

**Florida Keys National Marine Sanctuary
Marine Zoning & Regulatory Review
Ecosystem Protection: Ecological Reserves / Preservation Areas and Wildlife Protection
March 25 & 26, 2014**

Working Group Meeting Summary

Meeting Agenda – March 25

1. Review of agenda and objectives
2. Discussion: considerations for the Upper Keys Region
3. Presentation: Human use Data Available for the Upper Keys Region (Angela Orthmeyer)
4. Discussion: Sharing of local knowledge
5. Presentation: Natural Use Data/Analysis (Shay Viehman)
6. Discussion: data analysis/queries
7. Discussion: highlights from small group discussions
8. Presentation: Overview of management possibilities (Beth Dieveney)
9. Public Comment

Meeting Agenda – March 26

10. Welcome back and review agenda for day two
11. Discussion: round-robin suggestions for the upper keys region
12. Discussion: suggestions proposed and settling on preliminary recommendations
13. Public Comment

Meeting Summary – March 25

1. Review of agenda and objectives
 - Welcome:
 - Absent working group members:
 - Scott Saunders, Rob Harris, Mimi Stafford, and Don DeMaria
 - Objectives:
 - Review of working group's primary objective: Recommend new or modified marine zones to ensure protection of a diversity of resources, including spawning aggregations and the full suite of marine flora and fauna to be presented to the Sanctuary Advisory Council.
 - Review of Upper Keys Region meeting objective: Recommend new or modified marine zones for the Upper Keys Region based on ecological and human use data, local knowledge, and current zones.
 - Schedule:
 - The overall schedule is a series of six 2-day meetings to be completed in July 2014. For dates, locations, and agendas see: <http://floridakeys.noaa.gov/review/reserves.html>
 - This is the second meeting for this working group and the first regional meeting focusing on the Upper Keys region.

- Day 1 Objective: to build as complete a picture as possible of the Upper Keys region by combining results from biological and human use studies with members' local knowledge. Use this information to begin considering options for marine zones in the Upper Keys region.
- Day 2 Objective: discuss options, and develop recommendations for the Upper Keys region
- Last 15 minutes of each day is reserved for formal public comment. An additional half hour is set aside on day two for the public to interact with working group members. Written public comments are always welcome.
- The goal for this meeting is for the working group to reach consensus on recommendations for new or modified marine zones in the Upper Keys region; however if full consensus is not possible majority and minority opinion will be captured and included in the recommendations that are forwarded to the Sanctuary Advisory Council.

- Working Group Comments:

- Request for full scale nautical chart of upper keys region for reference.
- Request for more detailed chart of Biscayne National Park area with alternatives considered as 'special recreation zone' proposed zones.
- Noted that Biscayne Bay is part of the Florida Keys ecosystem. Therefore, potential closures in Biscayne National Park should be carefully monitored and considered throughout this process, as they will affect what will happen in the Upper Florida Keys region.

2. Discussion: considerations for the Upper Keys Region

Working group members were asked to share their interests and objectives for the Upper Keys region including what they care about considering, protecting, and valuing in this region. The following bullets are the statements made by individual working group members.

- Need to factor in proximity of other management entities that are outside the Sanctuary boundary; National Parks for example. Also, within the Sanctuary boundary need to consider other management entities, State Park, Key Largo National Marine Sanctuary, South Atlantic and Gulf Fishery Management Plan lobster zones, Pennekamp lobster zones. To the extent that the working group can propose something that accomplishes the goal of the Sanctuary Advisory Council to consider these various management regimes and, where possible, simplify this patchwork.
- Consider the number and congestion of existing zones. The Upper Keys region is the most heavily regulated zone in the sanctuary. Much of this area is "self-regulating" due to water depths controlling access and where you can go and operate, for example the area in-shore from Carysfort is too shallow to operate. These "self-regulated" areas also need to be considered when thinking about zones in the Upper Keys region.

- There is a patchwork of protected areas; SPAs were designated to separate user interactions. There is data that shows impact to coral is from divers. Consider giving small areas back, consider creating one large area to protect (if a large area works, for example Western Sambo). Consider keeping a zone for use by divers, give other zones back and establish one large zone. Stock assessments done in the last three years for key indicator species show good to excellent condition. This science indicates that fisheries are doing well. Don't think there would be any challenge to protecting areas if they show they produce for fisheries and spillover from that areas could occur. How do we consider protecting pelagic species? Need to ensure that the existing and future uses can be maintained, the traditional living that has gone on way before the existing management areas were established.
- Current zoning is too complicated and needs to be simplified so that everyone understands it. Feel that the working group is headed in the right direction.
- Provide a broad, historical perspective, which begins in 1968 with greater number and diversity of species; there was a whole other world that seemed to change drastically overnight. The Upper Keys has smaller tidal flow areas, longer chain of islands, significant living reef, including patch reefs. The area also has Florida Bay rather than the Gulf of Mexico which creates a different system. This region is much more connected to the mainland which creates a different system – geologically, biologically, and hydrologically. Historic change over time is also related to socio-economic issues. The population here and within an hour is quite large and there is great potential for accessibility to the region and impact of these users. The Upper Keys has a lot of recreational boater impact. Thousands of non-resident, independent users (divers, snorkelers, boaters) descend on the region and have effect it tremendously. The local commercial use is in decline while the external recreational use is increasing.
- Need to simplify and standardize definitions and uses across zones. There are a lot of areas that are too shallow to fish and dive. Request that we look at the Shallow Water working group recommendations to see they context of how those recommendations fit into the work we are doing. There are other things that can be done in addition to zoning. Mooring balls should state: No Fishing. Agree that divers do damage, however, by far the most stuff that is seen on the reef is fishing gear. Feel that the working group can do things that will be beneficial for the whole area. SPAs are not large enough to have an ecological effect. There is opportunity to provide greater protections in areas that are already protected for certain things (Pennekamp lobster zones for example).
- Need to focus on simplicity. Miami Dade residents and other visitors are clueless about the sanctuary and what is allowed and not. Equitability is important. Existing zones seem biased toward no commercial uses vs. recreational uses. Working group needs to consider how much of the various habitats are being protected. Need to ensure that the recommendations have a clear rationale.
- Would like to see spatial distribution of where marine life fishing and spearfishing is allowed in the upper keys. It is likely that the only things this working group can

truly effect are the Sanctuary zones (not National Parks, State Parks, Fishery Management Plan); should consider what this working group can do and apply that more smartly.

- Need to understand why Sanctuary zones were originally designated. Carysfort was originally intended to go from the shoreline to 50' but was shrunk down. All other areas in the Upper Keys, except the zone around Aquarius, were designated as SPAs to separate uses. These areas were heavily visited and the main reason they were zoned was to separate incompatible uses.
 - Would like to know what area of high relief reefs, premium bottom areas, are already protected in existing zones.
 - Noted that there are no signs indicating that you are entering a marine sanctuary. People do not know. To protect what we have, we need to educate people to what we have. Also need to have law enforcement and water quality. It is important to know the economics – the numbers of fishing and contribution to economy. Consider the SPA areas, which are likely all already damaged. Need to consider that effect of simplifying and creating more zones that will simply draw more people into those places and potentially result in damage in those places.
 - Consider that SPAs are more damaged than when designated, and no (legal) fishing is allowed in these zones.
 - Reefs have declined both inside and outside zones due to global issues. However we only have control of local impacts, need to consider what we can do to address the local impacts.
 - The original intent of SPAs was to separate uses so fishermen were not catching divers, divers not hurt by boats running over top. Agree that the original intent of SPAs may not be working. In the Middle Keys there are areas of reef that are good and are nowhere near Sanctuary zones. Feel that some may be willing to give up SPAs if divers feel safe that they can do their activity without impact. If we continue pulling people to these places they will not be what they are now 10 years from now, but will be degraded. Our job is not to point fingers at who is doing what. Our job is to look at the whole picture, make it simple, help people understand what they can and cannot do. We should focus on the things that we know we can affect.
3. Presentation: Human use Data Available for the Upper Keys Region (Angela Orthmeyer)
Spatial information of available human use data for the Upper Keys region was presented. Working group members were then asked to share additional local knowledge. The presentation can be found at:
<http://floridakeys.noaa.gov/review/documents/20140325ephumanusedata.pdf>
4. Discussion: Sharing of local knowledge
Working group members were asked to share additional local knowledge related to human use. The following bullets are the statements made by individual working group members.

- Concern that if not all lobster fisherman were surveyed then the survey is not fully accurate. Lobster fishing activity depends on season: different times of year different areas are fished. Lobster trap fishing occurs throughout the upper keys region, not just in isolated areas, it is likely more concentrated near Key Largo, but occurs in northern regions as well.
- Noted that the better fisherman are able to go further and likely take gear to north of Key Largo.
- Noted that fishermen that are home-ported in Miami are likely fishing in the upper region of sanctuary; these fishermen would not have been surveyed as the survey was done for Monroe County; therefore their fishing would not be captured in the data.
- Concern that fishermen out of Miami are fishing in areas further south in the sanctuary.
- Lobster data shows that lobster fishing takes place everywhere it is the range, level and density of where it happens that changes.
- Stone Crab fishing data may need to be updated to more accurately reflect current state of fishing and where fishing occurs.
- Stone crab fishing happens closer to shore, inside Hawks Channel. Also a lot of stone crab fishing occurs in north of sanctuary (those individuals were not likely surveyed as they are not in Monroe County and therefore their use would not be captured).
- Noted that the recreational and charter fishing data is not accurate in part because the dates when the data was collected is not sufficient. Winter has greater fishing in-shore and on patch reefs and summer has greater fishing off-shore for dolphin.
- Due to when the survey was conducted, there could be a whole other area of fishing effort off-shore during summer that did not get captured.
- Need to consider that people aren't willing to share their data and information accurately and therefore the information is not accurate.
- Noted that there is concern that when fishermen share information, it has been used against them and so they tend to stay quiet.
- When given a survey, respond as vague as possible, as the information collected through the survey could be skewed.
- Noted that the data is basically showing more effort in the red areas, with some effort in the other areas. The group could be trying to over interpret the colored areas. The group needs to look broadly. The data is the data available. There is also knowledge in the working group and community; we need to determine how to use what we have, ask questions of the data, and use the local knowledge.
- Noted that the diving data seems to be more accurate than the fishing data.
- Questioned if it is easy to determine the density of population on-shore and if so, would like to see if the data for where the fishing occurs correlates with the population centers.
- Noted there is no data and information related to mini-season. If data were available, the whole map would likely be red except for Pennekamp.

- Noted that money is made on the number of people who dive, not on what comes back (comparison to fishing), therefore dive operators are more willing to share information of where they go. The diving data seems pretty accurate.

5. Presentation: Natural Resource Data/Analysis (Shay Viehman)

Natural resource data for the Upper Keys region was presented. The presentation can be found at:

<http://floridakeys.noaa.gov/review/documents/20140325epnaturalresources.pdf>

Working Group Questions/Comments:

- How does a species being given threatened or endangered status effect fishing? When critical habitat is designated, how does that fit into the sanctuary?
 - When a species is listed under the Endangered Species Act (ESA) as threatened or endangered, it does not affect the day-to-day usage of the sanctuary. However, any federal action that is taken requires an ESA consultation with the National Marine Fisheries Service. Federal actions can include updating a Fishery Management Plan, National Marine Sanctuary Regulatory Review (the process that is underway now), or a U.S. Army Corps of Engineer dredging project, among other items. Additionally, for every species that is listed under ESA as threatened or endangered, critical habitat for that species is required to be designated.
- There are currently nine coral candidate species for listing under the ESA present in the FKNMS. It is important to consider their presence when setting aside certain areas for the future. Request to look at ecosystem metrics of endangered species specifically.
- It was noted that there is only one known location where both male and female pillar corals actively reproduce; this area is in the Upper Keys region.

6. Discussion: Data analysis/queries

Preliminary analysis of the natural resource data was done to support the group's deliberations. This analysis was presented followed by a discussion by the working group regarding additional analysis needed and how to use the data and analysis to begin considering options for marine zones in the Upper Keys region. The following data analysis queries were presented to the working group (and can be found in the Natural Resource Data presentation) :

- How much area is currently within marine zones?
- How are habitats distributed within existing marine zones?
- Where are the locations of high structural complexity relative to marine zones?
- Where are locations of spawning aggregations?
- What proportions of threatened coral species (staghorn, elkhorn, and pillar coral) are present in marine zones?
- Where are the locations of resilient reefs and how much are captured in existing marine zones?

- Where are the locations of high abundance and diversity of fish, stony coral, and soft coral?

The working group discussed the data and data analysis. The following bullets are the statements made by individual working group members.

- Request to see more detail on fish spawning aggregations, including bathymetry data in areas of known and reported aggregations. Need to look at the specific species that are spawning, if there are only specific areas where certain species spawn the group should consider that.
- Note that there is no data on apex predator fish (including sharks and other apex predator fish), which is encompassed in the charge of the working group to consider as an important aspect of the ecosystem.
- Need to recognize that the fish surveys are done through SCUBA, and most sharks swim away, so would not be captured in the data and are difficult to capture in the data.
- Reference made to the presentation given by Dr. Steven Miller in the first set of working group meetings. Noted that certain reef habitat types support high coral abundance and diversity relative to all other habitat types and subregions of the Keys. Mid-channel and offshore patch reefs, particularly in the upper and lower Keys, were given as examples. Suggested that the working group consider these “special spots” in zoning recommendations because they provide the opportunity to accomplish maximum coral protection in the smallest area possible and because these reef habitat types are poorly represented in the current zoning scheme.

7. Discussion: highlights from small group discussions

The working group broke into two break-out groups to work more closely with the data presented and to begin considering potential options for marine zones in the Upper Keys region. One spokesperson from each group reported the results of their discussions:

- Group One: Reviewed spawning aggregations, but needed bathymetric data to proceed.
- Group Two: Recommended the outer boundary of Carysfort be extended ocean-side in order to protect the spawning aggregation of the black grouper. Consider making Carysfort catch and release. Discussed the possibility of yearly closures or complete closure to address concern with equity. Noted that complete closure may put additional pressure on other zones in the area. Requested the use of Google Earth for a clearer visual of area to be impacted by any potential boundary change.
- Note: Some public attendees also discussed their knowledge of the Upper Keys region and made comments on a map that was provided during the breakout group time.

8. Presentation: Overview of management possibilities (Beth Dieveney)

The working group was presented with and discussed a range of potential management options for use when considering marine zones and identifying potential regulations to address impacts to resources.

9. Public Comment

Public comment was provided by eleven individuals.

- Marvin Barrett, commercial fisherman. I've lived in Key Largo since 1968. I'm a commercial fisherman here. I graduated Coral Shores in 1972. My father was a commercial fisherman too. I'm one of the larger operators here in Key Largo. I fish 4357 lobster traps, 3550 stone crab traps. My boat fishes almost every day. I pay \$6,132 every year for FWC tags. My boat supports two families. I pay my crew member about \$50,000 a year. Our boat has to produce. We don't need no more closures is what I'm telling you. We have enough closures now. I listen to all this up here and everything, and this is way over my head a lot of this stuff, but from what I'm gathering from what I'm hearing here, the sanctuary is what is trying to close a lot of the bottom here and everything and they're not even here. I don't understand this. The FWC officers. We need more law enforcement here. They're not even here. I don't get this. Listen, we had a good meeting last night, and I listened to everybody speak there: Earnie and Bill Kelly. Bill Kelly—this man's on top of his game. That's the man you need to listen to. I don't speak at these things often, so that's where I'm coming from. No more closures. We have enough out there now, and I'm having a hard time now to take care of things now. Thank you.
- Gerry Sands, commercial fisherman. I've been fishing, commercial fishing, since I got out of school in 1960 with my father because I was here before John Pennecamp Park was thought about fishing with my father. I watched that come. The National Marine Fisheries. The sanctuaries came. We've been fishing around these closures for a lot of years. I'd like to talk tomorrow, but I want to say a little something now. About that map: Earnie's working on that. You know, you can always get a bigger map. I wanted to show everybody here. The fishermen that fish at Key Largo know there's a lot of fishermen, and there's a lot of young guys coming up now. John over there, he just bought into the business just a couple years ago. This is a livelihood we're talking about. This is their futures. Not mine. Theirs. And Earnie's son, he's going to get in it. And his little son Travis is right behind him, right in his footsteps. They got to have some kind of insurance where they will be able to fish in this sanctuary where they said that we always will. But the way it's going now, that's why I wanted to show you the map. It really shows you what's happening. It isn't much longer... We're on a chair with a rope around our neck and waiting for someone to kick it out. And Biscayne National Monument up there where Earnie fishes. If they close that down, where's he going to go? Manny. Where's all his fishermen going to go? I mean, somewhere along the line, we're going to have to stop and evaluate what's going on here. The fishermen, the commercial fishermen, the lobster fishermen are really getting hurt bad. Not the divers. Not the recreational. This is simply a Disneyworld for everybody here for awhile. Except for the commercial fishermen. These younger guys growing up and trying to get the

business. They're having a hard time, and nobody says. I want to show you that map of what they're doing. That map there don't show anything. I want you to see the wealth on everybody's back. You know, what the sanctuary's trying to do. We're happy with what we got. Just let it go at that. If you want to protect it, the areas you've got now, go protect them. When you say, 'I want to save something. I want to save this and save that' What you do is you try and take care of it. There's no law enforcement out there. I've seen law enforcement twice since I've been fishing from August 1st until now. And I'm still fishing them, amberjack fishing now. There's a lot of amberjack fishermen stuck here, but they want to be here. Anyway, we've got enough problems now with what's going on. Everybody's having a hard time trying to make a living. Please, just look at what you've got. Take what you've got, take care of what you've got, and let the fishermen fish. Thank you.

- Henry Feddern, marine biologist. I have a doctorate in marine biology from the University of Miami. I've been diving since 1956 here. Now with what the fisherman has said, I agree with. In fact, for the marine life fishery, it's even worse because we're not allowed to fish in Biscayne National Park, nor in Key Largo National Marine Sanctuary, nor in Everglades Park, nor in any of these SPA areas, so it is a very restricted area that we can even live in the upper keys. So if any more are taken away, it will be really bad. It's an established fishery, and it looks out for the environment. We're catching live fish especially. One got me yesterday. Also, you need to be able to use a spear for lionfish because most are around coral heads, and you can't get them. Anyway, but no more restrictions are necessary up here. We've got the whole area restricted already except for this little area up here.
- Bill Evans, commercial fisherman. I fish out of Key Largo. Out of Key Largo fishery. I went to high school with Marvin. You guys have a tough job trying to decide. And the closings—they don't work. So don't close any more.
- Bill Kelly, Executive Director of Florida Keys Commercial Fishermen's Association. Hi I'm Bill Kelly. I'm the Executive Director of Florida Keys Fishermen's Association. I'd like to share a quote with you from the March 8th edition of the *Keynoter*, which was made by Robin Lockwood who was the president of the Key West Chamber of Commerce. Robin said, "The sanctuary's arbitrary and deceptive marine zoning scheme must be stopped if we want to protect our recreational and commercial fishermen and our tourism." That's a pretty harsh statement and I don't know Robin. I didn't put the words in his mouth, but from a third party, that's a pretty strong assessment of how they're perceiving things. I share a much more relaxed viewpoint after attending today's meeting and seeing the interaction and the way things have changed focus here with the cooperation that's being taken place. We got to give a lot of respect, and we need to address the issue of what the commercial fishing industry brings to the Florida Keys. It's the second largest commercial industry in Monroe County next to tourism. We contribute about 600 million dollars to this county. When you think about it, until last March, when the economy started to pick up again, we went through about a five or six year period here where the commercial fishing industry contributed significantly to keeping Monroe County afloat and profitable and in a position where it had the lowest unemployment rate in

the state of Florida or the lowest in the nation. We have generations of fishermen here. That's how we started out and made a gradual turn to tourism and became tourism dependent in certain areas like Key West. I don't know that each and every one of these communities wants a Carnival Cruise line ship in their back yard each and every day. We want to maintain our integrity, our style of living; we don't want to move to the main land; we don't want to work in factories. We want to continue our way of life, and that's very important to all of us. That's why a lot of us live here. So, we bring a lot to the table. We're very willing to cooperate. We're very much involved in the Environment. Ken Nedimyer's Coral Reef Restoration Foundation received its first seed money 2500 dollars from the Florida Keys Commercial Fishermen's Association. We work with Chris Burg and the Nature Conservancy in the past couple of years to develop and identify 60 new coral protection sites out there. Just in a few moments that we've had to get together today at the table, with Tim Grollmund and discuss Carysfort Reef to have the fishermen that actually work that area to discuss these and come up with potential solutions that are big wins for both sides. Both sides of industry, but all of us that live here in the Florida Keys. I think that's very important. We got a long way to go. Many of the species of fish that we're talking about we are concerned about because they have been assessed within the past three years. They are in good shape. Shallow water groupers, for those of you who do not know it, we can talk about closing sites up and down the reefs, but they're protected already during the spawning season between January 1st and April 30th. Many of these species of fish spawn year round both in shore and off shore. So judging by the key indicator species of the fish that live here, we are in pretty good shape compared to a lot of other areas, say for example, the Gulf of Mexico, or further up the East coast and up into New England. But in terms of the environment, our fragile corals and so forth, the biggest things: water quality especially, climate change, and disease. How do we protect these corals from that? We have to go and correct the pollution problems that we're having. We have to figure out ways that we can address climate change on a global basis. These are big challenges for all of us. But no matter how much territory we close, we won't protect corals from those two issues: water quality and climate change. So we got a lot of work ahead of us to try and identify ways that will work to improve our environment. Like I said at the onset, I'm very pleased with the exchanges that I've seen today, and I hope that we can continue that as we work our way down the reef to Key West and the Tortugas. Thank you.

- John Grecco, commercial fisherman. I'm a commercial fisherman here in Key Largo. I was always in to hook and line fishing, and in the last couple years, once we've gotten regulated and that hook and line set there I've got and trap also. I still do both. And I'm against all. Any new closures I'm against. I think you have a little bit to work with, and I think you need to manage that a lot better than you do. I think you all need to go and take a real hard look at from 18 years ago till now, or whenever the sanctuary was enacted, and put the SPAs around Molasses or any of these other reefs. I think you need to go in there and say, 'well, we've been protecting it for 18 years, and it's still dying. So apparently what we're doing's not right.' So you guys

need to figure out somewhere in-between what Nature's doing on its own, which none of us in this room are going to correct. I think you need to find somewhere between and give us something to work with. And then you guys need to keep, you know, if you all are dead set on putting buoys... We don't even have to say buoys, but if you think you got to protect something, you really ought to need to protect it. You can't just put your buoys out there and that's like the red light on the traffic-- you know, out on the roads where you got to stop. Because when I've seen it before, people go out into the ocean, and they don't understand that there are rules or there's a lot of freedom. And that's one thing that draws us in the industry. That there's self-freedom, but you guys need to really go in there and look at what you guys got and determine if what you all have been doing has made it better or made it worse or it's the same. And then I think you need to come up with some ideas off of that. I think there's other inner-lying pieces that we're not going over that I think are maybe subjecting the coral one way or another, and I think no matter what we do, I don't think that's going to help it. And that's all I got to say.

- Chris Dillan, charter boat fishermen. My grandparents had charter boats; my dad; my uncle; everybody had charter boats. I'm not for any new closures. I think what you have is enough. I don't think you guys should take any more. Try to get more law enforcement, more education, and get it taken care of. You know? That's pretty much it.
- Walter Rentz, commercial fisherman. My name's Walter Rentz, and I've been to I don't know how many of these things. If I could speak like Bill Kelly, I'd probably have his job, but I can't. I'm going to have to agree with him 100%. I think you're doing a great job. I think you really need to listen to him because he's got more wisdom than all of us. He's smarter than all of us. He's a great leader. He's going to keep on our culture. It's not so much a way of life. It is a way of life, but it's a culture too. It's what the keys have been brought up on. His daddy built Key Largo. Crazy. Talking about some of it being restricted, it's like cutting the head off the python. Anyway, just think about that. We're all doing good. Don't fix it until it is broke.
- Adam Hill, commercial fisherman. A lot of this scares me. Water quality I think is a major issue. Law enforcement is a big key too. You've got a lot of things going on in the Everglades. Oil drilling and things like that. We're talking about fracking. What are these chemicals going to do when they get that freshwater influence as they flush down through the glades and that river of grass and flood into the water. Where's it going to go. The current can take it this way, the current can take it that way, but eventually it's going to make it to the reef, and I think it's going to be a bad thing for all of us. And I think we need to protect what we have, and take care of what we have, and work with that before we take more, more, more. Let's manage what we have and see through it that it is managed, and looked after, and taken care of the way it should be. I think that's about all I have to say. Thank you.
- Allison Morgan Estape, diver. Hi, my name is Allison Estape and I live on Lower Matecumbe in Islamorada. I have been diving in the keys for over 25 years, I am a scuba instructor, u/w photographer, and a member of Reefs Field Survey Team - rated at the Expert level for fish ID. - I know my fish. And it is on behalf of the fish

that I am here today to urge you to not only protect our current SPAs but also expand them so future generations of snorkelers, divers and fishermen have the opportunity to enjoy the diverse amount of fish that we have in the Keys. I would like to share just how special the Keys are vs other parts of the tropical Western Atlantic area. In 1968, Dr. Stark from the University of Miami did a 10 year fish diversity study that ranged from Tennessee Reef thru Crocker Reef. 517 species were identified from shoreline to the 100 fathom line, making this the most diverse zone in fish species in all of the TWA. My husband and I have been replicating this study w/in the safe diving zones where we should be able to find 389 of the species identified by Dr. Stark. We have been focusing on alligator spa. At alligator spa we have identified almost 200 species over the last 6 months. We continue on the hunt for the balance; some which we do not expect to find due to the over fishing that has occurred since the 1970's - Carlos will share more on this in a moment. At alligator ledge, we have identified up to 116 species in a 1 tank dive. This FEAT makes alligator a rare habitat in all of the TWA that needs to be protected. Only Bonaire has documented identifying more than 100 fish species on a 1 tank dive. We are working with Reef and dive shops in Islamorada to drive awareness of just how special alligator spa is and to leverage this unique biodiversity to drive tourism. For example on a recent dive trip to Grand Cayman I identified between 50-60 species per dive; on other sites within the Keys; I average between 60-70 species per dive. Alligator truly is unique. Alligator spa is also unique in that we have found large aggregations of spawning size black grouper within the spa. Over the last 5 months, we have seen 20-30+ black grouper aggregating in the spa. If spear fishing or fishing were allowed this aggregation would be wiped out in days. It is very important that we continue to protect alligator spa to insure future generations of groupers and other fish. I would strongly recommend expanding the SPA to include the deep water so the adults can move unmolested from deep to shallow and help populate all of the keys. Another unique feature of alligator spa is its destination for fish as a cleaning station. The amount of cleaner fish on Alligator is impressive; as is the number of large fish that visit the site for this important Service. Keeping alligator closed to fishing & commercial collecting insures our fish have an area where they can be cleaned & prosper. In summary, Alligator Spa is a UNIQUE habitat that needs to be protected for current and future tourism, for current & future fish spawning & ongoing fish cleanings. It is very important that we protect and EXPAND Alligator SPA to insure our fish species have a safe zone where they can thrive and reproduce and where snorkelers and divers can experience an opportunity to see over 100 fish species. Thank you for your time and consideration.

- Carlos Estape, diver. I live on Lower Maticumbe in Key Islamorada, and I have been coming to the Florida Keys all of my life. I'm an underwater photographer, scuba instructor, and guide. And I love this place. I have spent countless days underwater and hundreds of hours diving on reefs. If there is only one point I can get across to you guys today, it's the astounding difference in fish size and total number of species found between the sanctuary preservation area and the rest of our reefs. SPAs make up a tiny fraction of our waters, and I fear that they are our last vastness for

spawning aggregations of some of our heavy target species like groupers and snappers. We are selectively reducing the size and numbers of commercial fish by removing the biggest fish in these breeding populations and it benefits all of us to give these species ample room and time to propagate their numbers. I also want to mention Dr Stark's study in the 1960s. It saddens me to report that apex predators like tiger sharks and lemon sharks that he listed as common then. I've never seen in all the years I've been diving here. He also found that the Nassau groupers were on the reef. Yet today, it is a rare occurrence to see one in spite of the protected status. And simply put, some species may never recover from overfishing. So, for the sake of future generations, it falls on our shoulders here, today, to do the right thing. And act as proper stewards of this unique and irreplaceable place we all call home. Expand the SPAs. It's the most logical way of increasing our fish stocks for the benefit of all. Thank you.

Meeting Summary – March 26

10. Welcome back and review agenda for day two

New charts posted as requested. Schedule will include an informal public input opportunity before lunch, and public attendees will also have the opportunity to participate in their own small group to discuss management possibilities during the breakout group session.

11. Discussion: round-robin suggestions for the Upper Keys region

Working group break-out groups reported on results of their discussion and collective draft recommendations. Individual members made additional recommendations including the rationale for recommendations. These ideas were further discussed and refined as outlined below.

12. Discussion: Discussion of suggestions proposed and settling on preliminary recommendations.

The working group reviewed ideas presented for potential modifications to marine zones in the Upper Keys region. The discussion focused on (1) potential zoning changes, (2) suggested changes to regulations, and (3) innovative and Keys-wide ideas. The working group identified and documented areas of consensus, majority agreement, concerns, and issues for further discussion. The working group did not fully discuss all ideas raised.

(1) Potential zoning changes:

For full details, see the table on page 20

(2) Suggested changes to regulations:

Suggested modifications to anchoring regulation in Sanctuary Preservation Areas:

- No anchoring in SPAs.

- Anchoring exception for bait-fishing could be allowed by permit. This exception could be seasonal and could include an educational requirement (i.e. create Blue Star model for charter fishing industry)
- No anchoring, limited mooring balls to allow for use by bait-fishing, placed strategically by users.
- Consider no anchoring allowed in the existing NMFS Fishery Management Plan Areas Closed to Lobster Trap Gear.

Rationale

- Sanctuary Preservation Areas and Areas Closed to Lobster Trap Gear are set aside due to coral reef presence to protect coral; anchoring is destructive and anchor damage can be fairly substantial.
- If have limited number of mooring buoys and are not allowed to anchor if all mooring buoys are taken, this could help set the carrying capacity of number of boats that can use an area at any one time.
- Current anchoring regulations are confusing and inconsistent.

Issues to Consider

- Need to consider the practice of vessels rafting-up to the vessel using the mooring buoy.
- Decisions to anchor and raft-up to other vessels are often made due to weather, current, and visibility.
- Some mooring buoys are located in places not close to reef; therefore vessels anchor to be closer to coral for snorkeling, etc. If mooring balls are used, they need to be more strategically placed. Need to consider the operators ability to execute the trip that has been sold.
- Have to consider issue of safety (potentially discretion of enforcement officer)
- Need to increase enforcement of anchoring and/or increase available mooring buoys.
- Fishery Management Plan Areas Closed to Lobster Trap Gear should be marked. If not allowed to throw traps because these are special areas, they need to be marked so that the average person should know where these zones are and know not to anchor in these areas.

Potential Modification to Marine Life Collection Regulation

- Consider lifting the existing prohibition of marine life fishing in Key Largo National Marine Sanctuary to allow commercial access by permit only.

Rationale

- Marine life collection is allowed, with limited entry, in all other places.
- This is an area where marine life collection has not been allowed for many years, there is no evidence that the closure has made a difference for the region.
- Consider the issue of equity of users and commercial activities allowed in this region.

(3) Innovative and Keys-wide ideas:

Consider Limited Use/Entry

- Commercial fisherman already have limited use/ entry; this sort of approach might be appropriate to consider for other commercial uses in the sanctuary.
- Need to look to the future and how more and more people and uses will be both using and impacting sanctuary resources.
- Consider starting a Blue Star model for charter vessels, which could serve as a mechanism to lead to limited entry. Blue Star serves as a means to educate people about regulations. Discussed the potential that Blue Star status gives access to catch baitfish in Sanctuary Preservation Areas.

Law enforcement

- Request that this working group include strong language to promote better law enforcement. Noted that the charge of the working group cannot be fully implemented without addressing the issue of law enforcement

Artificial Reefs

- Consider a zone onto themselves for artificial reefs, particularly relevant for the Upper, Middle, and Lower Regions. (Marquesas and Tortugas likely not appropriate for use of artificial reefs.)

Rationale

- Artificial reefs have been identified as benign and/or beneficial for the ecosystem and can provide an economic boom.
- Artificial reefs are placed in areas that are primarily sand.
- Consider identifying specified areas to consider for artificial reefs. Artificial reef zones should be carefully designed with location and type of material used. Areas should be experimental with one in each region, with no activity allowed for 5-10 years, zones would serve as control areas adjacent to natural areas to determine if artificial reefs could help regrow natural area. After 5-10 years, evaluate if they have demonstrated to be an effective tool to aid in ecosystem protection/recovery and determine if/how people can then use these areas.

Use of Technology

- Consider adding a QR code on buoys that can be scanned and provide information on the sanctuary, specific zone, and associated regulations. This could be applied Keys-wide, but tested in a smaller area.
- Technology is a good way to address management and education. Need to consider that by the time this review is complete and is being implemented, there could be a lot more technology in place that could be used and applied.

13. Public Comment

Public comment was provided by six individuals:

- Walter Rentz, commercial fisherman. You guys have done an excellent job, and I'm proud of you working together and hashing things out. It all looks good to me. It

looks like we can continue business. [Referring to discussion on boundary changes at Carysfort:] I'm going to move some gear from out there because I lost it offshore, but now I can go inshore because there's a little more room in there. But if we can't go that far, then we have to angle that line so we can use some of that, because I don't want to lose all of it if I don't have to. Anyway, you guys have done a really good job. Thank you.

- Bill Kelly, Florida Keys Commercial Fishermen. What I wanted to do was give you a perspective on things. The commercial and recreational fishing industries are two of the most heavily regulated industries in the United States. We have triggers when fish populations get in trouble, when they become overfished. We see huge areas of the South Atlantic and other areas of our Nation's waters closed for indefinite periods of time to protect Speckled Hind, Warsaw Groupers, fish that most people will never see in their lifetime anyway, but we do that to protect them. We don't see similar things taking place within the sanctuary and within one of the most lightly regulated businesses or industries, and that's the recreational dive industry. We've got an industry that according to studies by Emma Camp in 2010, Chadwick Krieger in 2013 did a formal study of all the more than 20 SPAs that stretch from Key Largo to Key West. Their assessment was that greater than 80 percent of the damage to corals occurred in those areas because of diver interaction. Yet, in all the plans that we see here, I don't see anything that's restricting any diver activity. Even in areas where John Hunt pointed out that there's threatened and endangered corals. One of the user groups that is having the greatest interaction with coral is still allowed to dive in there while we restrict other usages. That doesn't make sense to me. We need to think about carrying capacity for these Special Preservation Areas that were pristine when they were developed and developed for the sole purpose of protecting these outstanding coral colonies. We can have a dive boat with 40 people on it, and go out to Carysfort. They can all go in the water. Based on the statistics and the studies with Camp and Chadwick Krieger, there's going to be, with 40 people, 720 interactions with the corals. That's just on a morning trip, and that's just on one boat. We need to take a close look at what these areas can handle in terms of human traffic. We need to take a look at, and we need to think about dive organizations and divers paying user fees like fishing permits for recreational and commercial anglers. We really need to take a look at the groups that are doing the most damage out there. That's the water quality, which we've talked about ad nauseam along with law enforcement and education. So I just wanted to point that out. I was just surprised that as we evaluate all these areas, I don't see any restriction against diver interaction in these areas. Thank you.
- Michael Belitzky, National Marine Manufacturer's Association. We make your boats, your engines, your accessories, and your trailers. My industry is supporting everyone in this room. There is a lot of give and take. Just to comment on what Captain Kelly said: that is absolutely true. Since the sanctuary is so unique in that you can't just drive your car in, stop at the tollbooth, pay your entrance fee, and then the park and the sanctuary is collecting that fee. For me to go in, and whether it's enforced by the capacity in the cars or by one person or what have you... But you can't do that in the

keys because you can go in just about wherever you want. That's a sticking point that comes to mind when you try and say user fees for anglers, or divers, or just cruisers, or what have you. But I think there is a way for you to find some common ground with that. I like the permit system. Going along with what Dave is saying about the dive operators; there's Blue Star. For boat rentals and for personal watercraft rentals, there are 17 authorized certified Blue Rider industries. This is a program that our industry the Personal Watercraft Industry Association and NOAA came up with; literature, a video, educational resources, so that you know if I'm coming down from Ohio, and I want to take out a Jetski, I know that I'm going to an operator that is familiar with the sanctuary, that wants to promote stewardship, that does not want to cause any user conflict because they are well aware of the areas that they can go, the areas where you fish, the areas where you dive, the areas where Ken studies, where everyone is using the waterways. I personally, taking this away, would like to expand that to all boat rentals because if I usually drive a pontoon boat up in Lake Michigan, and I'm coming down to the Florida Keys, those waterways are completely juxtaposed. You couldn't even do anything about trying to say how to operate a boat in salt water in a reef environment than in Lake Michigan. So if I'm coming down here to rent a boat, I'm going to want to make sure I'm renting a boat from a certified Blue Star or Blue Rider that will provide me the education. Granted, boaters should a) you shouldn't drop an anchor on coral because you'll break your anchor. That's just ridiculous and sad that there are people dumb enough to do such things. I think there is a great need for education and how to promote education within the community. So Baitshops should be able to have literature that the sanctuary comes up with. Very basic literature in English and Spanish that goes with pictures and bullet points that outlines the importance of stewardship and preservation as well as user conflicts. Often, a rec boater who doesn't know this area, might go into a trapping area and screw with your stuff. Then you guys are pissed at me because I'm the rec boater, and that's just giving me a bad image on all of us that come down here to help the tourism industry, and we're just trying to help you guys out too. I think that not only with enforcement, but a community-wide education/outreach within a year of the ink drying on the paper and you all take some ownership and responsibility for promoting this out to the public. One last thing about the mooring buoys: that would be extremely beneficial to boaters and for rec anglers. It's difficult. It's expensive. Yeah, public-private partnerships definitely worked. And in our industry would definitely throw some money that way, but more and more waterways are now using virtual technology where you take your smartphone, you scan it, and it's run through a Coast Guard or NOAA and that seems the way to go for the future. That would be great to adopt in the Sanctuary.

- Tom Hill, Key Largo Fisheries. I'm going along with the theme a little bit. You guys talked about water quality, law enforcement, and education yesterday. I, unfortunately, had a visit with the FDA for the normal visitation for our business, and so I wasn't able to be here, but some of the things that I have concern about, and want to encourage, which is the importance of education. The online thing and

being able to tell people to do that and for them to be able to show a star on the side of the boat: a lot of people would be interested in doing that. Signage. We have no signage that I know of anywhere, other than in the Redlands in Homestead. When you go into the Redlands, it says, "You're entering the Redlands Apartment Community." You automatically think differently when you pass that sign. When people visit that area, they're looking for the unique atmosphere that's there: the farms, the tomatoes, and all of those things. We need some signage in order to do it. We need TV commercials just for instruction. We have a channel down here. It should constantly have some kind of feature on it in order to educate the public as well as those people that live here that sometimes think that they're above the law. Probably the biggest think that I wanted to share for you to think about is the economic impact. Whatever you guys decide, all the closures, all the openings, everything that occurs is going to affect the Florida Keys economically. It's not just these guys fishing. There's the real estate development, the real estate housing market. Nobody is going to want to come to the Keys and buy a house if they have no place to fish or dive. Those are things that are important to me. As far as the restaurants, being able to have fresh fish that they're supplying helps our business grow. Tackle stores, banks, mortgage companies... every aspect of the economy will be affected with decisions that are made at this table. So we carry a lot of responsibility in what we're doing. We need to protect the environment. People that are here; they're showing their support and interest in protecting the environment. But we also need to protect our livelihood and our culture. The culture of the Florida Keys is very delicate as well.

- Janice Duquesnel, Florida Park Service. I had this discussion during one of our breaks with a couple of us in the group, and I just wanted to make sure everybody else in the group is aware of this. If you're going to visit Turtle Rocks or if you want to do anything to protect Turtle Rocks or one of the others. I just wanted you to be aware that when we were going out there and doing our survey work, we were finding a lot of trap-line. So we went out and we were going to try to remove this trap-line. We had thought that we had gotten all of it, and, unfortunately, we did not. When we went back out with our Tallahassee staff after a major storm event, we found that trap-line had been relocated. It had moved in on the reef and actually sliced across several heads of Elkhorn coral. I know that's just something that was an unfortunate aspect of things being out in the water, but I just wanted to make sure that you guys are aware that there are some issues, especially since it was some pretty large individuals of Elkhorn coral that were damaged because the trap-line sliced through it. It basically just broke it off with maybe about a foot and a half left on the base. I just want to pass that along.
- Gary Sands, commercial fisherman. I'm going to speak for most everybody that's in Key Largo and fishing in the Sanctuary and in the Park. I'm going to speak for them. They might get mad at me or not, but I don't care. We would like to keep everything in the status quo. The Sanctuary can have what they want. The Park has what they want. We don't need no more closures. Everybody is happy with what they've got. I just want to put us on the endangered species list because the corals on there, the

staghorn and pillar. What I'm scared of is are the ones in Key Largo. It's hard trying to do it now. The younger guys here like little Ernie and Travis and John, he just bought in it. The fishermen are having a hard time. If you ever get in the trapping industry, if you buy a boat, if you can afford it, if you can afford the certificate, you have to find land to put your lobster traps. The county donated land to the fishermen from Islamorada down. There's no place in Key Largo for a fisherman to put his traps. You don't put lobster traps on residential property in Key Largo or anywhere between here and Islamorada. You've got to have commercial. Like Tom, if you don't fish for a fish house, it's hard. And sometimes Tom don't have room for more fishermen for him. It's hard. Trying to fish under these conditions. This little gentleman over here: he has traps; he's got a little boat. It's hard for these guys. I'm not worried about myself. I'm subject too. I'm about out of it. These younger guys—somebody has to protect them. I don't know who, but it's up to you guys because he's too young to understand what's going on. He's got his daddy, and his daddy was so mad the other day he was ready to quit. I said, 'don't quit, because if you do, you're dead.' His life is shot, because who's going to protect him if it's not his daddy? It makes me sad to see this gentleman over here, and this other one over here—his father in law just bought him a boat to run and everything, a sport fishing boat. It's hard for me to see these kids because they've got to have a future to look to--to fish. That's what they do. They've got to have the place.

Written public comment was provided by three individuals. Written comments can be found here:

<http://floridakeys.woc.noaa.gov/review/documents/20140325epwrittencomments.pdf>

Follow-Up Actions for Working Group Members

- Check calendars to verify that the final working group meeting can be rescheduled to July 8 & 9 (instead of July 1 & 2 as several working group members have a conflict with those dates).
- Begin considering potential options for the Middle Keys Region.

Decision Items of Note

Preliminary discussion and decisions for potential zone modifications in the Upper Keys region are outlined in the table on page 20. All other items will be further discussed before preliminary decisions are made.

DRAFT concepts presented for potential modifications to marine zones in the Upper Keys region. The below table reflects working group discussion to date. These concepts will be revisited at the final working group meeting in July. No formal working group recommendations have been made.

Area	Rationale	Zone Concept	Regulation Concept	Consensus
Carysfort Reef	More protective of deeper reefs and historic black grouper spawning aggregation	Concept 1: Move outer boundary line to 30-m contour to encompass deeper reefs and historic spawning aggregation (black grouper). Consider moving the inner boundary east just in-shore of the reef-line.	Concept 2: Consider allowing certain level of bait-fishing (limit number of permits allowed in zone) Concept 3: Make it a no anchoring zone. Limit number of mooring balls, limit use.	Consensus: Support zone and regulation concepts
Issues to Consider for Carysfort Reef and associated Concepts:				
Need to consider a buffer zone for natural resources that zone is designed to protect.				
Concern about lots of trap fishing gear and proximity to boundary and potential that it could impact resources in the zone.				
If no anchoring regulations put in place:				
o Would need to allow anchoring for bait-fishing (if the bait-fishing exception is still allowed).				
o If managed through mooring buoys: how many and where they are placed should be determined by those who use the reef, which will enhance effectiveness.				
Basin Hill Shoals and/or Turtle Rocks	Area is already a Pennekamp Coral Formation Zone, includes patch reefs, high relief, inner patch reefs are not currently well represented in FKNMS zoning scheme and represent a different habitat than fore-reef area. Higher number of diversity, abundance. Considers charge to working group to include range of habitats; this could serve as in-shore stepping stone to Carysfort reef (would not capture contiguous zone, but could serve as a patchwork to capture intent of SAC goals) Many users are already not allowed in zones, would create equitable no use for all. Area is complex for navigation	Concept 1: create a new zone in this area (considered creating zone that matched existing Pennekamp Coral Formation Zones, but no draft or final coordinates were recommended)	Concept 2: Consider no take, close to all uses.	Still under discussion, No Consensus for concepts
Issues to Consider for Basin Hill Shoals and associated concepts:				
State research 20-years of data – loss from 2010 cold front was minimal, indicate higher resilient reef. Aggregation of a lot of small patch reefs. Area includes high diversity coral and seagrass.				
Use and impact to charter fishing and bait-fishing				
Issues to Consider for Turtle Rocks and associated concepts:				
State research shows high range of coral species, more of a bank reef habitat, appears to be resilient site. Planning for a long-term monitoring site.				
Use and impact to charter fishing and bait-fishing				
Snapper Ledge & Pickles Reef	Hot spot for pillar coral. Also includes coral nursery. Big reef area just south of the no spearfishing area Long standing proposal from the dive community that this area become a SPA.	Concept 1: do nothing at this site. Concept 2: Create a new zone that includes the existing Closed Area for Lobster Trap Gear area at Pickles Reef and consider including an additional ½ mile area of Snapper Ledge to protect whole area.	Concept 3: Make into a research only or ecological reserve to protect this area more fully. Concept 4: No take, closed to all uses Concept 5: No anchoring zone (believe 4 mooring buoys exist)	Still under discussion, No Consensus for concepts
Issues to Consider for Snapper Ledge & Pickles Reef and associated concepts:				
Area around Pickles – where no trapping is currently allowed, if way to address the anchoring impact through regulations rather than through a zone of no-take				

DRAFT concepts presented for potential modifications to marine zones in the Upper Keys region. The below table reflects working group discussion to date. These concepts will be revisited at the final working group meeting in July. No formal working group recommendations have been made.

Area	Rationale	Zone Concept	Regulation Concept	Consensus
Davis Reef Sanctuary Preservation Area	The working group discussed the Davis Reef Sanctuary Preservation Area and value of keeping that area as a marine zone.	No Recommendation Made	No Recommendation Made	Consensus: No Action
	Noted that the original reason for creating a zone in this area was primarily to separate use.			
	The area includes a ledge on the landward side, the zone is almost identical to Conch and Alligator, and includes four-mooring buoys.			
Issues to Consider for Davis Reef and associated concepts:				
FWC and Coral Restoration Foundation have permits to conduct coral restoration activities in this zone.				