PUBLIC HEARING

SUMMARY

SPINY LOBSTER AMENDMENT 10

The Gulf of Mexico and South Atlantic Fishery Management Councils (Councils) are developing regulations to bring the spiny lobster fishery management plan into compliance with new requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and to meet requirements of the Endangered Species Act. The Spiny Lobster fishery management plan is jointly managed by the Councils. The regulations are expected to be implemented in 2012.

This document is intended to serve as a SUMMARY for all the actions and alternatives in Spiny Lobster Amendment 10/Draft Environmental Impact Statement. It outlines the alternatives with a focus on the preferred alternatives. It also provides background information and includes a summary of the expected biological and socio-economic effects from the management measures.

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BACKGROUND

What Actions Are Being Proposed?

The Councils are specifying, where applicable, the following for many managed species:

- changes to species compositions;
- control rules for acceptable biological catch;
- annual catch limits;
- annual catch targets;
- allocations; and,
- accountability measures

Who is Proposing the Action?

The Gulf of Mexico and South Atlantic Fishery Management Councils (Councils) are proposing the actions. The Councils develop the amendments and submit them to NOAA Fisheries Service who ultimately approves, disapproves, or partially approves the actions in the amendment on behalf of the Secretary of Commerce. NOAA Fisheries Service is an agency in the National Oceanic and Atmospheric Administration.

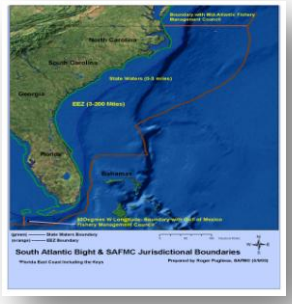
Gulf Of Mexico & South Atlantic Fishery Management Councils

- Responsible for conservation and management of fish stocks
- Consists of 13-17 voting members who are appointed by the Secretary of Commerce
- Management area is from 3 to 200 miles off the coasts of North Carolina through Texas; 9-200 miles off Florida West Coast & Texas.
- Responsible for developing fishery management plans and recommends regulations to NMFS and NOAA for implementation

Where is the Project Located?

Management of the Federal spiny lobster fishery located in the South Atlantic and Gulf of Mexico in the 3-200 nautical mile (nm) (9-200 nm off Florida West Coast & Texas) U.S. Exclusive Economic Zone (EEZ) is conducted under the Fishery Management Plan (FMP) for the Spiny Lobster Fishery in the Gulf of Mexico and South Atlantic Regions (GMFMC/SAFMC 1982) (**Figure 1-1**).

Figure 1-1. Jurisdictional boundaries of the Gulf & South Atlantic Fishery Management Councils.



Which Species Will Be Affected ?

These actions would apply to the following species:

- Caribbean spiny lobster, *Panulirus argus*
- Smoothtail spiny lobster**,** *Panulirus laevicauda*
- Spotted spiny lobster, *Panulirus guttatus*
- Spanish slipper lobster, *Scyllarides aequinoctialis*
- Ridged slipper lobster, *Scyllarides nodifer*

Why are the Councils Considering Action?

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires the Regional Fishery Management Councils and NOAA Fisheries Service to prevent overfishing while achieving optimum yield (OY) from each fishery. When it is determined a stock is undergoing overfishing, measures must be implemented to end overfishing. In cases where stocks are overfished, the Councils and NOAA Fisheries Service must implement rebuilding plans. Revisions to the Reauthorized Magnuson-Stevens Act in 2006 require that by 2010, FMPs for fisheries determined by the Secretary to be subject to overfishing establish a mechanism for specifying annual catch limits (ACLs) at a level that prevents overfishing and does not exceed the recommendations of the respective Council's Scientific and Statistical Committee (SSC) or other established peer review processes. These FMPs must also establish, within this timeframe, measures to ensure accountability. By 2011, FMPs for most other fisheries. The Councils are addressing the lobster species in this amendment.

CATEGORIES OF ACTIONS

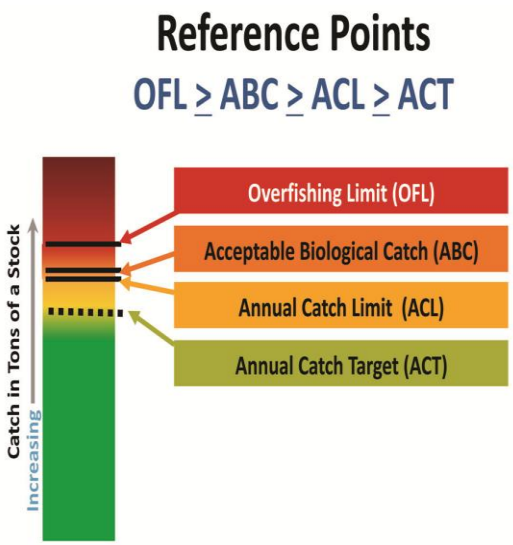
There are six categories of actions in Spiny Lobster Amendment 10.

- **Changes to Species Compositions**

The Council is considering removing species from the Spiny Lobster Fishery Management Unit.

- **Control Rules for Acceptable Biological Catch**

Acceptable Biological Catch (ABC) is the range of estimated allowable catch for a species of species group. *ABC Control Rule* is a policy for establishing a limit or target fishing level that is based on the best available scientific information and is established by fishery managers in consultation with fisheries scientists. Control rules should be designed so that management actions become more conservative as biomass estimates, or other proxies, for a stock or stock complex decline and as science and management uncertainty increases.



- **Annual Catch Limits**

Annual catch limit (ACL) is the level of catch that triggers accountability measures. It is expressed either in pounds or numbers of fish. The level may not exceed the Acceptable Biological Catch.

- **Annual Catch Targets**

Annual catch target (ACT) is an amount of annual catch of a stock or stock complex that is the management target of the fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL. ACTs are recommended in the system of accountability measures so that ACL is not exceeded.

- **Allocations**

Allocation is distribution of the opportunity to fish among user groups or individuals. The share a user group gets is sometimes based on historic harvest amounts.

- **Accountability Measures**

Accountability measure is an action taken to keep catch below or to avoid exceeding an identified catch level (usually the ACL). The following are four AMs: specification of an Annual Catch Target (ACT), in-season regulations changes, post-season regulation changes, and specification of management measures (e.g., bag limits).

Purpose and need of the proposed action

The *purpose* of Amendment 10 is to:

- bring the Spiny Lobster FMP into compliance with Magnuson-Stevens Act requirements for ACLs and AMs to prevent overfishing;
- update biological reference points, policies, and procedures; and
- consider adjustment of management measures to aid law enforcement and comply with measures to protect endangered species established under a biological opinion.

The *need* for the action is to keep the Caribbean spiny lobster stock at a level that will produce optimum yield (OY). Allowing the spiny lobster fishery to operate while minimizing any impacts on threatened Staghorn and Elkhorn corals (*Acropora*) will continue to produce the optimum yield. Optimum yield, the ultimate goal of any fishery management plan, is the level of harvest that provides the greatest economic, social, and ecological benefit to the nation.

List of Management Actions

There are 11 *actions* in Amendment 10 that will accomplish the purpose and need.

Action 1: Other species in the Spiny Lobster FMP
Action 2: Modify the current definitions of Maximum Sustainable Yield, Overfishing Threshold, and Overfished Threshold for Caribbean Spiny Lobster
- **Action 2-1:** Maximum Sustainable Yield (MSY)
- **Action 2-2:** Overfishing Threshold
- **Action 2-3:** Overfished Threshold

Action 3: Establish sector allocations for Caribbean Spiny Lobster in State & Federal waters from North Carolina through Texas
Action 4: Acceptable Biological Catch (ABC) Control Rule, ABC Level(s), Annual Catch Limits, and Annual Catch Targets for Caribbean Spiny Lobster
- **Action 4-1:** Acceptable Biological Catch (ABC) Control Rule
- **Action 4-2:** Set Annual Catch Limits (ACLs) for Caribbean Spiny Lobster
- **Action 4-3:** Set Annual Catch Targets (ACTs) for Caribbean Spiny Lobster

Action 5: Accountability Measures (AMs) by Sector
Action 6: Develop or Update a Framework Procedure and Protocol for enhanced cooperative management for Spiny Lobster
Action 7: Modify regulations regarding possession and handling of short Caribbean Spiny Lobsters as "Undersized Attractants"
Action 8: Modify tailing requirements for Caribbean Spiny Lobster for vessels that obtain a tailing permit

Spiny Lobster Distribution

From left to right: Caribbean spiny lobster, smoothtail spiny lobster, & spotted spiny lobster.

The Caribbean spiny lobster is widely distributed throughout the western Atlantic Ocean as far north as North Carolina to as far south as Brazil including Bermuda, the Bahamas, Caribbean, and Central America. DNA analyses indicate a single stock throughout its range. This species inhabits shallow waters, occasionally as deep as 29 ft (90 m), possibly even deeper. They live among rocks, on reefs, in grass beds or in any habitat that provides protection. The species is gregarious and migratory. Maximum total body length recorded is 18", but the average total body length is 8". Distribution and dispersal is determined by the long free floating larval phase (up to 9 months) until they settle to the bottom.

The following Actions address Endangered Species Act considerations:

Action 9: Limit Spiny Lobster fishing in certain areas in the EEZ off Florida to protect threatened Staghorn and Elkhorn corals (*Acropora*)
Action 10: Require gear markings so all spiny lobster trap lines in the EEZ off Florida are identifiable
Action 11: Allow the public to remove derelict or abandoned spiny lobster traps found in the EEZ off Florida

ACTIONS IN THE SPINY LOBSTER FISHERY MANAGEMENT PLAN

1. Removing Species from Unit

Five species are in the "Spiny Lobster Fishery Management Plan". But only two species are managed via the fishery management unit. The Council is concerned that the requirement for ACLs and AMs for some species will create a significant administrative burden to science and the administrative environment as landings are minimial and variable over time; specification of ACLs and AMs could trigger common overages. In addition, little biological or landings data are available for many of these species. Therefore, the Councils are considering a re-organization of the lobster complex by the following two methods: (1) removing species from the complex and (2) designating ecosystem component species. The Councils are proposing in their preferred alternative the species highlighted in yellow below be removed from the complex.

Removal

Common Name	Scientific Name
Caribbean spiny lobster	*Panulirus argus*
Smoothtail spiny lobster	*Panulirus laevicauda*
Spotted spiny lobster	*Panulirus guttatus*
Spanish slipper lobster	*Scyllarides aequinoctialis*
Ridged slipper lobster	*Scyllarides nodifer*

The preferred alternative would remove species based on the following criteria:

(1) Low landings
(2) Not heavily targeted; some landed as bycatch in shrimp fishery
(3) Under State of Florida Regulations – more conservative than Federal

Action 1 (Species in Unit) Alternatives

Alternative 1: No Action – Retain the following species: smoothtail spiny lobster**,** *Panulirus laevicauda,* spotted spiny lobster, *Panulirus guttatus,* Spanish slipper lobster, *Scyllarides aequinoctialis,* in the Fishery Management Plan for data collection purposes only, but do not add them to the Fishery Management Unit.

Alternative 2: Set annual catch limits and accountability measures using historical landings for Spanish slipper lobster *Scyllarides aequinoctialis,* after adding them to the Fishery Management Unit and for ridged slipper lobster, *Scyllarides nodifer*, currently in the Fishery Management Unit.

Alternative 3: List species as ecosystem component species:

Option a: smoothtail spiny lobster**,** *Panulirus laevicauda*
Option b: spotted spiny lobster, *Panulirus guttatus*
Option c: Spanish slipper lobster, *Scyllarides aequinoctialis*
Option d: ridged slipper lobster, *Scyllarides nodifer*

Preferred Alternative 4: Remove the following species from the Joint Spiny Lobster FMP:

Option a: smoothtail spiny lobster**,** *Panulirus laevicauda*
Option b: spotted spiny lobster, *Panulirus guttatus*
Option c: Spanish slipper lobster, *Scyllarides aequinoctialis*
Option d: ridged slipper lobster, *Scyllarides nodifer*

Impacts from Action 1 (Species in Unit)

Biological

Alternative 1 would not meet the National Standard 1 guidelines and would have the same impacts to the physical or biological environments as currently exist. **Alternative 2**would be expected to have positive impacts on the physical and biological environments if catch is constrained below current levels. **Alternative 3** impacts would be the same as currently exist, unless new data collection programs are developed. **Preferred Alternative 4** would remove any or all of the other lobster species from the fishery management plan. If other agencies, such as the individual states, took over management, positive physical and biological impacts could occur. In particular, Florida regulations concerning the taking of egg-bearing females, or stripping or removing eggs, are more conservative than federal regulations for most of these species.

Economic

Under **Alternative 1** all status quo management conditions and related operation of the fishery, and associated economic benefits, would remain unchanged. The economic benefit for **Alternative 2** is estimated by the ex-vessel value of $24,232 which could be reduced to zero under **Alternatives 1, 3 or 4.** Among the options for **Alternative 3**, the ex-vessel value of landings of scyllarid lobsters could decline by as much as $24,232 per year. That is, this amount represents the estimated economic impact of **Alternative 3, Option c and Option d** together, when compared with **Alternative 1**. The economic impact of **Alternative 3, Option a, or Alternative 3, Option b**, is not known, but assumed to be less. It assumed that the economic impacts of **Alternatives 3-4** are essentially the same.

Social

Alternative 1 would have little impact on the social environment. Setting ACLs and AMs in **Alternative 2** would likely have an impact on the social environment depending upon the thresholds selected and the measures that were implemented to account for any overages. Listing species as ecosystem components as in **Alternative 3** or removing species from the FMP as in **Preferred Alternative 4** would likely have few social impacts unless one or more of the **Options a-d** were not selected. Leaving any species in the FMP would require ACLs and AMs be set. Because landing information on these species is imprecise, setting an ACL and subsequent AMs would be problematic and could cause some social disruption and changes in fishing behavior if thresholds were set too low.

Administrative

Alternative 1 would not meet the requirements of the Magnuson-Stevens Act, and could leave NOAA Fisheries Service and the Councils subject to litigation, which would result in a significant administrative burden. Specifying an ACL alone (**Alternative 2**) would not increase the administrative burden over the status-quo. However, the monitoring and documentation needed to track the ACL could result in a need for additional cost and personnel resources because a monitoring mechanism is not already in place. After the ACL is specified, the administrative burden associated with monitoring and enforcement, implementing management measures, and accountability measures would increase. **Alternative 3** would eliminate the administrative burden associated with establishing ACLs and AMs for those species. **Preferred Alternative 4** would remove species from the FMP, resulting in less administrative burden with regards to establishing ACLs and AMs. However, removing these species from the FMP may make developing management measures for these species more difficult if the need arises.

2. Modify MSY, Overfishing & Overfished

The Councils are considering separate alternatives these 3 requirements.

Action 2-1 (Maximum Sustainable Yield) Alternatives

Alternative 1: No Action- Use the current definitions of MSY as a proxy. The Gulf of Mexico approved definition**:** MSY is estimated as 12.7 million pounds annually for the maximum yield per recruit size of 3.5 inch carapace length. The South Atlantic approved definition: MSY is defined as a harvest strategy that results in at least a 20% static SPR (spawning potential ratio).
Alternative 2: Modify the Gulf of Mexico definition to mirror the South Atlantic definition of MSY proxy, defined as 20% static SPR.

Alternative 3: the MSY equals the yield produced by fishing mortality at maximum sustainable yield (F_{MSY}) or proxy for F_{MSY}. Maximum sustainable yield will be defined by the most recent SEDAR and joint Scientific and Statistical Committee processes.

Preferred Alternative 4: the MSY proxy will be the Overfishing Limit (OFL) recommended by the Gulf of Mexico Scientific and Statistical Committee at 7.90 million pounds.

Action 2-2 (Overfishing Threshold) Alternatives

Alternative 1: No Action - Use the current definitions of overfishing thresholds. The Gulf and South Atlantic approved definition: overfishing level as a fishing mortality rate (F) in excess of the fishing mortality rate at 20% static SPR ($F_{20\%}$ static SPR).

Alternative 2: Specify the Maximum Fishing Mortality Threshold (MFMT) as F_{MSY} or F_{MSY} proxy. The most recent SEDAR and joint Scientific and Statistical Committees will define F_{MSY} or F_{MSY} proxy. This should equal the Overfishing Limit (OFL) provided by the Scientific and Statistical Committees (SSCs). The Councils will compare the most recent value for the current fishing mortality rate (F) from the SEDAR/SSC process to the level of fishing mortality that would result in overfishing (MFMT) and if the current F is greater than the MFMT, overfishing is occurring. Comparing these two numbers:

- $F_{CURRENT}$/MFMT = X.XXX

*This comparison is referred to as the **overfishing ratio**. If the ratio is greater than 1, then overfishing is occurring.
Preferred Alternative 3: Specify the Maximum Fishing Mortality Threshold (MFMT**)** as the Overfishing Limit (OFL) defined by the Gulf of Mexico Scientific and Statistical Committee at 7.90 million pounds.

Action 2-3 (Overfished Threshold) Alternatives

Alternative 1: No Action - Use the current definitions of overfished threshold. The Gulf of Mexico is the only Council with a current definition: the proxy for Minimum Stock Size Threshold (MSST) is a level of 15% transitional SPR (SSBR). The South Atlantic Council decided to use the framework procedure to add a biomass based component to the overfished definition, due to no biomass levels and/or proxies being
Alternative 2: The MSST is defined by the most recent SEDAR and joint Scientific and Statistical Committees process. The Councils will compare the current spawning stock biomass (SSB) from the SEDAR and Scientific and Statistical Committees process to the level of spawning stock biomass that could be rebuilt to the level to produce the MSY in 10 years. Comparing these two numbers:

- $SSB_{CURRENT}$/MSST = Y.YYY

This comparison is referred to as the **overfished ratio**. If the ratio is less than 1, then the stock is overfished.
Preferred Alternative 3: The MSST = (1-M) x B_{MSY}.

Maximum Sustainable Yield (MSY)
Largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological and environmental conditions.

- The Councils must set MSY.
- MSY for Caribbean spiny lobster cannot be calculated until a Caribbean-wide assessment is conducted. Therefore, a proxy must be used.
- A proxy is a placeholder until sufficient data become available to estimate MSY.
- Preferred MSY proxy = 7.90 million pounds

Overfishing

- None now
- Overfishing if landings are greater than 7.90 million pounds

Impacts from Action 2 (Modify MSY, Overfishing & Overfished)

Biological

Alternative 1, no action under all actions could have negative impacts to the physical and biological/ecological environment, due to the biological reference points being inconsistent MSY and MSST between the two Councils. The South Atlantic Council currently uses static SPR as a proxy and **Alternative 2**, under **Actions 2-1** would modify the Gulf Council's definition to static SPR. This would make the overfishing definitions consistent between the Councils and static SPR is a better proxy for yield projections, because it uses equilibrium changes in recruitment and mortality. Consistency between Councils when establishing biological reference points would be more beneficial for the physical and biological environments. **Alternative 3** under **Action 2-1 (MSY)** and **Alternatives 2** under **Action 2-2 (Overfishing Threshold)** and **Action 2-3 (Overfished Threshold)** would modify the current definitions to the biological reference points established during the SEDAR and joint SSC processes. However, due to the most recent stock assessment being unaccepted due to external recruitment from other Caribbean populations, these alternatives may not provide the best protection to the resource. **Preferred Alternative 4 (Action 2-1)** provides the best protection of the resource because the 2010 update assessment was rejected. **Preferred Alternative 3** under **Action 2-2 (MFMT)** is based on Caribbean spiny lobster landings and may provide the best protection of the resource and thereby the biological and ecological environments. However, without a clear estimate of Caribbean spiny lobster biomass it is unknown if **Alternatives 2** or **3** under **Action 2-3 (Overfished Threshold)** would provide the best protection for the resource and various subsequent negative and positive impacts to the biological and ecological environments.

Economic

Defining the MSY, OY, and MSST of a species does not alter the current harvest or use of the resource. Since there would be no direct effects on resource harvest or use, there would be no direct effects on fishery participants, associated industries, or communities.

Social

The setting of MSY for Caribbean spiny lobster is primarily a biological threshold that may impact the social environment depending upon where the threshold is set. The no action **Alternative 1** would likely have few impacts as it uses the present definition. **Alternative 2 and Alternative 3** could have impacts if the threshold is well below current landing levels, although it is likely that **Alternative 2** would not change that threshold substantially. The **Preferred Alternative 4**, which uses the MSY proxy recommended by the SSC, may have few negative social effects if the threshold is above the mean landings and not substantially reduced by other management action.

Administrative

There could be additional administrative burdens, if these biological reference points are not modified for consistency. Changing these biological reference points is required under the requirements of the Magnuson-Stevens Act, and if not done, could leave NOAA Fisheries Service and the Councils subject to litigation, which would result in a significant administrative burden.

3. Sector Allocations

The Councils are evaluating allocating the Annual Catch Limit (ACL) by sectors (recreational & commercial). This can be helpful in preventing the total ACL from being exceeded.

Action 3 (Sector Allocation) Alternatives
Preferred Alternative 1: No action – Do not establish sector allocations.
Alternative 2: Allocate the spiny lobster ACL by the following sector allocations: 80% commercial and 20% recreational.
Alternative 3: Allocate the spiny lobster ACL by the following sector allocations: 74% commercial and 26% recreational.
Alternative 4: Allocate the spiny lobster ACL by the following sector allocations: 78% commercial and 22% recreational.
Alternative 5: Allocate the spiny lobster ACL by the following sector allocations: 77% commercial and 23% recreational.
Alternative 6: Allocate the spiny lobster ACL by the following sector allocations: 76% commercial and 24% recreational.

Impacts from Action 3 (Sector Allocations)

Biological

Allocating the ACL between the recreational and commercial sectors will have no direct effect on the Physical and Biological/Ecological Environments. The range of commercial allocations (74-80%) is not sufficient to affect the number of lobster traps used so there would be no change in the impacts from lobster traps.

Economic

The sector allocations under Action 3 have no application in Amendment 10 apart from ACL and ACT alternatives under Action 4 and that is where they are analyzed.

Social

By establishing sector allocations there would likely be some changes in fishing behavior and impacts to the social environment. The mere act of separating the ACL into two sector ACLs has the perception of creating scarcity in that limits have been imposed on each individual sector. **Preferred Alternative 1** allows for an overall ACL which would allow for harvest to freely flow between the commercial and recreational sectors as it has in the past. **Alternatives 2 and 4** would provide an increase in allocation to the commercial sector and subsequent reduction to the recreational; while **Alternative 3** would provide an increase to the recreational sector.

Alternatives 5 and Alternative 6 both provide increases to the recreational sector, although smaller than previous alternatives. So, in all cases, it would be expected that there may be negative social effects to whichever sector receives less than their current allocation and those effects would correspond to the amount of reduction.

Administrative

There are no administrative impacts from allocating among the commercial and recreational sectors other than preparation of the amendment document and notices.

The preferred alternative would not establish sector ACLs:

1) ACL expected to be below recent landings
2) No data system for recreational sector
3) Commercial landings are not tracked in timely fashion for in–season quota monitoring

4. ABC Control Rule/ABC, ACLs, & ACTs

The Councils are considering separate alternatives these 3 requirements.

Action 4-1 (Allowable Biological Catch Control Rule) Alternatives
Alternative 1: No Action – Do not establish an ABC Control Rule for spiny lobster.
Alternative 2: Adopt the following ABC Control rule: **Option a**: the South Atlantic Council's ABC control rule. **Preferred Option b**: the Gulf Council's ABC control rule.
Alternative 3: Establish an ABC Control Rule where ABC equals OFL.
Alternative 4: Specify ABC as equal to the mean of the last 10 years landings.
Alternative 5: Specify ABC as equal to the high of the last 10 years landings.
Alternative 6: Specify ABC as equal to the low of the last 10 years landings.

Action 4-2 (Annual Catch Limits) Alternatives
Alternative 1: No Action – Do not set Annual Catch Limits.
Alternative 2: Set an Annual Catch Limit for the entire stock based on the Acceptable Biological Catch: **Preferred Option a:** Annual Catch Limit = OY = Acceptable Biological Catch. **Option b:** Annual Catch Limit = OY = 90% of Acceptable Biological Catch. **Option c:** Annual Catch Limit = OY = 80% of Acceptable Biological Catch.
Alternative 3: Set Annual Catch Limits for each sector based on allocations determined in Action 3: **Option a:** Annual Catch Limit = OY = (sector allocation x Acceptable Biological Catch). **Option b:** Annual Catch Limit = OY = 80% or 90% of (sector allocation x Acceptable Biological Catch). **Option c:** Annual Catch Limit = OY = sector allocation x (80% or 90% x% of Acceptable Biological Catch).

Action 4-3 (Annual Catch Target) Alternatives
Preferred Alternative 1: No Action – Do not set Annual Catch Targets.
Alternative 2: Set an Annual Catch Target for the entire stock. **Option a:** Annual Catch Target = 90% of Annual Catch Limit. **Option b:** Annual Catch Target = Annual Catch Limit. **Preferred Option c**: Annual Catch Target = 6.0 million pounds.
Alternative 3: Set Annual Catch Targets for each sector based on allocations from Action 3. **Option a:** Annual Catch Target = (sector allocation x Annual Catch Limit). **Option b:** Annual Catch Target = 90% of (sector allocation x Annual Catch Limit). **Option c:** Annual Catch Target = sector allocation x (90% of Annual Catch Limit).

Preferred Alternatives

Allowable Biological Catch (ABC) Control Rule & ABC

- OFL = 10-year mean + 2 SD = 7.90 million pounds
- ABC = 10-year mean + 1.5 SD = 7.32 million pounds

Annual Catch Limit (ACL)

- ACL = ABC = 7.32 million pounds

Annual Catch Target (ACT)

- ACT = 6.0 million pounds

Table 2.4.1. Caribbean spiny lobster landings.

Fishing Season	Com. Total	%Com	Rec. Total	%Rec	Com. & Rec. Total
1991/92	6,836,015	79%	1,815,791	21%	8,651,806
1992/93	5,368,188	80%	1,352,443	20%	6,720,631
1993/94	5,309,790	74%	1,883,114	26%	7,192,904
1994/95	7,181,641	79%	1,905,995	21%	9,087,636
1995/96	7,017,134	78%	1,930,718	22%	8,947,852
1996/97	7,744,104	80%	1,922,596	20%	9,666,700
1997/98	7,640,177	77%	2,304,186	23%	9,944,363
1998/99	5,447,533	81%	1,302,677	19%	6,750,210
1999/00	7,669,207	76%	2,461,981	24%	10,131,188
2000/01	5,568,707	74%	1,949,033	26%	7,517,740
2001/02	3,079,263	71%	1,251,081	29%	4,330,343
2002/03	4,577,392	76%	1,455,298	24%	6,032,690
2003/04	4,161,589	75%	1,411,509	25%	5,573,097
2004/05	5,472,994	76%	1,657,535	24%	6,906,397
2005/06	2,963,160	72%	1,131,014	28%	4,094,174
2006/07	4,799,493	79%	1,304,511	21%	6,104,004
2007/08	3,778,037	76%	1,215,069	24%	4,993,105
2008/09	3,269,397	72%	1,263,509	28%	4,532,906
2009/10	4,343,305	79%	1,126,714	21%	5,470,019
All years	5,380,375	77%	1,601,086	23%	6,981,461
Recent 10-year values					
Mean					5,584,939
Median					5,521,558
Minimum					4,094,174
Maximum					7,517,740
Mean + 1.5Std.					7,323,117
Mean + 2.0Std.					7,902,510

Impacts from Action 4 (ABC Control Rule/ABC, ACLs, & ACTs)

Biological

Setting an ABC, ACL, or ACT could affect the physical environment if harvest changes from current levels. An ACL equal to the ABC would allow a higher level of landings than an ACL lower than the ABC. Likewise, not setting an ACT would allow a higher level of landings than setting an ACT. If the ACL is separated by sectors, accountability measures would be triggered as each sector reaches its limit. This level of control would be expected to result in greater positive impacts on the biological environment because catch would be more restricted.

Economic

Under **Alternative 1**, status quo management conditions and related operation of the fishery, and associated economic benefits, would remain unchanged, with some caveats. Given the alternatives specified in Amendment 10, however, the more traditional output-control regulations for the commercial sector (to limit landings, impose trips limits and shorten seasons) of Actions 4-5 may be seen as having differing, if not conflicting objectives, in that they would introduce a move away from a private market mechanism for allocating harvesting rights. The regulations for recreational fishing of Actions 4-5 and state regulations are more harmonious, if not market oriented. Regardless, the impact on economic activity associated recreational fishing of lower bag limits, early season closures, and/or shorter seasons are more difficult to quantify than are counterparts for commercial fishing.

Social

For Action 4-1, **Alternative 1** seems to untenable since some level needs to be set, unless as in **Alternative 3** the threshold is equal to the OFL which would likely impose few negative social effects, but could risk a volatile stock status. **Preferred Alternative 2** offers two **Options a and Preferred b** which would vary depending upon the threshold levels that are calculated. The Gulf ABC calculations are above the most recent landing levels. With **Alternative 4** there would be a reduction from the most recent year's landings and certainly **Alternative 6** would have negative social effects as it would reduce harvest from current levels. **Alternative 5** would have few negative social effects in the short term as there would be no reduction in harvest, but may have long term effects if the catch limits are too high and jeopardize stock status. For Action 4-2, **Alternative 1** would not set ACLs and in that case harvest levels would likely revert to some other threshold, like ABC. This would likely have fewer negative social effects than a more restrictive ACL like those in **Alternative 2 Options b and c**. The **Preferred Alternative 2 Option a** would not impose a more restrictive catch limit. **Alternative 3** and its **Option a** would be similar except that it incorporates sector allocations as do the other **Alternative 3 Options b and c**. For Action 4-3, **Alternative 1** may be appropriate for this fishery and may not impose further negative social effects. **Alternatives 2 and 3** could impose further reductions in harvest and could have short term negative effects depending upon the reduction of harvest from present levels. The **Preferred Alternative 2 Option c** would be above the most recent landing levels, although in the past landings have exceeded that threshold.

Administrative

With establishment of an ACL or ACT, commercial landings may need to be included in the Southeast Fisheries Science Center's Quota Monitoring System. This system requires dealers to report landings, usually on a biweekly basis. If ACLs or ACTs are set by sector or gear, separate entries would be needed in the system.

5. Accountability Measures (AMs)

More than one alternative, option, sub-option, or combinations may be chosen as preferred..

Action 5 (Accountability Measures) Alternatives

Alternative 1: No Action – Do not set accountability measures. Currently there are no management measures in place that could be considered AMs.

Alternative 2: Establish commercial in-season accountability measures**:**

- **Option a**: close the commercial fishery when the ACL is projected to be met.
- **Option b**: implement a commercial trip limit when 75% of the commercial ACL is projected to be met.

Alternative 3: Establish post-season accountability measures:

- **Option a**: Commercial
  - **Sub-option i**: ACL payback in the fishing season following a previous years ACL overage.
  - **Sub-option ii**: Adjust the length of the fishing season following an ACL overage.
  - **Sub-option iii**: Implement a trip limit.
- **Option b**: Recreational
  - **Sub-option i**: ACL payback in the fishing season following an ACL overage. To estimate the overage, compare the recreational ACL with recreational landings over a range of years. For 2011, use only 2011 landings. For 2012, use the average landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running average.
  - **Sub-option ii**: Adjust the length of the fishing season following an ACL overage. To estimate the overage, compare recreational ACL with recreational landings over a range of years. For 2011, use only 2011 landings. For 2012, use the average landings of 2011 and 2012. For 2013 and beyond, use the most recent three-year running average.
  - **Sub-option iii**: Adjust bag limit for the fishing season following a previous seasons ACL overage.
- **Option c**: Recreational and commercial combined accountability measures
  - **Sub-option i**: Adjust season length for both recreational and commercial harvest of spiny lobster in the fishing season following an ACL overage
  - **Sub-option ii**: Recreational and commercial ACL payback in the fishing season following a previous years ACL overage (if a combined ACL is chosen).

Preferred Alternative 4: Establish the ACT as the accountability measure for Caribbean spiny lobster.

As part of the performance standard, if the landings exceed the ACT repeatedly, a review of the ACL, ACT, and AM would be triggered. Furthermore, if the catch exceeds the ACL more than once in the last four consecutive years, the entire system of ACLs and AMs would be re-evaluated as required by the National Standard 1 guidelines.

Preferred Alternative

Accountability Measures (AMs)

- AM = ACT = 6.0 million pounds
- If landings > 6.0 million pounds, Councils will determine if regulations need to change
- Framework will be used to implement changes
- Work with State of Florida

ACT compared to Landings

- Last 10 years only exceeded in 2000/01 (7.5 MP), 2002/03 (6.9 MP) & 2006/07 (6.1 MP)
- Last 3 years below 6.0 MP (Table 2.4.1)
- Effort controls in place to limit catch
- Commercial = trap reduction program
- Recreational = season & bag limits
- No further regulations needed at this time
- Fishery seems to be in a period of lower landings as compared to earlier years
- If fishery productivity returns to earlier levels, and no overfishing is evident, the Councils would evaluate increasing the ACT

Impacts from Action 5 (Accountability Measures)

Biological

Alternative 1 is not considered a viable option because it would specify no AM and therefore, would not limit harvest to the ACL or correct for an ACL overage if one were to occur. The Magnuson-Stevens Act requires that mechanisms of accountability be established for all federally managed species. **Alternative 1** would not comply with this mandate, and would provide no biological benefit to the species. **Alternative 2** would attempt to limit commercial harvest to levels at or below the ACL or ACT by reducing and/or closing harvest once a particular landings threshold is met for the commercial sector. The most biologically beneficial in-season AM would be a combination of **Option a** and **Option b**. **Alternative 3** includes a large suite of possible sector-specific post-season AMs that would be triggered in the event of an ACL overage. A combination of recreational and commercial AMs (**Options a** and **b**), would yield similar biological benefits when compared to **Option c**, which builds in a combination sector AMs. **Option b** alone would be the least biologically beneficial post-season AM because it does not compensate for any overages created by the commercial fishery. The biological impacts of **Preferred Alternative 4** would likely be similar to the status quo.

Economic

The choice of **Alternative 1** could affect constituent perceptions about the ability of fishery managers to comply with the requirements of the Magnuson Stevens Act to specify ABC, ACLs and AMs, thereby introducing elements of uncertainty about future business conditions and fishery regulations. While the extent of any change in economic behavior of fishery participants is not known, uncertainty about business conditions and regulations may be seen as adversely affecting various sectors of the economy, including commercial and recreational fishing.

Social

The setting of Accountability Measures can have significant direct and indirect effects on the social environment as they usually impose some restriction on harvest. The long term effects should be beneficial as they provide protection from further negative impacts on the stock. While the negative effects are usually short term, they may at times induce other indirect effects through changes in fishing behavior.

Administrative

Alternative 1 would not produce near-term administrative impacts. However, this alternative would not comply with Magnuson-Stevens Act requirements and therefore, may trigger some type of legal action for not doing so. If this scenario were to occur, the burden on the administrative environment would be great in the future. **Alternative 2** would result in some additional administrative cost and time burdens associated with tracking commercial landings in-season. **Alternative 3** could potentially produce a significant negative impact on the administrative environment regardless of the choice of options and sub-options. Under each of the sub-options spiny lobster would need to be added to the list of species tracked via MRFSS/MRIP, and through the quota management system. Implementing these ACL/AM tracking mechanisms is not a trivial undertaking and could result in significant administrative cost and time in the near-term and long-term. **Preferred Alternative 4** could result in moderate administrative impacts in the form of multi-year evaluations of actual harvest compared the ACT and ACL. If the ACT is repeatedly exceeded or if the ACL is exceeded more than once within a four year time period, the burden on the administrative environment would likely increase if a regulatory amendment is needed to modify management measures or harvest limits for Caribbean spiny lobster.

6. Framework Procedure & Protocol

More than one alternative may be chosen as preferred.

Action 6 (Framework Procedure & Protocol) Alternatives
Alternative 1: No Action – Do not update the Protocol for Enhanced Cooperative Management or the Regulatory Amendment Procedure. **Preferred Alternative 2:** Update the current Protocol for Enhanced Cooperative Management. **Alternative 3:** Update the current Regulatory Amendment Procedures to develop a Framework Procedure to modify ACLs and AMs. **Alternative 4:** Revise the current Regulatory Amendment Procedures to create an expanded Framework Procedure: **Preferred Option a:** Adopt the base Framework Procedure **Option b:** Adopt the more broad Framework Procedure **Option c:** Adopt the more narrow Framework Procedure

Allows managers to respond more quickly to changes in the fishery and outlines how the State of Florida, Councils, and NOAA Fisheries Service work cooperatively to manage the Caribbean Spiny Lobster fishery.

Framework

- Allows more rapid change in regulations
- Needs to be updated to add new requirements (adjustments to ABC, ACL & ACT)
- Procedure to implement regulations developed by the State of Florida

Cooperative Management

- Protocol outlines how Federal & State managers work together
- Much of management are governed by the State of Florida
- Needs to be update to add new names of organizations and update the steps

Impacts from Action 6 (Framework Procedure & Protocol)

Biological

Alternative 1 would maintain the Regional Administrator's current ability to adjust total allowable catch, quotas, trip limits, bag limits, size limits, seasonal closures, and area closures; however, no means would exist to make needed adjustments to the National Standard 1 harvest parameters in a timely manner. Such a scenario could be biologically detrimental because excessive levels of fishing mortality, or even overfishing, could persist until the appropriate harvest limitations could be put in place through amendment action. The impacts on the physical environment would not change under this alternative. **Preferred Alternative 2** would have no impact on the physical or biological environment because its only purpose is to update the protocol. **Alternatives 3 and 4** would likely be biologically beneficial for spiny lobster.

Economic

Action 6 is primarily administrative in intent. Implementation of Amendment 10 depends on cooperative management. However, Amendment 10 is complicated, with large numbers of possible combinations for alternatives and options. There may be differences of opinion about economic impacts among respective legislative bodies, regulatory bodies and courts. Any differences in regulation between Florida and the Councils would have the most economic impact. This is because practically all of the landings of Caribbean spiny lobster occur in Florida, which has its own regulations for this species. Furthermore, Florida landings occur largely in Monroe County (approximately 90% for commercial landings and 67% for recreational landings. Hence, economic impacts under Amendment 10 would occur primarily in Florida and largely in Monroe County.

Social

The development of a framework procedure would have beneficial impacts on the social environment as management can react to changes in the stock status or fishery in a timelier manner. **Alternative 1** would not allow for these types of changes and could, over time, have negative indirect effects. However, framework actions that are done rapidly do not always provide for as much public input and comment on the actions as other regulatory processes. The benefits of timely action often outweigh the diminished timeframe for comment though. **Preferred Alternative 2** would provide consistency in language with regulatory changes and have few effects on the social environment. **Alternatives 3 and 4** provide options for implementing a framework procedure that becomes less restrictive in terms of timing and public input going from **Preferred Alternative 4, Option a** to **Option c**. As mentioned earlier, timing and public input become the parameters that are constrained by these options. While public input and participation by advisory panels can be beneficial, it is time consuming and can slow the process. Yet, that participation can provide a more acceptable regulation which may lead to better compliance.

Administrative

Alternative 1 would be the most administratively burdensome of the alternatives being considered, because all modifications to ACLs, ACTs, and AMs would need to be implemented through an FMP amendment, which is a more laborious and time consuming process than a framework action. **Preferred Alternative 2** would have no impact on the administrative environment. **Alternatives 3** would incur less of an administrative burden than **Alternative 1** because several steps in the lengthy amendment process would be eliminated. **Preferred Alternative 4** would incur even less of an administrative burden because other management measures could also be adjusted through framework actions. **Alternative 4 Option b** would be the least burdensome because it would allow the widest range of actions to take place under the framework procedure.

7. Use of Shorts as "Attractants"

Action 7 (Use of Shorts as "Attractants") Alternatives
Alternative 1: No Action – Allow the possession of no more than 50 undersized Caribbean spiny lobsters, or one per trap aboard the vessel, whichever is greater, for use as attractants. **Alternative 2:** Prohibit the possession and use of undersized Caribbean spiny lobsters as attractants. **Alternative 3:** Allow undersized Caribbean spiny lobsters, but modify the number of allowable undersized lobsters, regardless of the number of traps fished: **Option a:** allow 50 undersized lobsters **Option b:** allow 35 undersized lobsters **Preferred Alternative 4:** Allow undersized spiny lobster not exceeding 50 per boat and 1 per trap aboard each boat if used exclusively for luring, decoying or otherwise attracting non-captive spiny lobsters into the trap**.**

Preferred Alternative 4 tracks State of Florida regulations and would make law enforcement more effective.

Shorts as Attractants

- Traps are more efficient with attractants
- Mortality is estimated at 10% which is less than the release mortality in many other fisheries
- Live wells are required to reduce mortality
- If traps are less efficient, the balance of recreational versus commercial harvest could shift, and bycatch of other species could increase

Impacts from Action 7 (Use of Shorts as "Attractants")

Biological

Alternative 1 produces the second highest rate of spiny lobster mortality associated with use as attractants relative to **Alternatives 2**, **3b,** and **Preferred Alternative 4**. **Alternative 2** would be the most biologically conservative alternative under this action since, theoretically, all mortality associated with using undersized lobsters as attractants would cease. **Alternative 3** could help to reduce fishing mortality attributable to use of undersized lobsters for baiting purposes. **Alternative 3** is not as precautionary as **Alternative 2**, and depending upon the option chosen, may only yield negligible biological benefits over the status quo. **Preferred Alternative 4** is very similar to **Alternative 1**, however, it would change the provision to allow 50 spiny lobster *plus* one per trap, rather than 50 spiny lobster "*or*" one per trap, and it would remove the "whichever is greater" portion of the provision. This alternative is the least biologically conservative for spiny lobster of all the alternatives considered because it would increase the number of undersized lobsters able to be maintained onboard a vessel for use as attractants. However, bycatch of other species may be reduced because traps will be left in the water a shorter period of time.

Economic

Under **Alternative 1** all status quo operation of the fishery, and associated economic benefits, would remain unchanged. **Alternative 2** would require the use of more purchased bait, hence increase trip costs. **Alternative 3** should reduce the fishing mortality associated with the use undersized attractants, more so for **Alternative 3, Option b**, than for **Alternative 3, Option a,** when compared with **Alternative 1** (status quo). The economic impact of **Alternative 3** would be less than that of **Alternative 2,** and require the use of less purchased bait, hence less increase in trip costs. **Preferred Alternative 4** would reduce fishing mortality associated with the use of undersized attractants far less than **Alternative 2** and require the use of less purchased bait, hence less increase in trip costs.

Social

The use of undersized lobster as attractants has been acceptable practice in the spiny lobster fishery for some time. The no action **Alternative 1** would continue the difficulty that law enforcement faces with prosecuting undersized lobster violations. **Alternative 2** could solve the law enforcement issue, but may impose a hardship on lobster fishermen who utilize "shorts" as attractants, if their harvest is reduced as a result. The two options under **Alternative 3** would reduce the number allowed on board however the difficulty for law enforcement would remain. With **Preferred Alternative 4** there is consistency with state regulation which would benefit law enforcement.

Administrative

Alternative 2 would create the lowest impact on the administrative environment since it would remove the need for enforcement personnel to check vessels for specific numbers of undersized lobsters. **Options a** and **b** under **Alternative 3** would not increase the administrative burden over the status quo since numbers of undersized lobsters would still need to be documented, just at a lower number. However, **Alternative 1, Alternative 3,** and **Preferred Alternative 4,** would not address the current enforcement concerns regarding the use of undersized lobster, and difficulty in prosecuting related violations would persist. Because **Preferred Alternative 4** is consistent with current state regulations in Florida, and therefore, would only ease the burden on enforcement to track compliance across the state/federal jurisdictional boundary.

8. Modify "Tailing" Permits

More than one alternative may be chosen as preferred.

Action 8 (Modify "Tailing" Permit) Alternatives
Alternative 1: No Action – Possession of a separated Caribbean spiny lobster tail in or from the EEZ is allowed only when the possession is incidental to fishing exclusively in the EEZ on a trip of 48 hours or more, and a federal tailing permit is issued to and on board the vessel. **Alternative 2:** Eliminate the Tail-Separation Permit for all vessels fishing for Caribbean spiny lobster in Gulf and South Atlantic waters of the EEZ. **Preferred Alternative 3:** Revise the current regulations to clearly state that all vessels must have either a federal spiny lobster permit or a Florida Restricted Species Endorsements associated with a Florida Saltwater Products License to obtain a tailing permit. **Preferred Alternative 4:** All Caribbean spiny lobster landed must either be landed all "whole" or all "tailed".

Preferred Alternative 4 tracks recommendations for the commercial industry and will assist law enforcement.

Modify "Tailing" Permits

- On long trips, product quality is better if tails are separated and iced or frozen
- Original intent for only commercial fishery
- Improves enforcement

Impacts from Action 8 (Modify "Tailing" Permits)

Biological

There would be no biological benefit realized under **Alternative 1**. **Alternative 2** would be the most biologically conservative of all the alternatives being considered under this action. Removing the ability for fishermen to land any Caribbean spiny lobster tailed would increase the probability that most lobster landed would be of legal size since they could easily be measured. **Preferred Alternative 3** would result in negligible biological impacts because it is thought that there are very few recreational fishermen who have in their possession a Tail-Separation Permit. If **Preferred Alternative 3** were implemented in combination with **Preferred Alternative 4**, the issue of recreational fishermen obtaining Tail-Separation Permits would be addressed, and could; therefore, result in greater biological benefit than if **Preferred Alternative 4** were chosen alone.

Economic

Alternative 2 would reverse a long-standing Council decision that provided an economic incentive to engage in multi-day, deep-water fishing for spiny lobster in the EEZ. Assuming that **Preferred Alternative 3** is approved, **Alternative 2** would have an economic impact exclusively on the commercial sector when compared with **Alternative 1**, because lobster tails could not be held onboard fishing vessels in the EEZ, thereby ending what is now a much reduced economic activity. **Preferred Alternative 4** may seem at first glance to have a less onerous economic impact on commercial fishing than **Alternative 2,** but either would affect the economic viability of remnant multi-day, deep-water fishing for spiny lobster tails in the EEZ, notably fishing in Monroe County.

Social

Modifying the tailing requirements can certainly benefit the social environment; yet, the alternatives do not provide a complete solution to the problem. **Alternative 1** would provide no solution as no action would be taken. While **Alternative 2** would solve most of the law enforcement issues, it would not provide the benefits of the original intent which allows for fishermen who take longer fishing trips to accommodate space issues with whole lobsters. By requiring recreational fishermen to obtain state commercial permits to obtain a tailing permit under **Preferred Alternative 3** would remove some of the uncertainty for law enforcement, yet still impose some ambiguity in the regulations making it difficult to regulate harvest of undersized lobster. **Preferred Alternative 4** would remove some of the difficulty in prosecuting the harvest of undersized lobster and in conjunction with **Preferred Alternative 3** may be the best solution to a difficult problem while continuing to provide for fishermen's concerns of space on long trips.

Administrative

Under **Alternative 1**, the current level of administrative time and cost burdens would be maintained. Enforcement concerns related to the harvest of undersized lobsters would persist and recreational fishermen may continue to acquire Tail Separation Permits, which was an unintended consequence of previously implemented regulations. **Alternative 2** would have a positive impact on the administrative and law enforcement environments since the Tail-Separation Permit would no longer exist and the practice of tailing lobsters would be prohibited. **Preferred Alternative 3** would create a very small administrative burden when compared to the status quo because some updates to the current regulatory text would be necessary. **Preferred Alternative 4** would also require a modification to the regulations; however, the administrative burden would be very low.

9. Limit Fishing Areas to Protect Threatened Staghorn & Elkhorn Corals

More than one alternative may be chosen as preferred.

Action 9 (Limit Fishing Area) Alternatives
Alternative 1: No Action – Do not limit spiny lobster fishing in certain areas in the EEZ off Florida to address ESA concerns for *Acropora*. **Alternative 2:** Prohibit spiny lobster trapping on all known hardbottom in the EEZ off Florida in water depths less than 30 meters. **Alternative 3:** Expand existing and/or create new closed areas to prohibit spiny lobster trapping in the EEZ off Florida. **Preferred Option a:** Create 25 —large closed areas to protect threatened *Acropora* corals. **Option b:** Create 37 —medium closed areas to protect threatened *Acropora* corals. **Option c:** Create 52 —small closed areas to protect threatened *Acropora* corals. **Alternative 4:** Expand existing and/or create new closed areas to prohibit all spiny lobster fishing in the EEZ off Florida. **Option a:** Create 25 —large closed areas to protect threatened *Acropora* corals. **Option b:** Create 37 —medium closed areas to protect threatened *Acropora* corals. **Option c:** Create 52 —small closed areas to protect threatened *Acropora* corals.

Limit Fishing Areas

- Traps are generally not set on coral or hardbottom
- Traps are set on seagrass, rubble, or sandy habitats because these areas are less likely to damage traps
- The movement of traps during storms poses the greatest threat
- NMFS Protected Resources staff worked with the commercial fishing industry to develop alternatives to close certain areas
- Areas were chosen to protect colonies with high conservation value and areas of high coral density

The Endangered Species Act (ESA) requires analyses to determine whether or not fishing operations impact threatened species including threatened staghorn & elkhorn corals (Acropora). The ESA Biological Opinion specifies certain actions that must be taken to address the impacts resulting from the commercial and recreational spiny lobster fisheries.

Impacts from Action 9 (Limit Fishing Areas)

Biological

Alternative 1 (No Action) would have the least biological benefit to *Acropora*, would perpetuate the existing level of risk of interaction between these species and the fishery, and would not meet the requirement established under the biological opinion. **Alternative 2** would provide the greatest biological benefit to *Acropora* and other hardbottom/coral resources. This alternative would greatly minimize any risk of interaction between *Acropora* and spiny lobster traps in federal waters. **Alternatives 3 and 4** would be less biologically beneficial to *Acropora* colonies located outside the closed areas. **Alternative 3 Options a-c** would reduce the risk of trap damage to *Acropora* by prohibiting the use of traps near areas of high *Acropora* density or near colonies with high conservation value. **Preferred Alternative 3 Option a** would likely provide the greatest biological benefit because it closes approximately 14 square miles of hardbottom habitat to trapping. **Alternative 3 Option b and c** would likely have decreasing biological benefits, closing approximately 8 and 4 square miles of hardbottom habitat to trapping, respectively. **Alternative 4** and the associated options would provide slightly more biological benefit to *Acropora* colonies than **Preferred Alternative 3** and the associated options because it would prohibit all fishing for spiny lobster in the proposed closed areas. **Alternatives 2, 3, and 4** would fulfill the requirements of the terms and conditions prescribed in the biological opinion. **Alternative 1** would perpetuate the existing level of risk for interactions between other ESA-listed species and the fishery. The impacts from **Alternatives 2-4** and their associated options on sea turtles and smalltooth sawfish are unclear. If these closed areas perpetuate the existing amount of fishing effort, but cause effort redistribution, any potential effort shift is unlikely to change the level of interaction between sea turtles and smalltooth sawfish and the fishery as a whole. If these alternatives reduce the overall amount of fishing effort in the fishery, the risk of interaction between sea turtles and smalltooth sawfish would likely decrease.

Economic

In terms of assessing economic impacts, the extent of lobster fishing in these proposed closed areas is unknown in part because they are relatively small when compared with the areas used in the fishery. It might be assumed that **Alternative 2** could have more economic impact on commercial fishing for Caribbean spiny lobster than **Alternatives 3 and 4**, but the validity of this assumption is unclear. **Alternatives 3 and 4** might expose commercial fishing to further regulation in the future if protection of the indicated coral does not meet expectations. **Alternative 2** could preclude virtually all of the trips in Federal (EEZ) waters in the Keys area; the total gross revenue would be reduced by $2.9 - $3.8 million.

Social

Alternative 1 would not meet the requirement in the biological opinion, so is not a viable option. The most restrictive, **Alternative 2** would have the most direct impacts on the social environment. **Alternatives 3 and 4** offer a broad array of options which provide less negative social impacts than **Alterative 2**, but may introduce other inefficiencies with regard to enforcement and compliance. Choosing smaller closed areas, as in **Alternative 3 Option b and c** may provide more flexibility for trap fishermen, but may make it more difficult to monitor and enforce compliance. **Alternative 4 Option b and c** would have similar social effects but for both commercial and recreational fishermen. Larger closed areas, like those in **Preferred Alternative 3 Option a** and **Alternative 4 Option a** may enhance enforcement, but could have more negative social effects on fishermen as they find less area to fish which could reduce harvests. Closed areas to fish could also create crowding as fishermen move more traps into areas closer to where others are already placing traps or as recreational divers are also forced into areas that become congested.

Administrative

Alternative 1 would maintain the current closed areas and would not meet the requirements of the biological opinion. This lack of action may precipitate legal action under the ESA involving NOAA Fisheries Service. Thus this alternative could greatly increase the administrative burden. Any alternative that creates new closed areas will increase the administrative burden over the current level due to changes in maps, outreach and education, and greater enforcement needs. **Alternative 2** would be the most inclusive and require enforcement over the largest area. **Alternatives 3 and 4** are similar except **Preferred Alternative 3** applies to trap fishing only, and **Alternative 4** applies to all lobster fishing. **Alternative 4** would be easier to enforce because any boat in a closed area with lobster on board would be in violation of regulations. **Preferred Option a** would create less administrative and enforcement burden than **Option b or c**.

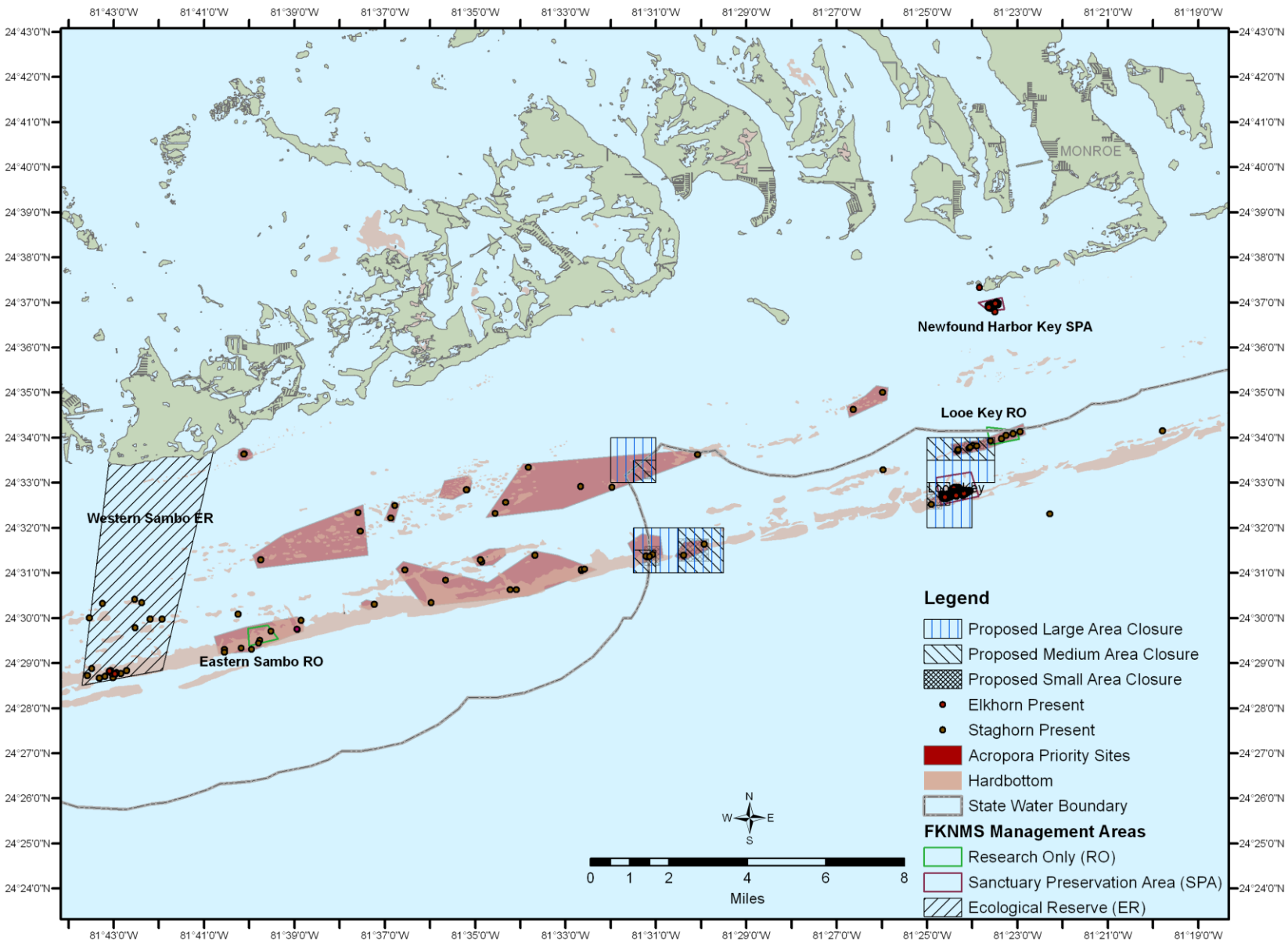


Figure 4.9.1.1. Proposed closed areas in the Lower Keys.

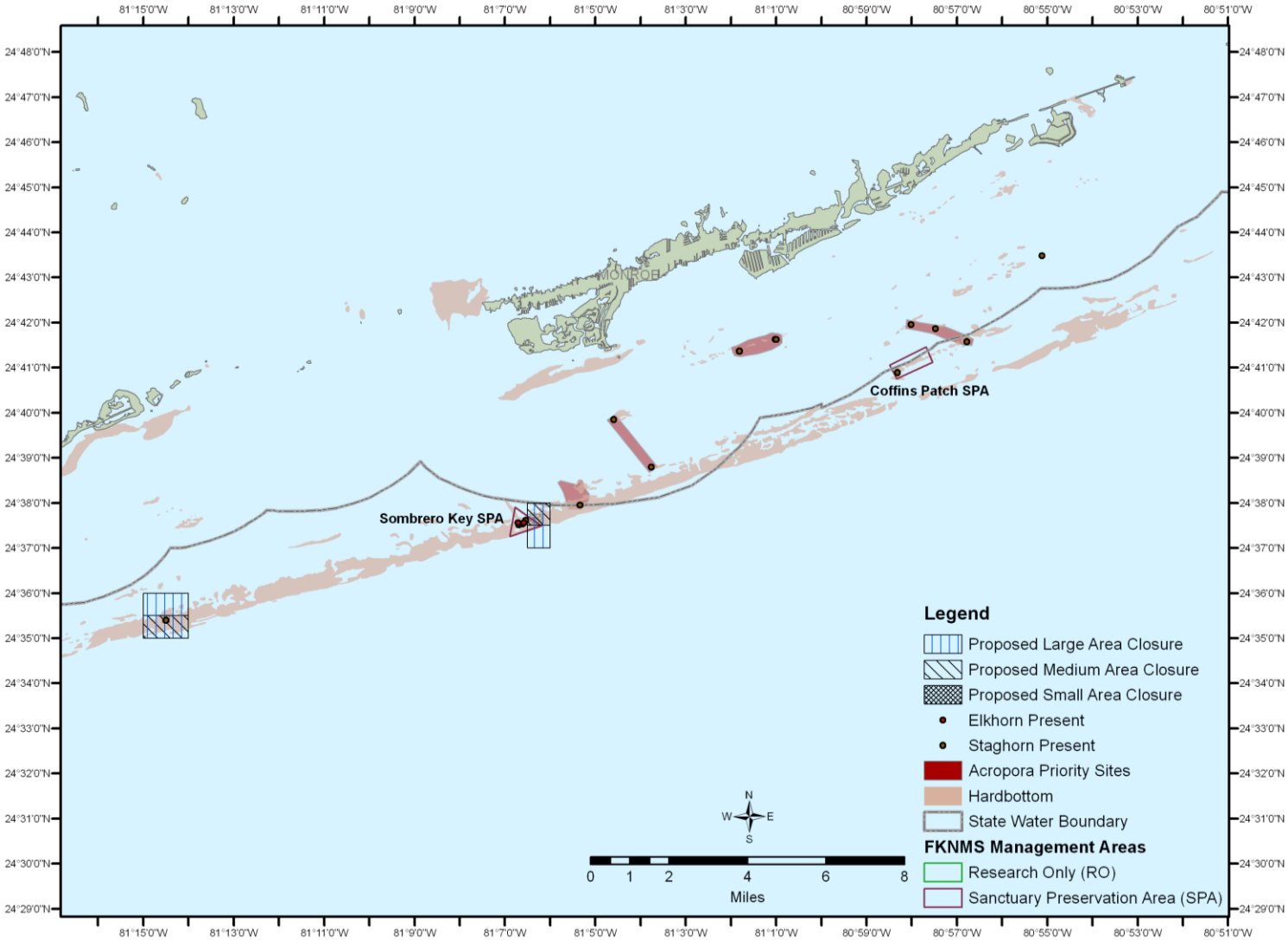


Figure 4.9.1.2. Proposed closed areas in the Middle Keys.

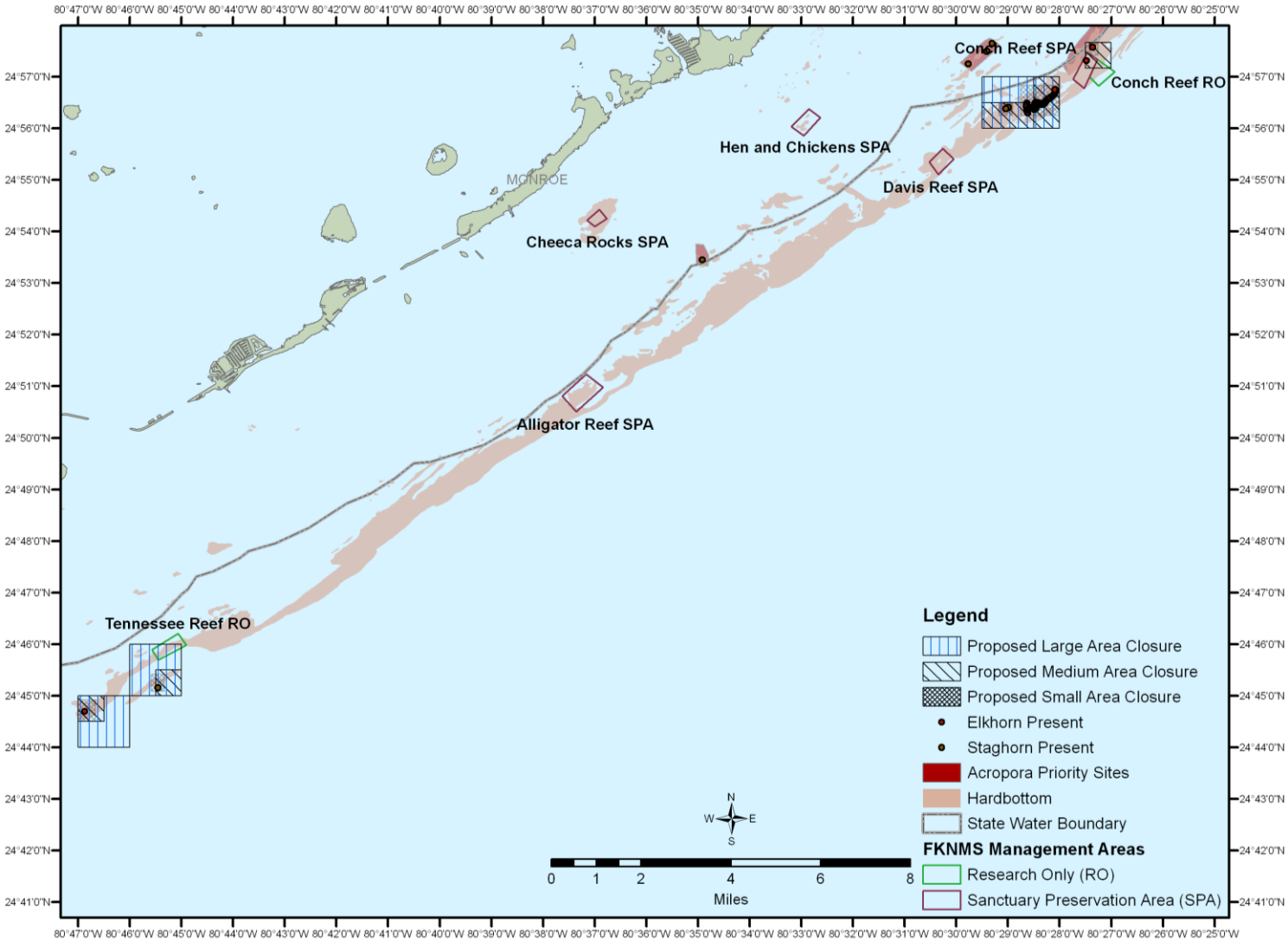


Figure 4.9.1.3a. Proposed closed areas in the Upper Keys.

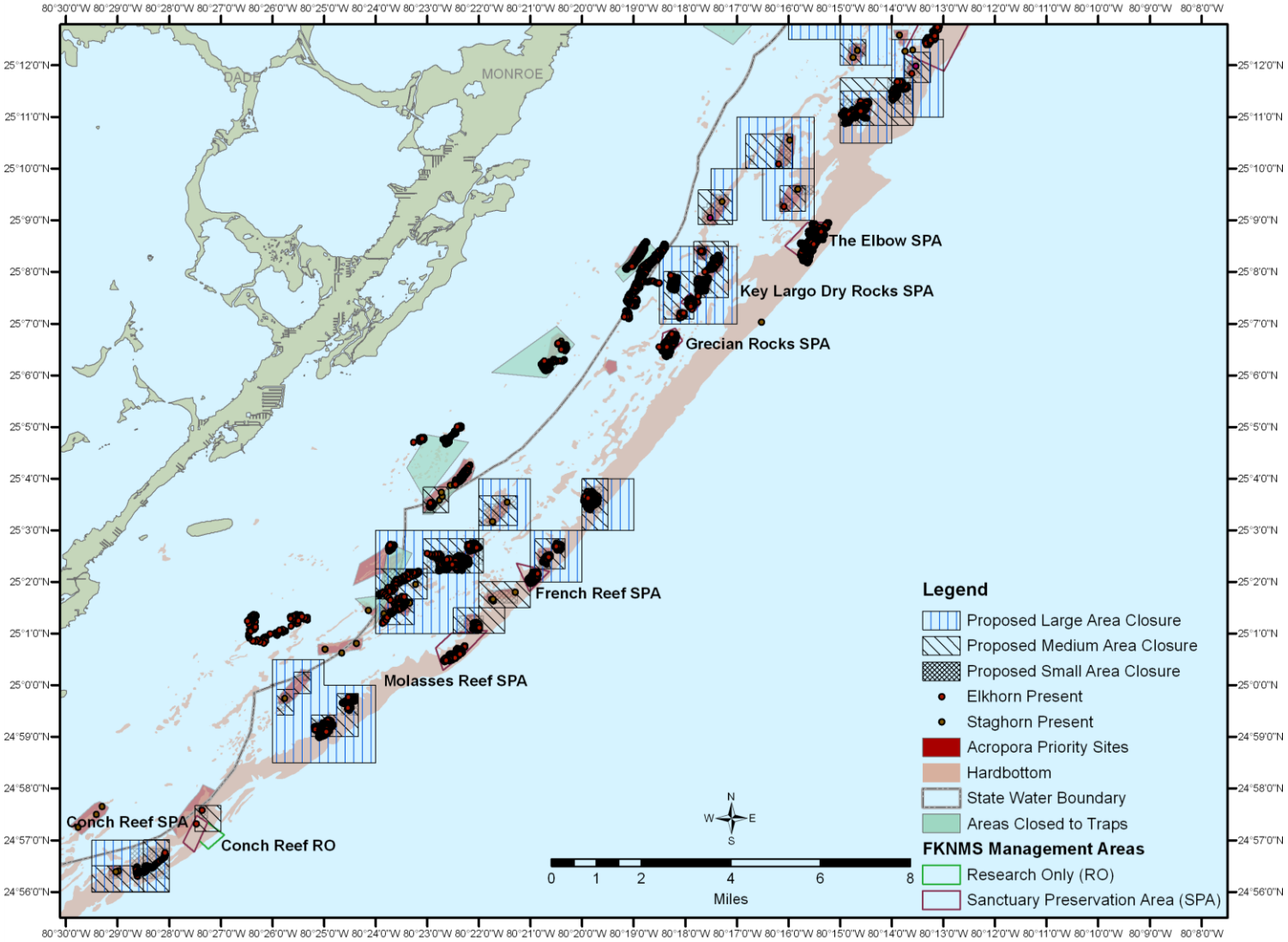


Figure 4.9.1.3b. Proposed closed areas in the Upper Keys con't.

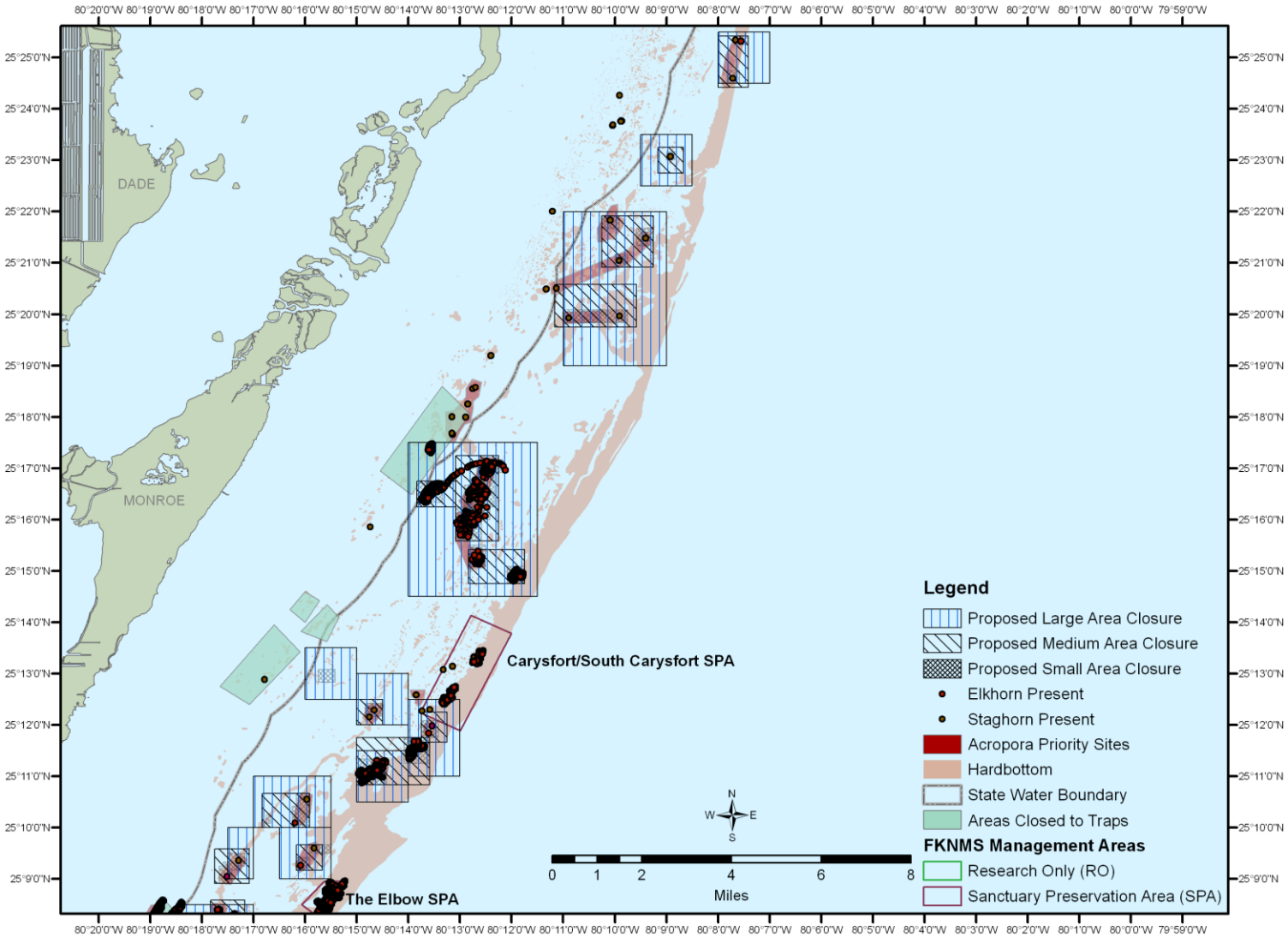


Figure 4.9.1.3c. Proposed closed areas in the Upper Keys con't.

10. Require Gear Markings on Trap Lines

Action 10 (Gear Markings on Trap Line) Alternatives
Alternative 1: No Action – Do not require gear marking measures for spiny lobster trap lines. **Preferred Alternative 2:** Require all spiny lobster trap lines in the EEZ off Florida to be COLOR, or have a COLOR marking along its entire length. All gear must comply with marking requirements no later than August 2014. **Alternative 3:** Require all spiny lobster trap lines in the EEZ off Florida to have a permanently affixed 4-inch COLOR marking every 15 ft along the buoy line or at the midpoint if less than 15 ft. All gear must comply with marking requirements no later than August 2014.

The Endangered Species Act (ESA) requires analyses to determine whether or not fishing operations impact threatened species including threatened staghorn & elkhorn corals (Acropora). The ESA Biological Opinion specifies certain actions that must be taken to address the impacts resulting from the commercial and recreational spiny lobster fisheries.

Gear Markings on Trap Lines

- Looking at delayed implementation to minimize economic impacts from new line requirement
- Councils want public input to determine color that should be used
- Need to be able to identify line to a specific fishery

Impacts from Action 10 (Gear Markings on Trap Lines)

Biological

Alternative 1 (No Action) would have no biological benefit for protected species and would not satisfy the line marking requirements of the biological opinion. **Preferred Alternative 2** would likely have slightly more biological benefit than **Alternative 3.** Requiring gear markings along the entire length of trap lines would minimize the likelihood that a portion of a spiny lobster trap line is recovered without an identifiable mark. **Alternative 3** would provide greater biological benefit than **Alternative 1** but the benefits would likely be less than **Preferred Alternative 2** for the reason described above. **Alternatives 2 and 3** would fulfill the requirements of the biological opinion. **Alternative 1** would have the least biological benefit to sea turtles and smalltooth sawfish and would perpetuate the existing level of risk for interactions between these species and the fishery. The trap marking requirements under **Alternatives 2 and 3** would provide indirect benefits to sea turtles and smalltooth sawfish. Trap marking requirements would provide better understanding of the frequency of interactions between these species and the fishery. These requirements could also help rule out the spiny lobster fishery as a potential source of entanglement with protected species.

Economic

The biological opinion requires that incidental take protected resources in the EEZ be monitored, Differences in economic impact on commercial fishing for Caribbean spiny lobster among the alternatives for marking trap lines are not immediately apparent. All have an August 2014 compliance date, and this would appear to allow enough time for fishermen to purchase the required lines as part their ongoing repair and replacement work.

Social

Marking trap lines should not have significant effects on the social environment other than imposing some added costs to modify the gear. The no action **Alternative 1** would not meet requirements of the biological opinion and therefore is an unlikely preferred option. **Alternative 2 and 3** would require some type of marking on trap lines which are required in other fisheries and would resolve any future problems with identification of trap lines being associated with interactions with endangered species. **Preferred Alternative 2** may allow for more efficient marking of lines as fishermen would not have measure each line marking pattern and therefore save time and money.

Administrative

Alternative 1 would maintain the current closed areas and would not meet the requirements of the biological opinion. This lack of action may precipitate legal action under the ESA against NOAA Fisheries Service. Thus this alternative could greatly increase the administrative burden. **Alternatives 2-4** would increase the need for enforcement to check if trap lines are properly colored or marked. On the other hand, the ability to identify lines entangled with endangered species would reduce the difficulty in determining assignment of incidental take to a particular fishery by NOAA Fisheries Service Protected Resources Division. In general, none of these alternatives would be more or less burdensome than the other.

11. Allow Public to Remove Derelict or Abandoned Spiny Lobster Traps in the EEZ off Florida

Action 11 (Public Removal of Derelict or Abandoned Trap) Alternatives
Alternative 1: No Action – Do not allow the public to remove any derelict or abandoned spiny lobster trap found in the EEZ off Florida.
Alternative 2: Allow the public to completely remove from the water any derelict or abandoned spiny lobster trap found in the EEZ off Florida from the end of lobster season trap removal period (usually April 5) until the beginning of the next season's trap deployment period (August 1).
Alternative 3: Allow the public to completely remove from the water any derelict or abandoned spiny lobster trap found in the EEZ off Florida during the closed seasons for both spiny lobster and stone crab (May 20-July 31).
Alternative 4: Allow the public to remove spiny lobster trap lines, buoys, and/or throats, but otherwise leave in place, any trap found in the EEZ off Florida from the end of season trap removal period (usually April 5) until the beginning of the next season's trap deployment period (August 1).
Alternative 5: Allow the public to remove spiny lobster trap lines, buoys, and/or throats, but otherwise leave in place, any trap found in the EEZ off Florida during the closed seasons for both spiny lobster and stone crab (May 20-July 31).
Preferred Alternative 6: Delegate authority to regulate the removal of derelict or abandoned spiny lobster traps occurring in the EEZ off Florida to FWC.

Public Removal of Derelict or Abandoned Spiny Lobster Traps in the EEZ off Florida

- State of Florida has a program to remove traps in state waters
- Industry concerns about the public removing traps

The Endangered Species Act (ESA) requires analyses to determine whether or not fishing operations impact threatened species including Threatened Staghorn & Elkhorn Corals (Acropora). The ESA Biological Opinion specifies certain actions that must be taken to address the impacts resulting from the commercial and recreational spiny lobster fisheries.

Impacts from Action 11 (Allow Public to Remove Derelict or Abandoned Spiny Lobster Traps in the EEZ off Florida)

Biological

Alternative 1 (No Action) would have no biological benefit for protected species or benthic habitat and would perpetuate the existing level of risk for interactions between these protected species and lost trap gear. **Alternative 2** would likely have the greatest biological benefits. **Alternative 3** would also allow for the complete removal of derelict or abandoned trap gear, but for a shorter period. As a result, the biological benefit of **Alternative 3** may be less than **Alternative 2**. **Alternatives 4 and 5** would likely have less biological benefit than **Alternatives 2 and 3**. Allowing the public to remove trap line, buoys, and throats, would help reduce the potential impacts from ghost fishing and entanglement. However, traps remaining in the environment still have the potential to cause damage to benthic habitat. **Alternative 4** would allow more time for the public to remove trap line, buoys, and throats from derelict or abandoned traps, potentially increasing the biological benefit. Compared to **Alternatives 2-4**, **Alternative 5** would likely have the least biological benefit. It is currently unclear what type of biological impact **Preferred Alternative 6** would have. **Alternative 1** would perpetuate the existing level of risk for interactions between other ESA-listed species and derelict traps and trap debris. The impacts from **Alternatives 2-6** on sea turtles and smalltooth sawfish are unclear.

Economic

Though none of these five alternatives would affect ongoing commercial fishing activity during the open season, fishermen's perception about any trap removal can impact their economic activity, wellbeing, and willingness to support regulations. Thus, **Preferred Alternative 6** may have the least economic impact. Federal and/or state outreach programs could change fishermen's perceptions over time, but change in attitudes may be a long time in coming and not as supportive as fishery managers may hope.

Social

Alternative 1 may be the most desirable for some trap fishermen. Trap molestation is always a concern for trap fishermen and if the public is provided with an opportunity to clear derelict traps during the closed season, there may be a perception that they may conclude that their duty extends to other times and areas. **Alternative 2** would allow for a more lengthy time period for the public to participate than **Alternative 3** which is limited to the closed season for spiny lobster and stone crab. The negative effects of allowing the public to participate are that there is no guarantee that legal traps might be removed by someone unfamiliar with the regulations. **Alternatives 4 and 5** would remedy some of the above concerns by allowing for removal of only parts of the trap, but there are still concerns about the public's knowledge and familiarity with the regulations. **Preferred Alternative 6** would allow the FWC to develop a program for trap removal that might address the concerns mentioned with previous alternatives and would likely have the fewest negative social effects.

Administrative

Alternative 1 would have no impacts on the administrative environment. **Alternatives 2 and 3** may create enforcement problems because someone with a trap aboard their vessel may have been removing it from the water because they found it abandoned or because they were illegal fishing. **Alternatives 4 and 5** would only allow the public to disable traps and would not allow them to retain the traps on board; thus enforcement would be easier. **Preferred Alternative 6** would have no impacts on the administrative environment for the federal government, but would increase the burden on the state government.

PUBLIC HEARING DATES & LOCATIONS

All hearings are from 5 pm – 7 pm

Monday, April 11, 2011 - Hilton New Bern/Riverfront, 100 Middle Street, New Bern, NC 28560 Phone: 252-638-3585	**Monday, April 18, 2011** – Radisson Resort at the Port, 8701 Astronaut Boulevard, Cape Canaveral, FL 32920, Phone: 321-784-0000
Tuesday, April 12, 2011 – Hilton Garden Inn, 5265 International Boulevard, North Charleston, SC 29418, Phone: 843-308-9330	***Tuesday, April 19, 2011** – Hawks Cay Resort, 61 Hawks Cay Boulevard, Duck Key, FL 33050, Phone: 305-743-7000
Wednesday, April 13, 2011 - Mighty Eighth Air Force Museum, 175 Bourne Avenue, Pooler, GA 31322, Phone: 912-748-8888	***Wednesday, April 20, 2011** – Doubletree Grand Key, 3990 South Roosevelt Boulevard, Key West, FL 33040, Phone: 305-293-1818
Thursday, April 14, 2011 – Crowne Plaza Jacksonville Riverfront, 1201 Riverplace Boulevard, Jacksonville, FL 32207; Phone: 904-398-8800	***Denotes joint hearing by the Gulf of Mexico & South Atlantic Fishery Management Councils**

What's Next?

- Scientific & Statistical Committee (4/5/11 - 4/7/11) in N. Charleston
- Public Hearings from NC thru FL Keys (4/11/11 - 4/20/11)
- Spiny Lobster Advisory Panel (4/20/11) in Key West
- Comments due by 5 p.m. on Friday, April 29, 2011
- Joint SAFMC/GMFMC Spiny Lobster Committee (6/7/11) in Key West
- Public Comment at Gulf Council meeting (6/9/11 afternoon) in Key West
- Joint Councils (6/10/11) in Key West – Final Approval
- Send to Secretary of Commerce June/July
- Regulations effective by December 31, 2011

Written comments: Bob Mahood, Executive Director, South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201, North Charleston, SC 29405.

Email: SpinyLobAmend10Comment@safmc.net for Amendment 10 to the Spiny Lobster FMP.

DEADLINE
All comments must be received by 5 p.m. on April 29, 2011