

**Title:**

**N-68: Reduce and regulate fertilizers, herbicides, fungicides, and pesticides and promote BMPs to reduce nutrient and pollutant loading to improve water quality and provide protection to the reefs, and promote the use of Florida friendly herbicides and pesticides to eliminate adverse impacts to the coastal environment and its watershed.**

**Background:**

- This recommended management action relates to Southeast Florida Coral Reef Initiative (SEFCRI) counties and all watersheds connecting to estuaries in these counties.
- This recommended management action is being proposed to reduce the overuse of fertilizers and pesticides which eventually make their way to waterways and diminish water quality. Nitrogen runoff contributes to ocean acidification which, in turn, leads to coral diseases and coral bleaching. This action will address land-based sources of pollution (LBSP) and nutrient imbalances in the water and watersheds and reduce algal growth/impacts on corals. This may fulfill the mandate to each county and municipal government located within the watershed of a body or water segment that is listed as impaired by nutrients to, at a minimum, adopt the Florida Department of Environmental Protection (FDEP) Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes pursuant to Fla. Stat. 403.9337.

**Objective:**

- The intended outcomes of this action are: (1) to reduce nutrient and pollutant loading to improve water quality and provide protection to the reefs, (2) formulate and articulate best management practices (BMPs) for the purchase (do not stockpile) usage (reduce it during the rainy season) and application (clear label instructions) of household fertilizers within watersheds that contribute to nutrient loadings in the SEFCRI region estuaries. Because the first line of defense is an educated consumer there are advantages to creating BMPs instead of enforcing use restrictions. A simple labeling color “restrict application during heavy rain events” may be better than a fine, (3) expand county-specific fertilizer ordinances for each county to reduce the application of fertilizers during rainy periods throughout the state. It should be noted that fertilizer ordinances are already in force in the northern part of the SEFCRI region that recently went into effect in 2014. (e.g. Fertilizer Ordinance 895, Martin County (2011), Best Management Practices Ordinance for Fertilizers, Lee County, Best Management Practices Certification for Fertilizers, Lee County, Florida Pest Management Association has a list of ordinances, and (4) reduced nutrient loads resulting in improved water quality at the receiving watersheds and downstream waterbodies.

**Intended Benefits and/or Potential Adverse Effects:**

- Benefits of implementation of this recommended management action include: reduced fertilizer impacts and Harmful Algal Blooms (HAB), reduced toxins from herbicides, pesticides and toxic compounds found in HABs, the decrease of which will result in more submerged vegetation and habitat. Reducing lost dive/fish revenue that occurs with HABs results in improved tourist revenues and protection of an important economic engine.
- An anticipated social/economic negative impact associated with this recommended management action is less luxurious landscaping. Additional potential disadvantages with implementing this recommended management action include: (1) the difficulty in regulating the use of these products, (2) industry and fertilizer user backlash (e.g. golf courses, farms, manufacturers, retailers), (3) lack of economically feasible alternatives, (4) potential negative effects property values, (5) difficult to ban use during rainy seasons by sales alone due to long shelf life, and (6) lost fertilizer sales due to a change in timing.

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- The duration of the benefits of this recommended management action should be an ongoing effort reflected in (1) the creation of BMPs, (2) informing the consumer and (3) working with manufacturers and distributors to promote the correct application.
- There is a high environmental risk associated with not implementing this action: major impacts from loss of business in the fishing and tourism industries.

**Agencies/ Organizations:**

- The lead agencies for implementation of this recommended management action would be the FDEP, Florida Department of Agriculture and Consumer Services (FDAC) and the United States Environmental Protection Agency (EPA).
- Other potential agencies or organizations who could be involved include the various SEFCRI county governments.
- The key stakeholders for this recommended management action are fertilizer companies, retail outlets, landscapers and homeowners of large properties.
- There are no legislative considerations to take into account since this action supports Total Maximum Daily Load and Basin Management Action Plan regulations for impaired water bodies.

**Permitting/ Enforcement Requirements of RMA:**

- Permitting for this recommended management action will be required. Landscapers and farmers currently have to comply with BMPs.
- Enforcement requirements for this recommended management action include inspection of retail outlets, landscapers and agricultural operators.
- Measurable ways of showing success with this recommended management action include improved water quality, less HABs, and less fish kills.

**Cost:**

- The estimated direct cost of implementing this recommended management action is unknown.
- Potential funding may be acquired through EPA and FDAC.

**Time Frame & Extent:**

- The anticipated timeframe for implementation of this recommended management action is 3 years.

**Miscellaneous Info:**

- This recommended management action is possibly linked with N-1 for its educational purposes.
- Uncertainties or information gaps with this recommended management action were not identified.
- Supporting and relevant data should be looked at from municipal governments with their existing fertilizer ordinances.
  - This recommended management action is already occurring in the St. Lucie River, Indian River Lagoon and Lake Worth Lagoon.
- Most local governments have some sort of relevant ordinance. However, enforcement and effectiveness of these are uncertain.

**Goals/ Objectives to be achieved:**

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

- Goals and Objectives were not identified within this recommended management action.

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