Florida Department of Environmental Protection (FDEP)
Coral Reef Conservation Program (CRCP)

Southeast Florida Coral Reef Initiative (SEFCRI)
Our Florida Reefs (OFR)
South Community Working Group Meeting

Wednesday, August 20, 2014, 9 am – 4:45 pm

Nova Southeastern University Oceanographic Center
8000 North Ocean Drive, Hollywood, FL 33004-3078

In person:

CWG: Alex Sommers, Angela Smith, Dan Clark, David Bingham, Dick Dodge, Howard Lustgarten, Bill Cole (A – Jeff Torode), Jennifer Peterson, Jim Bohnsack, Jim Mathie, Ken Banks, Kevin Muench, Mason Smith, Nick Morrell, Rebecca Johnson, Scott Sheckman, Stephanie Voris, Sara Thanner
Absent: Jane Fawcett, Arthur Loughran, Manny Toledo, Melodee Smith, Skip Dana

FDEP CRCP: Jamie Monty, Ben Wahle, Meghan Balling, Lauren Waters, Caitlin Pomerance

Facilitator: Carol Lippincott (Floridia)

Public: Stephanie Clark, Donald Vacin, Danielle Graham, Amanda Costaregni, Dana Wusinich-Mendez, Kurtis Gregg, James Byrne, Denise Fox, Drew Martin, Pilar Barrera

Key points (i.e. the points emphasized by the speakers) are highlighted in yellow

Action items are highlighted in yellow and will be labeled as **Action Item**

Group decisions are highlighted in yellow and will be labeled as **Decision**

Meeting Summary

9:00 AM – Welcome & Meeting Overview

Work Plan Progress to date:

- Completed five meetings
- You will be halfway through the OFR process by the end of today
- Progress so far:
    - Got organized
    - Ramped up the learning curve
    - Will finish learning curve today

Purpose of today's meeting:

- Develop a shared vision for SE FL coral reefs in 20 years
- Hear from James Byrne about SEFCRI's materials for listing and prioritizing management actions
- Hear three coral reef management case studies

How good groups make good enduring decisions together

- In your charter, you acknowledged that the more people in the room who are on board with your recommendations, the more likely they are to be implemented
- This will be accomplished through consensus based decision making
    - 4 values:
        - Mutual understanding
        - Full participation
        - Inclusive solutions
        - Shared responsibility
    - You will go back and forth developing options and have frequent polls to assess whether everyone is OK or if you need to keep working on something to include more people in agreement
        - When most are ok you will finally vote
- Your decision rules
    - Formal votes – 75% agreement needed
        - Listing recommendations
        - Prioritizing recommendations
    - Procedural votes – 60% agreement needed
        - Charter
        - All other votes (ex. vision, decision rules, etc.)

9:10 AM – Current Events

Dan Clark:

1) Coral reef burial in north Broward

- Happening from Hillsborough inlet south through Lauderdale by the Sea
    - Divers seeing reefs buried
    - DEP took samples on the beach and on the reef
        - DEP doesn't believe it was truck haul sand
        - They believe it was bypass sand from Hurricane Sandy
    - US Army Corps of Engineers now wants to put in a new bypass at Hillsborough inlet without an Environmental Impact Statement

2) Broward Segment 3 – Mitigation required

- Large sand bar developed off Westin-Diplomat Hotel in Hollywood resulting from 2005 Broward County Segment III beach renourishment project
    - DEP has sent a letter of non-compliance to Broward County and is requiring mitigation
        - Giving money to SAFCRI is one option for mitigation
    - Broward County must respond in 10 days
- More information: http://articles.sun-sentinel.com/2014-08-22/news/fl-beach-coral-damage-20140822_1_beach-renourishment-reefs-coral-damage

3) Port of Miami – Possible violation and non-compliance (hyperlink to letter)

- Dredging is burying and smothering reefs around the port project
    - DEP is doing assessments in this area – finding 14cm (5.5 in) thick sediments smothering coral
    - Mitigation rocks were dropped directly on top of living reefs
- DEP has issued a letter to the USACE stating that they and the dredging contractor Great Lakes Dredge and Dock are in violation of their dredging permits
    - USACE and GLDD have not sufficiently monitored impacts from the dredging project
    - They also damaged existing hardbottom communities with the mitigation project
    - USACE is required to respond to this letter in two weeks
- More information: http://www.miamiherald.com/2014/08/19/4298352/miami-port-dredging-damaging-sea.html
- Many of the rules on how dredge projects are approved have been changed (contact Dan Clark for more information)

Scott Sheckman: Sierra Club hosting 3rd annual ocean conference

- September 20 from 9-5 at Hallandale Beach Community Center
- Will feature a group of speakers from: American Littoral Society, Surfrider Foundation, Pew, The Nature Conservancy, FL Rep. Mark Pafford, University of Miami, etc.
- Several non-profits participating, DEP CRCP will also have an information booth
- Will feature a raffle for a Wyland lithograph – come by 1:00 PM for a free ticket

Arthur Mariano: September 3 at 7:00 PM at Shenanigans East Side Pub –Presentation to Hollywood Hills Fishing Cub on Deepwater Horizon oil effects on fish

9:30 AM – Develop Shared Vision for Southeast Florida Coral Reefs

Introduction

- The South Community Working Group performed an expedited 2-hour exercise to create vision statements that describe what they want the northern third of the Florida Reef Tract (north of the Key Biscayne lighthouse) to look like in 2034 - 20 years from now - as a result of implementation of their management actions.
- The purpose of this exercise was to provide an image for them to aim toward as they develop their recommended management actions, so that their management actions are designed to achieve their vision.
- Working group members were asked to develop separate vision statements for each of their 5 focus areas, starting with one sentence and adding to it as needed. After everyone had the opportunity to add to each vision statement, small groups (tables) attempted to summarize all contributions into one vision statement for each focus area.
- The resulting visions statements are, as expected, unpolished due to lack of time to do so. The SCWG voted to adopt part or all of the resulting vision statements, which they asked the facilitator to clean up in terms of punctuation and grammar.

- While the statements contain many elements of the SCWG's vision, the CWG emphasized that these vision statements are not comprehensive or complete.

Purpose: focus management actions on achieving a picture of the future that you will develop as a group

- If you don't have this picture, your management actions might not get you where you want to go
- Gives you a tangible idea of what you are moving towards
- Example: start building a house without a design – NO
  1) Draw a blueprint (vision)
  2) Come up with plans to build it

Mission vs. Vision

- Mission is why you exist and what you're doing for whom
- Vision is what you want the future of coral reefs to be as a result of your mission
    - A good vision isn't technical – no numbers or quantities
    - It should engage and energize people
    - Ex. NASA's early vision: "put a man on the moon"

Transformative Scenario Planning

- Tool that started the dialogue that ended apartheid in South Africa, created peace in Northern Ireland

By lunchtime, you will have a vision – it won't be polished, but it will be useful

How you will develop your vision

- Your focus areas will be broad areas in which you categorize your management actions
- Each sentence in your vision statement will be your vision for the future of reefs in terms of each of your focus areas
- Example – community working groups in N Florida on restoration of groundwater springs
    - Through several meetings, these groups went through several scenario planning sessions and came up with multiple vision statements
    - Sample vision:
        - In terms of the environment: "the water in Clear Spring once again flows so abundantly that it sometimes forms a roiling mound at the spring boil"
            - "groundwater flowing to Clear Spring is cleaner than groundwater in most of the state"
        - In terms of community: "Clear Spring is highly valued as a place for family reunions, weddings, and baptisms"
            - "Smith county residents are proud that they use less water than in most other areas in the state"
        - In terms of politics: "there is broad consistent voter support for protection of Clear Spring"
            - "Clear spring is declared a national natural landmark"
- Your vision needs to be broad and inspiring

Methods

1) Each table is given a focus area
2) Each table has 15 minutes to talk about your 1 sentence vision for that particular focus area
    - Spend a few minutes imagining it is 20 years from now (2035) and you are looking at the reef – you think to yourself "I'm so happy we spent the time with OFR to make the reef the way it is today because it worked"
    - What does the reef look like in this vision?
    - Select a table moderator who will keep the conversation moving, take notes, and write on the flip chart
    - Go around your table and talk about what you think your vision for SEFCRI reefs should be
    - Try your best to come up with a vision that everyone at your table is ok with
3) After that 15 minutes, you will rotate to another table and see if you want to add to the vision for another focus area
    - You can only add, not modify or subtract
4) Once you've rotated through all five tables, you will be reassigned to a new table, and then you will try to write one sentence that summarizes and incorporates what everyone wrote
    - Read what the previous groups have written and summarize it into one sentence
    - Focus on the elements that are written as a vision (a picture of the future)
5) After that, the entire group will review each statement and modify them as a group

Results* (Statements + Summaries)

**These statements are everything that the working group members initially added to the vision statements for each focus area. THEY ARE NOT THE FINAL APPROVED VISION STATEMENTS. For the official vision statements, please see "Final Products" below.*

- Awareness & Appreciation / Education & Outreach
    - Vision Summary: Public (residents and visitors) all recognize, understand and appreciate that conservation of Florida reef ecosystems are a core value for our enhanced quality of life and the economy.
    - Statements:
        - South Florida with knowledge of and a vested interest in protecting coral reefs, starting with education in the school systems
        - All residents and visitors recognize and appreciate that coral reefs are a core value to South Florida
        - People of all ages are aware of and appreciate southeast Florida coral reef resources and acknowledge that their actions influence these resources; information in southeast Florida coral reefs is widely distributed by public and private entities
        - The critical importance and heritage of Florida's Great Barrier Reefs will be widely known to all residents and visitors via early and continued education in addition to persistent and effective model public relations
        - Public understanding that a healthy Florida coral reef ecosystem is essential to an enhanced economy and quality of life

- Land-Based Sources of Pollution / Water Quality
    - Vision Summary: Water quality and availability of freshwater that are appropriate for sustaining resources such as reefs and supporting estuarine habitats
    - Statements:
        - Statewide initiatives to reduce and eliminate land-based sources of pollution
        - Achieve a vibrant, ecologically sustainable ecosystem and economy using best available science and conservation-based management to identify and minimize land-based sources of pollution
        - Clear ocean waters of oceanic salinity
        - An established positive impact of source of freshwater from land
        - Investment in infrastructure and improved public support for water management and sewage treatment practices that reduce pollutants and conserve water resources
- Coral Reef Habitat Restoration
    - Vision Summary: A restored and maintained vibrant ecosystem
        - Define and establish Marine Protected Areas to allow recovery and mitigation (ample diversity)
        - Reduce threats of overfishing, pollution and climate change to allow natural restoration to occur
        - Have successful science-based artificial restoration projects
        - Promote restoration and maintenance of biodiversity and ecological resilience in South Florida marine environments
        - Define habitat: ecosystem (physical & biological components) - healthy, abundant, large-size fish; healthy benthic organisms, low macroalgal cover
        - Increase diversity and abundance of coral species providing a stable healthy habitat
        - Improved ecosystem function of natural and artificial reefs and other supporting habitats including nurseries such as seagrass and mangroves
- Fishing, Diving, Boating, and Other Uses
    - Vision Summary: A Marine Protected Area management plan with adaptive rules generation and application.
        - An optimized healthy coral reef ecosystem with a thriving balance of marine life and human use of our coral reefs
        - Preservation of the reef and maintenance of a sustainable fisheries to promote tourism and improve Florida's economy
        - System of education and licensing that promotes and protects habitat and users
        - Protected Florida reef ecosystem to allow for future sustainable uses and improved health, with separation of incompatible uses
        - More educated users of marine resources
- Maritime Industry & Coastal Construction Impacts
    - Vision Summary: Collaborative methods to establish meaningful programs of ecological preservation and mitigation need to be a priority when impacts to marine ecology are inevitable

- Collaborative approaches to promote no-impact activities and construction methods
- Industry and construction projects have least possible impact on coral reef ecosystems
- Construction is necessary; establish preserve or sanctuary with emphasis on avoidance and minimization of coastal construction impacts; regional management such as balancing need for construction with protection of resources, considering cumulative impacts throughout the region; improve mitigation for unavoidable impacts including alternative mitigation such as transplants
- Establish a maritime LEED certification program and encourage preference to those certified contractors
- Require green construction to minimize environmental damage

Final Products*

**These highlighted statements below are the FINAL APPROVED vision statements for the SCWG. For each focus area, the SCWG decided to approve the either vision summary, the separate statements, or both.*

- Awareness & Appreciation / Education & Outreach
  - Vision Summary: Public (residents and visitors) all recognize, understand and appreciate that conservation of Florida reef ecosystems are a core value for our enhanced quality of life and the economy.
- Land-Based Sources of Pollution / Water Quality
  - Vision Summary: Water quality and availability of freshwater that are appropriate for sustaining resources such as reefs and supporting estuarine habitats
  - Statements:
    - Statewide initiatives to reduce and eliminate land-based sources of pollution
    - Achieve a vibrant, ecologically sustainable ecosystem and economy using best available science and conservation-based management to identify and minimize land-based sources of pollution
    - Clear ocean waters of oceanic salinity
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  - Vision Summary: A Marine Protected Area management plan with adaptive rules generation and application.
    - An optimized healthy coral reef ecosystem with a thriving balance of marine life and human use of our coral reefs

        - Preservation of the reef and maintenance of a sustainable fisheries to promote tourism and improve Florida's economy
        - System of education and licensing that promotes and protects habitat and users
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        - Require green construction to minimize environmental damage

Action Item: Carol will do GRAMMATICAL corrections only to the vision statements

12:40 PM – Public Comment

Jimmy Massey: I run a nonprofit called blue water initiative to clean up Osborne tire reef and I own a commercial sword fishing company. This seems more of an argument about semantics than actual content. I'd like to see something like the MPA in Monterey, CA because if we don't do something soon the reefs here will be gone.

Dan Clark: There is a movie documentary coming out called 6 by the people who made The Cove. The premise of the movie there have been five major extinctions in the world and we are coming up on number six. You can learn more by googling the movie six. Part of the promo is a vehicle that will project images from the movie on buildings.

Stephanie Clark: I'm really glad we're talking about management plans and MPAs. We need to keep looking towards this vision and make sure this isn't a nothing process and keep moving forward towards this vision. We shouldn't assume that it will fail because of political will.

Kevin Claridge (Director, FDEP Florida Coastal Office): You are part of a larger statewide team of coastal programs combined within DEP to support you. I've been cheerleading you up in Tallahassee and I'm excited to hear about your management recommendations.

12:55 PM - Housekeeping

Approval of last month's meeting minutes: APPROVED

Members who have attended every meeting:

- Alex Sommers
- Dan Clark
- Dick Dodge
- Howard Lustgarten
- Jennifer Peterson
- Jim Mathie
- Ken Banks
- Mason Smith
- Rebecca Johnson
- Scott Scheckman
- Stephanie Voris

Some of the worksheets we provide you will need to be filled out online*. To do so, you should:

- Be comfortable using standard word processing software
- Be able to easily and reliably access the internet
- Be able to easily use standard internet programs

**if anyone has problems talk to Carol or Meghan*

All files are on the OFR website, so if you can't access them through email they are online at www.ourfloridareefs.org

1:05 PM – Helping You to List and Prioritize Your Management Actions

Speaker: James Byrne, The Nature Conservancy

Your Mission: Develop a prioritized list of recommended management actions to preserve and protect SE FL coral reefs

Steps: Develop management actions, then prioritize them

1) List Management Actions

- You need a quality check to make sure they meet certain criteria
    - Criteria of your quality check:
        - "activity that helps enhance or maintain the condition of coral reef ecosystems or reduce threats to coral reef ecosystems to ensure their long term self-renewal"
        - must be short phrase: VERB, OBJECT, and brief BENEFIT of activity

        - Ex. “install a sufficient number of mooring buoys in all high-use locations to reduce anchor damage to reefs”
- You will fill out management action cards and each one will be scored to see whether or not the meet the criteria of the quality check
    - The ones that meet the quality check will make the list

2) Information gathering (2 components)

- Tier 1: critical information needed from the community working groups for implementation
    - Aspects: focus area, intended outcome, justification, potential pros and cons, location, duration (once or ongoing), spatial information (if necessary (information about the area where it will occur))
- Tier 2: supplementary information needed from the community working groups and SEFCRI (CWGs may not be able to supply all of this)
    - Aspects: why (potential environmental, social, or economic benefits/disadvantages, linkage to SEFCRI goals and objectives, supporting data), when (timeframe for implementation), who (lead agency and key stakeholders), how (approximate cost, other feasibility questions)
    - SEFCRI will add to this information during their first review
- You will review these templates and can add in other things that you deem necessary
- Both of these templates will be filled out electronically

3) Initial prioritization of management actions

- Assess benefits, feasibility, and cost
- Each category will be given a rank (electronic form to submit)
- Rankings will be tallied and given a final score
    - The total score of management actions will show the top, middle, and bottom ranked management actions

4) Final Prioritization

- You can re-prioritize by formal vote for reasons other than what was captured in the assessment

5) Final list of recommended management actions

Notes from discussion on resources to list and prioritize management actions:

- The main categories of the scoring mechanism to rank management actions are: benefits, feasibility, and cost
    - The final criteria for each of these are still being determined and your input will be included
    - The cost criteria will be quantified, as opposed to high, medium, and low
- A cost benefit analysis occurs in the ranking process
    - In the rank table, benefits is the driver of the ranking, so everything else will be ranked against the benefit (i.e. high benefit low cost will have a very high rank)
    - Cost of not taking action will also be incorporated in the cost category

- Although the ranking process will use specific metrics, your management recommendations don't need to be data-heavy
    - That information will be gleaned later in the Tier 1 and 2 information sheets
    - The Tier 2 sheet is meant for you to fill in what you know – SEFCRI will fill in the rest
    - The Tier 1 sheet includes enough information that the technical experts can fill information into the Tier 2 form
        - That is why it's especially important to fill out the Tier 1 form
        - When you get the SEFCRI review back after winter break all that information in the Tier 2 sheets will be filled out
- YOU as working group members will be developing the list of management actions by filling out the management action template cards that were handed out at the meeting
    - The management action template is also available online at http://ourfloridareefs.org/wp-content/uploads/2014/09/2_Management-Action-Template_Blank_NCWG.pdf
    - The Tier 1&2 worksheets are available at http://ourfloridareefs.org/north-working-group/08272014-north-community-working-group-meeting/

Action Item: Before the next meeting, Carol will provide the list of significant causes of change in coral reefs that the South CWG identified at their May meeting, as a reference as they develop their management actions.

- When incorporating the North and South group's management actions into one document, the PPT will look at both lists and try to combine them WHERE APPROPRIATE
    - You will have the final vote on this combined list
    - Ultimately the combined list will serve as the basis for a comprehensive management plan for the SEFCRI region
- Information on current management programs that exist for this region is available on the OFR website in the minutes and presentations from the July meetings

1:35 PM – Florida Keys National Marine Sanctuary

Speaker: Dr. Billy Causey – SE Regional Director, NOAA Office of National Marine Sanctuaries

Billy.causey@noaa.gov

Marine Sanctuary organizational chart

- Department of Commerce
- National Oceanic and Atmospheric Administration (NOAA)
- National Ocean Service
- Office of National Marine Sanctuaries (ONMS)

The National Marine Sanctuaries

- 13 sanctuaries and 1 marine national monument in 4 regions
    - Make up more area on water than all national parks on land

- The largest site is Papahanaumokuakea Marine National Monument

Definition of Marine Protected Area: “any area of intertidal or sub tidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.” -IUCN

- National Marine Sanctuaries: “Areas of marine the marine environment with special conservation, recreational, ecological, historical, cultural, archeological, or aesthetic qualities…”

The National Marine Sanctuaries Act (as amended in 2000)

- Directive: “To maintain, restore, and enhance living resources ... and to facilitate to the extent possible all public and private uses of the resources of these marine areas…”
- Mandate: “…to identify and designate as national marine sanctuaries areas of the marine environment which are of special national significance and to manage these areas as the National Marine Sanctuary System…”
- Congress found that National Marine Sanctuaries System (NMSS) will:
  A. Improve the conservation, understanding, management, and wise and sustainable use of marine resources;
  B. Enhance public awareness, understanding, and appreciation of the marine environment; and
  C. Maintain for future generations the habitat, and the ecological services, of the natural assemblage of living resources that inhabit these areas “improve conservation, understanding, management, and wise and sustainable use of marine resources
- Among the Purposes and Policies, Congress directed the NMSS:
  - “to facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities;”

Florida's Original National Marine Sanctuaries (1975-1990)

- Key Largo – established 1975 (353 sq km)
- Looe Key – established 1981 (18 sq km)

Florida Keys National Marine Sanctuary

- There were 3 major ship groundings in the Florida Keys over a period of 17 days between October and November 1989
- Congress quickly acted to designate the FL Keys National Marine Sanctuary (created by law: Florida Keys National Marine Sanctuary and Protection Act of 1990)
  - 2900 nm2 / 9800 km2
  - Jurisdiction to mean high tide
  - Surrounds Florida Keys
  - Co-trustee Management with State of Florida
  - 60% State Waters
  - 40% Federal Waters

    - 1600 Keys / 1800 miles of shoreline
- Contained a number of firsts for the National Marine Sanctuary Program – 1st to:
    - Congressionally designated Sanctuary
    - NMS to totally surround a community
    - Have emphasis on Ecosystem management
    - Include an Area To Be Avoided (ATBA) in the Sanctuary Regulations
    - To include a Water Quality Protection Program
    - To create a Sanctuary Advisory Council
    - To give specifics for management plan
    - To give direction on interagency process
    - Have an emphasis on marine zoning
    - To incorporate existing Sanctuaries
- Immediate forms of protection
    - ATBA for ships longer than 50m
    - Prohibited exploration for oil and minerals
    - Established water quality protection program (EPA, FL, NOAA)
- Directed NOAA to develop an integrated sanctuary management plan that should consider "temporal and geographic zoning"
- Act was specific about including the local state and federal agencies in the management planning process
- Authorized US EPA to create a water quality protection program
    - Authorized a high level Water Quality Steering Committee
        - Chaired by Regional Director of EPA
        - Co-Chaired by the State - FDEP
    - Identify Problems and Take Corrective Actions
    - Establish WQ, Coral and Seagrass Monitoring Programs

Coastal Marine Spatial Planning and National Marine Sanctuaries

- No oil and gas development
- Areas To Be Avoided (IMO designation – applies to vessels longer than 50 m)
    - Since this designation, there were only two ship groundings in a 24 year period (both occurred right after the designation went into effect)
- Particularly sensitive sea area (IMO designation – puts info on international nautical charts)
- Marine zoning
- No discharge

Ecosystem approach

- Includes full seascape – full range of habitats (seagrass, mangroves, coral reefs, etc.) and species

Threats to coral reefs

- Climate change
    - Steep decline in coral cover associated with massive bleaching events
    - Coral cover dropped in 2010 cold snap and has increased slightly

- Land-Based Sources of Pollution
- Habitat loss and degradation
- Overfishing

Challenges

- No single point of entry
- 26461 registered vessels
- Diverse audiences
    - Resident/tourist
    - Come from all over
- Resource damage (direct & indirect)
- Lack of awareness

Environment and Economy are inextricably linked in FL Keys

- Tourism is major economic driver in the keys (diving in Largo, sport fishing in Islamorada, partying in Key West)
    - 7.5 million visitor days – people come for:
        - Diving/snorkeling (739,000 people/yr)
        - Recreational fishing (416,000 people/yr)
        - Wildlife viewing (620,000 people/yr)
        - Cruiseships (dramatic increase over past two decades – 525 landings in Key West in 2005)
- Commercial fishing (2nd largest industry in Keys)
    - Shrimp, spiny lobster (#1 catch), stone crab and fin fish and marine life collection - $100M income with 4,310 jobs
    - $50M/yr in commercial seafood landings in Key West

FLKNMS regulates all of these activities

- Spearfishing
- Marine Life / Aquarium Collection
- Fishing / Trapping / Gear Type
- Personal Watercraft
- Airboats / Waterskiing
- Vessel Speed / Wake / Motor
- Vessel Size / groundings / prop scaring
- Anchoring / Mooring
- Impacts to Corals, Seagrass& Mangroves
- Access
- Diving / Snorkeling
- Discharges / Land / Vessels
- Bottom Disturbances

Marine Zoning

- "Setting aside of areas for specific activities to balance commercial and recreational interests with the need for a sustainable ecosystem" (FLKNMS Management Plan 1996)
    - Reduce user conflicts
    - Protect resources
- 5 zone types
    - Preservation Areas and Ecological Reserves – No Take Areas
    - Wildlife Management Areas – Access, Speed and Boating Restrictions
    - Special Use Areas –Research Only
    - 94% of Florida Keys NMS is "General Use"
- 18 Sanctuary Preservation Areas (SPA) – No Take
    - Shallow heavily used reefs
    - Capture 80-85% of snorkeling and diving activity
    - Reduces conflicts between divers and other users
        - Concentrated visitor activity leads to resource degradation
    - Vary in size, water quality, and biodiversity
    - Can sustain and protect habitat
    - Enhance reproductive capabilities of renewable resources
    - Areas that are critical for sustaining and protecting important marine species
- 4 research only areas – Only Permitted Entry Allowed
    - Variety of coral reef habitats
    - Areas used for:
        - scientific research (including baseline research)
        - educational purposes
        - restoration
        - monitoring
    - High-impact activities prohibited
    - Impacts minimized on sensitive habitats and reduce user conflicts
- 2 ecological reserves – No Take
    - Large areas with high habitat and species diversity
    - Representative Keys marine ecosystem
    - Generally good water quality
    - Encompass large enough areas to include a range of habitats
    - Provide natural spawning, nursery, and permanent residence areas for the
    - replenishment and genetic protection of marine life
    - Protect and preserve all habitats and species particularly those not protected by fishery management regulations
    - Western Sambo 9 sq nm – showed positive signs of recovery in one year
    - Tortugas 151 sq nm – includes mutton snapper spawning aggregation site (Riley's Hump)
        - After implementation in 2001, there were 5 banner years for mutton snapper in the Keys
        - Gyres pick up larvae when fish spawn and carry them to other parts of the keys
- 27 Wildlife Management Areas (19 with USFWS)
    - Protect back county islands

        - Bird rookeries, turtle nesting, other sensitive habitats
    - Protect endangered or threatened species or their habitats
    - Vary in size and location
    - Provide opportunities for public use / reduces conflicts
    - Regulate mode of access (jet skis, boats with noisy motors)
        - Reduced conflicts between jet skis and flats guides
- 19 existing management areas
    - Overlap state parks, aquatic preserves, sanctuaries, etc.
    - Sanctuary regulations can enhance the existing regulations of these areas, but DO NOT preempt them

New Marine Zoning Process Underway

- Sanctuary advisory council representatives and volunteers lead these efforts
    - Follow a process defined in the Sanctuary Management Plan
    - Rely on community involvement

Keys programs

- Science and research
- Mooring Buoys reduce physical damage
- Education and outreach (done on the water and land)
    - Blue Star – voluntary program for dive shops to spread information
    - Media outreach
- Enforcement – FWC (primary), NOAA OLE, USCG, USFWS

Sanctuary Nomination Process

- Community involvement is key to nomination of national marine sanctuaries
- Sanctuary office has $50m budget, 325 staff, 440 Sanctuary Advisory Council members – not a lot of resources
- Sanctuary Nomination process has been reestablished for the public to nominate new areas
    - Includes built in evaluation criteria
- Nomination process history
    - First formal process developed in late 1970s
    - More detailed Site Evaluation List process developed in 1983
        - Sites on the SEL were evaluated by regional review panels and NOAA staff
    - 12 sanctuaries designated by 1994
    - SEL deactivated in 1995 to focus on management of existing sanctuary system
    - Only one sanctuary added since then – Thunder Bay (Great Lakes) in 2000
- Reestablishing nomination process
    - Who can nominate: Anyone
    - 18000 public comments – majority support
    - Replaces inactive SEL with community-based criteria driven proposals for new sanctuaries
    - Stakeholders will work together to build engagement and solicit nominations for areas as new sanctuaries

    - Communities will be expected to identify opportunities for partnerships and collaborative management (will lend important credibility to nomination)
    - If a nomination makes it through the evaluation process it will be placed in a ranked list with other nominated areas
    - Nominated areas will be reviewed by NOAA against the final criteria and considerations; if successful, the agency may move forward with formal designation as a national marine sanctuary
    - New nominations do not equate to new sanctuary designations. Formal designation occurs in a separate, highly public process that often takes years to complete

SE Region Sanctuaries

- Existing: Flower Garden Banks, Florida Keys, Grays Reef
- Proposed: Monterrey Shipwrecks, Submerged Cypress Forest, NE Florida, Mosquito Bay NE Reserves in Puerto Rico

Notes from discussion on FKNMS

- As far as timeframe for nomination, the sooner the package is in the better, but you should go through the entire OFR process first
    - "You all are light years ahead of other areas that have an interest"
- For new nominations, ONMS is not looking at size
    - They are looking at networks as well as large areas – i.e. you could nominate the whole SEFCRI region or just core areas
    - Much of the SEFCRI region is in state waters so it would require a very close partnership with state bodies (as it is in the Florida Keys NMS)
- The reefs in the SEFCRI region were left out of FKNMS because they weren't in Congressman Purcell's district
    - He was looking at the Florida Keys only
- Despite its proximity to the keys, this area serves as its own discrete footprint, so it should be nominated as a separate sanctuary
- Remember that sanctuaries are multiple-use areas designed to improve (appropriate) human uses and the environment
- A sanctuary can also be used to address dredging

Action Item: Change Tom Goreau in last meeting minutes (current events from Jane's statement)

2:35 PM – Caribbean Case Study – Cayman Islands and Grenada

Speaker: James Byrne, The Nature Conservancy

Sandy Island Oyster Bed MPA in Carriacou, Grenada (TNC working directly with small community)

- Local people saw the reef system declining and fish dying and wanted to do something about it
- TNC worked with locals to develop a management plan, move it through the government, and get the area designated as an MPA

- Project partners: international and local NGOs, government of Grenada
- TNC went through MPA management planning with the local community of Sandy Island
    - 3 phases of planning process
        - Building vision and setting foundation
        - Understanding human dimensions (what are humans doing that cause the problems)
        - Designing solutions (management actions)
    - Stakeholder participation: fishermen, dive shops, hotels, government, university researchers, etc.
    - 1st goal: Select priority conservation resources
        - Fish, beaches, mangroves, coral reefs, offshore islands, seagrass
    - The area had no data – had to draw lines on a map printout to identify coral reefs based on local knowledge
        - Did the same with other resources
        - TNC backed up this knowledge with scientific studies (local knowledge was extremely accurate)
    - Graded out the condition of different resources
    - Assessed threats to these resources – overfishing, over visitation, etc.
        - Ranked them out
    - Used this information to tell a story of why they developed the management actions
- 18 objectives defined – developed strategies for achieving each one
    - This information went into developing a management plan
    - Included a financial plan for implementing the plan because the government and the locals didn't have the money
- Proposals
    - Protect fringing offshore islands and mangroves with fringing reefs that are nursery habitat
    - Create mooring fields
    - Protected reef fish in a certain area but allowed for bait and pelagic fishing
    - Gear restrictions in offshore waters
    - Straight lines and squares on the map made enforcement easy
- Attendance was good for most groups – except fishermen
    - Hard getting them to take time from the water
    - TNC didn't want to exclude or disenfranchise them
        - Went to meet them at the rum shops
        - Were successful by telling the story – fishermen were receptive, but didn't like zoning
            - They wanted to just close the whole area so they wouldn't have to worry about the rules of each zone
- Final zoning was finished four months later – hired enforcement officers, implemented plan
    - The original community working group is now co-manager with government as the management committee
- Key Points
    - Required extra effort to involve stakeholders

    - Having management plan and financial plan in place made passage easier
    - Key to protection was not about what you can't do, it was about what you can do – language was framed in a positive way

Darwin Initiative to Enhance an Established MPA system in Cayman Islands (assessing progress of an existing MPA system and figuring how to enhance it)

- Cayman Islands – 3 islands
    - Most people live on Grand Cayman
    - Contains an extensive reef systems, lots of fish, heavy tourism – especially on west end of Grand Cayman
- Timeline of reef condition
    - 1974: reef was in good condition
    - 1980s: reefs were still in good shape
    - Known threats in 1986 (time of marine park designation)
        - Overharvesting of conch and lobster
        - Ongoing coastal development
        - Anchor damage
        - User conflicts
    - 1986: marine park designated
        - Marine park zones mostly focused on reducing user conflicts
            - No fishing in dive sites
            - No diving in fishing sites
    - 2000: reefs degraded, fish populations down
        - Parks reduced user conflicts but didn't protect reefs – they were only designed to reduce user conflicts
- New threats
    - Continued population growth
    - Increased fishing pressure
    - Ongoing coastal development
    - Climate change
    - Invasive species
- New marine park goal: enhance reefs and fisheries
- Steps of marine park review process
    - Studies
    - Threat assessment
    - Review best practices/international recommendations
        - Protect 40-50% of each marine habitat with no-take reserves
        - Numerous reserves broadly distributed
        - Protect spawning sites and nurseries (Nassau grouper spawning)
        - Permanent protection (can't be revoked by future governments)
        - Size each reserve according to natural ranges of key species (recognize habitat connections)
        - Protect healthy areas (especially with location of key species) avoid high risk/threatened areas (don't protect an area that will inevitably be damaged)

        - Use temporary closures in addition to reserves
    - Public input
        - Lots of meetings held during first public consultation in 2011
        - Different times of day and many locations to accommodate work schedules
        - Aims: introduce project, share data, ask for public's views of marine environment and what they want to see in the future
    - Marine spatial planning
        - Map out use areas, reef health, risk areas
        - Use software to show areas for potential protection
        - Use common sense to develop network of proposed MPAs
    - Public consultation
        - Show maps and facilitate discussion
        - Expect things to change based on public consultation
        - Needed a place to collect all public comment – used legislative office to collect public comments and then met with legislators to talk about what people want in each district
            - Involved legislators and they presented the solutions to their constituents (thereby securing political support)
- Final draft system: created fishing areas next to public access points (swapped areas)
- Plan was presented to legislature and then governor got arrested for embezzlement so process had to start over (fingers crossed!)

Questions:

- The idea behind incorporating uncontrollable events into the planning process is that a healthy system will recover from those events. Having redundancy (multiple sites) is important to address this issue
- In Grenada two wardens were hired for full time enforcement. Plus, the Grenadian Coast Guard agreed to enforce resource regulations when they didn't do so before
- In the Caymans, there wasn't enough enforcement
    - Having no take areas made enforcement easier and cheaper because it takes less time than measuring catch
    - TNC also made an app where people can document resource violations with pictures and GPS coordinates that are sent to enforcement personnel
- Self-compliance with rules was mostly good, but in bad weather fishermen were more likely to stay close to shore in no-take areas
    - The youngest and oldest people were easiest to get compliance. The younger people had grown up learning about the environment, and the oldest knew what the reefs used to be like
    - Middle aged people were the hardest to get acceptance because they needed to provide for their families
    - A lot of the violations were for migratory jacks which they were going to be allowed to fish for before they made it an MPA
- The key here is that although these were called MPAs or marine parks, this was ZONING FOR DIFFERENT USES it was not strictly for no-take

3:20 PM – Shifting Baselines in the SE FL Recreational Reef Fishery

Speakers: Catherine Brady & Dana Wusinich-Mendez, NOAA

Baseline: the starting point to be used for comparisons in monitoring programs

- Important reference point for measuring health of ecosystems, shows how it used to be
    - If we know what the baseline looks like for a degraded ecosystem, we can try to restore it back to that state
    - Most people relate ocean health to the best they can remember in their own lifetimes (creates a very short timeline for measuring change in marine ecosystem health)

Shifting Baselines: chronic, slow, hard-to-notice change in things

- Documenting loss of large trophy fish in FL keys with historic photographs (MecClenachan, 2009)
    - Documented changes in size and species composition of catch in absence of long term fisheries data

Shifting baselines in SEFCRI recreational reef fishery

- Done through photographic records from fishing clubs, charters, IGFA, etc.

1939

- West Palm Beach – 4 large amberjacks, red grouper, black grouper
- Ft Lauderdale – diversity of large fish (Nassau grouper, black grouper)
    - 74 lb snapper was considered a good days catch

1955:

- Bahia Mar – large Warsaw grouper (slow growing and long lived)
    - People still catch them, but they are very small
- Pier 66: used to catch Warsaws, now catch Amberjacks (used to be considered garbage)

SE FL today

- Good species diversity
- Fish are not as abundant or as large
- Goliath grouper has returned thanks to protection by state of FL

Notes from discussion on shifting baselines:

- NOAA does have fisheries data reflecting an increase in catch effort associated with a decrease in catch size
- This photographic evidence is consistent with the verbal stories of the fish people used to catch here

3:45 PM – Homework/Activities for September Meeting

Activities for next meeting

- Start out by asking you if you want more information collected on the Tier 2 worksheets
- Start creating management actions!!
    - You will start working in tables to make sure your recommendations meet the quality check
    - Then as a group you will go through each one and decide whether they meet the quality check
    - You will categorize them into focus areas and combine them where appropriate
    - Then you will identify which focus area needs more recommendations

Homework

- Review the Tier 2 worksheet and decide if there is additional information you want it to collect
- ATTEND THE SEPTEMBER MEETING
- Fill out draft management actions on the stock cards that will be provided to you
    - Keep to about 35 words
    - Must meet the quality check
    - You can use the marine planner to view spatial data to aid in creating these management actions
    - Please print in LARGE letters with a SHARPIE so that people can read it

Action Item: CRCP will make forms available digitally

4:00 PM – Hawaii Case Study

Speaker: Tova Callender – West Maui Watershed and Coastal Management Coordinator

West Maui Ridge 2 Reefs - multi partner collaborative initiative with leadership at the federal and state levels

Maui coral reef decline trends

- West Maui has seen localized declines in coral cover
- Management focus has been on decline in five watershed areas
- 2 priority watersheds – Waikuli and Hoowakah
    - combined coastline of about 4 miles
    - High elevation areas are forested
    - Middle elevation is agriculture
    - Coastal areas are developed for tourism

Watershed partners

- Funding agency support teams
- Local working group made up of representative from interest groups in this area
- Ridge to Reef team that work toward meeting the goals of the larger initiative

Threats

- Landscaping chemical runoff
- Wildfires
- Sedimentation dams that don't trap fine sediment
- Agricultural roads
- Bare agricultural fields
- Waste water reclamation facility injection well discharge (water comes up right in nearshore area)
- Urban runoff

Goal of Ridge to Reef Imitative – Enhance health and resiliency of West Maui watersheds

Accomplishments

- Watershed plan and significant level of funding available for implementation projects made available
    - Solutions
        - Rain gardens – intentionally placed shallow depression designed to remove so pollutants running through it
        - Reef friendly landscaping planning – resorts using reef friendly landscaping
        - Post fire rehabilitation planning
        - Pilot curb inlet basket installations
            - Baskets under storm drains that capture debris and hydrocarbons
        - Slope stabilization projects
        - Retrofitting dam to capture fine sediment
        - Agricultural road erosion control best management practices
- Collaborative effort where everyone has agreed to participate
- Multi-approach outreach
    - Targeted programs
    - Partners
    - Mailing lists
    - Social marketing – Using the same principles designed that make you buy stuff to make you change your behavior
        - Makes community feel empowered to take action

Role of monitoring

- Key component to tracking effectiveness and understanding dynamics
    - At project level
    - Medium and long time horizons
    - Social, biological, and organizational monitoring
- Hub of research activity (because these are priority watersheds)

Barriers to Implementation

- Limited county resources

    - Challenged ability to prioritize natural resources stewardship if staffing and funding are already maxed out
- Landowner constraints
    - Lack of staff, capacity, equipment and funding
    - Can't get on board with stewardship projects
    - Landscape in transition from farming to housing
        - Does create potential to introduce smart growth
- Bureaucratic hold ups
    - Including lengthy processing times for grants and securing permissions

Lessons

- Relationships are critical
- Rolling implementation improves engagement
    - Having the ability to undertake rolling implementation of some activities, while continuing in the planning is key to keep community engaged
        - Shows commitment to action
- Expect delays
    - Everything takes longer than expected

Recommendations for future watershed efforts

- Have some science in place prior to planning
- Establish dedicated staff
- Consider expansion to additional watersheds if contributing threats cross out of the boundaries
- Scope and budget of watershed management plan should be as actionable as possible
- Integrate watershed management activities with inshore activities – recognize land/sea connections

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Notes from discussion on Hawaii watershed case study

- Ways they facilitated interaction between ocean and land users/educated upland users about their ocean impacts:
    - Created educational activities for land users and engaged the ocean users as well
    - Hosted an annual ridge to reef event and to get them to interact with each other
    - The social marketing campaign also aided in that effort because it sold the message of ocean health but it was all land-based actions.