



New York State 12 Priority Lakes HAB Initiative

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On behalf of the NYS Department of Environmental Conservation

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Freshwater HABs in New York

DEC, DOH and partners documented freshwater HABs across NYS since 2011

Steady ↑ in reported blooms

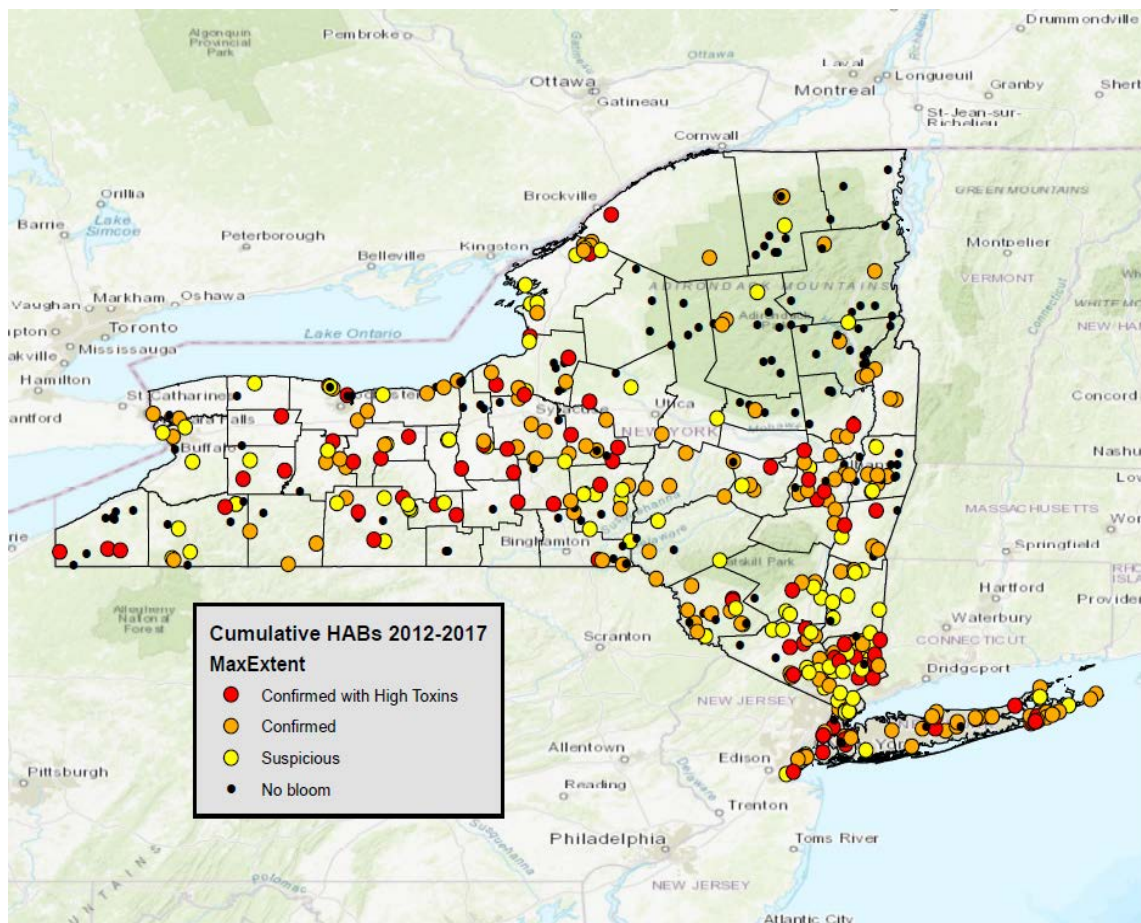
Dozens of Suffolk County lakes w/HABs

Blooms affecting drinking water in Owasco Lake, Skaneateles Lake

Beach closures throughout NYS



Owasco Lake



	Suspicious	Confirmed	Confirmed with high toxins	Total
2012	20	28	9	57
2013	17	37	22	76
2014	19	51	23	93
2015	39	62	35	136
2016	41	95	38	174
2017	45	84	36	165
All years	96	155	89	340



Governor Cuomo's State of the State 2018

- \$65 million dedicated to this issue; HABs Summits, 12 waterbodies identified for Action Plans; Advanced Monitoring pilots; Mitigation pilots
- Follow up to previous initiatives
 - \$2.5B in Clean Water Infrastructure funding
 - > \$2M for state-of-the-art water treatment systems
 - Finger Lakes Hub staff hired to oversee WQ activities
 - \$700k in Owasco Flats restoration funds

HABs Regional Summits

- ❖ Sponsored by Governor's Office, DEC, DOH, DAM
- ❖ Southern Summit, February 27, New Paltz (Lake Carmel, Putnam Lake, Palmer Lake, Monhagen Watershed)
- ❖ Central Summit, March 5 & 6, Syracuse (Skaneateles, Owasco, Cayuga Lakes)
- ❖ North Country Summit, March 20, Ticonderoga (Lake George, Lake Champlain)
- ❖ Western Summit, March 26, Rochester (Conesus, Honeoye, Chautauqua Lakes)

Summit Format

Daytime – invite

- Overview of NYS Circumstances
 - History
 - Program action
- Expert presentations and discussions

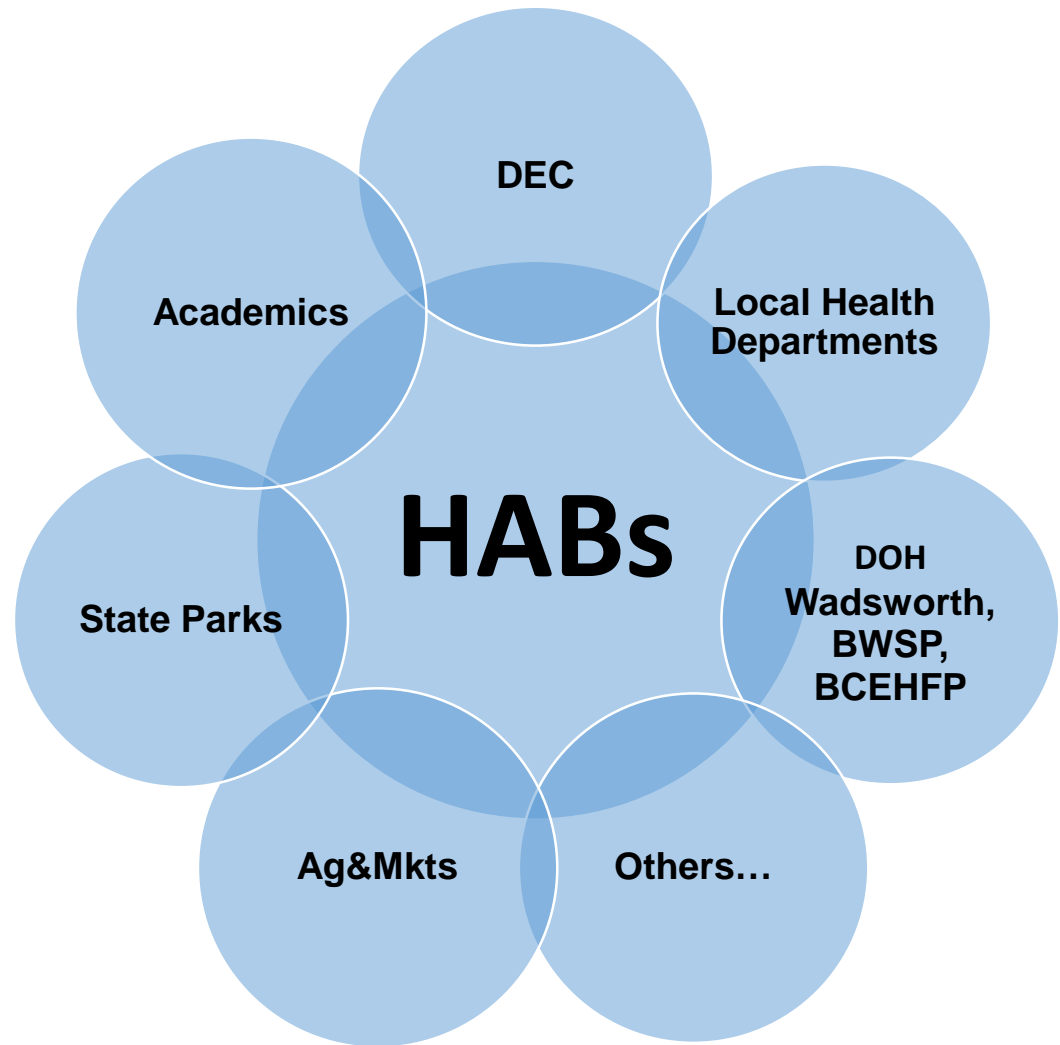
Evening – open to public

- Panel with brief program presentations and keynote from an expert;
<https://livestream.com/hvccstreaming/habssummits>
- Moderated Q&A



Team Work

- Action plans
- Coordination and collaboration with other agencies
- Based on science
- Time to do something



Take Home Messages



- “Its complicated”
- Long Haul
- Improvement is possible
- Control both nitrogen *and* phosphorus
- Expand collaborative partnerships and research

The Experts

- Art Degaetano – Cornell University
- Greg Boyer – SUNY ESF
- Tim Mihuc – SUNY Plattsburgh
- Angela Shambaugh – Vermont DEC
- Sandra Nierzwicki – Bauer-RPI
- Tim Davis – Bowling Green State Univ.
- Hal Walker – SUNY Stony Brook
- Jennifer Graham – USGS-Kansas
- Dave Mathews – UFI
- Hans Paerl – Univ. of North Carolina
- Steve Wilhelm – Univ. of Tennessee
- Chris Gobler – SUNY Stony Brook



HABs Action Plans



**DRAFT - HARMFUL ALGAL BLOOM
ACTION PLAN
OWASCO LAKE**



12 plans, one for each priority waterbody

Summary of lake, water quality and HABs history

Waterbody and statewide analysis of HAB triggers

Lake and watershed implementation projects to address HABs

Due in May 2018

HABs Advanced Monitoring Pilot

- DEC and contractors developing pilot to investigate use of advanced monitoring platforms
 - Innovative HAB sensors
 - Meteorological stations
 - Real time reporting
 - Public facing webpage
- DEC finalizing details



HABs Mitigation Pilot



<http://aquatechnex.com>

- Evaluation of innovative HABs mitigation actions
 - Nutrient inactivants
 - Hydrogen peroxide
 - Ultrasonic devices
- DEC and contractor choosing candidate sites and technologies; initiating environmental review

How Will This Help Long Island?

Extensive local and statewide HAB data analysis to identify triggers for blooms and toxin production

Lessons learned from HABs mitigation projects in 12 targeted waterbodies and pilot projects

Advanced monitoring tools for future use in other waterbodies

Continuing NYS Government attention to HABs



Department of
Environmental
Conservation

Questions?



Conesus Lake