

Title:

S-110: Eliminate over beach discharge of water to eliminate those sources of beach erosion reducing the amount of beach fill needed which may improve near shore water quality.

Background:

- This recommended management action relates to Southeast Florida Coral Reef Initiative (SEFCRI) counties i.e. Miami-Dade, Broward, Palm Beach, Martin and their associated habitats.
- This recommended management action is being proposed to reduce dune erosion from end-of-pipe (point source) runoff and decrease the need for beach renourishment. The focus of this action is stormwater discharges (over-beach discharges) and how they erode our beaches. Such discharges are illegal, and there are existing laws and rules in place to address problem areas.

Objective:

- The intended outcomes of this action are: (1) divert stormwater runoff from beaches, (2) build up pavers/dunes systems, (3) diffuse end-of-pipe stormwater point source runoff, (4) eliminate over-beach discharges to decrease beach erosion, and (5) reduce the amount of beach fill needed which, in turn, may improve nearshore water quality.

Intended Benefits and/or Potential Adverse Effects:

- Some potential benefits to implementation of this recommended management action include the following: (1) less need for beach renourishment, (2) an improvement in water quality (lower turbidity and sedimentation), (3) decreased dune erosion and reduced "hotspot" beach renourishment areas, and (4) a reduction in the burial of nearshore habitats (e.g. seagrass beds, hardbottom and coral reefs) by sedimentation.
- The duration of benefits of this recommended management action is recurring.
- Some possible issues that may arise with implementation of this recommended management action include: local and city expenses, the cost of retrofitting infrastructure, cost of structure maintenance, and associated permitting costs.
- If this recommended management action is not implemented there will be continued stormwater runoff onto coastal areas, causing water quality degradation, dune habitat loss, and erosion.

Agencies/ Organizations:

- The lead agencies for implementation of this recommended management action would be the Florida Department of Environmental Protection's (FDEP) Beaches and Coastal Systems programs, municipal governments, and the United States Environmental Protection Agency's National Pollutant Discharge Elimination System (EPA NPDES) and stormwater programs.
- Other agencies or organizations who could be involved include local cities and counties.
- The key stakeholders for this recommended management action are local municipalities and homeowner associations which are required to maintain stormwater systems.
- This recommended management action both actively supports and does not conflict with local,

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state or federal laws and regulations.

Permitting/ Enforcement Requirements of RMA:

- Permitting requirements for this recommended management action would include retrofitting permits for individual cities or counties.
- Means of measuring the success of this recommended management action include visualization of “hot spots” for beach erosion and the decrease in projects (renourishment) in these areas.

Cost:

- The estimated direct cost of implementing this recommended management action is greater than \$250,000. However, each project could cost less if implemented on its own. Changing the direction or angle of beach access and dune planting can be done at a low cost. Dune plantings using free plants have taken place across Broward County.
- This cost to retrofit old infrastructure would be a one-time cost.
- Potential funding may be acquired through: the FDEP budget, EPA, the National Oceanic and Atmospheric Administration and United States Fish and Wildlife Service.

Time Frame & Extent:

- The anticipated timeframe for implementation of this recommended management action is 2 - 5 years. Retrofitting stormwater discharge pipes to divert runoff away from beaches is a discrete action. Dune building and/or restoration are also discrete actions.

Miscellaneous Info:

- This recommended management action is not linked to nor conflicts with any other recommended management action.
- Some uncertainties or information gaps with this recommended management action include determining the problematic locations in Miami-Dade, Palm Beach and Martin counties. Broward County lists all illegal stormwater discharges across their beaches (Broward Drainage and Derelict Structures, Olson & CP&E, 2001).
- Supporting and relevant data include Lauderdale by the Sea’s dune planting and street-end retrofits.
- Stormwater regulations exist for coastal construction projects. Street ends at Lauderdale by the Sea have been retrofitted to divert runoff away from the beaches, a practice that has greatly reduced erosion.

Goals/ Objectives to be achieved:

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

- FL Priorities Goal C1 / FL Priorities Goal C1 Obj. 1 / FL Priorities Goal C1 Obj. 7 / FL Priorities Goal C2 Obj. 1 / FL Priorities Goal C2 Obj. 4 / FL Priorities Goal C3 Obj. 4 / FL Priorities Goal C4 / FL Priorities Goal C4 Obj. 5.
- FDEP CRCP Coral Reef Ecosystem Conservation Obj. 3 / FDEP CRCP Coral Reef Ecosystem Conservation Goal C / FDEP CRCP Coral Reef Ecosystem Conservation Obj. 5.

SEFCRI LAS LBSP Issue 4 Goal / SEFCRI LAS MICCI Issue 1 Goal Obj. 2.

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