Blue Herons.	No-motor zone (300 feet) around one key; idle speed only/no-wake zones in tidal creeks.	Modify	Establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus
Cottrell Key	Decrease disturbance of wading birds and mangrove terrapins. This is the only island in the lower keys where brown pelicans nest.	No-motor zone (300 feet) around entire key.	Modify	Establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present; consider specific area that is needed for bird nesting - potentially only portion of the island	Establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus
Little Mullet Key	Decrease disturbance of nesting/roosting birds.	No-access buffer zone (300 feet) around entire key.	Status Quo	Maintain existing zoning and restrictions.	Maintain existing zoning and restrictions.	1, 2, 6	Status Quo
Big Mullet Key	Decrease disturbance of nesting Great White Herons, variety of other wading birds, and mangrove terrapins.	No-motor zone (300 feet) around entire key.	Modify	Establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Establish temporal No Entry Zone 100 yards around islands.	1, 2, 6	Consensus
Woman Key	Decrease disturbance of nesting/roosting birds and nesting turtles.	One-half of beach and sand spit on southeast side closed (beach and sand spit above mean high water closed by Department of the Interior).	Modify	Recommendation 1: Maintain established closed zones and	No Entry Zone and establish temporal No Entry Zone 100 yards out from beaches.	1, 2, 3, 4	Recommendation 1, 2, 3, 4
				Recommendation 2: Establish temporal No Access Zone during turtle nesting seasons or when species of concern are present, and designate all surrounding flats as Idle Speed/No Wake Zone (pole/troll/idle).	No Access Zone during turtle nesting seasons or when species of concern are present, and designate all surrounding flats as Idle Speed/No Wake Zone (pole/troll/idle).		
				Recommendation 3: Consider 100 yard buffer zone around island	Establish temporal No Entry Zone 100 yards out from beaches.		
				Recommendation 4: Establish Pole/Troll/Idle Zone (Idle Speed/No Wake Zone) on surrounding flats.	No Entry Zone (beach), and establish Restricted Entry/No Anchor Zone or No Motor Zone 100 yards out from beach.		
Boca Grande Key	Decrease disturbance of nesting/roosting birds.	South one-half of beach closed (beach above mean high water closed by Department of the Interior).	Modify	Recommendation 1: Maintain established closed zones and	No Entry Zone (beach) and establish temporal No Entry Zone 100 yards out from beaches.	1, 2, 3, 4	Recommendation 1, 2, 3, 4
				Recommendation 2: Establish temporal No Access Zone during turtle nesting seasons or when species of concern are present.	No Access Zone during turtle nesting seasons or when species of concern are present.		
				Recommendation 3: Consider 100 yard buffer zone around island	Establish temporal No Entry Zone 100 yards out from beaches.		
				Recommendation 4: Establishing No Anchor Zone, No Motor Zone, or designate island No Access Zone.	No Entry Zone (beach), and establish Restricted Entry/No Anchor Zone or No Motor Zone 100 yards out from beach.		
Marquesas Keys	Decrease disturbance of nesting, feeding, and roosting sea turtles and birds.	(i) No-motor zones (300 feet) around three smallest keys on western side of chain; (ii) no-access buffer zone (300 feet) around one island at western side of chain; (iii) idle speed only/no-wake zone in southwest tidal creek.	Modify	Designate all flats and tidal creeks as Pole/Troll/Idle Zone (Idle Speed/No Wake Zone) and establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.; Designate flats as poll/troll and identify certain access channels to be open to normal operation, and establish temporal no entry zones 100 yards around islands	Idle Speed/No Wake Zone for all flats and tidal creeks and establish temporal No Entry Zone 100 yards around islands.	1, 2, 3	Consensus

Area	Purpose	Existing Access Restrictions/Regulation	Recommendation	Description of Modification	Zone Type (Consistent with State of Florida Language)	Objectives	Consensus
New Areas							
Whitmore Bight/El Radabob Key/Rattle Snake Key	Decrease disturbance to important hardbottom habitat for juvenile lobster, reef fish and sport fish.		New	Recommendation 1: Establish a potential Closed/Research Only Area from South Sound Creek to Point Willie and Pole/Troll Zone from Point Willie to northeast point of Rattlesnake Key. Will need to determine a viable comparison site that could be adjacent to or another area.	No Entry Zone (South Sound Creek to Point Willie) and No Motor Zone (Point Willie to northeast point of Rattlesnake Key).	2, 3	Recommendation 1, 2, and 3
				Recommendation 2: Establish Pole/Troll Zone from South Sound Creek to northeast point of Rattlesnake Key.	No Motor Zone (from South Sound Creek to northeast point of Rattlesnake Key).	2, 5	
				Recommendation 3: Establish Pole/Troll Zone from Point Willie to northeast point of Rattlesnake Key.	No Motor Zone (from Point Willie to northeast point of Rattlesnake Key).		
Barnes Sound - Shallow Bays in the NW corner of Barnes Sound	Decrease impacts and disturbance to nesting wading birds and shallow water gamefish. Decrease damage to seagrass and macroalgae community.		New	Establish Pole/Troll Zone.	No Motor Zone.	2, 3	Consensus
Pigeon Key - Florida Bay	Decrease disturbance to nesting wading birds, including roseate spoonbills, mangrove terrapins, mangrove salt march snakes, roosting frigate birds. Extremely important wading bird nesting. Close proximity to Intracoastal Waterway.		New	Establish No Access Zone.	No Entry Zone 100 yards around island.	2, 6	Consensus
Ashbey/Horseshoe Key (ensure the name for this area is clear, use name currently on NOAA charts)	Frigate roosting area in Lignumvitae Preserve		New	Establish No Access Zone.	No Entry Zone 100 yards around island.	2, 6	Consensus
Gulfside Banks	Fisheries scientists, John Burke and other scientists have studied them in recent years and recommended more protection for a number of reasons: they have been likened to coral reefs in that they support many of the same fish in different life stages (as they grow large and move from the bay to the reef); channels associated with them are important too; they are well defined for experienced boaters, but in high water can be harder to see and have suffered boating impacts; They can be impacted by fishing gear during storms, etc.		New	Recommendation 1: Establish zones for each bank.	Idle Speed/No Wake Zone on flats.	2, 4	Recommendation 1, 2
				Recommendation 2: Establish No Access/Research Area for monitoring bank habitats; consider small targeted areas and consult with user groups when determining these areas.	No Entry Zone.	2, 5	
				Recommendation 3: Install Gated Channel Markers.		2, 4	
Moser Channel Banks	Due to their location, the lack of navigational features in, and the poorly drawn charts of the area, the banks are hard to locate and are susceptible to boat groundings. Banks also support diverse assemblages of corals, sponges, macro-algae, and seagrasses.		New	Recommendation 1: Establish Idle Speed/No Wake Zones for each bank; include buffer zones around each bank.	Idle Speed/No Wake Zone on flats.	2, 3	Recommendation 1
				Recommendation 2: Install Gated Channel Markers for entry/exit to Moser Channel, extend gated markers to ensure buffer zone and navigation routes near are clearly marked.		2, 4	
Marathon Oceanside Shoreline. From Vaca Cut to Sombrero Beach and ocean facing shoreline of Boot Key			New	Recommendation 1: Establish Idle Speed/No Wake Zone and leave access channels for homeowners.	Idle Speed/No Wake Zone on flats and access channels open to normal operation.	2, 3	Recommendation 1, 2
				Recommendation 2: Establish Idle Speed/No Wake Zone from Vaca Cut west to first channel.	Idle Speed/No Wake on flats.		

Area	Purpose	Existing Access Restrictions/Regulation	Recommendation	Description of Modification	Zone Type (Consistent with State of Florida Language)	Objectives	Consensus
New Areas							
Tarpon Wildlife Migration Lane	Protect the oceanside migratory travel lanes used by Tarpon (<i>Megalops atlanticus</i>). The water they frequent (<10ft) is heavily used by boaters. This traffic greatly effects this species and generates daily conflict between fisherman and other users		New	Recommendation 1: Establish an Idle Speed/No Wake Zone (April-June) along oceanside shorelines from east end of Key West to west end of Ohio Key. Consider impacts to and from users.	Idle Speed/No Wake Zone (April-June)	2, 4	Recommendation 1, 2; Consensus for protection, consider size
				Recommendation 2: Establish an Idle Speed/No Wake Zone (April-June) from east Bahia Honda to 7-mile bridge and Boca Chica. Consider impacts to and from users.	Idle Speed/No Wake Zone (April-June)	2, 4	
Little Pine Mangrove Key	Frigatebird roost, nesting reddish egrets, tri-colored and great white herons. Follow up with USFWS regarding exact island.		New	Establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Establish temporal No Entry Zone 100 yards around islands.	2, 6	Consensus
Content Keys and Upper Harbor Key	This should be a year round, catch and release, pole/troll zone; except for Content Pass which should be marked and remain open use to allow transit between the basin and the Gulf. Many non fishing boaters ignore the channel and "run" the grass flats in order to reach shallow sandy areas or the Gulf. This zone would end this practice, limiting conflict between flats fishermen and boaters while protecting shallow grass meadows.		New	Establish Pole/Troll/Idle Zone with Content Pass to remain open to normal operation.	Idle Speed/No Wake Zone with Content Pass to open to normal operation.	2, 4	Consensus
Island near Torch Key	Huge frigatebird roost, and there is also great white heron activity there.		New	Establish No Access Zone.	No Entry Zone 100 yards around island.	2, 6	Consensus
Key Lois (Loggerhead Basin)	This basin area is highly used by migratory tarpon and flats fishermen from Feb thru the end of June. It is also located near highly populated areas and a heavily trafficked channel (Bow Channel). This zone would limit conflict between boaters "cutting corners" thru the basin and flats fishermen targeting tarpon there. Northern boundary should be set to allow transit east/west from Kemp Channel.		New	Establish Pole/Troll/Idle Zone.	Idle Speed/No Wake Zone.	2, 4	Consensus
Crane Key	Public Scoping comment		New	Establish No Access Zone.	No Entry Zone 100 yards around island. Establish temporal no access zone; when it is determined that a species of concern uses this area		Consensus
Marvin Key and the Barracuda Keys	Like the Content/Upper Harbor zone, this zone will protect shallow fishing areas and relieve conflict between fishermen and other boaters who transit the area to reach "party areas".		New	Establish No Motor Zone (pole/troll). Navigable channels to be Idle Speed Only/No Wake.	No Motor Zone with Idle Speed/No Wake Zone in channels.	2, 4	Consensus
Seaplane Basin	Like Loggerhead Basin, this area will seasonally hold large numbers of tarpon and flats fishermen, but is located near a high traffic area. The zone would prevent conflict between flats fishermen and other boaters, but boundaries should take into account transit/access channels.		New	Establish Pole/Troll/Idle Zone (Idle Speed/No Wake Zone).	Idle Speed/No Wake Zone from February to June.	2, 4	Eliminate zone
Demolition Key	Island that includes great white heron nests and frigatebirds.		New	Establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present.	Establish temporal No Entry Zone 100 yards around islands.	2, 6	Consensus
Pearl Basin	This zone (from Calda to Pearl Banks between NW Channel and Man O' War Harbor) would relieve conflict between fishermen and boats transiting the basin headed to the NW Channel.		New	Establish Pole/Troll/Idle Zone (Idle Speed/No Wake Zone).	Idle Speed/No Wake Zone.	2, 4	Consensus
Mule Key	Reduce seagrass damage from prop scarring	Controlling Depth Marker	New	Install markers at all entrances to the Lakes displaying controlling depth for area.	Caution Zone.	2, 4	Consensus
Lakes area (LaVina Bank)	This zone will protect grass flats/fishing areas from damage by unknowledgeable boaters in what is a poorly marked and poorly mapped area.		New	Pole/Troll/Idle Zone (Idle Speed/No Wake Zone) with the Little Mullet channel open to normal operation.	Idle Speed/No Wake Zone with Little Mullet channel open to normal operation.	2, 4	Consensus

Area	Purpose	Existing Access Restrictions/Regulation	Recommendation	Description of Modification	Zone Type (Consistent with State of Florida Language)	Objectives	Consensus
New Areas							
Archer Key	Reduce disturbance to nesting and roosting birds and protect sea grass habitat, soft corals, and sponges.		New	Recommendation 1: Establish temporal No Access Zone during bird nesting/roosting seasons or when species of concern are present. Recommendation 2: Install additional mooring buoys and require use of mooring buoys (No Anchoring) and only one vessel per buoy. Recommendation 3: No overnight anchoring of platforms; no un-attended vessels in shallow water wildlife zones.	Establish temporal No Entry Zone 100 yards around island. Establish temporal No Entry Zone 100 yards around island and No Anchor Zone. Establish temporal No Entry Zone 100 yards around island and No Overnight Anchor Zone.	2, 6 2, 3	Recommendation 1, 2, 3
East Barracouta Key Flats	Reduce disturbance to sea turtles and protect important hard bottom habitat		New	0.4 square mile Non-extraction Zone southeast of Baracouta Key	Establish Non-extractive, No Anchor Zone.	2, 3	Consensus
West Barracouta Key Flats	Reduce disturbance to sea turtles and protect important hard bottom habitat		New	2 square mile (reduce by about a mile and a half) Non-extraction Zone south west of Baracouta Key	Establish Non-extractive, No Anchor Zone.	2,3	Consensus
Boca Grande Key to Woman Key Shallow Bank	Such zoning would help to protect grass flat from grounding and limit user conflict in a high traffic area.		New	Pole/Troll/Idle Zone (Idle Speed/No Wake Zone) during bird nesting/roosting season or when species of concern are present.	Establish temporal Idle Speed/No Wake Zone.	2, 4	Consensus
Wilma Key	Decrease disturbance of nesting/roosting birds	No Access Zone	New	No Access Zone; Verify with USFWS that this zone is needed because same habitats could be protected by the Boca Grande/Woman Key Bank proposed area.	No Entry Zone.	2, 6	Consensus
Marquesas Keys	Reduce disturbance to endangered green sea turtles on a rare foraging ground while allowing critical research on this species. Protects green turtles on an internationally important foraging ground from boat strikes and fishery interactions. Also, allows for important research on green turtles and their importance to the seagrass ecosystem.	Research Only Zone, 12 square mile area 1 mile due west of the Marquesas Keys evaluated at 10 years.	New	Closed	No Entry Zone.	2, 5	Consensus