Welcome to the 2018 Screening Kick-Offs

Proposed 2018 Site Maps – see chat box for live link
Streams -
https://arcg.is/PGaXb
Lakes -
https://drive.google.com/open?id=1wtt4IkMheButMyJ0qexQpxxtQrsZtbsZ&usp=sharing

Schedule
Rivers and Streams
Lakes and Ponds
+
Q&A on presentations and programs
+
Site Feedback
2018 RIBS Screening Kick-Off Meetings

Lake Champlain, Susquehanna, Atlantic/Long Island

May 22-24th, 2018
Housekeeping

Bear with us as we work through a new RIBS kickoff approach
We will mute attendees while presenting
Please ask questions in chat window and we will address them after presentations
• Please identify yourself and your organization
We will unmute lines for program Q&A
You may also have to unmute yourself to be heard
Chat Window Instructions
Presentations

Rivers and Streams

Lakes and Ponds

Q&A on presentations and programs

Open Discussion/Site Feedback
Statewide Waters Monitoring Program

Monitoring by waterbody type
- Rivers/Streams
- Lakes/Ponds/Reservoirs
- Groundwater
5 Year Monitoring Cycle

Year 1 - Screening

Year 2 - Intensives

Years 3 - 5 - Assessments, Update WI/PWL, Develop Protection/Restoration Strategies
Rivers and Streams
River and Stream Monitoring Programs

- Biological Monitoring Program
- Water Chemistry Sampling Program
- Water Assessment by Volunteer Evaluators (WAVE)
- Toxicity
Program Objectives

Primary
• Provide a comprehensive assessment of water quality in support of 305(b) and 303(d)

Secondary
• Identify and analyze temporal and spatial trends
• Characterize natural background conditions
• Support data needs of other department programs
Drivers of Monitoring Program Changes

Reductions in staff and funding
Changes is network demands
• TMDLs/Clean Water Planning
• Documentation of pollutant sources for all sites
• Better trend monitoring
• Focus on parameters with assessment criteria
Overview of Changes Made

Sample distribution and frequency

Geographic location of permanent sites

Narrowing parameter lists

Simplifying work planning (hopefully)
Specific Changes to Monitoring Networks

Routine Network

- From 19 to 40 sites
- Maintained historic sites where possible
- Co-located with USGS gages
- Large rivers + small rivers and streams
- Sampled 4 times/year, every year
Routine Network

Historic Routine Network

Current Routine Network

Legend:
- RIBS_RoutineSites
- New York State
- Major River Basins

N
0 20 40 80 120 160 Miles

0 15 30 60 90 120 Miles
Specific Changes to Monitoring Networks

Screening Network
• Add water column chemistry (grab)

Intensive Network → Special Surveys
• Small surveys designed around a specific need
• ex. Wappingers Creek (2017), Wallkill (2017)
5 Year Monitoring Cycle

Year 0 – WAVE + Routine

Year 1 – Screening + Routine

Year 2 – Special Studies + Routine

Years 3 - 5 - Assessments, Update WI/PWL, Develop Protection/Restoration Strategies + Routine
Screening Site Selection

Un-assessed Waters 20%
• Relies on Waterbody Inventory

Department/Outside Interest 25%
• TMDL Vision / Compliance Issues, Source Water Protection, etc…

Regional Reference 10%
• > 75% Natural Cover, Background chemistries, good biology

Long-Term Trend 20%
• Longest historical sampling record…..many from 70’s

Random Probabilistic 20%
• Statistical, unbiased sampling design

WAVE 5%
• Possibly impaired sites identified by volunteers
Screening Network Parameters

- Macroinvertebrate Community Analysis
- Habitat Assessment
- Sediment Toxicity
- Recreational Assessment
- Water column chemistry (grab)
Special Surveys “Tool Box”

Screening Network Parameters +
- Depth Integrated Water Column Chemistry
- Periphyton Community Analysis
- Sediment Chemistry
- Macroinvertebrate Tissue Chemistry
- Pebble Count
- Fish Community Analysis
- Bacteria, Chlorophyll A, Algal Toxicity
Macroinvertebrate Community Analysis

Non-impacted: BAP > 7.5
Slightly impacted: BAP 5.0 - 7.5
Moderately impacted: BAP 2.5 – 5.0
Severely impacted: BAP < 2.5
Trends and Statewide Condition

2003-2012 Sampling Locations

2003 - 2012 Interpolation of BAP Scores

- Non-impacted (BAP > 7.5)
- Severely Impacted (BAP < 2.5)

Legend
- New York State Boundary
- 2003 - 2012 Macroinvertebrate Sample Locations

0 15 30 60 90 120 Miles
Screening Network - 2018

Approximately 75 sites/basin
- Lake Champlain
- Atlantic/Long Island
- Susquehanna
Screening Survey Dates - 2018

• Lake Champlain – Week of 7/16
• Susquehanna – Week of 8/6
• Atlantic/Long Island – Week of 9/10

• Volunteer assistance is welcome…
• Brian Duffy - brian.duffy@dec.ny.gov
Ponded Waters
(Lakes, Ponds, Reservoirs)
Lake Monitoring Programs

- Citizen Statewide Lake Assessment Program (CSLAP)
- Lake Classification and Inventory (LCI)
- Harmful Algal Bloom (HABs) Program
LCI Screening Site Selection

Single sampling event during screening year

• Candidate lakes:
  
  Lakes for which we have no (recent) information for “Unassessed”
  
  Highest priority largest unsampled lakes
  
  Local or regional request (citizen complaint)
  
  Lakes near “problem” lakes
  
  Limited to Publicly Accessible Lakes/Public launch
  
  Shoreline Fishing or passive recreational opportunities
  
  Drinking water supply
Screening Network - 2018

• Lake Champlain ~ 21 lakes
• Atlantic Ocean / Long Island Sound ~ 27 lakes
• Susquehanna River ~ 20 lakes
Intensive Network - 2018

- Sites selected
  - Screening lakes with WQ questions
  - PWL “Needs Verification”
  - PWL impaired
  - Regionally important

- Lower Hudson River ~ 18 lakes
- Black River ~ 7 lakes
- Chemung River ~ 7 Lakes
Monitoring Parameters

- Depth profile (depth, temp, DO, pH, conductivity, ORP)
- Surface water samples for trophic and standard limnological indicators
- Nutrients, algae, clarity, carbon, color, metals
- Bottom water samples if lake stratified
- Macrophyte (aquatic plant) identifications
- Invasive exotic plants
- Protected species (with Natural Heritage Program)
- HABs indicators (algae, microscopy, toxins)
CSLAP

Volunteer lake monitoring program conducted jointly by NYSDEC and NYS Federation of Lake Associations (NYSFOLA)

• Initiated 1986

Appx. 270 lakes have been sampled through CSLAP
Mandated by ECL (17-0305)

For Information Contact
DEC @ DOWinfo@dec.ny.gov
NYSFOLA @ fola@nysfola.org
CSLAP

Water samples collected by trained lay volunteers every other week for 15 weeks (8 samples)

• Sampling focuses on lake eutrophication indicators (“greenness”)
  Water clarity (Secchi disk transparency)
  Nutrients (phosphorus and nitrogen)
  Algae (chlorophyll a)
  pH, Color, Conductivity, Calcium, Ammonia
  Lake/user Perception
  HABs indicators, including Algal Toxins
2018 CSLAP Lakes

- Statewide ~ 182 sites on 160 Lakes
CSLAP Reports

Issued for all 160+ lakes sampled each year, including scorecards evaluating whether lake uses are being attained

- Summarizes present and historical results
- Reports, Scorecards, Single Page Q&A available on NYSFOLA website (www.nysfola.org)
- Reports and Scorecards for most recent sampled year available on DEC websites (www.dec.ny.gov)
Training Video

http://www.dec.ny.gov/chemical/81849.html
What are Harmful Algae Blooms (HABs)?

Harmful: Cyanobacteria create liver, nerve or dermal toxins that affect drinking water, contact recreation, pets, wildlife, irrigation, and food

Algae: Freshwater HABs are often cyanobacteria (not true algae)

Bloom: Cyanobacteria are found in nearly all lakes, but a bloom is a dense concentration of cells
Recognizing HABs

- Spilled paint on the water surface
- Pea soup throughout water column
- Discolored (usually green or blue green) streaks in water
- Green dots
- Scums, often accumulate along the shore
What can you do?

Learn more about HABs
- NY DEC: on.ny.gov/hab
- NY DOH: www.health.ny.gov/harmfulalgae

Report potential blooms to DEC
- Suspicious Algae Bloom Form on website
- Email: HABsInfo@dec.ny.gov

Encourage monitoring thru CSLAP or other programs

Establish a surveillance/monitoring program
- Contact DEC for more info
Enhanced HABs Surveillance and Sampling

- Finger Lakes: Volunteer monitoring program, enhanced sampling at Honeoye Lake, Otisco Lake, Owasco Lake, Seneca Lake- likely adding Canandaigua Lake, Cayuga Lake, and Skaneateles Lake in 2018
- NYC Parks and Long Island
- Wallkill River: Lakes & Streams sections in conjunction with the Wallkill River Watershed Alliance
Site Selection Discussion

2018 Draft Stream Sites – [https://arcg.is/PGaXb](https://arcg.is/PGaXb)

2018 Draft Lakes - [https://drive.google.com/open?id=1wtt4IkMheButMyJ0qexQpxxtQrsZtbsZ&usp=sharing](https://drive.google.com/open?id=1wtt4IkMheButMyJ0qexQpxxtQrsZtbsZ&usp=sharing)

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