



# Florida Department of Environmental Protection

Division of Environmental Assessment and Restoration

## Revision and Implementation of DEP's Bacteria Criteria





# Revision of Bacteria Criteria

- For recreation use support, changing **from fecal coliforms** to
  - *E. coli* in freshwater
  - enterococci in marine waters
- Based on EPA recommended values
  
- Keeping fecal coliforms for Class II (shellfish) waters



# 62-302 Revision of Bacteria Criteria

- **New criteria -**
  - **a monthly geometric mean (MGM)**
    - **Minimum of 10 samples taken over a 30-day period**
  - **Ten Percent Threshold Value (TPTV)**
    - **No minimum sample size**

<b>Parameter</b>	<b>Monthly Geomean Value</b>	<b>Ten Percent Threshold Value</b>
E. Coli	126	410
Enterococci	35	130

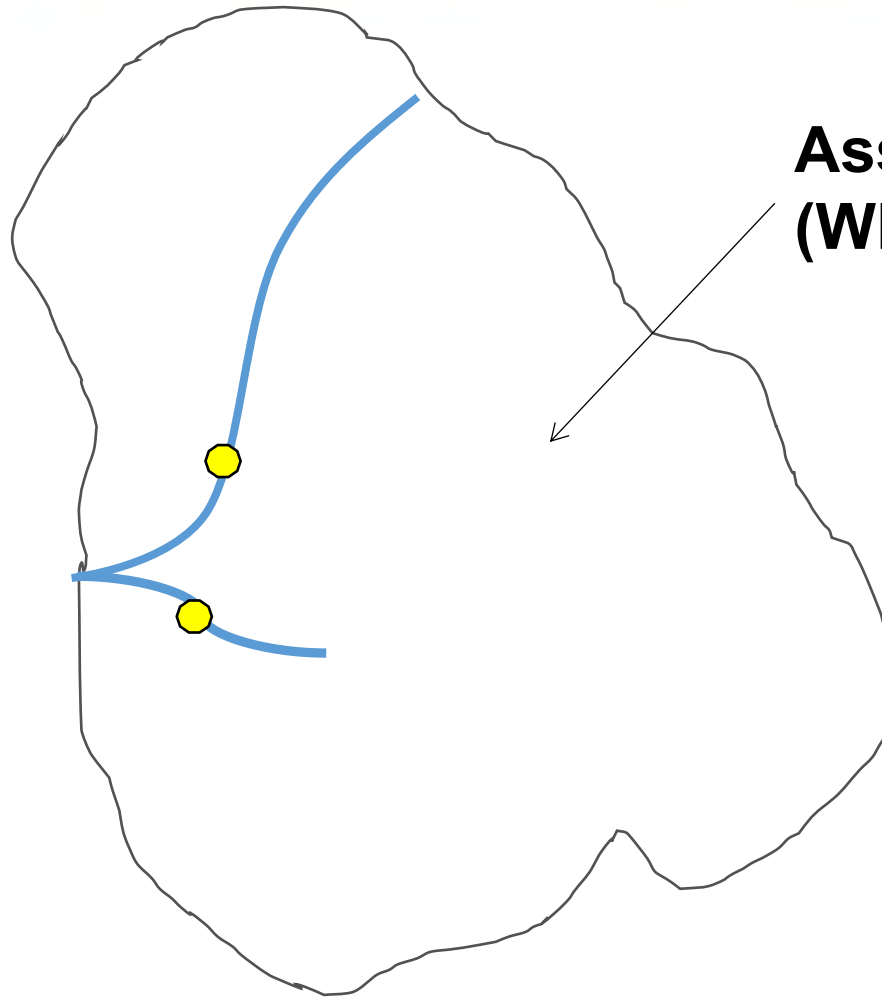


# Implementation of New Bacteria Criteria

- **Waters verified as impaired for fecal coliforms stay on the list until new data indicate the waterbody is not impaired**
- **Waters with fecal coliform TMDLs will not change until attainment of new criteria is demonstrated**
- **Applying the binomial to TPTV**
- **Monthly geomean applies to monitoring stations**



# Example Assessment of New Bacteria Criteria



## Assessment Unit (WBID)

**Station 1 = 20 samples in one month**

**Station 2 = 28 samples in 7.5 years**

**MGM assessment = 324 CFU/100 mL**

**TPTV assessment = 15/48 samples >410**



# Revisions to Study List Provisions

- **In Rule 62-303.390, subsection (2) addresses the ways waters can be listed on the Study List,**
  - f) Waters with < 20 samples, but available data doesn't attain**
  - g) Waters not attaining bacteria criteria, but suspected to be due to natural sources**

**Microbial source tracking studies may be implemented for waters on the Study List.**



# Monitoring Strategy

## Priority 1 –

- **Waters with BMAPs**
  - DEP will collect e. coli or enterococci
  - Many have already had intensive surveys, including chemical tracers and DNA markers
- **Waters with Phase 1 MS4 permits prioritizing fecal coliforms due to TMDL**
  - Working with MS4 program to revise permit language
  - Permittees need to collect e. coli or enterococci
- **Waters on the Planning or Study List based on new indicator criteria**
  - DEP will collect e. coli or enterococci; and chemical tracers and DNA markers, as needed

## Priority 2 - Waters on the Verified List for fecal coliforms

- DEP will collect e. coli or enterococci; and chemical tracers and DNA markers, as needed



# Monitoring Strategy

## **Priority 3 – Waters with a fecal coliform DEP TMDL, not prioritized by a MS4 Phase 1 entity**

- **DEP will collect e. coli or enterococci; and chemical tracers and DNA markers, as needed**

## **Priority 4 – Waters on the Planning List for fecal coliforms**

- **DEP will collect e. coli or enterococci as part of our rotating basin cycle**

**DEP Prioritizing 358 WBIDs for 2017 Strategic Monitoring**





# Status of Criteria Revisions

- **Proposed rules were approved by Environmental Regulation Commission (ERC) on December 9, and became effective February 17, 2016.**
- **Awaiting approval by EPA**
  - **Before go into effect for Impaired Waters Rule purposes**



# Questions?

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## MS4 Permit Implementation of the new Bacteria Standard

11/29/2016





# Storm Sewer System - MS4

## Municipal Separate Storm Sewer System (MS4)

NPDES permit regulates a system of conveyances:

- Roads, streets, catch basins, curbs, gutters, ditches, constructed channels, or storm drains;
- Owned / operated by entity with jurisdiction over management and discharge of stormwater (State, city, town, county, special district, etc.); and
- Regulates discharges from the MS4 to waters of the state.





# MS4 Permit & TMDLs

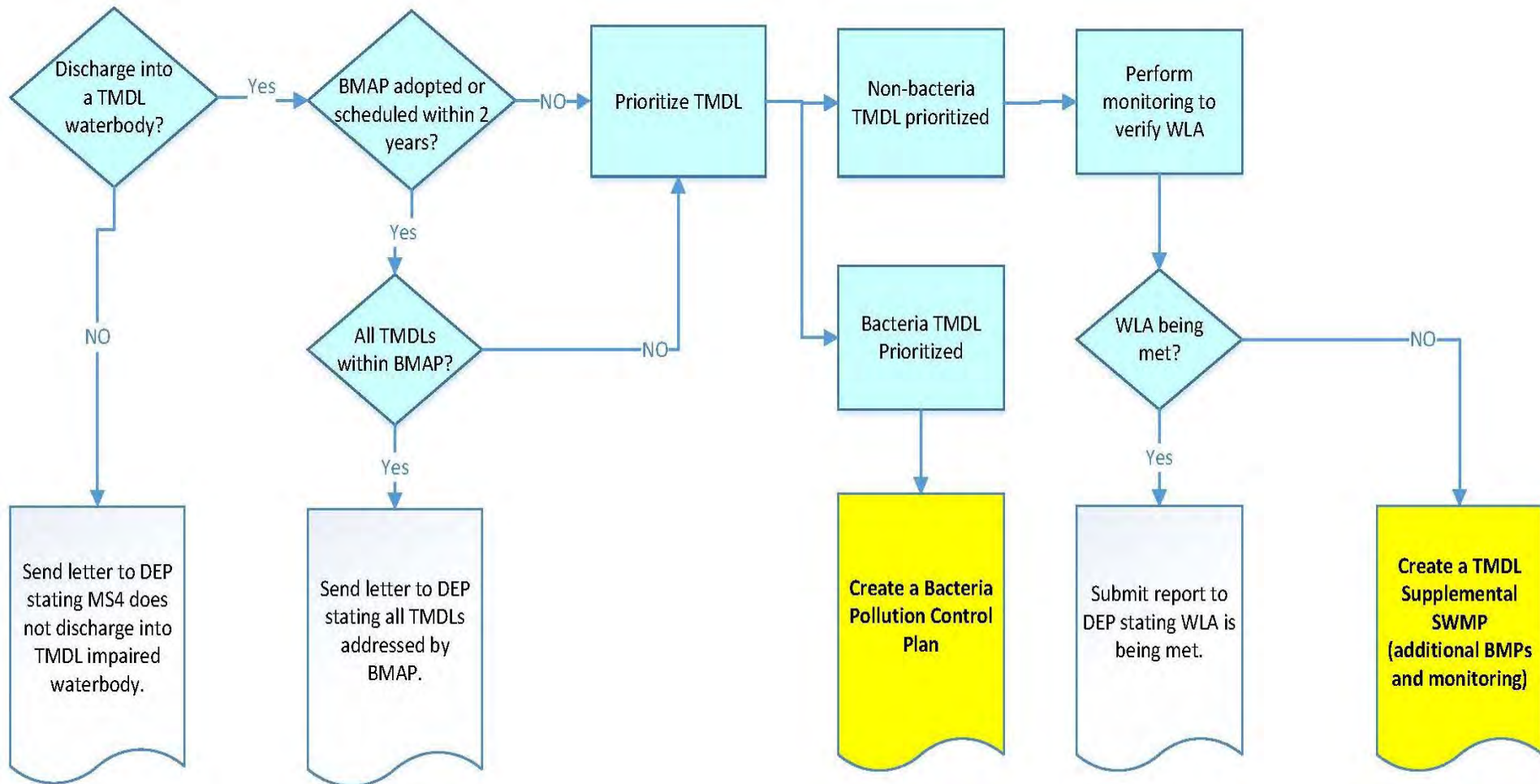
- Permittee required to address TMDLs where MS4 discharges (directly or indirectly) to TMDL waterbody.
- “Maximum Extent Practicable” (MEP) goal is generally the most appropriate form of effluent limitation for MS4 reduction of pollutants to address TMDL allocations.

## TWO ARENAS in which MS4s ADDRESS TMDLs

- TMDL water bodies within a BMAP:
  - Permittee must comply with implementation plan of the BMAP.
- Discharges to TMDL water bodies not within a BMAP:
  1. TMDL Pollutant(s) other than bacteria (nutrients); and
  2. TMDL Pollutant bacteria = Bacteria Pollution Control Plan (BPCP).



# Phase I MS4 Permit Process for TMDL Pollutant Reduction Implementation







# FIB in MS4 Permits

- Permittees that will prioritize a Fecal Coliform TMDL in Cycle 4 are strongly encouraged to address the new Bacteria standard for E-Coli and Enterococci.
  - Permittees in current development of a BPCP are encouraged to revise their plan to include the new Bacteria standard for E-Coli and Enterococci.
  - Permittees that already have an approved BPCP are not obligated to make any changes at this time but are encouraged to use the new criteria when it becomes feasible for the monitoring entity.



# FIB in MS4 Permits

- Cycle 4 permit language has been revised to recognize the new standard by referring to “Bacteria TMDLs” as opposed to Fecal Coliform TMDLs.
  - Purpose of the change is to accommodate TMDLs based on either indicator.
- Implementation (Fecal Indicator Bacteria toolkit) of the new Bacteria standard will be consistent with the current required elements in your permit.
  - Permittees would need to monitor and to calculate the magnitude and frequency of percent exceedances. Percent exceedance is a metric applicable to both “old and revised bacteria criteria”.
  - Permittees should utilize data to prioritize where to focus restoration efforts.





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