

Title:

N-97: Target, prioritize, and implement land-based sources of pollution reduction activities at identified pollution hotspots within Southeast Florida Coral Reef Initiative watersheds to improve coastal water quality.

Background:

- This recommended management action relates to one watershed or Inlet Contributing Area (ICA) in each of the four counties within the Southeast Florida Coral Reef Initiative (SEFCRI) region, as well as the watersheds upstream of the SEFCRI region.
- This recommended management action is being proposed to locate sources of stormwater pollution flowing into creeks, rivers, canals and lagoons that eventually reach southeast Florida's coral reefs and to aid in the reduction of stormwater runoff from private properties. Given the difficulty of pinpointing specific pollutant sources and the high cost of land-based sources of pollution (LBSP) reduction activities, this recommended action would help agencies and SEFCRI partners focus resources on priority reef areas and maximize the efficient use of funding. The pilot LBSP reduction approach would be evaluated in terms of effectiveness in improving water quality and, subsequently, reef condition, after which it could be considered for implementation along the entire reef tract.

Objective:

- The intended outcome of this action is improved water quality inputs from watersheds, rivers and lagoons leading to the reefs. Improvements in water quality in priority watersheds will lead to improved estuary health and reef conditions due to reduced or eliminated point sources of pollution. This action will also help restore groundwater hydrology/storage by reducing runoff and discharges to southeast Florida estuaries.

Intended Benefits and/or Potential Adverse Effects:

- Benefits of implementation of this recommended management action include: (1) reduced usage of pesticides and fertilizers to improve water quality in watersheds, (2) ameliorated salinity fluctuations, (3) reduced siltation and erosion, (4) potential improvement of shellfish habitat, (5) potential reopening of closed shellfish harvest areas, (6) improved recreational fishing, (7) fewer beach closures, and (8) the promotion of water reuse.
- Some potential disadvantages of implementation of this recommended management action include: (1) funding for increased monitoring, (2) developing effective enforcement, (3) focus on specific areas may draw efforts and attention away from areas that have not been prioritized for this recommended action, (4) being able to prove number of ppm is harmful to environment, (5) cost of retrofitting existing infrastructure, (6) opposition to changes in the status quo, potential for inconsistencies if working on a county-by-county basis, (7) source of pollution may be outside SEFCRI region, (8) technological hurdles in retrofitting, and (9) options may be fewer in historic neighborhoods.

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- Negative environmental impacts are not expected to result from this action. However, if point sources of pollution into the aquatic environment are eliminated, other means of disposal will need to be found. This unintended consequence may have negative impacts in other areas. The cost of implementing this recommended action will be borne by taxpayers. If utilities and private industry are the point sources they will have to cover costs.
- The duration of benefits of this recommended management action are recurring, with outfall and/or source monitoring endeavored as a continuing process. The timeframe for implementation of this recommended management action is 5-10 years.
- Continued pollution of our rivers, lagoons and bays - and subsequent degradation of our reefs - will occur if this recommended management action is not implemented.

Agencies/ Organizations:

- The lead agencies for implementation of this recommended management action are the Florida Department of Environmental Protection, United States Environmental Protection Agency and Florida Department of Health.
- Other potential participants include waste management agencies.
- The key stakeholders for this recommended management action are businesses and utilities responsible for point-source pollution.
- There are no known conflicts with any existing laws or regulations.

Permitting/ Enforcement Requirements of RMA:

- Permitting requirements for this recommended management action include permits for construction and removal of existing outfalls, along with permits for the disposal of pollutants.
- There are no enforcement requirements for this recommended management action.
- A measurable way of indicating success of this recommended management action is improved water quality in the vicinity of existing point sources of pollution and surface waters of southeast Florida.

Cost:

- The estimated direct cost of implementing this recommended management action is greater than \$250,000, though this amount is highly variable.
- Potential funding sources include taxpayers, utility customers and polluters (industrial).

Time Frame & Extent:

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

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Miscellaneous Info:

- This recommended management action is linked to S-25. Information received from the water quality monitoring proposed here will be valuable to other recommended management actions.
- Some uncertainties or gaps with this recommended management action include: lack of knowledge of detrimental effects of some pollutants (contaminants of *emerging concern*) on public health or ecosystem, and fate of pollutants once point sources are identified.
- Supporting and relevant data: New golf courses are being designed with holding ponds to capture surface water runoff and allow for reuse of water and fertilizers.
 - Pickering and Baker. Watershed Scale Planning to Reduce the Land-Based Sources of Pollution for the Protection of Coral Reefs in Southeast Florida. 2015
- Water quality monitoring is currently being done at general sites where pollutants flow into estuaries. Monitoring is not done upstream to find true sources. The Martin County Commission recently passed an ordinance on the use of fertilizers near waterbodies.
- Existing legislation will eliminate ocean outfalls by 2025.

Goals/ Objectives to be achieved:

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

- FL Priorities Goal C1 / FL Priorities Goal C4 / FL Priorities Goal C4 Obj. 4.
- FDEP CRCP Coral Reef Ecosystem Conservation Objective 3 / FDEP CRCP Coral Reef Ecosystem Conservation Goal B.
- SEFCRI LAS LBSP Issue 4 Goal / SEFCRI LAS LBSP Issue 4 Goal Obj. 3 / SEFCRI LAS MICCI Issue 2 Goal.