

Title:

N-94: Support and promote a certification program and adaptive BMPs for all golf courses (similar to Blue Star for dive industry and clean marina programs) to provide incentives for golf courses to eliminate adverse impacts on the coastal environment and its watershed.

Background:

- This recommended management action relates to the estuaries, reefs, and watersheds of the entire Southeast Florida Coral Reef Initiative (SEFCRI) region and Monroe County.
- This recommended management action is being proposed to: (1) reduce the amount of pollution (pesticides, herbicides and fertilizers) coming from existing golf courses in the region, (2) reduce water consumption by reducing the volume of freshwater necessary for irrigation, and (3) raise awareness, and improve water quality and reef condition. A recommendation was made that a flag similar to that of the Clean Marina programs be provided for the golf courses to fly.
- Establishment of criteria for the award system would be a discrete action that would ideally be completed in one year. However, recertification and the award system logistics would be an ongoing effort.

Objective:

- The intended outcomes of this action are: (1) establish a regional recognition system e.g. "Green Club" for golf courses, (2) improve awareness among golf club management, maintenance personnel, operation personnel, and golfers about course 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, personnel, and golfers about the amount of water required to maintain a course per round of golf played, (7) identify and implement Best Management Practices (BMPs) (e.g., replace turf grasses with salt-water tolerant species), (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 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*, which can be irrigated with saltwater. Another species that is salt-water tolerant is common Bermuda grass. This practice represents cost savings associated with reduced pesticides (and potentially fertilizer) usage since saltwater is a natural weed/pest killer. Irrigation systems, however, must be saltwater capable and saltwater could affect golf carts and other equipment.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include: (1) long-lasting reduction of land-based sources of pollution (LBSP), (2) improved water quality leading to improved reef condition with an opportunity to engage golf industry in coral reef conservation, and (3) creation of a new option for reef-conscious users and one which also raises reef awareness of existing golfers.
- There are no anticipated negative environmental impacts, although a potential negative social/economic impact may be a short-term increased cost on industry to meet certification requirements. Certification, however, would be voluntary.
- Failure to implement this recommended management action entails ignoring a potentially large source of LBSP entering the surface waters of southeast Florida.

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Agencies/ Organizations:

- The lead agency for implementation of this recommended management action would be the National Audubon Society through their Audubon Cooperative Sanctuary Program. See <http://www.auduboninternational.org/acspgolf>
- Other potential agencies or organizations who could be involved include the Florida Department of Environmental Protection, which would implement the tiered certification aspect of this recommended management action.
- The key stakeholders for this recommended management action would be golfers and any individual who uses the reefs.
- There are no legislative considerations associated with this recommended management action.

Permitting/ Enforcement Requirements of RMA:

- There are no permitting requirements with this recommended management action, although implementation would require some permitting.
- Means of measuring the success of this recommended management action include measured improvements in water quality and decreased presence of pesticides, herbicides and nutrients in inlets associated with certified golf courses.

Cost:

- The estimated direct cost of implementing this recommended management action would be a onetime cost of \$100,000, with ongoing costs of \$20,000 for staff and outreach.
- Potential funding may be acquired through the United States Environmental Protection Agency and non-profit organizations.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended management action is 1 year to set up certification program, and 3 years to get a significant number (10%) of regional golf courses certified.

Miscellaneous Info:

- This recommended management action is not linked to any other recommended management actions.
- No uncertainties or information gaps for this recommended management action were identified.
- Supporting and relevant data would need to include additional regional studies to determine the loading/concentration of pollutants and therefore potential benefits.
- Currently the National Audubon Society offers a golf course certification via is Cooperative Sanctuary Program for Golf Courses, which focuses on protecting bird populations. This recommended 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.

Goals/ Objectives to be achieved:

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

- FL Priorities Goal C1.
- FDEP CRCP Coral Reef Ecosystem Conservation Goal 8 Obj. 3.
- SEFCRI LAS LBSP Issue Goal 5.

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