

CAC SUB-COMMITTEE ON WATER QUALITY

At its December 3, 2019 meeting, the sub-committee agreed to sharply limit its operating approach and criteria in recommendations regarding water-quality issues to the CAC and, in turn, to the Collier County Board of Commissioners (Attachment 1).

Some relevant issues confronting bays, inlets, estuaries and coastal areas are listed in Attachment 2.

Numerous possible measures to deal with coastal water-quality problems were deemed inappropriate for BCC action because other entities, both local and state, already had programs addressing them. They are listed in Attachment 3.

Appropriate proposals to the BCC, and their rationale, are summarized in Attachments 4 – 6.

Other recommendations will be considered in 2020.

Dave Trecker
12/10/19

Attachment 1

**PROPOSED CAC APPROACH AND CRITERIA FOR MAKING
RECOMMENDATIONS TO THE BCC ON WATER-QUALITY
ISSUES**

- Limit recommendations to those relevant to Collier County.
- No duplication: Proposals must not compete with or duplicate state or local projects or studies underway elsewhere.
- CAC should not conduct or request lengthy studies to gather bullet-proof support for the recommendations.
- Recommendations should be made periodically to the BCC in outline form, with the understanding that county resources may be needed to flesh out the proposals if the BCC decides to pursue them.

Attachment 2

SOME WATER-QUALITY ISSUES IN COLLIER COUNTY BAYS, INLETS, ESTUARIES AND COASTAL AREAS

- **Impairment** due to high levels of nutrients, chlorophyll A, heavy metals, fecal coliform, enterococci and/or low levels of dissolved oxygen
- **Toxic blue-green algae** (fresh water)
- **Red tide** (salt water)

Some or all resulting in ...

- **Costly cleanup or mitigation requirements**
- **Fish & other marine-life kills or contamination**
- **Toxins** causing human health problems
- **Tourism decline**
- **Property value decline**

Attachment 3

MEASURES TO DEAL WITH WATER-QUALITY PROBLEMS ALREADY BEING ADDRESSED BY OTHER ENTITIES

I. Responsive Actions

- **Ensuring adequate and uniform sampling, testing, reporting**
(Procedures and standards are set by DEP, extensive local and state sampling)
- **Provision of signage and other warnings of health-endangering conditions**
(Upgrades are under consideration by state DOH and DEP)
- **Research into levels of algal-generated toxins that affect people**
(State programs and academic studies are underway.)

II. Preventative Measures

- **Enacting tougher waterborne nutrient standards**
(DEP is in the process of updating standards.)
- **Mandating reduced nutrient runoff from septic systems**
(State legislation is under consideration.)
- **Resume street sweeping to collect leaves & grass clippings**
(Part of county's proposed Stormwater Utility)

Attachment 4

MEASURES THAT MAY BE APPROPRIATE FOR BCC TO CONSIDER

Nutrient runoff from fertilizer and recycled irrigation water feeds algae in Collier County lakes and waterways and red tide near the shoreline, causing growth and spread of both toxic and non-toxic species. Florida's Department of Environmental Protection has list five coastal waterbodies impaired because of high nutrient levels.

Here are two specific issues.

Collier County passed a comprehensive fertilizer ordinance (2019-18) that, if followed, would substantially reduce nutrient levels in inland lakes and in waterways leading to coastal areas. Unfortunately, the limited resources in Pollution Control and Code Enforcement that are devoted to water-quality issues preclude robust training and enforcement. As such, the ordinance has little value, relying mostly on voluntary compliance from those aware of the new rules. Even a modest increase in manning for training, inspection and enforcement purposes would, we believe, be very beneficial.

Irrigation water from wastewater recycle has high levels of nutrients and, as such, when over-used or improperly contained, runs into storm sewers, containment lakes and eventually the Gulf, impairing waterbodies, stoking algae growth and worsening red tide. Collier County does not use Advanced Wastewater Treatment (AWT), which can be designed to substantially reduce nutrients in its effluent. The AWT technology is well-developed and could be adapted to Collier wastewater treatment facilities. The question is whether the nutrient reduction would justify the cost. We believe an investment/operating cost assessment should be made.

Attachment 5

Proposed CAC Recommendation #1 – TO IMPROVE COMPLIANCE WITH COUNTY FERTILIZER ORDINANCE

(1)The CAC recommends that adequate county resources be made available to promote/enforce compliance with fertilizer ordinance 2019-18 in unincorporated Collier County.

(2) The CAC also recommends that a task force of representatives of the Pollution Control and Code Enforcement departments meet with and ensure lawn/landscape maintenance companies that work in Collier County have the required training and certification to comply with the ordinance and understand he need to adjust fertilizer levels when using recycled water for irrigation.

Attachment 6

Proposed CAC Recommendation #2 – DETERMINE COST-BENEFIT OF INSTALLING AWT TO REDUCE NUTRIENT LEVELS IN RECYCLED IRRIGATION WATER

The CAC recommends appropriate Advanced Wastewater Treatment studies be identified that provide a thorough cost-benefit analysis for substantially reducing nutrient levels in Collier County wastewater treatment.

If no appropriate studies are available, the CAC recommends that a consultant study be undertaken to determine the cost for substantially reducing nutrient levels in Collier County wastewater treatment.