

Education & Outreach Response Document April 2016

***For context on this document, please see meeting minutes from April 2016.**

Title:

N-5: Enhance the Southeast Florida Coral Reef Initiative Florida reefs and ecosystems curriculum, including educating educators on available resources, and mandate that it be taught once in elementary school, once in middle school and once in high school (every school year) to provide science-based foundation for making future decisions to protect coral reefs.

Background:

- This recommended management action relates to the Southeast Florida Coral Reef Initiative (SEFCRI) region i.e. Miami-Dade, Broward, Palm Beach and Martin counties.
- The program is applicable to public and private school sectors and should address watersheds in inland areas that affect these coastal and marine habitats (including coral reefs, hardbottoms and estuarine ecosystems), due to the connectivity of said habitats.
- All elementary, middle and high schools should implement this program.
- This recommended management action is being put forth due to the lack of uniformity in education standards related directly to Florida coral reefs. A connection between the required educational standards and the unique local ecology of southeast Florida is lacking. A strong foundation in sciences (particularly marine science) for United States students is also lacking.
- In general, there is a lack of education, awareness, appreciation/reverence with respect to the marine environment by the general population.

Objectives:

- The intended outcomes of this recommended management action are: (1) to increase the awareness and knowledge of coral reefs, specifically in the SEFCRI region, (2) enhance the health of Florida coral reefs through increased education, and (3) provide strong science-based foundations to students and parents for making future decisions to encourage stewardship of reef resources.
- The recommended action also intends to create a better-educated group of citizen activist-students who will be culturally informed and value and protect our natural environment. Students will, in turn, positively affect their friends and family.
- The recommended action addresses the problem of a public that is not aware of the importance of and threats to our local reef ecosystem
- The recommended action aims to develop a generation of educated stewards who desire to conserve our marine environment and facilitate the implementation of other recommended management actions.

Intended Benefits and/or Potential Adverse Effects:

- There are no anticipated negative environmental impacts, nor are there any threats of adverse social or economic effects associated with this action.
- The duration of the benefits of this recommended management action is continual and ongoing.

- Some potential benefits of implementation of this recommended management action include improved knowledge base of students, parents and teachers. A way to achieve these benefits is by creating a standardized, uniform curriculum for coral reef education across the state. Improved environmental stewardship and appreciation: The more educated the population is, the greater likelihood that it will be more aware of and comprehend environmental issues pertaining to coral reefs. With increased knowledge of such issues, there will be less need for recovery and repair to coral reefs which are often harmed by avoidable damage. This type of program will nurture an informed citizenry and encourage a cultural shift towards ecosystem-based management. This could stimulate student interest in STEM (Science, Technology, Engineering and Math education) programs.
- Potential issues that may arise with implementation of this recommended management action include: (1) introducing another mandate and potential backlash among teachers and school districts in an increasingly data-driven environment (rigorous testing and dependence on standardized test scores), (2) difficulty getting new mandates through the approval process, (3) the time and cost to develop a new curriculum, (4) uncertain funding if programs are grant-based, (5) difficulty moving through bureaucracy to get this program mandated, (6) the logistics of implementation of a such a program, and (7) resistance to change. Students and parents, however, are likely to be supportive.
- **Include education on potential careers in marine and conservation industry.**

Agencies/ Organizations:

- The lead agencies/agents for implementation of this recommended management action are local school board representatives, teachers, science curriculum supervisors in each district and the Florida Marine Science Educators Association (FMSEA).
- The key stakeholders for this recommended management action are students, parents and teachers.
- The legislative considerations include the possible need for legislative approval.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting or enforcement requirements for this recommended management action.

Cost:

- The estimated direct cost of implementing this recommended management action is \$50,000-\$100,000 for a one-time cost associated with curriculum creation followed by occasional updates.
- No potential funding sources have been identified at this time.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended management action is 1 - 2 years.

Miscellaneous Info:

- This recommended management action is not linked to other recommended management actions.
- Some uncertainties or gaps with this recommended management action include: approval from local school boards would probably be necessary, or the state legislature could mandate the

program; authoring the curriculum and how long it would take to implement; the specific grade levels this recommended management action would target.

- Supporting and relevant data includes an online forum that would provide access to many more people. This could be added to the curriculum to address issues. Other potential sources of information include: Fldoe.org, CPALMS student resources and tutorials.
- Upload curriculum to the above-mentioned websites.
- SEFCRI offers teacher trainings and curriculum activities for K-12.
- Armstrong, H. 2005. Environmental education in Tobago's primary schools: a case study of coral reef education. Revista de Biologia Tropical, Vol. 53.
- Suggestion was made to meet with marine magnet schools (MAST, Broward County) to get guidance on how to approach this.
- Explore options to make this mandatory: consultants exist that can assist with this.
- Curriculum and activities are currently available through SEFCRI and COSEE, perhaps others. However, these resources are not widely known and not intrinsic parts of the K-12 science education curriculum (no coral reef units exist for any grade level).
- **Encourage field trips and environmental interaction.**

N-5 Public Comment Report:



Education and Outreach

Enhance the Southeast Florida Coral Reef Initiative (SEFCRI) Florida reefs and ecosystems curriculum, including educating educators on available resources, and mandate that it be taught once in elementary school, once in middle school and once in high school (every school year) to provide science-based foundation for making future decisions to protect coral reefs.

Quick Stats:

- Total number of comments on this RMA = 33
- Letters of support: **Read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
- Letters of opposition:
 - Charles Berkley—**details to be determined.**

Long Responses:

1. **“What do you support, or how could this RMA be changed to an action you could support?”:**

Category	Comment	Ref #	CWG response
Support	I think it is absolutely vital to teach coral reef ecosystem science to school age children, so they can grow up understanding how important the coral reefs are and be responsible for their actions.	1297	Read and noted.
Support	I support the entire RMA	1199	Read and noted.
Support	Education is key, especially in the young and impressionable minds of the next generation. It will be up to them to be the guardians of the sea in the future	1154	Read and noted.
Support	Really important! Teach the kids, and they will grow up to be informed citizens. I like the idea of an elementary, middle, and high school component. Look at the success of the Fairchild Challenge that Fairchild Tropical Botanical Garden puts on each year. Hundreds and hundreds of students participate! Maybe this can serve as a model for teaching our kids about coral reefs.	1125	Read and noted.
Support	"I support the protection of the Florida coral reefs. I believe it is very important that students in all grade levels learn about our coral reefs, and learn how to protect them too. They should understand how much pollution we are causing in our coral reefs and how to fix it. This is a very important topic that needs to be taken care of. -Rachel from Alonzo and Tracy Mourning Senior High School"	1024	Read and noted.
Support	Good to keep the youth informed on how to preserve the quality wellbeing of our coral reefs and marine ecosystems.	1019	Read and noted.
Support	I think it's a good thing that they are raising awareness and educating students on the safety of our coral reefs	962	Read and noted.
Support	A great proposal. In my county, Brevard there are kids living here that have never seen the ocean let alone reef awareness	764	Read and noted.
Support	Making knowledge of the reef system to school age children should ensure the future of a healthy and viable reef system.	733	Read and noted.
Support	OK as is.	669	Read and noted.
Support	Education and Outreach is critical to any management or preservation plan. People must understand what we are trying to save.	601	Read and noted.
Support	I completely support this action. Our future generations need to be aware of our reefs. They are our future. I push for this.	180	Read and noted.
Support	I have worked for non-profits in the keys with outdoor education. There is a need for more education on more ecosystem programs and education. Can't have too much of it, the future of the reefs depend on it.	266	Read and noted.
Support	education and awareness are imperative	286	Read and noted.

Support	Definitely!! Extracurricular activities and field trips would be a great help too!	316	Read and noted. See comment/response 1154 .
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1234	Read and noted.
Support	Ecosystems and marine curriculum in schools is nice.	350	Read and noted.
Oppose	<p>"The education system is over burdened with lofty goals and short of basic hard and soft skills upon graduation..."</p> <p>"Provide science-based foundation for making future decisions to protect coral reefs"".</p> <p>This cannot be effective unless students learn skills needed to support themselves in their life.</p> <p>The basic student population needs a better ""science-based foundation"" to protect themselves much less coral reefs.</p> <p>Mandating is wrong."</p>	857	Consider tweaking RMA to include language about careers in marine/conservation industry. Re-visit during April.
Other	"This is an excellent draft though in need of a few possible changes. Overall however, the draft is fairly sound. The one-time fee for the fixing of the end of the storm water pipe for such a minute price is miraculous to me. Being someone who lives on the beach and seeing the sands raked every morning has led me to wonder as to why that is needed so often. Protection of Miami's key tourist destination is vital to majority of the state's income and risking the beaches and future economy of Florida over such a silly issue is mind boggling to me. The most critical issue presented by this draft is the time frame that is set forth for the repair. It is absolutely absurd that it cannot occur in less than 2-5 years! It should definitely be shortened as to not add another issue for Mother Nature to deal with."	984	N/A. Refer to LBSP focus area.
Other	It already is	975	Read and noted.
Other	Make more people know about this for more support	964	Read and noted.
Other	The coral reefs should be protected and people how trash the water should be fined	984	Read and noted.
Other	"I Think this is a good idea for the ocean and for our world because we are messing up most of the ocean coral reef and ecosystems with trash that we throw out into the ocean oil or waste and global warming because that is a big cause on the coral reef ecosystem cause all the coral reef in the environment to died because of the climate change in the water so I think this idea is perfect in making us aware of what is happening to our ocean and what we are going to do about it	956	Read and noted.

	Nyrah Fisher-From Alonzo and Tracy Mourning Senior high"		
Other	"Sunscreen damages coral reefs: https://www.washingtonpost.com/news/energy-environment/wp/2015/10/20/after-sunscreen-protects-humans-it-massacres-coral-reefs/ http://www.washingtonpost.com/wp-dyn/content/article/2009/08/12/AR2009081201097.html "	634	Read and noted.
Other	add economics education of recreation and commercial use of fisheries	41	Read and noted.

2. "Other comments or input":

Category	Comment	Ref #	CWG response
Support	Education of all ages is vital for the future of the reef.	1199	Read and noted.
Support	Field trips and environmental interaction are key to this. Physically seeing the coral reefs and their inhabitants will have a more powerful impact than 50 classroom lessons.	1154	Read and noted. RMA language could be modified to include encouragement of field trips.
Support	"I won't comment on all of the RMA's, however I support ALL of the proposed RMA's after reading each of them. The stronger the policies, regulations, outreach and education are the healthier and more protected our reefs will be. I know each of these were developed after much effort from those involved and represent the best ideas available. These actions will require changes and adaptations but if we want to preserve and improve the reef habitats we must be willing to give and suffer some ""pain"". The payoff will be great! We must do this for our future and our future generations. Please post this comment to ALL RMA's if needed."	601	Read and noted. Forward to all other focus areas.
Other	I am not for any action that restricts divers or fishermen	597	N/A. Refer to FDOU.
Other	If this curriculum could be made nationwide. This can show other in the future generation a heads up to what's happening and have to protect their ecosystem	350	Read and noted.

Title:

N-14: Enhance distribution of educational materials (continue current activities) highlighting the economic and recreational values of southeast Florida reefs to enhance awareness by residents, elected officials, and visitors. Source reports are optimally updated every five years, if funded.

***CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action is being put forth to request that the Florida state legislature allocate funds to determine the economic valuation of the entire Florida reef tract from St. Lucie Inlet Preserve State Park to Dry Tortugas National Park. The study would be modeled on the recent St. Johns River Economic Study, which was completed by the University of North Florida and partners in approximately one year for \$400,000.
- The Florida Reef Tract study would include economic valuations of the reef for coastal protection, property values, carbon sequestration, nutrient removal, recreation, fisheries, ecotourism, and other ecosystem services.

Objective:

- The goals of this recommended management action are: (1) to provide economic data to highlight the economic value of the Florida Reef Tract, (2) inform decision-making, (3) empower stakeholders to make a difference in coral reef conservation and restoration; (Economic data could be used as a reference for future study parameters or funding requests.), (4) increased appreciation of economic and recreational value of reefs by residents, elected officials and visitors, (5) provide necessary data for funding opportunities, (6) provide information on solutions for tackling reef stressors, and (7) empower target audiences to make a difference. (This could be a positive indirect result of the educational materials.)

Intended Benefits and/or Potential Adverse Effects:

Benefits of implementation of this recommended management action include: (1) increased support and awareness of the reef tract, (2) empowering individuals to take actions to make a difference, (3) better protection of the reefs and increased awareness of the economic and recreational values of reefs, and (4) an overall increased awareness by all stakeholders may lead to actions based on this recognition. For example, municipality growth and management plans may take into account economic ramifications of environmental impacts to coral reefs. Campaigns to incentivize private businesses to enact coral-specific green practices are bolstered by economic data and serve as reminders to recreation-based businesses and groups that environmental impacts have economic consequences.

- There are no anticipated negative environmental impacts, nor are there any threats of adverse social or economic effects.
- If this recommended management action is not implemented, uninformed-decision making and missed funding opportunities could result. A missed opportunity to engage all stakeholders on the value of coral reefs is also a likely outcome.

Agencies/ Organizations:

- The lead agencies for implementation of this recommended management action are the Southeast Florida Coral Reef Initiative (SEFCRI), Florida Department of Environmental Protection (FDEP), Florida Fish and Wildlife Conservation Commission (FWC) and the National Oceanic and Atmospheric Administration (NOAA).
- Key stakeholders for this recommended management action were not identified
- There are no legislative considerations with this recommended management action.

Permitting/ Enforcement Requirements of this RMA:

- There are no permitting or enforcement requirements with this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- The estimated direct cost of implementing this recommended management action is greater than \$250,000.
- Data collection represents a one-time cost, while the printing and distribution expenses of educational materials are recurring.
- Potential funding sources include the Governor's budget, license plate revenue, private-public partnerships, federal funding or a direct request to the legislature.

Time Frame & Extent:

- This recommended management action is currently underway and would need updating as new studies are released.

Miscellaneous Info:

- This recommended management action is not linked with any other recommended management actions.
- Uncertainties or information gaps were not identified.
- Relevant supporting data include the following:
 - Shivlani, M. and Villanueva, M. 2007. A Compilation and Comparison of Social Perceptions on Reef Conditions and Use in Southeast Florida. Florida Department of Environmental Protection. Miami, FL. 200 pp.
- Consider looking at the NCREMP socio-economic study that just was done by Maria Dillard (NOAA). The data she collected was for the entire Florida reef tract, but the data

- might be parsed for just the SEFCRI region.
- Relevant current or ongoing efforts were not identified.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- FL Priorities Goal A2 Obj. 1 / FL Priorities Goal C3 / FL Priorities Goal C3 Obj. 1, 3 and 4 / FL Priorities Goal D3 Obj. 3 / FL Priorities Goal D4 / FL Priorities Goal D4 Obj. 2 / FL Priorities Goal D4 Obj. 4
- FDEP CRCP EOA Goals A-D
- SEFCRI LAS AA Issue 1 Goal / SEFCRI LAS AA Issue 1 Obj. 1 / SEFCRI LAS AA Issue 2 Goal / SEFCRI LAS AA Issue 2 Obj. 1-8 / SEFCRI LAS LBSP Issue 5 Goal SEFCRI LAS FDOU Issue 3 Goal / SEFCRI LAS FDOU Goal Obj. 4.

N-14 Public Comment Report:

Education and Outreach



Enhance distribution of educational materials (continue current activities) highlighting the economic and recreational values of southeast Florida reefs to enhance awareness by residents, elected officials, and visitors. Source reports are optimally updated every five years, if funded.

Quick Stats:

- Total number of comments on this RMA = 9
- Letters of support:
 - Coastal Conservation Association—**read and noted.**
 - American Sportfishing Association/Keep Florida Fishing—**read and noted.**
 - Miami Waterkeeper—**read and noted.**
 - West Palm Beach Fishing Club--**before any new materials are created, existing materials will be reviewed to lessen duplicate efforts.**
- Letters of opposition:
 - Charles Berkley—**Noted.**

Long Responses:

1. **“What do you support, or how could this RMA be changed to an action you could support?”:**

Category	Comment	Ref #	CWG response
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Support	We all need to be involved in coral reef protection! Providing educational materials to residents, elected officials and visitors would help us all "be on the same team."	1298	Read and noted.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1235	Read and noted.
Support	Very necessary! Include public support from meetings like these	315	Read and noted.
Other	The first step is awareness	765	Read and noted.
Other	Financial support funding will eventually have to come from politician's education of them and constituents is important.	735	Read and noted.

2. "Other comments or input":

Category	Comment	Ref #	CWG response
Other	A "manual" must be created and taught (or at least distributed) in all public school and in all public colleges and universities in the SEFCRI region. It needs to be produced in English and Spanish. People do not understand the scope of the problem. If they can learn about the problem, they can learn some solutions! We must reach the kids, because the kids understand!	265	Comment addressed in RMA N-5.

***CWG reviewed all the comments and decided to leave this RMA as it is written.**

Title:

N-15: Promote citizen support organization Friends of Our Florida Reefs to enable better community engagement in coral reef efforts and target funding for conservation activities more effectively and efficiently.

Background:

- This recommended management action relates to the Southeast Florida Coral Reef Initiative (SEFCRI) region, though home offices could be located within the region or elsewhere in the state.
- This recommended management action is being put forth because of inefficient or insufficient government procurement processes that impede the timely use of funding to support priority coral reef conservation efforts in the SEFCRI region. This recommended management action will also increase capacity to implement SEFCRI efforts by directly involving non-governmental SEFCRI partners and increasing their ownership of SEFCRI. It will also be a mechanism to attract additional financial resources to support SEFCRI efforts. This action will hopefully address concerns that there are “no programs to get involved with.”

Objective:

- The intended outcome of this recommended action is to promote the citizen support organization (CSO) Friends of Our Florida Reefs in order to generate general community support and additional funding opportunities for the direct benefit of the SEFCRI region (i.e. the northern section of the Florida Reef Tract) and the programs/activities of the Florida Department of Environmental Protection’s Coral Reef Conservation Program (FDEP CRCP) and SEFCRI.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include: (1) promotion of citizen conservation of coral reefs while also encouraging businesses associated with the SEFCRI area and marine environment to take an active role in the protection and conservation of the resource, (2) additional funding and funding options for underfunded vetted programs and activities, (3) social positivity in bringing the community together to celebrate a forward step in taking care of our beautiful environment, (4) increased funding and more efficient use of funding, (5) increased ability to respond to immediate coral reef conservation priority needs, and (6) educational awareness of coral reefs and community outreach.
- Implementation of this recommended management action is long term and long lasting. Non-profit organizations can be self-sustaining (low budget and/or all volunteer) hence can maintain proper status and community viability for as long as necessary – years, decades, even centuries.

Agencies/ Organizations:

- The lead agency for implementation of this recommended management action would be FDEP CRCP.
- Other agencies/organizations that might be involved or consulted include: Reef Environmental Education Foundation, The Nature Conservancy, local non-profit organizations, local government agencies and local businesses.
- Key stakeholders for this recommended management action were not identified.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are several regulations governing the start-up of nonprofits (or any legal organization/business) in the state of Florida, and 501(c)(3) status needs to be requested from the IRS at considerable cost. Special events may require site permits from the appropriate authority.
- There are no enforcement requirements with this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified.

Cost:

- The cost of implementing this recommended management action ranges from \$2,000 - \$50,000, depending on resources/experience/abilities of founding director.
- Potential funding sources include: donations from individuals, businesses and other nonprofit organizations; various grants (family foundations and corporate); membership fees; merchandise; fees for services; bequests; and vehicle donations. Special event fundraising would include sponsorships, entry fees, silent/live auctions, appeals, etc.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended management action is 0 - 2 years. Note: Friends of Our Florida Reefs took approximately 18 months to launch from inception to reality. However, most of the critical work to establish the nonprofit CSO was completed in less than six months.
- Associated costs would be recurring annually. Annual costs may fluctuate depending on need for CSO staff and funding goals/objectives. Costs should be covered by incoming donations and grants.

Miscellaneous Info:

- This recommended management action is not linked with other recommended management actions.
- Information gap: There is no history of a CSO working for the direct benefit of the FDEP CRCP/SEFCRI and the northern reef tract, thus it is unknown to what extent the CSO would be able to market the mission (or a special awareness/fundraising event) to the greater community and what the results would yield in terms of human resources and/or funding.
- Relevant supporting data: There are numerous citizen support organizations in Florida and around the country, e.g. Friends of Biscayne Bay, Friends of the Spoil Islands, and many others actively contributing towards the preservation/conservation of a particular natural resource via a combination of human resources and fundraising. There are many examples of successful festivals in celebration of Earth Day and Mother Nature in general.
- Current or ongoing efforts were not identified.
- Consider partnering with/tie in with the local sports teams (e.g. Marlins & Dolphins) to host a “coral reef awareness day” and/or partner with them for school coral reef programs.” (post-it data)
- Consider utilizing Miami’s celebrity population to promote reef conservation and state of ocean awareness.” (post-it data)

Goals/ Objectives to be Achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- FL Priorities Goal C3 / FL Priorities Goal C3 Obj. 3.
- FDEP CRCP Education and Outreach Goal A.
- SEFCRI LAS AA Issue 2 Goal / SEFCRI LAS LBSP Issue 5 Goal.

N-15 Public Comment Report:

Education and Outreach

Promote citizen supported organization (CSO) Friends of Our Florida Reefs to enable better community engagement in coral reef efforts and target funding for conservation activities more effectively and efficiently.



Quick Stats:

- Total number of comments on this RMA = 11
- Letters of support: **read all and noted. Thank you for your consideration**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charles Berkley
- There were no letters in opposition

Long Responses:

3. “What do you support, or how could this RMA be changed to an action you could support?”:

Category	Comment	Ref #	CWG response
Support	With all these action plans for coral reef protection, it is critical for citizens to be involved. A CSO would be ideal to help gather community involvement and support.	1299	Read and noted.
Support	I completely support this recommendation. It will really help coordinate projects and funding for interested community groups. This has the potential to snowball into something great for the community and uniting all of the groups. I believe this will be a very cost-effective program.	1180	Read and noted.
Support	Strongly support this!	1126	Read and noted.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1236	Read and noted.
Support	Awareness is the Key...Most likely to spur volunteer support	766	Read and noted.
Other	Providing students with information and experiences that allow them to make a strong connection with their surrounding ecosystem will help create a more sustainable community in the future. There are lots of short term benefits too! Public Participation in Scientific Research (PPSR) as well as K-12 marine science education can help researchers by providing a workforce to of 'non-experts' who can help gather data for higher quality scientific results.	651	Addressed in N-5.

4. “Other comments or input”:

Category	Comment	Ref #	CWG response
Other	I am very excited to see what happens with this recommendation! Ocean science is underrepresented when we talk about improving environmental education (EE) in K-12 curricula. I would love to direct a marine science education program in Palm Beach County, and hopefully work with local school districts.	313	Addressed in N-5.

Title:

N-18: Augment existing fishery and coral reef education programs to incorporate multi-cultural fishing practices including addressing environmental ethics.

***CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action relates to all of the Southeast Florida Coral Reef Initiative (SEFCRI) region, i.e. Miami-Dade, Broward, Palm Beach and Martin counties.
- This recommended management action is being put forth to address impacts to the Florida Reef Tract (FRT) resources that reflect unique cultural or ethnic uses that would be previously unanticipated without programs to reach relevant stakeholders.

Objective:

- The objective of this recommended management action is to promote awareness of the importance of the coral reef habitat to a multi-cultural population of resource users.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementing this recommended management action include increased social awareness resulting in better stewardship of the FRT and the establishment of a sense of stewardship.
- The benefits of this recommended management action are long lasting and include passing down sustainable fishing practices and eco-conscious behaviors (using less plastic and more reusable bags, proper trash disposal, etc.) and an increased understanding of marine habitats.
- There is a moderate threat to not implementing this recommended management action. Habitat could continue to degrade if information is not communicated.

Agencies/ Organizations:

- The lead agency for implementation of this recommended management action is the Florida Fish and Wildlife Conservation Commission.
- Other participating agencies or organizations could include local fishing clubs and diving/boating organizations.
- The key stakeholders for this recommended management action would be the Spanish and Creole-speaking reef users, namely fishers.
- Legislative considerations were not identified for the recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting or enforcement requirements for this action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for the recommended management action.

Cost:

- No potential funding sources were identified.

Time Frame & Extent:

- The anticipated timeframe for implementation is less than two years. Outreach objectives and activities will not be overly complicated.

Miscellaneous Info:

- This recommended management action is not linked with any other recommended management actions.
- Uncertainties or information gaps were not identified for this recommended management action.
- Development is still needed. Suggestion made to link this program to obtaining a fishing license in order to create motivation to participate.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- FDEP CRCP Education and Outreach Goal D.
- SEFCRI LAS FDOU Issue 2 Goal / SEFCRI LAS FDOU Issue 3 Goal.

N-18 Public Comment Report:

Education and Outreach

Augment existing fishery and coral reef education programs to incorporate multi-cultural fishing practices including addressing environmental ethics.



Quick Stats:

- Total number of comments on this RMA = 7
- Letters of support: **read and noted to all. Thank you for your consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charles Berkley
- There were no letters in opposition

Long Responses:

5. "What do you support, or how could this RMA be changed to an action you could support?":

Category	Comment	Ref #	CWG response
Support	South Florida is such a culturally diverse region. Many residents speak languages other than English therefore programs for coral reef ecosystem education need to be available in many languages. What might be acceptable fishing and diving practices elsewhere might not be beneficial here in South Florida. We all need to be responsible stewards in protecting the coral reefs, we could all benefit from educational materials.	1301	Read and noted.
Support	South Florida is such a culturally diverse region. Many residents speak languages other than English therefore programs for coral reef ecosystem education need to be available in many languages. What might be acceptable fishing and diving practices elsewhere might not be beneficial here in South Florida. We all need to be responsible stewards in protecting the coral reefs, we could all benefit from educational materials.	1301	Read and noted.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1237	Read and noted.
Support	Reef management should be all cultures concern.	736	Read and noted.
Support	outreach should be encouraged across all ethnic identities	311	Read and noted.
Other	to educate our now multi-cultural residents on fishing guidelines to maintain good ability to maintain our species	339	Read and noted.

***CWG reviewed all the comments and decided to leave this RMA as it is written.**

Title:

N-19: Make nautical charts featuring benthic natural resources coverage in the Southeast Florida Coral Reef Initiative region available to boaters.

***CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action relates to the entire Southeast Florida Coral Reef Initiative (SEFCRI) region, as well as the Florida Keys.
- This recommended management action is being put forth because the lack of knowledge among the boating community about the specific location of benthic resources prevents responsible boating and increases direct impacts and damage to coral reefs.

Objective:

- The intended outcome of this activity is improved availability of information on the location of natural resources made available to the boating community and maritime industry, as well as a reduction in direct impacts to benthic resources from boat groundings and anchoring.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include reduced boating impacts to reefs (leading to improved reef condition) and reduced seagrass scarring outside marked channels.
- The duration of this recommended management action's benefits are long term.

Agencies/ Organizations:

- The lead agency for implementation of this recommended management action is the Florida Fish and Wildlife Conservation Commission (FWC).
- Other potential agencies/organizations include the National Oceanic and Atmospheric Administration (NOAA), Florida Department of Environmental Protection (FDEP), Garmin and other electronic navigation manufacturers.
- The key stakeholders for this recommended management action are boaters and the shipping and maritime industries.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting requirements associated with this recommended management action.
- There are no enforcement requirements with this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- Potential funding sources include FWC, NOAA, and FDEP.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended management action has not been identified.

Miscellaneous Info:

- This recommended management action has not been linked to any other recommended management actions.
- Uncertainties or gaps with this recommended management action were not identified.
- Supporting and relevant data for this action were not identified.
- No current efforts have been identified with this recommended management action.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- Florida Priorities Goals D2 / Florida Priorities Goals D2 Obj. 1 / Florida Priorities Goals D4 / Florida Priorities Goals D4 Obj. 2.

N-19 Public Comment Report:



Education and Outreach

Make nautical charts featuring benthic natural resources coverage in the Southeast Florida Coral Reef Initiative (SEFCRI) region available to boaters.

Quick Stats:

- Total number of comments on this RMA = 12
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charleston Berkley—**noted. Will check if additional information is necessary.**
- There were no letters in opposition

Long Responses:

6. “What do you support, or how could this RMA be changed to an action you could support?”:

Category	Comment	Ref #	CWG response
Support	There are so many boats in South Florida therefore nautical charts showing natural resources coverage is paramount. Operating a vessel in these local waters is a privilege and boat owners/operators need up to date information.	1302	Read and noted.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1238	Read and noted.
Support	I support this recommendation. This is a very good tool to educate boaters to the area. I feel that a lot of sea grass and reef damage is caused by uneducated boaters or boaters unfamiliar with the area they are boating in. This tool provides an updated chart that boaters can use to find areas for fishing, be notified of protected areas and regulations, as well as additional information necessary to protect the resources or report violations.	1186	Read and noted.
Support	OK as is.	671	Read and noted.
Support	OK as is.	670	Read and noted.
Oppose	Waste of finances that could be used elsewhere. probable would not be used or kept by recreational boaters	740	Read and noted.
Other	nautical chart distribution to boaters is a good idea but won't make a difference if boaters do not know how to read or utilize them	296	Noted.
Other	Make N-19 free	124	Noted.

7. "Other comments or input":

Category	Comment	Ref #	CWG response
Support	This info on charts will eliminate the ignorance alibi - good!	236	Read and noted.

*CWG reviewed all the comments and decided to leave this RMA as it is written.

Title:

N-21: Develop and distribute welcome information digital video or image packages for new Florida residents **and visitors that provide information on impacts to reef systems and how they can be addressed to raise awareness and influence behavior change to reduce impacts to reefs.**

Background:

- This recommended management action relates to all counties in the Southeast Florida Coral Reef Initiative (SEFCRI) region, i.e. Miami-Dade, Broward, Palm Beach and Martin counties.
- This recommended management action is being put forth to address the lack of knowledge and awareness by new area residents of the importance of the reef system and how their behavior can impact coral reef ecosystems.

Objective:

- The intended outcome of this recommended management action is to create welcome information to raise awareness and influence behavior change of new residents and, in turn, reduce impacts on reefs. This information about Florida's reefs would be delivered in the form of digital videos or image packages to be displayed at Florida welcome centers. These may also be placed in post offices, where other welcome packets are located, as well as at chambers of commerce and on their websites.
- The goals of this information include promoting low-impact or sustainable living, informing how daily actions affect coral reefs and promoting reef-safe practices and sustainable seafood choices. This recommended management action is needed to ensure that residents who do not necessarily live near the coast know that what goes down their drains or runs off their yards still ends up making its way to the reef system.
- The content of the welcome information could target things people can do as a Florida resident. It is recommended that the message be in a digital format for ease of future upgrades.

Intended Benefits and/or Potential Adverse Effects:

- The benefits associated with this recommended management actions are increased stewardship and awareness, more responsible living and a public that is better educated on issues affecting coral reefs.
- A video or slide show packaging this information would be more easily updated and tailored to different audiences. It could be shown at existing kiosks or on websites.
- The anticipated negative impacts are the costs associated with creation and distribution of this information, as well as the potential for the material distributed to new Florida residents to become litter.

Agencies/ Organizations:

- The lead agency for this recommended management action could be any State of Florida agency, as new residents are likely to visit state agencies or websites.
- Other potential agencies/organizations were not identified.
- The key stakeholders for this recommended management action were not identified.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting or enforcement requirements for this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- No costs have been identified with this recommended action.
- Potential funding sources could include impact fees or other fees.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended management action has not been identified.

Miscellaneous Info:

- This recommended management action is not linked to any other recommended management action.
- Uncertainties or gaps with this recommended management action were not identified.
- Supporting and relevant data for this recommended action were not identified.
- No ongoing efforts related to this recommended management action have been identified.
- The informational message may also be delivered via PDF files made available for download. Popular websites for new residents may include the following: Florida Fish and Wildlife Conservation Commission, Florida Department of Environmental Protection, driver license renewal sites, websites to file homestead exemptions and clerks of court websites. In other words, this information should be widely available and placed specifically at places and on websites that are regularly visited by new residents.
- **Consider creating education programs pertaining to hazards and impacts of marine debris/garbage/advantages of recycling, etc.**

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- [SEFCRI LAS AA Issue 2 Goal](#).

N-21 Public Comment Report:

Education and Outreach



Develop and distribute welcome information, digital video, or image packages for new Florida residents that provide information on impacts to reef systems and how they can be addressed to raise awareness and influence behavior change to reduce impacts to reefs.

Quick Stats:

- Total number of comments on this RMA = 10
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charles Berkley—**online materials are anticipated.**
- There were no letters in opposition

Long Responses:

8. “What do you support, or how could this RMA be changed to an action you could support?”:

Category	Comment	Ref #	CWG response
Support	New Florida residents need to get on the "coral reef protection" team as soon as possible. Most likely these same folks have relocated to South Florida to enjoy an activity connected to the coral reefs therefore they need to be educated on what they can do to make a positive impact.	1303	Read and noted.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1239	Read and noted.
Other	Develop a means for getting the word out to tourists regarding the reef system and the need for protection of the resource.	1402	Comment integrated
Other	New residents are often totally un aware of our reefs...If they boat they would be most likely to damage reefs just do to lack of awareness	767	Read and noted.
Other	need more education to new visitors and residents	123	Comment integrated
Other	I feel like resources could be used better. Most people will not look up the video when they move here, so it may end up being a waste.	314	Read and noted.

Title:

N-23: Following the example and spirit of successful “Blue Star” programs in Florida and other developed areas of the world, create a voluntary marine industry education/certification program in the Southeast Florida Coral Reef Initiative region to increase professional and consumer user awareness, responsibility and personal pride, leading to voluntary reduction of typical user reef damage and negative impacts.

***CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action relates to the entire Southeast Florida Coral Reef Initiative (SEFCRI) region but could also be implemented state-wide.
- This recommended management action is being put forth because SCUBA divers, at times, may have an adverse impact on coral reefs. Providing divers with education about their potential impact on the reefs before they are certified addresses this problem by attempting to reduce the impact.

Objective:

- The intended outcome of this action is a carefully planned, executed, and respected "Blue Star"-like marine industry certification program that encourages reef conservation and protection. Certified commercial reef users (including, but not limited to, diving/snorkeling, fishing, water sports, and boating operations). In turn, their typical patrons would potentially reduce their negative impacts on coral reef ecosystems. Certified commercial operations could benefit from increased business and higher rates via free co-promotion with related agencies, parties and pro-enviro consumer preferences.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementations of this recommended management action include: (1) reduced physical impacts to the reefs and less coral damage by scuba divers and their equipment, (2) less damage by anchors, and (3) more knowledgeable divers benefit overall coral reef ecosystem health.
- Another potential benefit of implementing this action is the creation of a marine industry program for local business (dive shops, boats, watersports, fishing, etc.) that promotes recycling, ocean conservation, and eco-friendly practices. Desired outcomes objectives are getting all water-related companies to use this program, tourism promotion and encourage locals to use these companies because of their program participation.
- Documents (training materials) and training for commercial operators would be required to promote ethical stewardship for marine ecosystems. The agency or entity responsible for creating the training program and materials would need to be identified. Presentations, pre-fishing briefings, pre-diving briefings, glass bottom boat tour briefing, etc., are examples of how these objectives could be delivered.
- The duration of the benefits of this recommended management action is long lasting and recurring.

Agencies/ Organizations:

- The lead agencies for implementation of this recommended action could be the National Oceanic and Atmospheric Administration or the Florida Department of Environmental Protection's Coral Reef Conservation Program.
- Other participating organizations could include non-profit organizations.
- The key stakeholders for this recommended management action were not identified, but it has been suggested that all regional dive shops be involved.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- No permitting or enforcement requirements have been identified for this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- Estimated costs for establishing this type of program range from \$0 - \$50,000.
- Potential funding could come from larger non-profits and large scuba diving agencies, as well as state and federal grants.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended management action is 1 - 2 years.

Miscellaneous Info:

- This recommended management action has not been linked to any other recommended management actions.
- Uncertainties or gaps with this recommended management action were not identified.
- The Blue Star Program in the Florida Keys is a great example of how this type of program can help increase knowledge within the diving community. Divers may not understand how they may be damaging the reefs, and this program would raise awareness.
- It is widely accepted that not all businesses in the same field are created equal, especially when natural resource exploitation is at the heart of the business. While some may run a "tighter ship" and conduct business efficiently (thereby staying in business), this may include cutting corners and/or sacrificing safety, resource health and integrity. Besides price, advertising and convenience, tourist and local consumers may not have a way to discern operators who do their best to conserve/protect the resource from those who do not do their best or, perhaps, do not bother at all. A blue-star like program conducted by a vetted organization (Florida Department of Environmental Protection or nonprofit) may help highlight businesses that invest in continuing education and resource conservation/protection above all else.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- [FL Priorities Goal D4 Obj. 4 / FL Priorities Goal D2 Obj. 3](#).
- [SEFCRI LAS FDOU Issue 3 Goal Obj. 4](#).

N-23 Public Comment Report:



Education and Outreach

Following the example and spirit of successful “Blue Star” programs in Florida and other developed areas of the world, create a voluntary marine industry education/certification program in the Southeast Florida Coral Reef Initiative (SEFCRI) region, to increase professional and consumer user awareness, responsibility, and personal pride, leading to voluntary reduction of typical user reef damage and negative impacts.

Quick Stats:

- Total number of comments on this RMA = 10
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
- Letter in opposition:
 - Charles Berkley—it was intended to be a **voluntary** education program to encourage **reef stewardship**.

Long Responses:

9. “What do you support, or how could this RMA be changed to an action you could support?”:

Category	Comment	Ref #	CWG response
Support	I would hope that all marine industries would want to take part in this endeavor. I know if I traveled to another area to dive or go boating, I would want to know that I am utilizing a company that does their part to protect the local natural resources.	1304	Read and noted.

Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1240	Read and noted.
Support	I like the tie into to the Blue Star program/clean marina program to encourage responsible practices and awareness. May promote more eco-tourism.	1052	Read and noted.
Other	Volunteer opportunities are always beneficial	768	Read and noted.
Other	A proven program educating those who use the water on a daily basis	741	Read and noted.
Other	there should be an incentive to complete the program	308	Read and noted.
Other	The more all marine participants recognize the value of the reef, the better stewardship of the entire ocean use we can promote	164	Read and noted.

***CWG reviewed all the comments and decided to leave this RMA as it is written.**

Title:

N-41: Develop a voluntary "Florida Reef Tract Stewardship and Job Creation Fund" fee to fund education and conservation programs.

***CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action relates to all Southeast Florida Coral Reef Initiative (SEFCRI) counties, i.e. along the southeast Florida Reef Tract, with the option of including Monroe County since the program title refers to the "Florida Reef Tract" which includes Monroe County.
- This recommended management action is being put forth due to a current lack of funds for education (including lack of awareness and appreciation) and conservation. A fund would help brand the "Florida Reef Tract."

Objective:

- The intended outcome of this action is increased funding for coral reef education and conservation. A voluntary fee would be assessed to hotel bills for those staying in the four counties. The citizen support organization Friends of Our Florida Reefs could possibly administer the fund.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include increased reef awareness and appreciation, as well as increased funding for reef conservation and education projects.
- Some possible issues that may arise with implementation of this recommended management action include public resistance to new fees and pushback from industries who feel their business would be hurt by this new fee.

Agencies/ Organizations:

- The lead agency or organizations of this recommended action should be a not-for-profit or non-governmental organization (e.g. Friends of Our Florida Reefs). Such organizations should administer the fund with monetary benefits to agencies, universities, and others working in the conservation and education of coral reef ecosystems.
- Key stakeholders for this recommended management action were not identified.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting or enforcement requirements with this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- No costs have been identified for the recommended management action.

Time Frame & Extent:

- The time frame for this recommended management action is 0 - 2 years.

Miscellaneous Info:

- This recommended management action is linked to N-25.
- Uncertainties or gaps with this recommended management action were not identified.
- Supporting and relevant data for this action were not identified.
- No current efforts have been identified with this recommended management action.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

[FDEP CRCP Coral Reef Ecosystem Conservation Obj. 7.](#)

N-41 Public Comment Report:

Education and Outreach



Develop a voluntary “Florida Reef Tract Stewardship and Job Creation Fund” fee to fund education and conservation programs.

Quick Stats:

- Total number of comments on this RMA = 6
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charles Berkley—**details to be determined.**
- There were no letters in opposition

Long Responses:

10. “What do you support, or how could this RMA be changed to an action you could support?”:

Category	Comment	Ref #	CWG response
Support	Having a voluntary fund can help implement some of these proposed action plans. Definitely could not hurt! I know that if I traveled to other areas with significant and unique natural resources, that I would want to contribute to help protect	1306	Read and understood.

	them for future generations. It is a way of giving back and showing support.		
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1242	Read and understood.
Other	People should be given the opportunity to contribute, however education and conservation should also have stable dedicated taxpayer money	310	Read and understood.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**

Title:

N-123: Develop and maintain a sustainable finance plan to support coral reef conservation efforts in the Southeast Florida Coral Reef Initiative Region.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action relates to the entire Southeast Florida Coral Reef Initiative (SEFCRI) region and could be applied state-wide.
- This recommended management action is being put forth because the effectiveness of SEFCRI and the Florida Department of Environmental Protection's Coral Reef Conservation Program (FDEP CRCP) to conserve the coral reef ecosystem is limited by the funding available to support projects, people and recommended management actions. At present, SEFCRI is dependent on annual funding from the National Oceanic and Atmospheric Administration and the State of Florida. Additional sources of funding to support coral reef conservation need to be identified. Private funding sources that may be available to support coral reef conservation in this densely populated and relatively economically robust region of the United States have not been utilized.

Objective:

- The goal of the recommended action is to increase the availability of long-term and reliable sources of funding options to support coral reef management and conservation in the SEFCRI region.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include more funds to keep Florida's coral reef ecosystems healthy and available year-round.

Agencies/ Organizations:

- The lead agency in charge of implementation of this recommended management action is the FDEP CRCP.
- All SEFCRI partners should lend support to implementation.
- Key stakeholders for this recommended management action were not identified.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- Unforeseen technical (regulatory, legal) challenges may need to be addressed with a unique finance-related recommended management action designed to support conservation-themed recommended management actions.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this RMA.

Cost:

- The cost to implement this recommended management action ranges from \$30,000 - \$50,000. This might be a one-time cost, but could be recurring if maintaining the plan and revenue stream requires paid management.

Time Frame & Extent:

- The anticipated timeframe for implementation of the recommended action is 1 - 2 years (to develop the plan).

Miscellaneous Info:

- This recommended management action has not been linked to any other recommended management actions.
- Uncertainties or gaps with this recommended management action were not identified.
- Supporting and relevant data for this action were not identified.
- No current efforts have been identified with this recommended management action.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- [This action would support the implementation of almost all of the priority goals and objectives established for the SEFCRI region.](#)

N-123 Public Comment Report:

Education and Outreach

Develop and implement a sustainable finance plan to support coral reef conservation efforts in the Southeast Florida Coral Reef Initiative (SEFCRI) region.

Quick Stats:

- Total number of comments on this RMA = 8
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charles Berkley—**detailed report provided online.**
- There were no letters in opposition



Long Responses:

11. "What do you support, or how could this RMA be changed to an action you could support?":

Category	Comment	Ref #	CWG response
Support	A sound finance plan is key to achieving success both short-term and long-term. There needs to be a plan that supports the entire reef tract.	1307	Read and noted.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1243	Read and noted.
Support	Nothing gets done without financial support	742	Read and noted.
Support	There definitely needs to be a stable source of funding! Where will it come from? I vote tax dollars	304	Read and noted.

12. "Other comments or input":

Category	Comment	Ref #	CWG response
Other	many people wouldn't want to freely give their money	353	Read and noted.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**

Title:

S-52: Create an effective reef protection mascot, logo/campaign to increase awareness for protection.

Background:

- This recommended management action relates to all counties in the Southeast Florida Coral Reef Initiative (SEFCRI) region, i.e. Miami-Dade, Broward, Palm Beach and Martin counties.
- This recommended management action is being put forth because a logo depicting coral reef protection provides the campaign with a design that will help provide recognition of its focus on coral reef protection. The public awareness campaign will keep the public informed of the importance of protecting coral reef ecosystems.

Objective:

- The intended outcome of this action is a public awareness campaign that will inform and educate the public of the importance of protecting our coral reefs.
- A graphic logo effectively depicting coral reef protection will provide immediate and extensive recognition for distinct stakeholders and the public at large.

Intended Benefits and/or Potential Adverse Effects:

- Potential advantages associated with this recommended management action include a unified and ongoing effort to protect coral reefs and keep the public informed.
- All stakeholders would benefit from implementation of this recommended management action.

Agencies/ Organizations:

- It is unclear who the lead agency would be for this recommended management action. The Florida Department of Environmental Protection could facilitate the public awareness campaign.
- Other potential participating agencies/organizations were not identified.
- Key stakeholders for this recommended management action were not identified.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting or enforcement requirements associated with this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- The estimated direct cost of implementing this recommended management action is \$50,000-\$100,000.
- Potential funding sources could include grants, as well as corporate and private donors.

Time Frame & Extent:

- The anticipated timeframe for implementations of this recommended management action is six months to one year.

Miscellaneous Info:

- Uncertainties or gaps with this recommended management action include the costs of a festival type of event, which might be mitigated if piggybacked onto an established event such as the Tortuga Music Festival.
- Supporting and relevant data for this action were not identified.
- No current efforts have been identified with this recommended management action.
- **Hold a high school contest for the development and design of a logo/mascot (post-it data)**

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- FDEP CRCP Education and Outreach Goal A.

S-52 Public Comment Report:

Education and Outreach



Create an effective reef protection mascot/logo campaign to increase awareness for protection.

Quick Stats:

- Total number of comments on this RMA = 10
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charles Berkley—**this RMA will move forward with the most cost-effective funding.**
- There were no letters in opposition

Long Responses:

13. “What do you support, or how could this RMA be changed to an action you could support?”:

Category	Comment	Ref #	CWG response
Support	A good mascot and campaign can help ensure good outcomes. I remember Ready Kilowatt for electrical companies and Smokey the Bear to prevent forest fires. A school could be	1308	Read and noted.

	utilized to determine a good mascot so there is buy-in from school-age children. Could send and reinforce a good, consistent message.		
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1244	Read and noted.
Oppose	There seems to be much more cost-effective ways to promote the reef protection. The Our Florida Reefs current logo is simple and effective. I feel a mascot will not help.	1181	Read and noted.
Other	contact Scott Camberson at professor Clark the science shark books about the mascot 561-602-3127	42	Read and noted.
Other	hold a school-aged child (elem-high) contest for logo creation	76	Read and noted. Comment integrated
Other	It won't hurt, but I'm not convinced it will really make a difference unless coupled with an education and outreach program	305	Read and noted.
Other	contact Scott Lumberton 561-602-3127 re using professor Clark the science shark book characters as mascots	163	Read and noted.

14. "Other comments or input":

Category	Comment	Ref #	CWG response
Other	Involving N-15+ N-14 + S-91=S-52 should be grouped as one. S-91+N-37+N-19+N-15 should be grouped as one	40	Read and noted.
Other	Have SBHS and New river middle school develop mascot	354	Read and noted.

Title:

S-67: Provide incentives to divers and fishermen to eradicate invasive species of marine organisms proliferating the Southeast Florida Coral Reef Initiative coral reef system to provide a natural ecological balance of marine and plant life for the coral reef system.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action relates to all four Southeast Florida Coral Reef Initiative (SEFCRI) counties, i.e. Miami-Dade, Broward, Palm Beach and Martin counties.
- This recommended management action is being put forth because lionfish prey on native juvenile fish and negatively affect recruitment of juvenile fish to patch reefs. Reducing the number of this exotic invasive species will help maintain native fish populations that are key to the coral reef ecosystem. Lionfish prey on herbivorous fish that are essential to keeping algae in check, so it does not overgrow corals. Lionfish have no known predators in this region, so divers and fishermen could be instrumental in reducing the population of this unwanted, non-native species.

Objective:

- The intended outcomes of this action are to reduce exotic and invasive species through incentives to divers and fishermen as well as a reduction in the consumption of juvenile reef fish biodiversity.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include the protection of important native reef species essential to the coral reef ecosystem. Incentives for lionfish "collection/elimination" would create a sense of stewardship for coral reef protection, as well as be rewarding.
- The anticipated negative environmental impacts are potential damage to coral reefs caused by divers and fishermen who are overly eager to earn incentives by collecting large numbers of lionfish and/or invasive species.
- The duration of the benefits of this recommended management action are recurring so long as lionfish and/or other invasive species continue to be observed in local waters.

Agencies/ Organizations:

- A lead agency for implementation of this recommended management action has not been identified.
- Other potential agencies/organizations were not identified.
- Key stakeholders for this recommended management action were not identified.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting or enforcement requirements identified with this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- No costs have been identified with this recommended action.

Time Frame & Extent:

- A timeframe for implementation of this recommended management action has not been set.

Miscellaneous Info:

- This recommended management action has not been linked to any other recommended management actions.
- Uncertainties or gaps with this recommended management action were not identified.
- Supporting and relevant data for this recommended action were not identified.
- No current efforts have been identified with this recommended management action.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- [FL Priorities Goal D1](#).

S-67 Public Comment Report:

Education and Outreach

Provide incentives to divers and fishermen to eradicate invasive species of marine organisms proliferating the Southeast Florida Coral Reef Initiative (SEFCRI) coral reef system to provide a natural ecological balance of marine and plant life for the coral reef system.



Quick Stats:

- Total number of comments on this RMA = 12
- Letters of support:
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charles Berkley
- There were no letters in opposition

Long Responses:

15. "What do you support, or how could this RMA be changed to an action you could support?":

Category	Comment	Ref #	CWG response
Support	Invasive marine species are a major issue for South Florida reefs. While targeted eradication programs cannot completely eliminate these threats, they can keep them in check. In particular, while lionfish are common at sites where there is low hunting pressure from recreational divers, at popular dive sites they are often scarce or absent. However, aside from relatively infrequent events such as localized annual culls there is little incentive aside from altruism and a lionfish dinner for most divers to pursue these animals (and risk a painful sting). Lionfish is not a widespread menu option at many restaurants and fish markets and commercial-scale consumption appears to be on an ad hoc basis. Greater incentives for targeting this and other adverse invasive species may increase the number taken (for instance, incentive for commercial spearfishers to outright target dense concentrations of lionfish or backing the development of a selective means to catch them at depths beyond the range of SCUBA divers).	1404	Read and noted.
Support	Loved the recent lobster season rules to catch 10 lionfish and be able to legally catch one more lobster during mini-season! Incentives can be creative and just not monetary. We need to do all that we can do to help eliminate invasive species. This seems like a great way to get divers involved.	1309	Read and noted.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1246	Read and noted.
Support	Nice idea. I am already actively removing lionfish from the reefs. Every time I scuba dive, I take a lionfish spear and kill as many as possible. As an aside, I am in the water when I am spearing fish for dinner. If the RMA that bans spearfishing on	1219	Refer to FDOU focus area.

	scuba is put into effect, I will no longer be in the water and will no longer be removing lionfish.		
Oppose	I do not support incentives for the removal of lionfish or invasive species. I feel that there are plenty of stakeholders that are willingly going out to do their part in removing lionfish. Providing a 'no limit take' is enough incentive for me personally. I believe there more efficient uses of the resources than this RMA.	1189	Read and noted.
Oppose	Florida DEP and Reef.org are very well versed in this arena. No need for duplication of efforts	769	Read and noted.
Other	Suggest to FWC for a discounted fishing license if you can kill a certain number of Lionfish. As you know Lionfish are invasive and harmful to our Florida reefs.	1020	Read and noted.
Other	HOW? I recommend offering free fishing licenses to people who capture and kill more than 20 invasive species per year as an incentive	307	Read and noted.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**

Title:

S-75: Initiate voluntary donation program from all reef users via licensed dive boats or fishing boats/charters. This donation would support reef conservation programs or projects.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action relates to the four-county Southeast Florida Coral Reef Initiative (SEFCRI) region, but could be applied state-wide.
- This long-term, recurring recommended management action is being put forth to help address funding gaps for reef conservation initiatives, especially those related to the dive industry and potential damages caused by dive boats (private and commercial) and scuba divers (pleasure or underwater fishing/extraction). This action may also help fund initiatives that can enhance diving (e.g. mooring buoys, lion fish removal). Collected money would be stored in a fund used for programs vetted/supervised by Florida Department of Environmental Protection's Coral Reef Conservation Program or related nonprofit citizen support organizations.

Objective:

- The intended outcome of this action is to fund critical conservation initiatives. The proposed fee could provide funding for conservation projects or increased law enforcement agents.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include making divers more aware of their actions and how these can potentially harm the reefs. These benefits would be long lasting.
- Fees acquired could add up very quickly in a dedicated account.
- Some issues that could arise with implementation of this recommended management action include: (1) rejection/resistance by divers and dive operators as perception of this as another burdensome tax/fee, (2) costs and work associated with need to properly collect, manage and spend collected funds, and (3) the possibility of improper collections and accounting of fund management.

Agencies/ Organizations:

- The lead agency for implementation of this recommended management action would be the Florida Fish and Wildlife Conservation Commission.
- Other potential agencies/organizations were not identified.
- The key stakeholder group for this recommended action is the scuba diving community.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting requirements associated with this recommended management action.
- This recommended management action could require a significant enforcement effort if not voluntary. If mandatory, officers would need to be able to see divers' permits at all times in scuba gear.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- The cost of this fee is estimated at \$10/diver annually. The cost to implement this recommended management action was not identified.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended action is a minimum of three years, which includes time to get the proposal through the state legislature.

Miscellaneous Info:

- Designating the SEFCRI region, in whole or in part, as a sanctuary or some sort of special zone might make implementation of this recommended management action much more feasible.
- This recommended management action has not been linked to any other recommended management actions.
- No current efforts have been identified with this recommended management action.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- [FL Priorities Goal D3 Obj. 4 / FL Priorities Goal D4 Obj. 3.](#)

S-75 Public Comment Report:

Education and Outreach

Initiate voluntary donation program from all reef users via licensed dive boats or fishing boats/charters. This donation would support reef conservation programs or projects.

Quick Stats:

- Total number of comments on this RMA = 7
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Charles Berkley—**recommendation is intended to initiate the process—details will be determined.**
- There were no letters in opposition

Long Responses:

Category	Comment	Ref #	CWG response
Support	Any monetary contribution could be put to good use to help with coral reef protection. As I mentioned in another section, if I was traveling to another area with rich natural resources, I would want to make a donation to help with protection the same way I would make a contribution to a museum or non-profit environmental group. Example, when I went to the Great Barrier Reef I make a voluntary donation. I have done so here in the Everglades. If every user or person enjoying the resource could make a small donation or "user fee", those funds could really add up.	1310	Read and understood.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1245	Read and understood.
Support	Hello, I am from Alonzo and Tracy Mourning Senior High and I believe there should be more volunteers in the donation program. In my opinion I really think the program would benefit from donations and it will also help get the word around!	951	Read and understood.
Other	It's great to give people the opportunity to contribute, however our reefs shouldn't depend on fickle voluntary contributions but should have stable funding	303	Read and understood.

16. "Other comments or input":

Category	Comment	Ref #	CWG response
Other	Many people wouldn't want to freely give their money	352	Program aimed to compliment other funding methods.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**

Title:

N-37: Continue to improve existing Florida Fish and Wildlife Conservation Commission hotline and significantly increase (at least double existing investment in) the marketing about the hotline to more efficiently report emergencies or violations, send pictures, and be able to report a problem to assist agencies to enforce the regulations that protect our coral reefs.

Background:

- This recommended management action would be applicable state-wide.
- This recommended management action is being put forth to improve the ability of the Florida Fish and Wildlife Conservation Commission (FWC) to be aware of problems and infractions occurring on the Florida Reef Tract. FWC cannot be everywhere all the time.

Objective:

- The intended outcomes of this recommended action are the simplification, availability and publicity of a four-lettered phone line that directly connects to the FWC office. The number should have the capability to receive cell phone pictures of problems occurring on the water and reefs, similar to Florida Highway Patrol's service for highways.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include helping FWC enforcement to more efficiently protect our reefs by providing improved communication between the public and FWC officers and stations.

Agencies/ Organizations:

- The lead agency for implementation of this recommended management action is FWC.
- Other agencies that could be involved are local, state and federal law enforcement agencies, as well as the United States Coast Guard.
- Key stakeholders for this recommended management action were not identified.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting or enforcement requirements associated with this recommended management action.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- Estimated costs of this recommended management action are \$0 - \$50,000.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended management action is 0 - 2 years.

Miscellaneous Info:

- This recommended management action has not been linked to any other recommended management actions.
- Uncertainties or gaps with this recommended management action were not identified.
- Supporting and relevant data for this action were not identified.
- No current efforts have been identified with this recommended management action.

Goals/ Objectives to be achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- [FL Priorities Goal D3](#).

N-37 Public Comment Report:

Education and Outreach



Continue to improve existing Florida Fish and Wildlife Conservation Commission (FWC) hotline and significantly increase (at least double existing investment) marketing about the hotline and the phone application to more efficiently report emergencies or violations, send pictures, and be able to report a problem to assist agencies to enforce the regulations that protect our coral reefs.

Quick Stats:

- Total number of comments on this RMA = 7
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
 - Mike Kennedy
 - Charles Berkley
- There were no letters in opposition.

Long Responses:

17. "What do you support, or how could this RMA be changed to an action you could support?":

Category	Comment	Ref #	CWG response
Support	Increased marketing of the FWC Hotline would be key to reducing and deterring destructive practices of any kind. Apps need to keep up with the Smart Phone capabilities. Just like	1305	Group wants RMA to move forward as is.

	capturing video around the world has led to arrests, it can be the same here. Info gathered could be disseminated to appropriate agencies.		No need for change.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1241	Read and considered
Support	a worthy companion to S-91	193	Noted separate intentions. Comment integrated
Other	The FWC needs more personnel in addition to being more efficient through programs such as these.	309	Noted. Pass to Enforcement focus area: RMA S-99.

Title:

S-91: Develop a mobile phone application to allow the public to photograph violations and document time, boat numbers, GPS coordinates and violation to state to Florida Fish and Wildlife Conservation Commission and federal enforcement personnel to improve regulatory compliance and enforcement and improve public involvement, outreach and education concerning coastal protection in Florida.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**

Background:

- This recommended management action relates to all marine areas throughout the state.
- This recommended management action is being put forth because law enforcement personnel and resources are limited. This mobile phone application will allow public surveillance and participation in resource management. The public can use mobile phones to photograph violations and transmit related information to enforcement agencies. This will create more “eyes on the water” and act as a deterrent to illegal activities. This can be done without a significant expense to the government.

Objective:

- The intended outcome of this recommended management action is to develop a mobile phone application to allow the public to text/upload photographed violations and document time, boat numbers, GPS coordinates, and violations to Florida Fish and Wildlife Conservation Commission (FWC) or federal enforcement personnel.
- This recommended action would improve regulatory compliance and enforcement while also boosting public involvement, outreach and education concerning coastal protection in Florida. In turn, this would create a disincentive for violations because it increases the likelihood that violators will be recorded doing something illegal. This application supports enforcement. Even if no officers are able to respond, they can send a notice to the violator after the fact (based on Florida boat registration numbers) referencing the violation and providing an educational reminder about regulations. The application is intended to automatically transmit violation information and photographs to the appropriate enforcement personnel. Successful implementation requires that enforcement has the appropriate infrastructure/database to receive, process and store information.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include: enhanced enforcement surveillance at no cost to government by better documenting the who, what, and where of resource violations using photos with date stamps and GPS locations that can be e-mailed to enforcement agencies. People are less likely to break rules if the chance of being detected and caught increases. Reporting unusual or suspicious activities may increase waterfront/homeland security.

- A potential disadvantage of this recommended management action might include: enforcement agencies will have to process in near-real time photos and respond to public reports. People photographing illicit activities may be at risk of retribution or injury if detected by offenders.

Agencies/ Organizations:

- The lead agency suggested for implementation of this recommended management action is the FWC.
- Other agencies that might participate include local, state, and federal enforcement agencies and the United States Coast Guard.
- Key stakeholders for this recommended management action were not identified.
- Legislative considerations were not identified for this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting requirements associated with this recommended management action.
- This recommended management action does require enforcement.
- Measurable Outcomes/Success Criteria/Milestones were not identified for this recommended management action.

Cost:

- The estimated direct cost of implementing this recommended management action is \$50,000-\$100,000 for application development.
- There would be a one-time cost to develop the application and recurring costs for application maintenance and upgrades.

Time Frame & Extent:

- The anticipated timeframe for implementation is 0 - 2 years.

Miscellaneous Info:

- If the application can use GPS data to send to dispatch, an appropriate officer in the vicinity can respond. Knowing that actions may be recorded and reported to FWC would help deter violators.
- This recommended management action has not been linked to any other recommended management actions.
- Uncertainties or gaps with this recommended management action were not identified.
- Supporting and relevant data for this action were not identified.
- No current efforts have been identified with this recommended management action.

Goals/ Objectives to be Achieved:

Refer to the [SEFCRI Coral Reef Management Goals and Objectives Reference Guide](#).

- [FL Priorities Goal D3 Obj. 2 / FL Priorities Goal D3 Obj. 4](#).

S-91 Public Comment Report:



Education and Outreach

Develop a telephone application to allow the public to photograph violations and document time, boat numbers, GIS coordinates, and violation to state Florida Fish and Wildlife Conservation Commission (FWC) and federal enforcement personnel to improve public involvement, outreach and education concerning coastal protection in Florida.

Quick Stats:

- Total number of comments on this RMA = 8
- Letters of support: **read and noted to all. Thank you for your comments and consideration.**
 - Coastal Conservation Association
 - American Sportfishing Association/Keep Florida Fishing
 - Miami Waterkeeper
- Letter in opposition:
 - Charles Berkley

Long Responses:

18. “What do you support, or how could this RMA be changed to an action you could support?”:

Category	Comment	Ref #	CWG response
Support	Smartphones are everywhere and apps constantly in use. Improving compliance to coral reef protection regulations is key. Perhaps a potential reef user will think twice about his/her actions if there was knowledge that violations could be reported by the public. Misuse of the app would have to be watched.	1311	Read and noted.
Support	CCA is in support of all 14 education and outreach RMA's. These are important and cost-effective tools that will bring awareness of the reef to all ages.	1247	Read and noted.
Support	Good idea.	1221	Read and noted.

Support	I support this recommendation. This is something that can provide a lot of value at a very low cost to value ratio. There are so many boats out in South Florida. Allowing this type of self-policing will help report violations and deter at the same time.	1185	Read and noted.
Support	A great idea, if enforcement agencies can respond timely	192	Read and noted.
Oppose	The system seems to be vulnerable to abuse. I don't know how I feel about laypeople being able to be involved in law enforcement and tickets should definitely not be issues using this system. Also, volunteers with cell phones are no replacement for actual law enforcement personnel. there does need to be increased enforcement	306	If RMA results in new rule-making, this concern will be addressed. Final comment covered by S-99.

****CWG reviewed all the comments and decided to leave this RMA as it is written.**