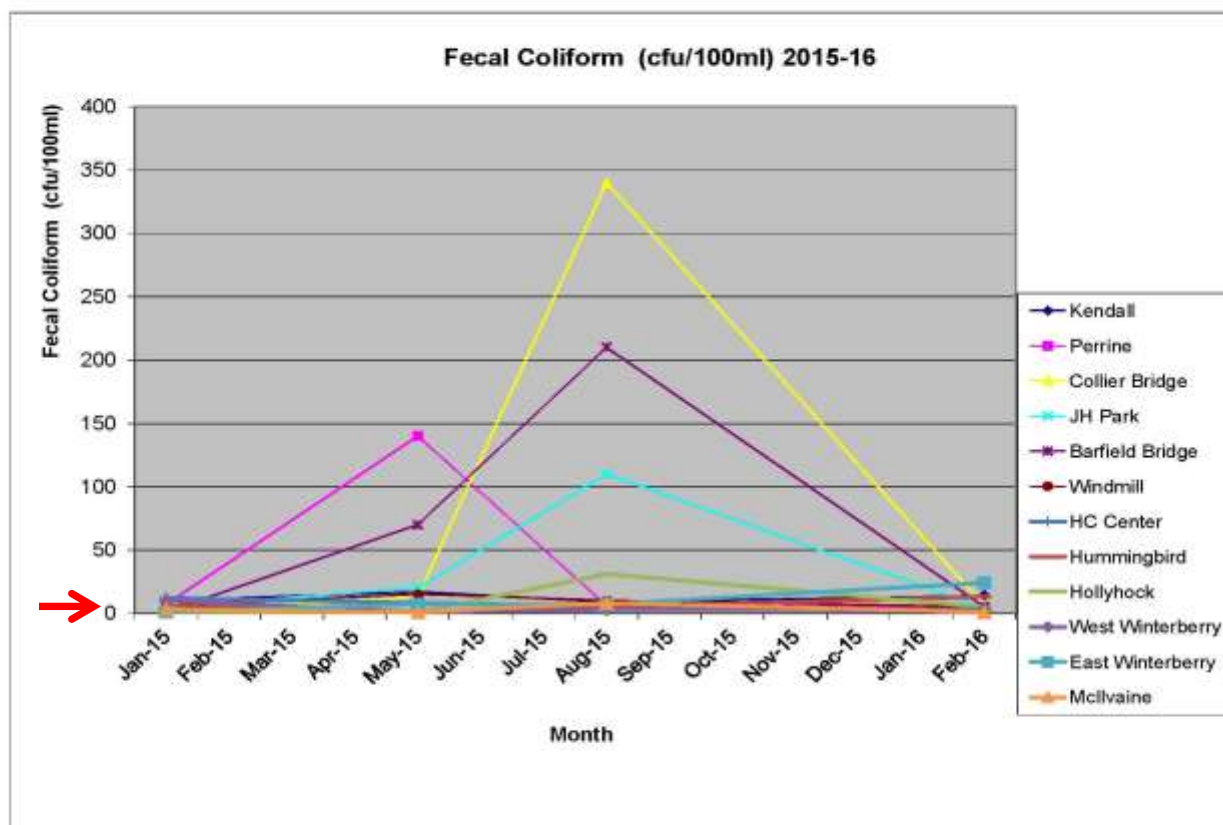


Need for Specific Storm Water Management and Water Quality Provisions in the Marco Island Comprehensive Plan & LDC (including an effective enforcement process with appropriate measurement & surveillance)

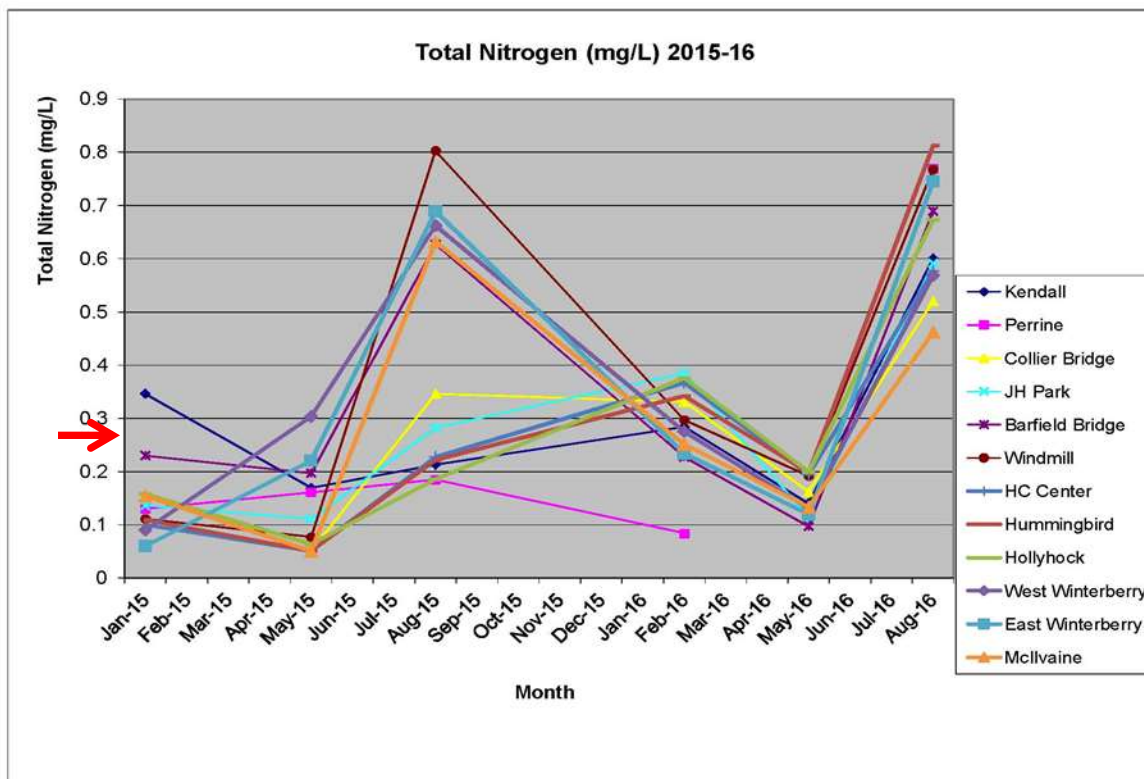
A. The Problem:

1. Coastal waters of Marco Island are listed as IMPAIRED by DEP for fecal coliform. This is based on SEAS classification of the shellfish harvesting area 66 (Ten Thousand Islands) as conditionally approved by the Department of Agriculture and Consumer Services (from Growth Management report to City Council at the 11/ 14/ 16 Meeting). Currently we are only following the minimum standards. In addition, I believe the City of Naples sets their own standards which exceed State and Federal Standards.
2. Local water testing indicates pollutants in excess of acceptable levels, especially in the rainy season, with current monitoring only at minimal required intervals – and fecal coliform monitoring recently discontinued – the elimination of which has not been finally approved by State/ DEP (still awaiting EPA approval, so old/ current criteria still in effect).

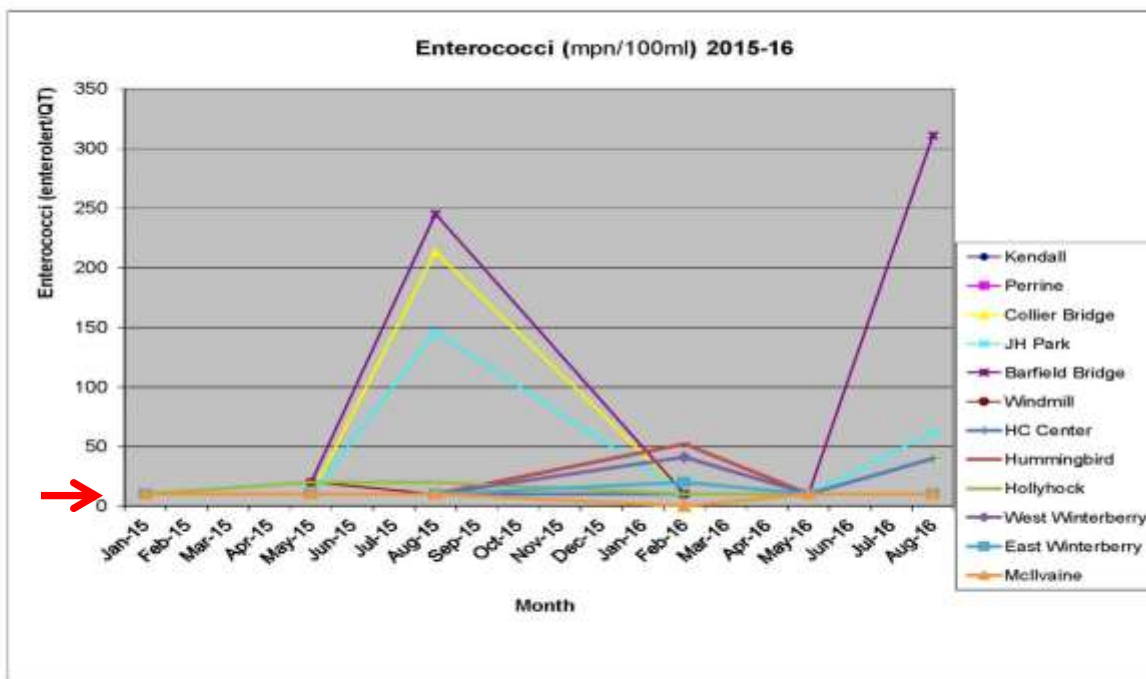


→ Approximate Acceptable Threshold: 1.0 (cfu/100ml)

NOTE: Fecal Coliform Monitoring Suspended by the City after February 2016. This problem has been in place for some time as indicated by the 2014 Fecal Coliform Trends Chart (attached).



→ Approximate Acceptable Threshold: 0.275 (mg/L)



→ Approximate Acceptable Threshold: 7.5 (cfu/100ml)

3. Recent City Staff Report citing the “Surface Water Quality Assessment and Trend Report for Collier County Engineering and Natural Resources Division, (11/ 20/ 15), indicating no water quality issues for Marco Island was misleading due to the fact that the report did not include the waters within Marco Island. The 2015 Collier County Report is based on a 5-year collection and assessment of data. Marco Island waters were not included in the Collier County Report due to the fact that there was not a 5-year trend of water quality data. The City of Marco Island discontinued monthly water quality data collection in 2014 and initiated quarterly Collier County water quality data collection in 2015. Due to the fact that the Collier County Reports are based on 5-year trends, the next report addressing Marco Island water quality will be generated near the end of the year 2020.
4. Storm water Outlet Neglect
 - a. 540 drain inlets currently without filters (Public Works Report January 2016)
 - b. Concerned that the current 1,324 filters not being routinely cleaned or replaced (even though the June 6th 2016 report says all were cleaned, when annual cleaning cycle is during May & June at a rate of 29/ day using vacuum truck).
5. Most swales not graded properly to retain storm water and drain pipes placed at too low a level (above the base level of the swale) to support that and allow needed percolation to occur.
6. Apparent infrequent checking of potential waste water discharge by boats anchored in Smokehouse Bay and also likely in other waterways in and around Marco Island.

B. Proposed Solution:

1. Strengthen storm water management provisions in current LDC and consolidate current references into one area with specific measurement, monitoring requirements and remedial action measures.
 - a. Require storm water management plan for all development (now only commercial) including specific storm water drainage plan, and require that the overall storm water management system for MI (both private and public property) complies with stringent level of service (LOS) standards. These standards, associated monitoring, and our water quality testing practices (such as testing for fecal material) need to be more stringent than the minimal levels currently advocated.
 - b. Consolidate and strengthen current recommended changes to the Land Development Code including landscaping (Item 11); Storm water Management Requirements (Item 15, Section 30 – 964c6); Site Plan Submittal Requirements (Item 22); Erosion Control Specifics (Item 24); Pervious/ impervious allowances (Item 27); Measuring Pervious Areas (Item 31)

2. Institute Monthly Water Quality Testing Program (as was the City's previous practice) with reports to City Council at the same intervals
3. Institute/ revisit a comprehensive program to regrade City Swales and adjust drain inlet heights with appropriate target/ prescribed height of inlet drain above bottom of swale to allow proper percolation.
4. Complete installation of filters in the 540 drains currently without them as soon as possible (must be included in the 2017 City Budget). This was never placed in the Budget as recommended by a City Councilor on 4/ 16/ 16.
5. Ramp up the program to replace and maintain current filters more frequently than the current annual program.
6. Increase police visitation frequency for boats anchored in Smokehouse Bay and other MI waterways (now only on a monthly basis), including waste water outlet checks. For Smokehouse Bay, the Esplanade Marina Management has expressed an interest in helping to identify boats anchored for more than one week in order that the police can follow-up on a timely basis. All visits should include testing of the MSD with dye tablets and/ or inspection of the through-hull valves to ensure no illegal waste discharge. All of these visits/ boardings need to be documented (versus current practice of only documenting violations). All boat visits should also include distributing the City's Boating Safety Brochure, which includes information on location of our 4 pump out facilities (indicating that the Esplanade and perhaps others are "free-of-charge.")

C. SUMMARY:

As a unique community surrounded by water, in addition to having an extensive system of inland waterways, water quality is one of the most important factors for quality of life for our residents and a key driver for tourism.

This is why it is critically important for Marco Island to adopt a more rigorous program of both storm water management and water quality monitoring, (as outlined in Section B of this White Paper) an institutionalizing it in our Comprehensive Plan.

It simply is not adequate for us to provide only minimal level of support for this program (and increased City funds need to be budgeted for it if needed – and less essential programs reprioritized, if necessary).

Also, the data gathered for this program represents my best efforts given the difficulties of accessing all relevant data, and rather than focusing on challenging the information collected herein, that the City would focus on the need for improvement in these areas and developing a more effective program with a transparent measurement and monitoring process.

Dr. W.D. Trotter
Vice Chairman
Marco Island Planning Board

