

# CWG Review 1: Spring 2015

## Tier 1 Information:

### 1. Management Action

**N-94 Develop and implement a "Green" Club certification program for golf courses (similar to Blue Star for dive industry and clean marina programs) to provide an incentive mechanism for golf courses to reduce their impact on marine environment.**

### 2. Intended Result (Output/Outcome)

*What is the end product/result of this management action?*

- The intended outcomes of this action are to: (1) Establish a regional recognition system, "Green Club," for golf courses; (2) Improve awareness among golf club management, maintenance personnel, operation personnel, and the golfers about their impacts on coral reefs and estuaries; (3) Potentially decrease coral reef impacts; (4) Conserve water; (5) Stop nutrient, pesticide, herbicide, hydrocarbon (e.g. mowers, edgers, leaf blowers) and cart battery runoff; (6) Improve awareness among golf club management, maintenance and operation personnel, and the golfers about the amount of water required to maintain a golf course, per round of golf played; (7) Identify and improvement Best Management Practices (BMPs)(e.g. replace the typical turf grasses with species that thrive with saltwater irrigation); (8) Make the program a tiered certification (similar to LEED) so that the golf courses will compete amongst each other for higher recognitions; and (9) reduce the occurrence of golf balls on reefs (e.g. Broward County).
- Examples of grasses that could be used for BMPs include: *Paspalum vaginatum*, *Sporobolus virginicus*, *Distichlis spicata* and they can be irrigated with saltwater and others species are salt –tolerant such as common Bermuda. This would save on pesticides (and potentially, fertilizer) used since saltwater is a natural weeds/pest killer. Irrigation system however must be saltwater capable and saltwater could affect golf carts and other equipment.

#### • **Duration of Activity**

*Is this a discrete action or a recurring activity? Explain.*

- The establishment of the criteria for the award system would be a discrete action which would ideally be completed in one year, for instance; however the recertification and award system would be an ongoing effort.

### 3. Justification

*What issue or problem will this management action address? Explain.*

- This management action is being put forth to reduce the amount of pollution (pesticides, herbicides and fertilizers) coming from existing golf courses in the region; reduce water consumption by reducing the volume of freshwater necessary for irrigation; raise awareness; and improve water quality and reef condition. A recommendation was made that a flag similar to the Clean Marina programs, be provided for the golf courses to fly.

### 4. Potential Pros

*What are the potential advantages associated with this management action?*

- Reduced water consumption, raise awareness, improved water quality and reef condition. Flag provided for courses to fly similar to Clean Marina program.

### 5. Potential Cons

*What are the potential disadvantages associated with this management action?*

- Increased costs for industry, and therefore, to the golfers. Will be voluntary.

### 6. Location

*County/Counties: Miami-Dade, Broward, Palm Beach, Martin, Other?*

- SEFCRI region....agreed but perhaps Monroe County should be added

*Relevant Habitats: Coral reef, seagrass, watershed, etc.?*

- Estuaries, reefs, watershed ecosystems.

*Specific Location: City, site name, coordinates, etc.?*

- SEFCRI region

## 7. Extent

*Area, number, etc.*

- Seeking 100% participation of existing and future golf courses.

## 8. Is this action spatial in nature?

- No

**Do you believe this management action could be informed by the Our Florida Reefs Marine Planner Decision Support Tool?**

*If yes, you will proceed to the next section on Marine Planner Information.*

- -yes

## Marine Planer Information:

N/A...it could include golf courses...Lauren/Brian Walker should work on this

## Tier 2 Information:

### *WHY?*

#### 1. Strategic Goals & Objectives to be Achieved

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

- FL Coral Reef Management Priorities Goal C1 - Reduce pollutant loading to south Florida coastal waters
- FDEP CRCP Coral Reef Ecosystem Conservation Goal 8 Obj 3 - Reduce the impacts of land-based sources of pollution on the Florida Reef Tract.
- SEFCRI LAS LBSP Issue Goal 5 - Increase public awareness and understanding of the effects of land-based sources of pollution on water quality and coral reefs.

#### 2. Current Status

*Is this activity currently underway, or are there planned actions related to this recommendation in southeast Florida? If so, what are they, and what is their status.*

3. Currently the National Audubon society has a golf course certification (The Audubon Cooperative Sanctuary Program for Golf Courses, ACSP) which is focused on protecting bird populations. This management action would be regionally specific and focus on pollutants impacting coral reefs. The hope is that a well-known non-profit (e.g. Audubon) would lead this effort.

#### 4. Intended Benefits (Outcomes)

*What potential environmental benefits or positive impacts might this management action have?*

- Reduction of LBSP, improved water quality leading to improved reef condition

*What potential social/economic benefits or positive impacts might this management action have?*

- Opportunity to engage golf industry in coral reef conservation and open market to new reef conscious users while raising reef awareness of existing golfers
- -

*What is the likely duration of these benefits - short term or long-lasting? Explain.*

- Long lasting
- -

## **5. Indirect Costs (Outcomes)**

*What potential negative environmental impacts might this action have?*

- None

*What potential negative social/economic impacts might this action have?*

- Increased cost on industry to meet certification requirements but would be voluntary.

*What is the likely duration of these negative impacts - short term or long-lasting? Explain.*

- Short term

## **6. Risk**

*What is the threat of adverse environmental, social, or economic effects arising from not implementing this action?*

- If this management action were not to be implemented, ignoring a potentially large source of LBSP in SE Florida will continue to occur.

## **7. Relevant Supporting Data**

*What existing science supports this recommendation? (Provide citations)*

- Supporting and relevant data would need to include additional regional studies to determine the loading/concentration of pollutants and therefore potential benefits.

## **8. Information Gaps**

*What uncertainties or information gaps still exist?*

## **WHEN?**

## **9. Anticipated Timeframe for Implementation**

*How long will this recommendation take to implement?*

- 1 year to set up certification program,
- 3 years to get a significant number (10%) of golf courses in the region certified

## **10. Linkage to Other Proposed Management Actions**

*Is this activity linked to other proposed management recommendations?*

- -

*If so, which ones, and how are they linked? (e.g., is this activity a necessary step for other management actions to be completed?)*

- -

*Does this activity conflict with other existing or proposed management actions?*

- -

## **WHO?**

## **11. Lead Agency or Organization for Implementation**

*What agency or organization currently has/would have authority? Refer to the [Agencies and Actions Reference Guide](#).*

- National Audubon through their ACSP, <http://www.auduboninternational.org/acspgolf>

## **12. Other Agencies or Organizations**

*Are there any other agencies or organizations that may also support implementation? Explain.*

### 13. Key Stakeholders

*Identify those stakeholders most greatly impacted by this management action, including those from whom you might expect a high level of support or opposition. Explain.*

- The key stakeholders for this management action would be the golfers and any individual who use the reefs.

### HOW?

### 14. Feasibility

*Is there appropriate political will to support this? Explain.*

- There is appropriate political will to support this management action if a nonprofit leads the effort (e.g. National Audubon).

*What are the potential technical challenges to implementing this action? Has it been done elsewhere?*

- None...educating golf courses regarding changes in landscaping could be challenging

### 15. Legislative Considerations

*Does the recommendation conflict with or actively support existing local, state, or federal laws or regulations? Explain.*

- There were no legislative considerations that the recommended action conflict with or actively support.

### 16. Permitting Requirements

*Will any permits be required to implement this action? Explain.*

- There are no permitting requirements with this management action, however implementation would require some permitting aspects.

### 17. Estimated Direct Costs

*Approximately how much will this action likely cost? (Consider one-time direct costs, annual costs, and staff time, including enforcement.)*

- The estimated direct cost of implementing this management action would be a onetime cost of \$100K; and an ongoing \$20K for staff time and outreach.

*Will costs associated with this activity be one-time or recurring?*

- Mostly one-time costs but will require ongoing staff coordination

*If recurring, approximately how long will staff time and annual costs be necessary to implement the management action?*

- ongoing

### 18. Enforcement

*Does this require enforcement effort?*

- no

*Provide an explanation if available.*

### 19. Potential Funding Sources

*Identify potential funding organizations/grant opportunities, etc.*

- Potential funding source can be acquired through: the EPA, and non-profit organizations.

### 20. Measurable Outcomes/Success Criteria/Milestones

*How will the success of this recommendation be measured? How will you know when the intended result is achieved?*

- A way to provide a means to measure the success of this management action includes: Improved water quality

and a reduction of the presence of pesticides, herbicides and nutrients in inlets associated with certified golf courses.

#### SEFCRI/TAC Targeted Questions:

1. **TAC** - Is the recommendation likely to achieve the intended result? Explain.

*Tier 1 – #2 (Intended Result - Output/Outcome)*

- ECP: Probably, but depends, need to know current impacts for comparison with implementation

2. **TAC** - Is the recommendation sufficient to address the identified issue or problem? Explain.

*Tier 1 – #4 (Justification)*

- ECP: No

3. **TAC** - Is the recommendation technically achievable from a science or management perspective? Explain.

*Tier 2 – #8 (Anticipated Timeframe for Implementation) and Tier 2 - #13 (Feasibility)*

- ECP: Yes, has been done for other areas

4. **SEFCRI Team, PPT & Other Advisors** - Has this been done (by SEFCRI, other agencies or organizations in the SEFCRI region)? Explain.

*Tier 2 – #2 (Current Status)*

5. **SEFCRI Team, PPT & Other Advisors** - Is this recommendation a research or monitoring project? (Recommendations should be turn-dirt management actions, not the step you take before a management action). Explain.

6. **SEFCRI Team, PPT & Other Advisors** - If either of the following applies to this management action, provide feedback on which information submitted by the Community Working Groups may be more appropriate, or if entries should be merged. Explain.

- a. There are different viewpoints for an individual management action (i.e. two working group members provided separate information, as indicated by a '/' marking between them).
- b. Information submitted for this and other draft management actions is sufficiently similar that they might be considered the same.

7. **SEFCRI Team, PPT & Other Advisors** - Non-agency Question: Is the recommendation technically achievable from your stakeholder perspective? If not, do you have suggestions that would allow this to become technically achievable from your stakeholder perspective? Explain.

*Tier 1 - #5 (Potential Pros), Tier 1 - #6 (Potential Cons), Tier 2 - #3 (Intended Benefits), Tier 2 - #4 (Indirect Costs) and Tier 2 - #12 (Key Stakeholders)*

8. **SEFCRI Team, PPT & Other Advisors** - Agency Question: Is the recommendation technically achievable from a management perspective? If not, do you have suggestions that would allow this to become technically achievable from your agency's management perspective? Explain.

*Tier 2 – #10 (Lead Agency or Organization for Implementation) and Tier 2 - #11 (Other Agencies or Organizations)*

#### Comments from the Reviewers:

- RED: Every little bit helps and so this might be a worthy effort. It would be, however, important to better understand the degree to which Golf Course pollution has a significant impact on the marine environment. Suck knowledge could help to prioritize the importance of this recommendation.
- ECP: Agree with RED
- TAC comments from 1/27 meeting: should be a voluntary certification and modeled after Blue Star certification for dive operators, clean marine program and blue flag program for beaches. If there is limited interest from golf course industry you may want to fund some market research to document consumer preference for

environmentally friendly golf courses. From some quick online research it appears that the Audubon society has the "Audubon Cooperative Sanctuary Program for Golf Courses" and there are only golf courses in all of Florida associated with that program. Also see "Virginia Green Golf Courses" program implemented by the Virginia DEQ as a model that is very relevant.

- TAC comments from 1/27 meeting: market research on consumer willingness to pay for use of environmentally friendly facilities, would need to document primary pollutants that are introduced into the system from golf courses, establish a baseline for these pollutions in influenced waterways adjacent to participating golf courses preprogram participation and monitor the impacts of the program in those waterways.

#### Questions from the Reviewers:

Questions/Information Needs Highlighted by the Reviewers		Addressed by CWG:	Not Addressed by CWG Because:
1.	Do west coast golf courses impact the SEFCRI region? But would be good to improve Gulf waters, too...agreed that this does not apply	<input type="checkbox"/>	<input checked="" type="checkbox"/> This does not apply. <input type="checkbox"/> Need help addressing it.
2.	Need to know what pollution is an issue now...heavy metals, fertilizers (nutrients), refer to studies of land use run-off, pesticides, clippings,	<input type="checkbox"/>	<input checked="" type="checkbox"/> This does not apply. <input type="checkbox"/> Need help addressing it.
3.	Can SEFCRI take this on, statewide? Start small in SEFCRI region	<input checked="" type="checkbox"/>	<input type="checkbox"/> This does not apply. <input type="checkbox"/> Need help addressing it.
4.		<input type="checkbox"/>	<input type="checkbox"/> This does not apply. <input type="checkbox"/> Need help addressing it.
5.		<input type="checkbox"/>	<input type="checkbox"/> This does not apply. <input type="checkbox"/> Need help addressing it.
6.		<input type="checkbox"/>	<input type="checkbox"/> This does not apply. <input type="checkbox"/> Need help addressing it.
7.		<input type="checkbox"/>	<input type="checkbox"/> This does not apply. <input type="checkbox"/> Need help addressing it.

#### Questions from the CWGs back to the Reviewers: