CWG Review 1: Spring 2015

Tier 1 Information:

1. **Management Action**

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.

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

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

- The intended outcome of this action is to divert the water from run off; build up pavers/dunes systems; diffuse storm water (point source runoff); eliminate over beach discharge to decrease beach erosion and reduce the amount of beach fill needed which may improve near shore water quality.

3. **Duration of Activity**

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

- Retrofitting to divert run off away from the beach and building of the dunes are discrete actions.

4. **Justification**

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

- This management action is being put forth to reduce the dune erosion from redirecting point source runoff to decrease the need for renourishment (and subsequent turbidity and improve water quality. The focus of this action is to look at how the storm water discharge causes erosion to our beaches. These discharges are illegal as there are existing laws and rules are in place to fix these problem areas.

5. **Potential Pros**

What are the potential advantages associated with this management action?

- Some potential benefits to implementation of this management action are: there will be less need for beach renourishment; an increase in water quality; a reduction of dune erosion and reduced "hotspot" renourishment areas; and a reduction in the burying near shore habitats.

6. **Potential Cons**

What are the potential disadvantages associated with this management action?

- Some possible issues that may arise with implementation of this management action would include: local and city expenses, the cost of retrofitting the infrastructure, the continued maintenance of structures, and associated permitting costs.

7. **Location**

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

- All

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

- All

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

- Any locations with beaches: street ends with runoff and pipes
- Drainage pipes: pool decks parking lots, condos, cooling towers

8. **Extent**

Area, number, etc.

- All areas with beaches with runoff "ditches" or tunnels (any place with point source runoff)

9. **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? NO

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

- Yes

Marine Planer Information:

N/A

Tier 2 Information:

WHY?

1. **Strategic Goals & Objectives to be Achieved**
   - IA; 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; SEFCRI LAS LBSP Issue 4 Goal; FDEP CRCP Coral Reef Ecosystem Conservation Goal C; FDEP CRCP Coral Reef Ecosystem Conservation Obj. 5; SEFCRI LAS MICCI Issue 1 Goal Obj. 2;

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.

   - Currently there are storm water regulations in place for coastal construction projects. Street ends at Lauderdale by the sea have been retrofitted to divert runoff away from the beaches which has greatly reduced erosion.

3. **Intended Benefits (Outcomes)**

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

   - The intended outcome of this management action is a reduction in stormwater runoff onto beaches, which cause erosion and water quality degradation.

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

   - Improved stormwater management

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

   - Long-term

4. **Indirect Costs (Outcomes)**

   What potential negative environmental impacts might this action have?

   - No negative environmental impacts from this RMA

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

   - Short term cost – long term savings

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

   - -

5. **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 there will be continued stormwater runoff onto coastal areas, causing water quality degradation, dune habitat loss, and erosion.

6. **Relevant Supporting Data**

   What existing science supports this recommendation? (Provide citations)

   - Lauderdale by the Sea dune planting and street end retrofit
   - See attached photos

7. **Information Gaps**

   What uncertainties or information gaps still exist?

   - Some uncertainties or information gaps with this management action include the locations in Miami-Dade, Palm Beach and Martin County. Currently Broward County has a report which lists all illegal storm water discharges across their beaches (Broward Drainage and Derelict Structures (Olson & CP&E 2001)).

WHEN?

8. **Anticipated Timeframe for Implementation**

   How long will this recommendation take to implement?

   - 2 - 5 years

9. **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?

   - No this activity does not conflict with other RMAs

WHO?

10. **Lead Agency or Organization for Implementation**

    What agency or organization currently has/would have authority? Refer to the Agencies and Actions Reference Guide.

    - The Lead Agency for implementation of this management action would be the FDEP and Beaches and Coastal section; the municipal governments; and part of the EPA NPDSA and storm water program.

11. **Other Agencies or Organizations**

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

    - Other potential agencies or organizations who could be involved include local cities and counties.

12. **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 local municipalities and HOA's which are required to maintain stormwater systems.

HOW?

13. Feasibility

Is there appropriate political will to support this? Explain.

- There is some political supports as there is an incentive to improve water quality within the State and an incentive to save money on beach projects in different cities and counties.

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

- No potential technical challenges.
- Pavers have been used
- Lauderdale by the Sea

14. Legislative Considerations

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

- This management action does not conflict with or actively support local, state, or federal laws or regulations.

15. Permitting Requirements

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

- Permitting requirements for this management action would include retrofitting permits for cities or counties.

16. 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 is: >$250,000. However, each project could be of lower cost if implemented on its own. To change the direction or angle of the beach access and dune planting could be done at a low cost. Free dune plants and planting has taken place across Broward County.

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

- This cost would be a single occurrence to retrofit old structures.

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

- None

17. Enforcement

Does this require enforcement effort?

- Yes

Provide an explanation if available.

- These discharges are illegal.
- Existing laws and rules are in place to fix these problems, there seems to be an unwillingness to enforce these rules

18. Potential Funding Sources

Identify potential funding organizations/grant opportunities, etc.

- Potential funding source can be acquired through: the FDEP budget, EPA, NOAA, and FWS.

19. 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 visualization of “hot spots” for beach erosion and the need for less projects in these areas.

SEFCRI/TAC Targeted Questions:

1. **TAC - Is the recommendation likely to achieve the intended result? Explain.**
   Tier 1 – #2 (Intended Result - Output/Outcome)
   - Yes if implemented well. JS

2. **TAC - Is the recommendation sufficient to address the identified issue or problem? Explain.**
   Tier 1 – #4 (Justification)
   - -

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)
   - Yes. JS.
   - TAC Team 3
   - Issues: Runoff (fertilizers) and proper treatment of wastewater. Need public buy in to get these things done.
   - Combine N-81, N-87, S-110
   - Science-based approach-stormwater, ID point sources using GIS or other mapping tool (industrial and other).
   - Work done in Keys years ago (late 90's) TAC-
   - JF-observation of retention ponds-good at removing phosphorus, but not nitrogen. It's not enough to have them, but to have better designs. Formula is not working. Large part of problem is that the solution is to turn these areas into marshes. Economic tug- of- war.
   - Need greater emphasis on function. Otherwise, just big ponds that pool water. Aesthetic aspect to this as well, humans like things that are pretty. Marshes fluctuate wet/dry.
   - DG-Chicago has major caves dug to trap water. Can't do that here in FL. See retention ponds in other states.
   - DC-See these frequently, but here we are losing wetlands. DG-overall effects would probably be miniscule.
   - JB-any feedback you need on recommendations? EP-
   - DG-only tiny part of the community can utilize (that) as a nutrient source. The longer the retention, the better.
   - EP-What were the 29,000 acres used for (to DC) DC-more storage capacity
   - JB-opportunity to provide feedback on various MAs to enhance or strengthen, to help CWGs

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)
   - SEFCRI LAS Project AA #10-FDEP/AZ

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.**
   - BB: No. It is turn-dirt.

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:

- See Tier 1, Question 2: IA: Coastal construction projects have to have an approved stormwater management system.
- Team: Agree that management action is necessary. Good suggestion. JS
- A lot of ideas rolled into one action, each a concern but would be better served as stand alones. NIC
- Agree, good suggestions but too many processes: separate the physical (erosion) and the chemical (LBSP)
- See Tier 1, Question 3: KL for JF: O&M=ongoing maintenance of dunes. Hard to assess due to the mixed processes. Dunes are dynamic. Good point below on the contribution of storms vs runoff into the erosion process.PRG
- See Tier 1, Question 4: How much beach erosion is due to storm water runoff? NIC
- See Tier 1, Question 5: IA: most beach renourishment occurs because erosion is caused by wave action, not runoff. Storm water erosion is minimal compared to wave erosion. Most erosion occurs because coastal development has eliminated dunes.
  KL for JF: can look at bathymetry and current land use of areas near coastline and determine additional areas where habitat creation could occur (wetland) as well as to serve as a point for storm water recharge and decreased discharge to ocean, decreased potential for dune erosion during storms
- See Tier 1, Question 6: KL for JF: Could increase water quality issues inland, since runoff would be diverted to inland structures, Amended version of idea could be to increase SW retention ponds inland, or coastal/near shore wetlands, for ex. (to assist with flood control and water outflow to sea), as well as Difficult to quantify financial benefit because of ongoing O&M cost, Difficult to quantify water quality savings

Questions from the Reviewers:

	Questions/Information Needs Highlighted by the Reviewers	Addressed by CWG:	Not Addressed by CWG Because:
1.	Signage/traveling display to go where? Marinas? Events? Dive shops?	☐	☒ This does not apply. ☐ Need help addressing it.
2.	All public- service announcement-related MA's can be streamlined here, and need the following questions answered: Who is the audience? What is the message? What medium do we want to use to convey this message?	☐	☒ This does not apply. ☐ Need help addressing it.

Questions from the CWGs back to the Reviewers:

- Many of these comments are regarding water quality. Water quality is a secondary benefit of this Management Action.
- The focus of this action needs to look at how the storm water discharge causes erosion to our beaches and creates "hot spots" (see attached photos). These discharges are illegal.

- Existing laws and rules are in place to fix these problems, there seems to be an unwillingness to enforce these rules.
- Looking for more comments on street-end type of discharge.

Attached photos:

Pool Deck Ft. Lauderdale

Ft. Lauderdale Galt Ocean Mile

Broward County has worked with jurisdictions such as City of Ft. Lauderdale to address these pipes. Many have already been plugged.

These are not currently permitted and are historic problems.