



Department of
Environmental
Conservation

Focus on Waterbody Health Moving from Assessment to Action

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NYS DEC



DOW Water Wheel





Many “Players” In the WQ Management Game

- DEC/Division of Water
- Fed/State Watershed Programs
- NYSARC and Regional Planning
- Local SWCD, NYSFOLA
- Citizen Groups, and MORE
- State/Local Health Departments
- Local Municipalities
- Environmental Organizations
- Academics/Researchers



“I Got It!”

“You Take it!”



Waterbody Health Plan

Think of Waterbodies
as if they are Patients



Then...



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Progress Toward Waterbody Health

Monitor, or Doctor's Visit

(RIBS Screening, CSLAP, WAVE, Other)

Assess, or Diagnose

(WI/PWL, 303(d))

Develop Plan/Strategy, or Prescription

(TMDL, Watershed Plans)

Funding, or Do You Have INSURANCE!

(WQIP, NRCS, Ag Nonpoint....)

Implementation, or Are You Following Dr's Orders?

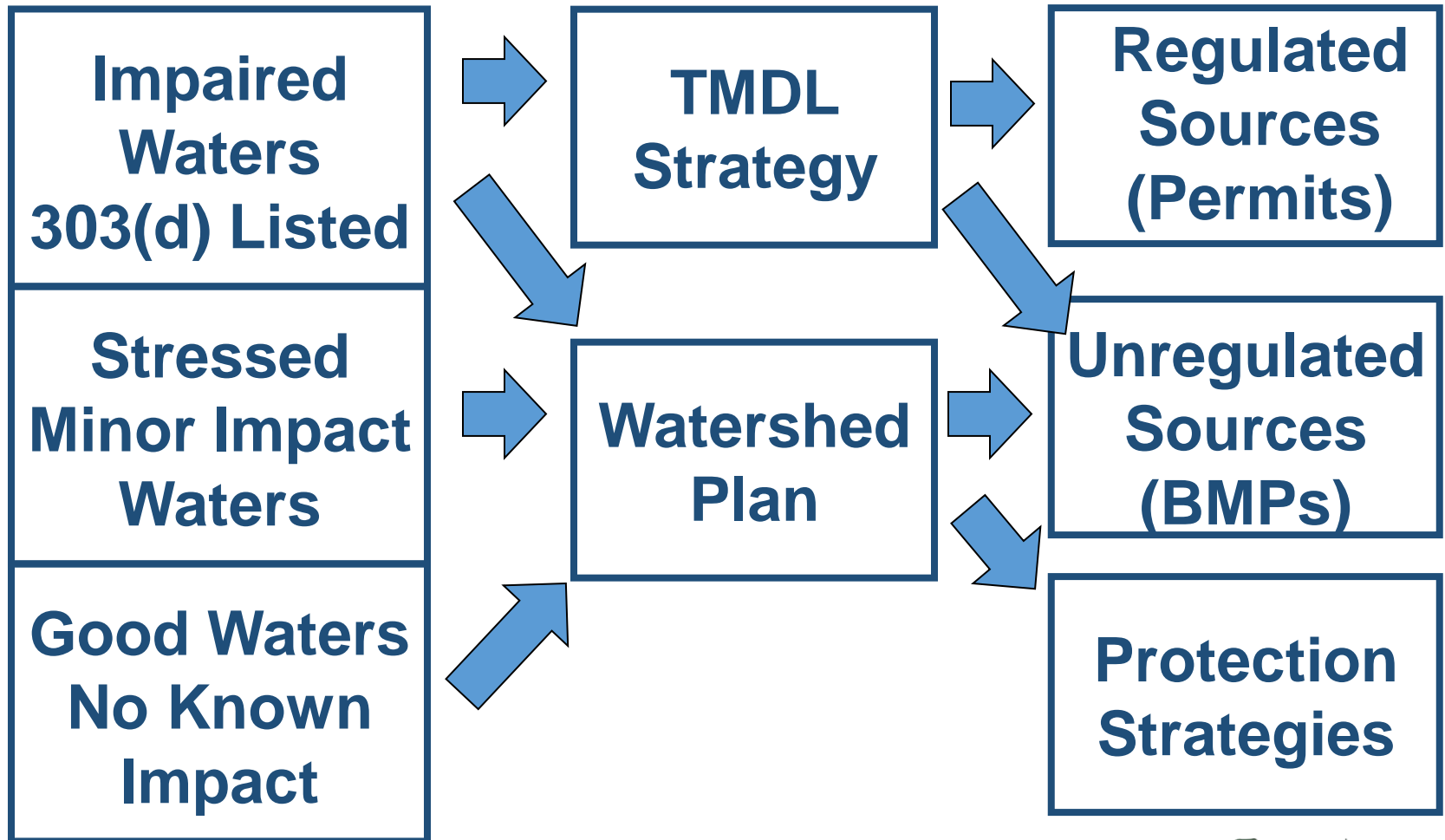
(TMDL/Wshd Plan Implementation)

Reassessment, See You in 6 Months

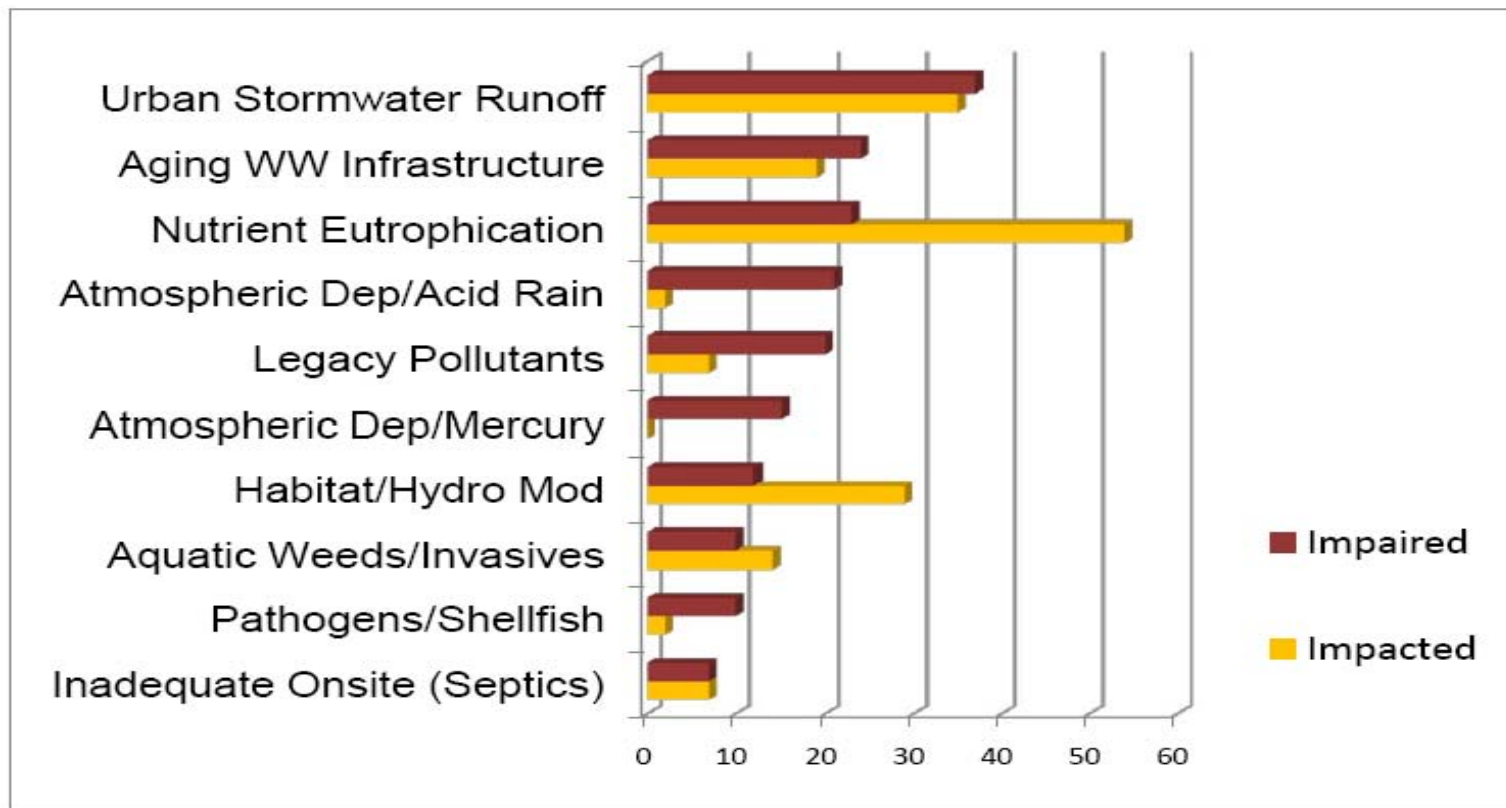


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Water Quality Management



Top Ten (or *Leading* Causes of) WQ Problems in NYS



Note: Frequency totals do not equal 100% because categories are not mutually exclusive.

Mixed Metaphors

Health of the Waterbodies



Making the Grade, or
No Waters Left Behind



The Waterbody Inventory and Priority Waterbodies List

The Waterbody Inventory

Class Roster

*No
Water
Left
Behind*



The Waterbody Inventory and Priority Waterbodies List

Priority Waterbodies List

**Problem
Children**



Middle Bay (1701-0208)

Impaired

Waterbody Location Information

Revised: 08/01/2014

Water Index No: (MW8.3) MDB (portion 1)
Hydro Unit Code: 0203020202 Class: SA
Water Type/Size: Estuary 1210.3 Acres
Description: entire bay, as delineated
Drain Basin: Atlantic-Long Island Sound
Southern Long Island
Reg/County: 1/Nassau Co. (30)

Water Quality Problem/Issue Information

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Shellfishing	Precluded	Known
Public Bathing	Stressed	Suspected
Recreation	Stressed	Suspected
Aquatic Life	Unassessed	-
Fish Consumption	Stressed	Suspected
Conditions Evaluated		
Habitat/Hydrology	Fair	
Aesthetics	Fair	

Type of Pollutant(s) (CAPS indicate MAJOR Pollutants/Sources)

Known: PATHOGENS
Suspected: Priority Organics (PCBs/migratory fish), Nutrients (nitrogen), Algal/Plant Growth (ulva/sea lettuce)
Unconfirmed: - - -

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: Other Source (migratory fish species), Municipal, Habitat Alteration
Unconfirmed: - - -

Resolution/Management Information

Management Status: Strategy Implementation Scheduled or Underway
Lead Agency/Office: DOW/Reg1
IR/305(b) Code: Impaired Water Requiring a TMDL (IR Category 5)

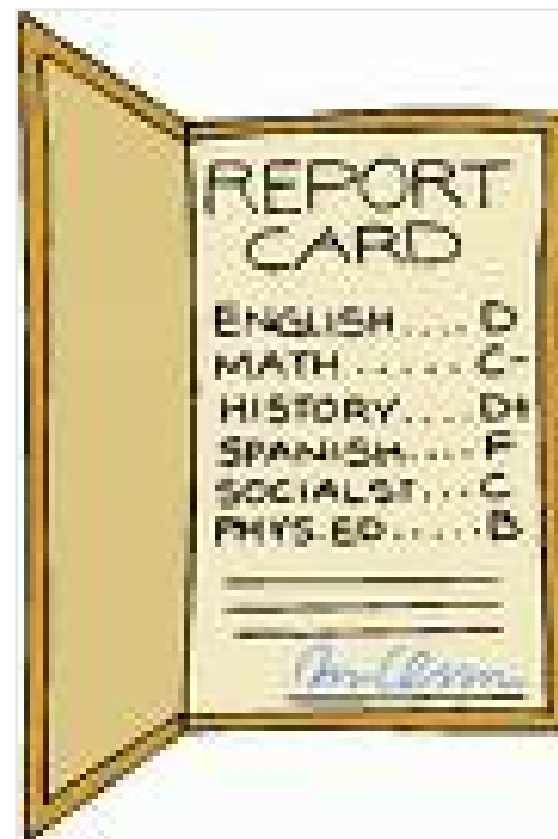
Further Details

Overview

Middle Bay is assessed as impaired due to shellfishing use that is known to be precluded by pathogens from stormwater and urban nonpoint runoff. Public bathing and recreational uses are also thought to be affected by the presence of macroalgae in the Bay. Fish consumption is considered to experience minor impacts due to precautionary health advisories limiting the consumption of certain species due to elevated PCB levels.

Use Assessment

Middle Bay is a class SA waterbody, classified for shellfishing, public bathing, general recreation uses and support of aquatic life.



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The Waterbody Inventory and Priority Waterbodies List

Water Uses Supported

- | | |
|--------------------|------------|
| • Water Supply | Class A |
| • Shellfishing | Class SA |
| • Public Bathing | Class B,SB |
| • Recreation | All Waters |
| • Aquatic Life | All Waters |
| • Fish Consumption | All Waters |

Other Conditions

- | | |
|---------------------|------------|
| • Habitat/Hydrology | All Waters |
| • Aesthetics | All Waters |





The Waterbody Inventory and Priority Waterbodies List

Use Evaluations

- Fully Supported
- Threatened
- Stressed
- Impaired
- Precluded

Class Grades

A

A- to B+ (Kinda)

C to B

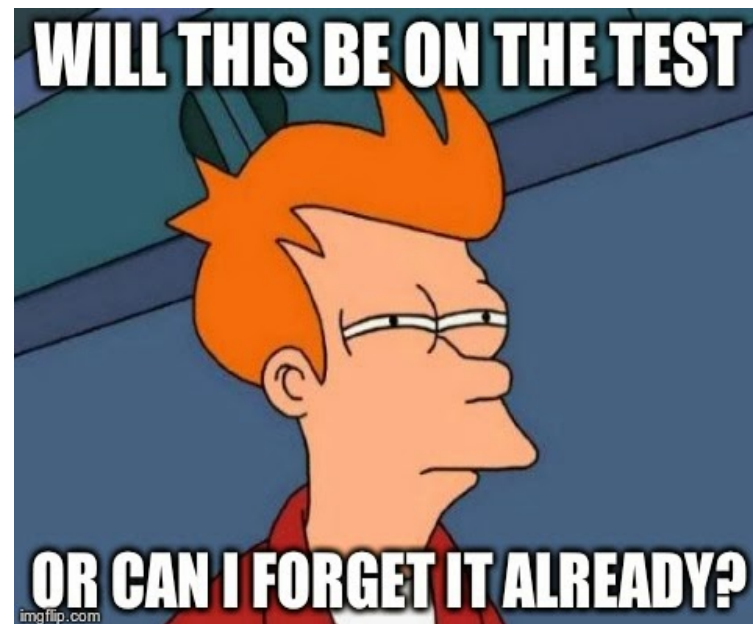
D to F

F

Table 4 Recreation Use Evaluation Criteria							
Use Evaluation Criteria	Severity						
Conditions Frequently Prevent Use <ul style="list-style-type: none"> NYS/local Health Department or local health entities have issued a closure¹ of public bathing beach(es) in the waterbody for period of more than 25 days. 	Precluded						
Conditions Occasionally Prevent or Frequently Discourage Use <ul style="list-style-type: none"> NYS/local Health Department or local health entities have issued temporary/occasional closures of public bathing beach(es) in the waterbody for between 10 and 25 days, or Presence of harmful algal bloom (HABs)², or Monitoring data show exceedence of one or more parameter-specific use evaluation criteria.* 	Impaired						
Conditions Occasionally Discourage Use <ul style="list-style-type: none"> NYS/local Health Department or local health entities have issued temporary/occasional closures of public bathing beach(es) in the waterbody for less than 10 days. Occasional occurrence of harmful algal blooms (HABs) of less than 2 week duration. Additional measures (e.g., algae control) are deemed necessary to support public bathing use.³ Monitoring data show exceedence of one or more parameter-specific use evaluation criteria* value more than 10% of the time. 	Stressed						
Conditions Fully Support Use <ul style="list-style-type: none"> NYS/local Health Department or local health entities have not restricted swimming, and Available monitoring data does not exceed use evaluation criteria, and No significant occurrence of HABs have been reported, and Additional measures are not necessary for support of swimming use. 	Fully Supported						
Conditions Support Use, but Threats Noted <ul style="list-style-type: none"> No specific use evaluation criteria; see definition of <i>Threatened</i>.⁴ 	Threatened						
* Parameter-Specific Use Evaluation Criteria <table> <tr> <td>Chlorophyll <i>a</i> (mean)⁵</td><td>TBD⁶ ug/l</td></tr> <tr> <td>Clarity/Secchi Disc (mean)</td><td>< 1.2 meters</td></tr> <tr> <td>Pathogen Indicators</td><td>see Public Bathing Use Evaluation Criteria (Table3)⁷</td></tr> </table>		Chlorophyll <i>a</i> (mean) ⁵	TBD ⁶ ug/l	Clarity/Secchi Disc (mean)	< 1.2 meters	Pathogen Indicators	see Public Bathing Use Evaluation Criteria (Table3) ⁷
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Pathogen Indicators	see Public Bathing Use Evaluation Criteria (Table3) ⁷						
¹ Closures are based on ambient water quality/contamination ² As defined by NYSDEC Harmful Algal Bloom notification criteria; occurrence on multiple days and verified over more than a 2 week period, at multiple locations covering significant spatial extent, with likelihood of annual recurrence. ³ In some instances, the need for additional measures is so acute that an evaluation indicating impaired recreational use is appropriate however such conditions are typically accompanied by exceedence of other impaired criteria. ⁴ <i>Threatened</i> waters include those waters where uses are <i>Fully Supported</i> , however: 1) changing land use patterns may result in restricted use or ecosystem disruption, or; 2) decreasing trends or sub-optimum water quality suggest future impacts, or; 3) support of a specific/distinctive use make the waterbody more susceptible to water quality threats. ⁵ Application of the Chlorophyll <i>a</i> criteria assumes a corresponding elevated nutrient level in the waterbody. ⁶ Specific criteria have yet to be established, but a value in the range of 10-15 ug/l is under consideration. ⁷ For Class C, SC and D waters that are used for more intensive public bathing use, the public bathing use pathogen criteria may also be applied to evaluate Recreation use.							

Class Syllabus

- Standards/Criteria
- Surrogate Indicators
- Administrative Restrictions



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Recommended Management Actions

- UnAssessed
- Assessment/Reassessment Scheduled
- Verification of Use Support Needed
- Verification of Pollutants/Causes Needed
- Verification of Sources Needed
- Restoration/Protection Strategy Needed
- Funding for Strategy Implementation Needed
- Strategy Implementation Scheduled or Underway
- Reassessment Needed
- No Action Needed



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Further Details

- Overview
- Use Assessment
- WQ Sampling
- Source Asmt
- Mgmt Actions
- Segment Desc



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The Use of the WI/PWL in the WQIP

Moving from...
Money Looking
for Projects



To...
Projects Looking
for Money

Moving from Assessment To Action

Questions?



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