

Drinking Water Source Water Protection and the Role of Watershed Rules and Regulations

June 9, 2021



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Q & A



Drinking Water Source Protection & the Role of Watershed Rules and Regulations

Dan Shapley, Co-director, Riverkeeper's Science & Patrol Program

Capital District Regional Planning Commission
Planning and Zoning Webinar Series
June 9, 2021

Riverkeeper's Mission

Riverkeeper protects and restores the Hudson River from source to sea and safeguards drinking water supplies, through advocacy rooted in community partnerships, science and law.

Main Points

- Drinking water source protection is a public health issue and an environmental justice issue.
- Watershed Rules and Regulations uniquely empower communities to protect their water supplies against specific local threats, even when those threats originate in other municipalities
- Many communities have outdated Watershed Rules and Regulations, or none at all
- NYS has signaled a new willingness to consider updates: **let's make the most of it**



Public Health & Environmental Justice

- The largest communities, including many with significant BIPOC populations, rely on water sources and watersheds outside municipal boundaries
- Downstream communities have little to no power over land use, or other activities affecting their water sources upstream
- Water supplies are contaminated by unregulated and recently regulated contaminants, harmful algal blooms; threatened by death by a thousand cuts

Watershed Rules and Regulations

NYS Public Health Law Section 1100

- Established at state level, at discretion of NYS DOH, and ultimately enforced by NYS DOH
- Can be applied at local level, to every drinking water supply, and at watershed scale, to address local concerns and local threats
- Rare Home Rule exception allowing downstream communities to establish laws affecting other municipalities, including the right to inspect and issue notices of violation in communities upstream
- Projects proposed in upstream watersheds must be compliant

Watershed Rules and Regulations

NYS Public Health Law Section 1100

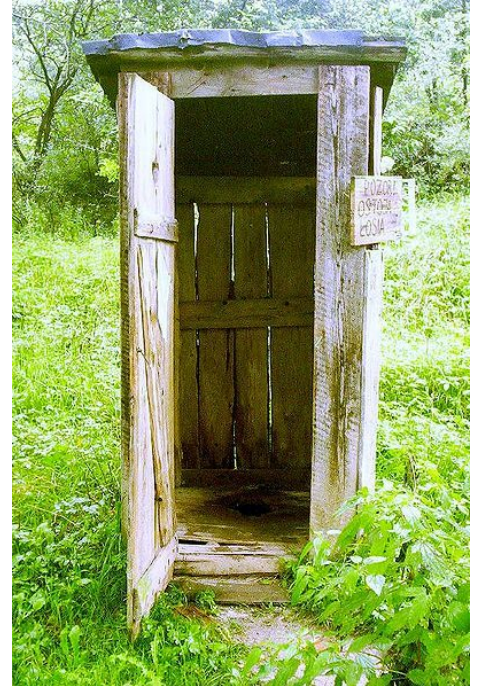
- About 250 communities in NYS have Watershed Rules and Regulations
 - tinyurl.com/nys-wrr-code
- Various size communities
 - Water districts, villages, cities
 - Some no longer in existence
- Various water sources
 - Reservoirs, wells
 - Some Rivers (Genesee), not others (Hudson)
 - Some Lakes (Ontario), not others (Seneca)



Watershed Rules and Regulations

NYS Public Health Law Section 1100

- Many date to 1910s - 1950s
- Outdated pollution concerns
- Only two have been updated for unfiltered water supplies (NYC, Syracuse)
- Most have not been updated, and aren't protective against industrial pollutants, urban and agricultural runoff, development, erosion & other modern threats





Drinking Water Source Protection Program

- New York State's new framework for protecting water at its source
- Stakeholder process, mapping, goals -> strategies, implementation
- Watershed Rules and Regulations are identified as being effective in some cases: "especially in watersheds that fall within several municipalities."

What they're saying about DWSP2

- "The Drinking Water Source Protection Program **empowers communities to protect their sources of public drinking water**, ensuring good water quality and protecting public health."
-DEC Commissioner Basil Seggos
- "Protecting New York's source waters is paramount to ensuring access to quality drinking water statewide. **This program recognizes the need to update outdated assessments and focus on creating and implementing modernized protection plans** while providing cost-free technical assistance to help communities achieve that goal."
-New York State Health Commissioner Dr. Howard Zucker

What You Can Do

- Research your own water supplies
 - Do you have Watershed Rules and Regulations?
tinyurl.com/nys-wrr-code
 - Are they up to date?
- Support Cayuga County's effort to have its first-through-the-door Watershed Rules and Regulations updated for Owasco Lake
- Ask the Department of Health to establish a transparent process for the timely adoption of updated Watershed Rules and Regulations
 - Memorializing Resolution: tinyurl.com/WRR-resolution



Thank You

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About Regional Planning Councils



- ▶ Survey, study and research programs which address regional needs and improve community services
- ▶ Prepare a regional comprehensive plan
- ▶ Consult and cooperate entities in matters affecting the region
- ▶ Assist with transportation planning in areas of the region
- ▶ Review certain planning and zoning actions

What is CDRPC?

- Founded in 1967 by Albany, Rensselaer, Saratoga, and Schenectady Counties.
- Supports regional initiatives, planning and information sharing
- Provides a forum for regional communication and intermunicipal collaboration
- Builds regional capacity
- Fosters partnerships and open dialogue on regional challenges and opportunities.



Water Quality

- ▶ Combined Sewer Long Term Control Plan
 - ▶ The cities of Albany Cohoes, Rensselaer, Troy and Watervliet; and the Village of Green Island + Two County Sewer Districts
 - ▶ Coordinate programs and projects that will aid in the clean-up of the Hudson River. (\$150m)
- ▶ NYSDEC Funded “604(b)” Clean Water Program
 - ▶ Regional comprehensive water quality management planning activities.
 - ▶ Assistance to MS4 communities (urban)
 - ▶ Assistance to County Water Quality Committees (rural)
 - ▶ **Source water protection**



How is this work Funded?

Funding for this report has been provided by a grant from the New York State Department of Environmental Conservation (NYSDEC) originating from a federal allocation from the Environmental Protection Agency (EPA) under Section 604(b) of the National Water Quality Act.



DWSP2 Model

- Prioritize potential contaminant sources
- Identify protection methods
- Develop implementation timeline
- Designate management team
- Create revision schedule



Methodology

- Reexamine the relationship between land use and water quality;
- Reexamine environmental features and their functions within the watershed;
- Reexamine the manmade features and growth trends within the watershed;
- Reexamine the current land use regulations within the watershed as they pertain to water quality;
- Offer recommendations for mitigating existing threats and for minimizing future threats to the water quality of the reservoir. (IE *short term*: purchase of harvester and *long term*: prevention of nutrient loading)



Methodology

- Assist in efforts to address invasive (IE machine to remove water chestnut)
- Explore methods to enable municipalities to purchase or protect land of significant environmental protection value to the reservoir with the aid of willing landowners
- Look to State, OSI, Land Trust, Land Bank and others on acquisition

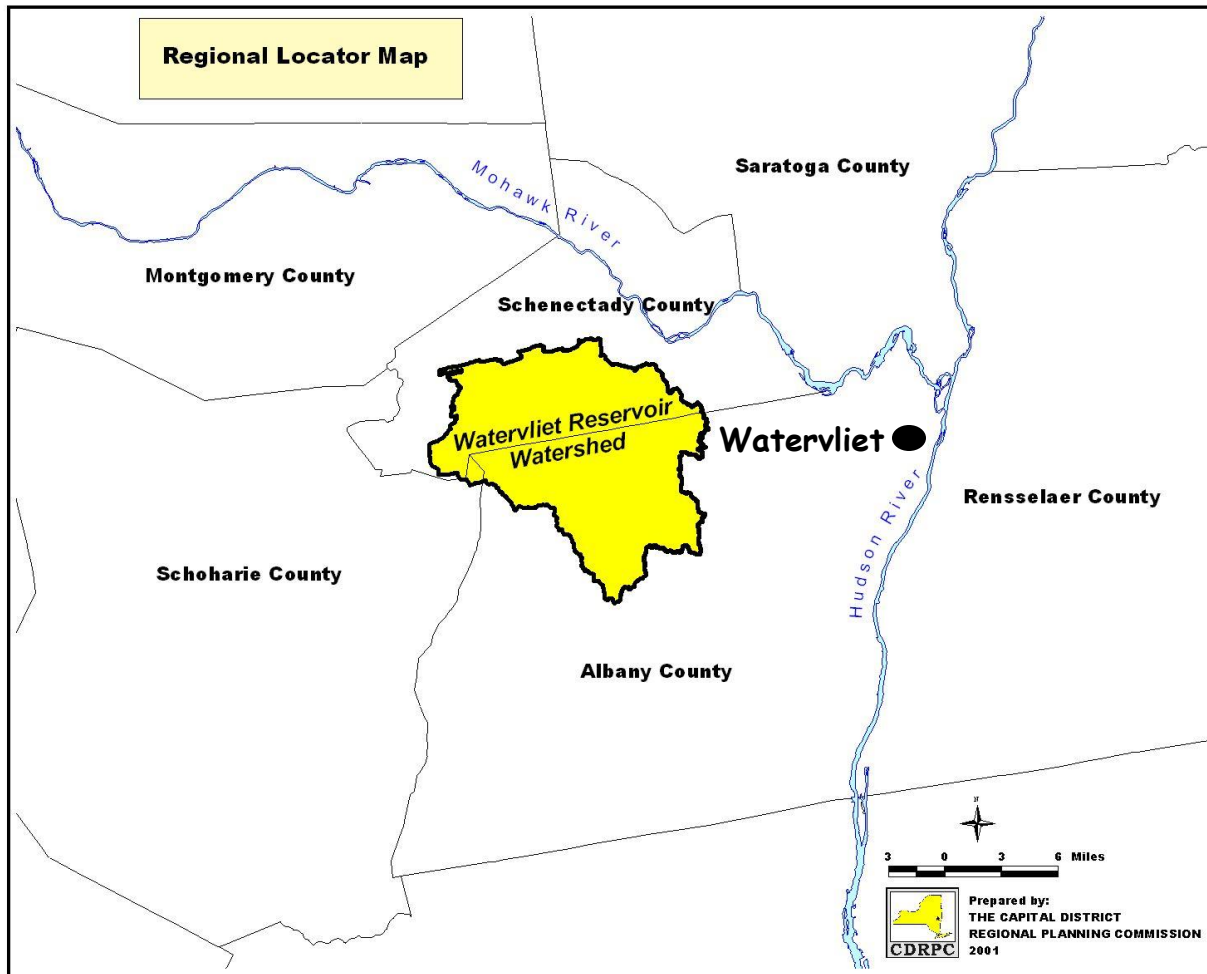


Watershed Protection Study **Update**

- Reservoir is owned by city of Watervliet (sole drinking water source)
- Primary drinking water source for the town of Guilderland
- Created in 1915 by damming the Normans Kill
- Safe yield of 12 million gallons/day
- Watervliet's daily average: 2.75 million gallons
- Guilderland: between 3 - 4 million gallons of raw water/day
- City and Town have separate intakes, treatment plants, pump stations and transmission lines
- Source of Hydro owned by Watervliet
- Reservoir protection plan written in 2003



Regional Locator Map



Advisory Committee

Large Municipalities within Watershed

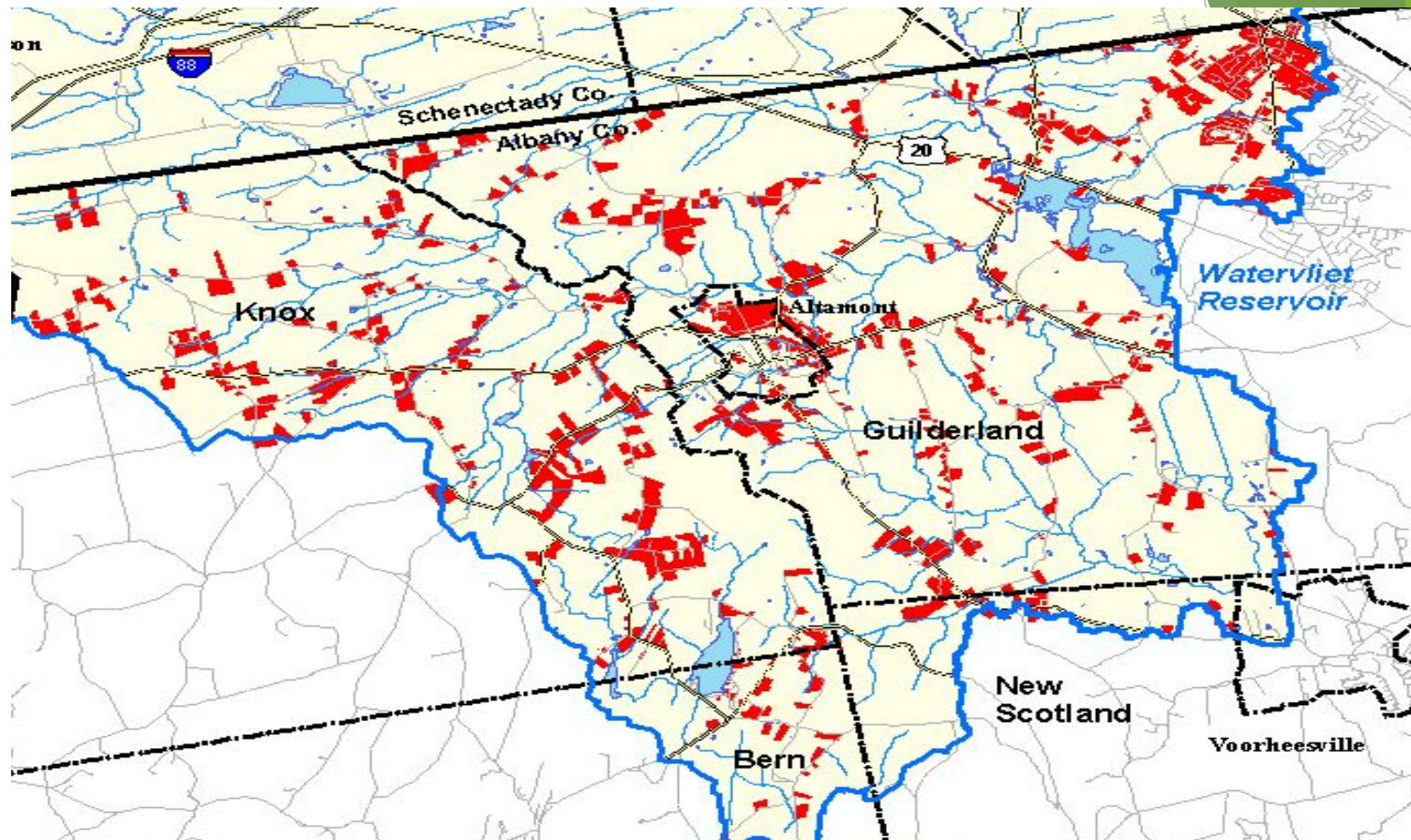
- Town of Guilderland
- Town of Rotterdam
- Town of Knox
- Town of Duanesburg
- Village of Altamont
- Village of Voorheesville
- Town of New Scotland
- Town of Bern
- Albany County
- Schenectady County

Community and Organizational Entities:

- Stormwater Coalition of Albany County (w/ member ms4s in the watershed)
- Soil & Water Conservation District
- Hudson Mohawk Land Conservancy
- Farm Bureau
- Hudson River Watershed Alliance
- Schenectady County WQCC (W/ MS4s)
- Siena College



1945-2000



Specific Watervliet Reservoir Water Quality Issues Identified in the 2003 Report

- The Northeast Industrial Park
- School Bus Garage
- Former Town Landfill
- Proximity of Roads
- Invasive Plants
- Expansion Plans
- Gravel Quarry
- Development in the Watershed
- Best Management Practices for Stormwater
- Erosion and Sediment control



Growth Pressure

Municipalities	1990 Watershed Population	2000 Watershed Population	Population Change 1990 - 2000	2010 Watershed Population	Population Change 2000-2010	Population Change 1990-2010
Berne	250	256	2.4%	1368	434.4%	444.8%
Duanseburg*	2715	2833	4.3%	6122	116.1%	121.1%
Knox	1646	1685	2.4%	2692	59.8%	61.2%
Rotterdam	8700	9,102	4.6%	13676	50.3%	52.6%
New Scotland	216	224	3.7%	337	50.4%	52.3%
Guilderland	5891	6984	18.6%	8411	20.4%	24.2%
Princeton	1360	1477	8.6%	1490	0.9%	1.0%
Altamont	1524	1737	14.0%	1720	-1.0%	-1.1%
Voorheesville	199	215	8.0%	175	-18.6%	-20.1%
Total	22501	24513	8.9%	35991	46.8%	51.0%

**Duanseburg includes Delanson*

Current Challenges at the Reservoir

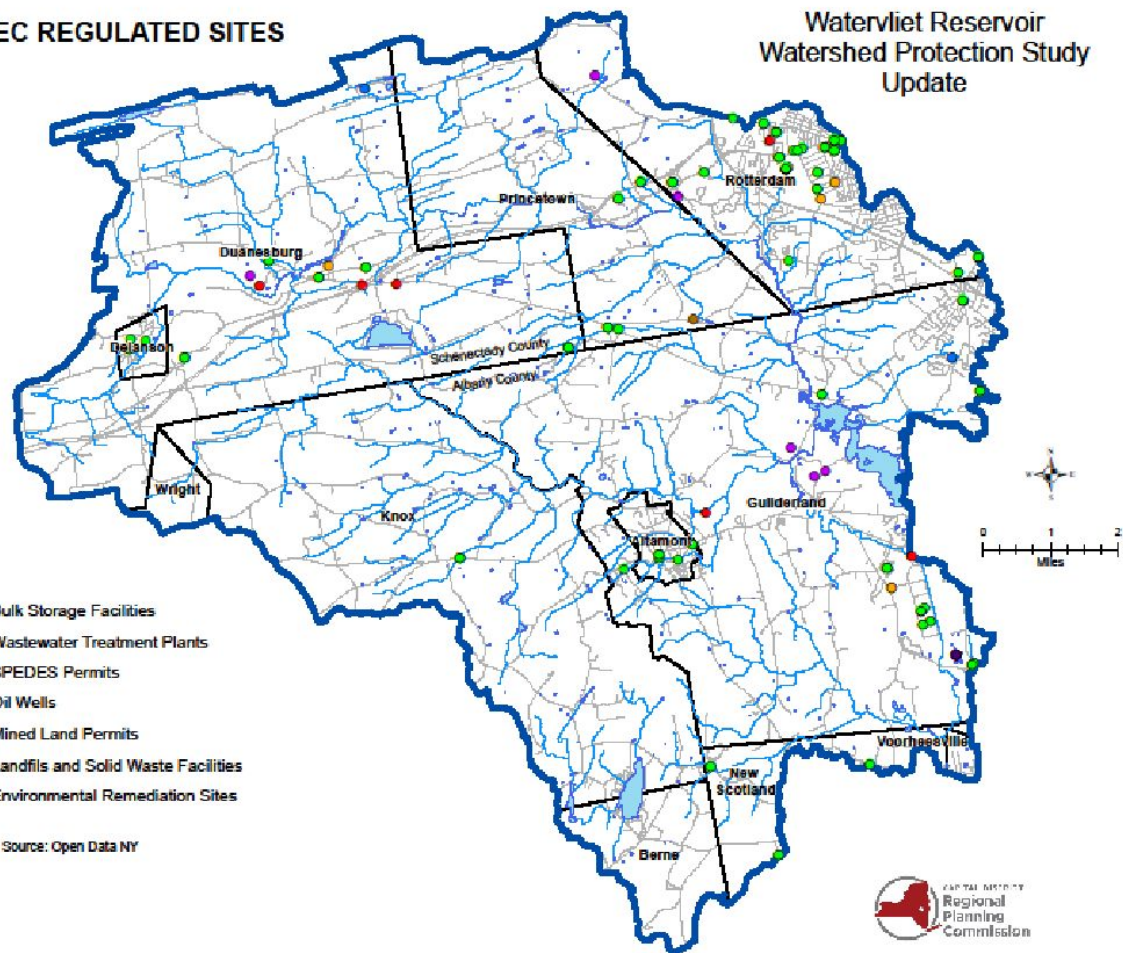
- Oxygen levels are well below normal, likely due to water chestnuts.
- Turbidity is high though the reservoir recharges quickly.
- The town surrounding the reservoir, Guilderland, wants recreational opportunities expanded.
- Two privately owned golf courses closed adjacent to reservoir. One is slated to become a park.
- Intense development pressure.
- Critical threats from potential train derailment and encroachments

NYS DEC REGULATED SITES

Watervliet Reservoir Watershed Protection Study Update

- Bulk Storage Facilities
- Wastewater Treatment Plants
- SPEDES Permits
- Oil Wells
- Mined Land Permits
- Landfills and Solid Waste Facilities
- Environmental Remediation Sites

Source: Open Data NY

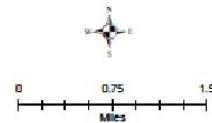
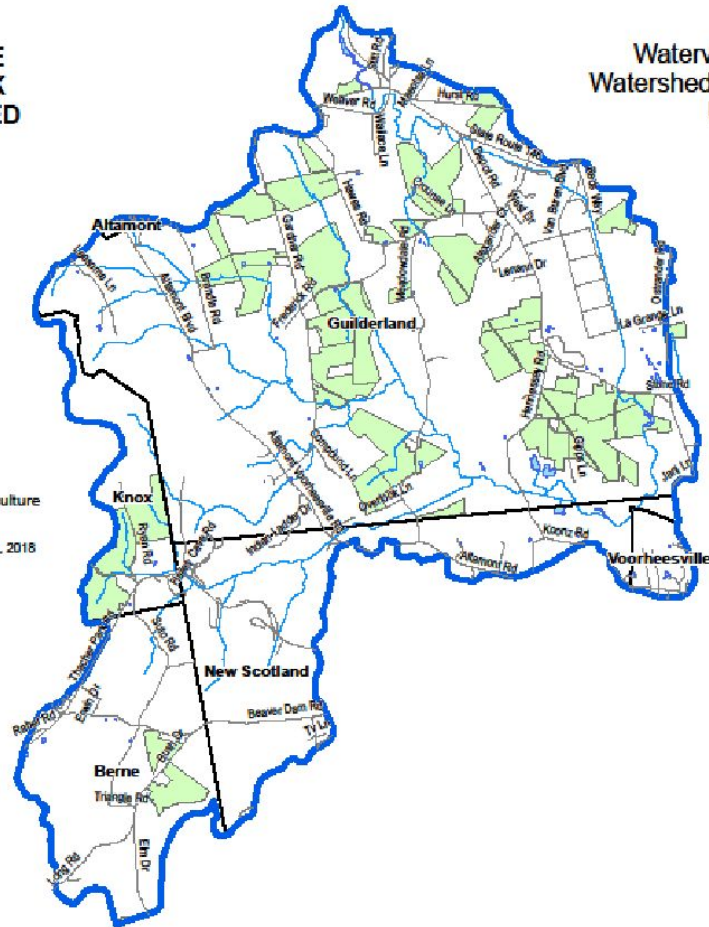


**AGRICULTURE
BLACK CREEK
SUBWATERSHED**

**Watervliet Reservoir
Watershed Protection Study
Update**

 Parcels Used for Agriculture

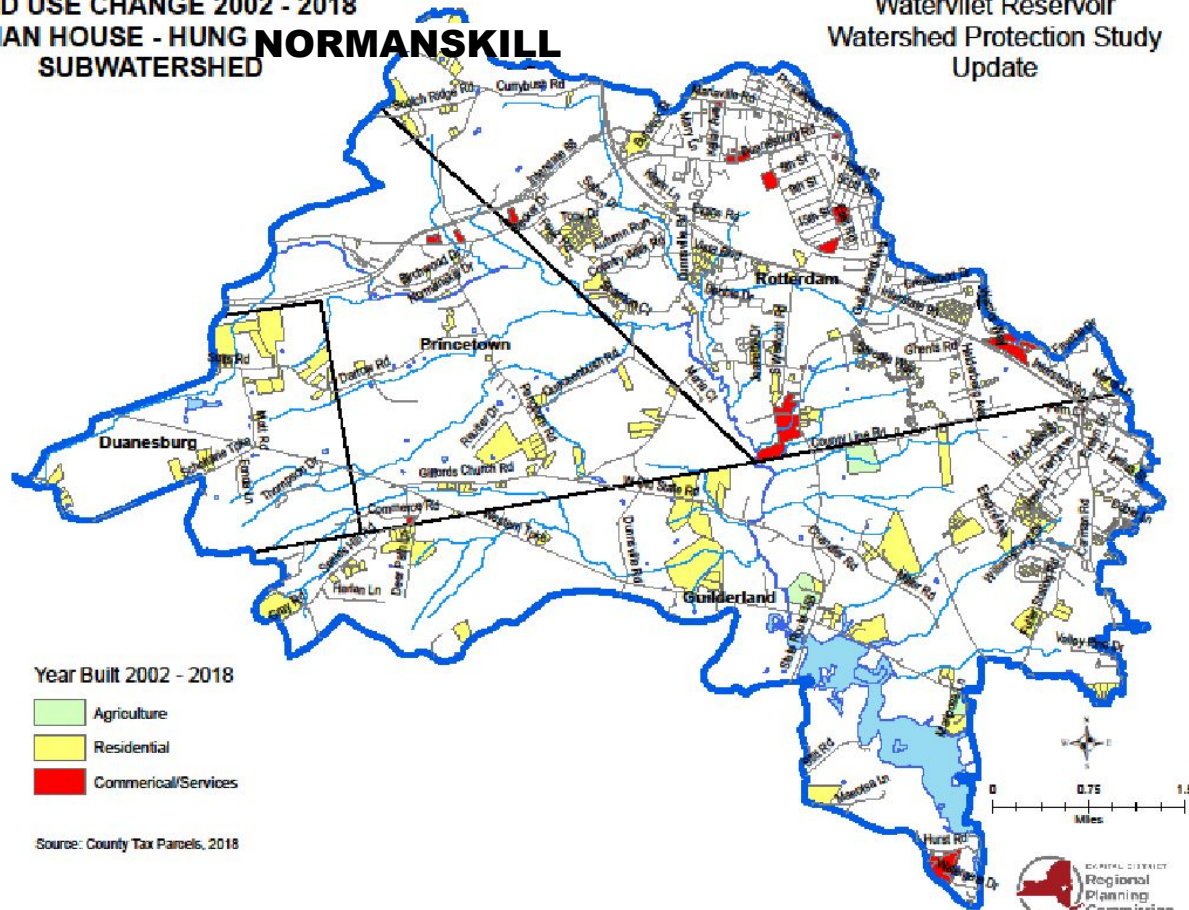
Source: County Tax Parcels, 2018



LAND USE CHANGE 2002 - 2018

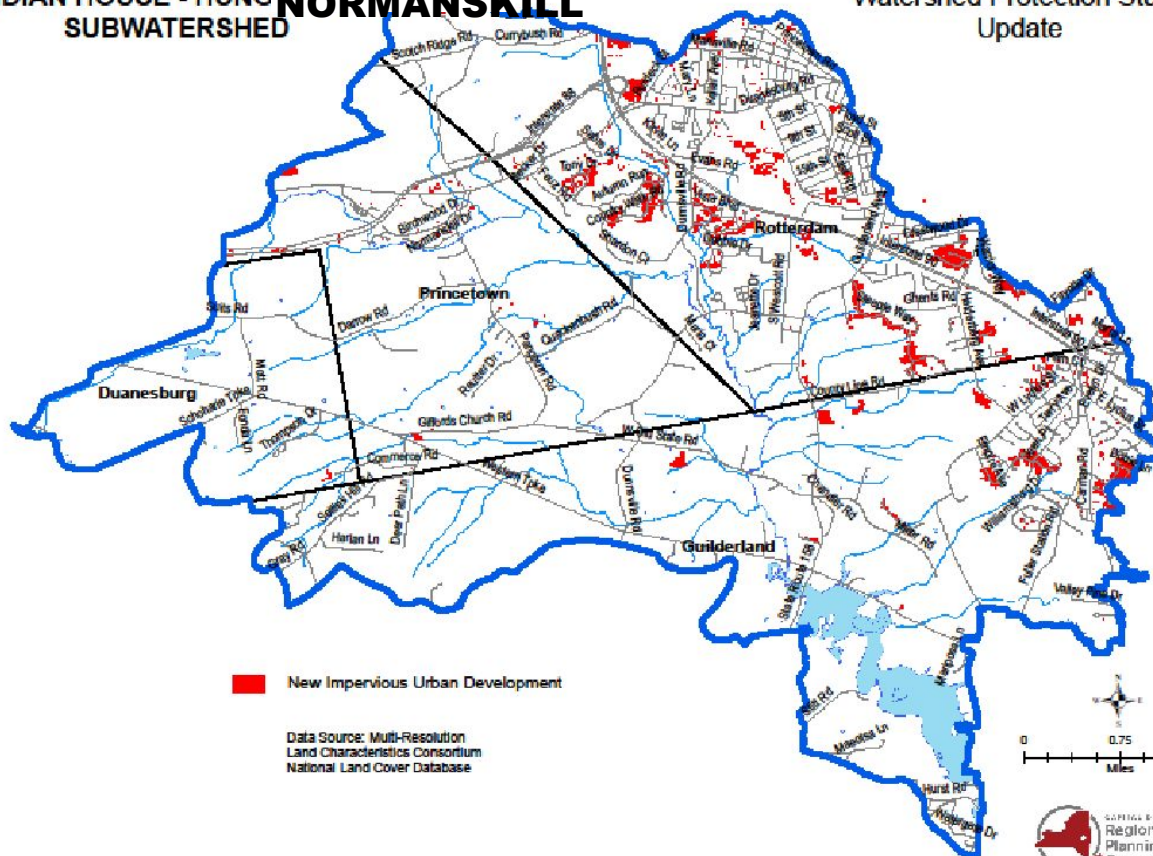
INDIAN HOUSE - HUNG NORMANSKILL
SUBWATERSHED

Watervliet Reservoir
Watershed Protection Study
Update



URBAN CHANGE 2001 - 2016
INDIAN HOUSE - HUNG NORMANSKILL
SUBWATERSHED

Watervliet Reservoir
Watershed Protection Study
Update



Watervliet Reservoir Tributary Stream Sampling Sites

#3) Black Creek at Route 158
(Guilderland Rd.)

#4) Normans Kill at Route 20
(Western Turnpike)

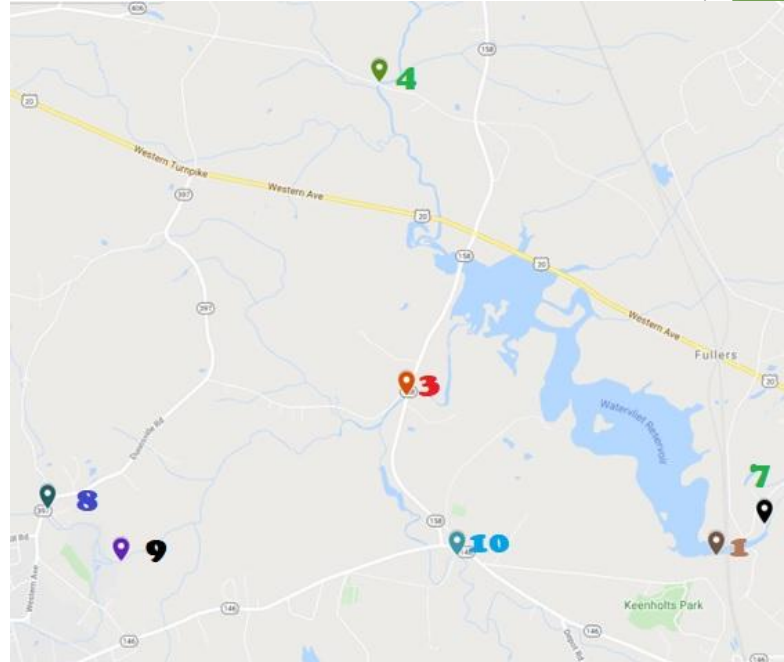
#8) Bozen Kill at Route 397
(Dunnsville Rd.)

#9) Bozen Kill downstream of
Altamont Wastewater Treatment
Plant

#10) Black Creek at Weaver Road

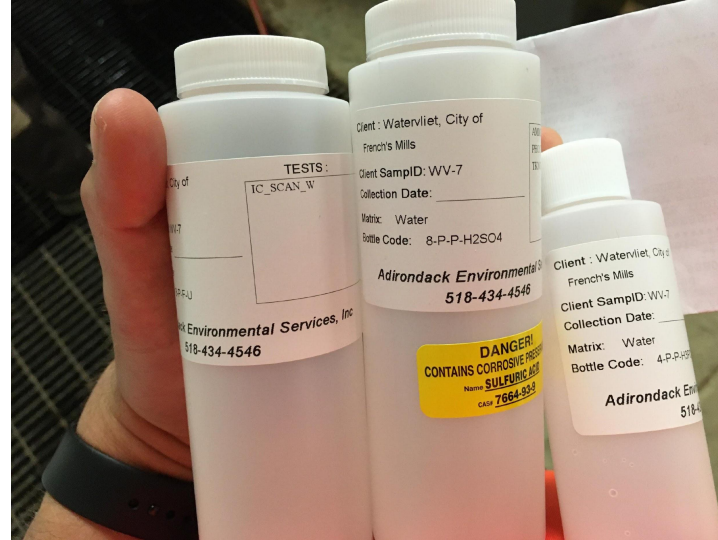
#7) Watervliet Reservoir Intake

#1) Shoreline of Reservoir at
Unnamed Stream (rerouted in 2001,
sampling suspended in 2004)



Criteria Tested

- ▶ Temperature
- ▶ Dissolved Oxygen
- ▶ Oxygen Saturation
- ▶ pH
- ▶ Chlorides
- ▶ Fecal Coliform (until 2002)
- ▶ Nitrates
- ▶ K-Nitrogen
- ▶ Organic Nitrogen
- ▶ Total Phosphate
- ▶ Total Organic Carbon
- ▶ Turbidity



Watervliet Reservoir Intake

- **Oxygen Saturation** Levels have held declined steadily since 1987 from just above 80% to just above 60%. To help boost DO in the reservoir the City does operate circulators
- **Total Phosphate** has risen slightly from roughly .04 ppm to roughly .05 ppm
- **Turbidity** has steadily increased from 1987, from roughly 5 NTU to more than 20 NTU.

The Black Creek

- **Temperatures** - the average temperature has continued to rise since sampling began in 1987. The average temperature of the stream has rise roughly 2 degrees Celsius between 1987 and 2019.
- **pH** in the Black Creek has risen slightly from 7.5 to 8 on average. The normal, healthy range of pH for supporting aquatic life is between 5 and 7. An increase in pH could be due to contribution of lime, a neutralizer of acid soils in agriculture. Areas with a lot of limestone may also have more alkaline waters naturally.
- **Total Phosphate** has remained stable, and high, at .5 ppm. For protection of ecological health phosphate levels should be <.05 ppm. Levels of phosphates in excess of .1 ppm usually indicate organic pollution and may lead to explosive algae growth. Levels as low as .5 ppm are considered unsafe for drinking. Levels above 0.1 ppm usually indicate human-influenced pollution sources. This includes runoff into waterways from: wastes produced by poultry, dairy and other animal farming operations that are not properly managed, concentrations of droppings from nuisance animals (e.g. Canada geese) and even household pets, seeping of sewage wastes from improperly sited or poorly-maintained home septic systems, and inadequate sewage treatment plants.

The Normans Kill

- pH in has held steady, at just under 8 on average. The normal, healthy range of pH for supporting aquatic life is between 5 and 7. An increase in pH could be due to contribution of lime, a neutralizer of acid soils in agriculture. Areas with a lot of limestone may also have more alkaline waters naturally.
- **Chlorides** have risen sharply from 100ppm levels in 1987 to a roughly 125ppm average in 2019. Chloride concentrations of between 1 and 100 ppm (parts per million) are normal in freshwater. **This could be an indication that road salt application is impacting the stream**
- **Total Phosphate** has remained stable, and high, at roughly .4 ppm. For protection of ecological health phosphate levels should be <.05 ppm. Levels of phosphates in excess of .1 ppm usually indicate organic pollution and may lead to explosive algae growth. Levels above 0.1 ppm usually indicate human-influenced pollution sources. This includes runoff into waterways from: wastes produced by poultry, dairy and other animal farming operations that are not properly managed, concentrations of droppings from nuisance animals (e.g. Canada geese) and even household pets, seeping of sewage wastes from improperly-sited or poorly-maintained home septic systems, and inadequate sewage treatment plants.
- **Turbidity** has increased sharply from 1987, from roughly 1 to slightly above 5 NTU.

The Bozen Kill at 397

- pH in has risen slightly from at just under 7.5 to 8. The normal, healthy range of pH for supporting aquatic life is between 5 and 7. An increase in pH could be due to contribution of lime, a neutralizer of acid soils in agriculture. Areas with a lot of limestone may also have more alkaline waters naturally.

Black Creek at Weaver Road

- **Oxygen Saturation** Levels have held steady, but are very low, just below 80%, the threshold for supporting a healthy, diverse ecosystem in the creek.

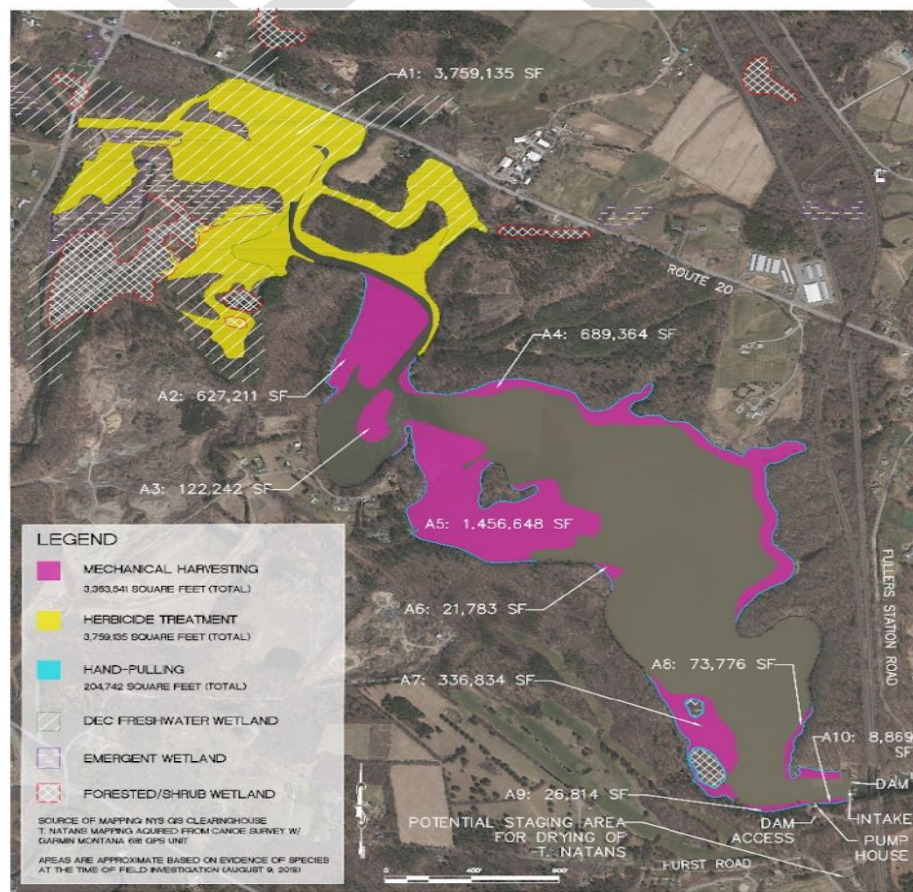


Figure 1: *Trapa natans* Distribution and Wetland Boundaries in the Watervliet Reservoir.



First Year Costs for Removal

- \$5,000 for shallow depth hand pulling
- \$195,000 for mechanical harvesting
- \$70,000 for herbicide treatment*

overall cost \$270,000.



Removal Vs. Management

- Reservoir flushes frequently due to size of the watershed
- Water chestnuts choke out other potential invasives
- If cut back before fall, DO rates addressed without out costly harvesting

Preliminary Recommendations for Review

- Local code recommendations to manage impacts from growth
- Road salt management strategies
- Update of Watershed Rules and regulations
- Setback distances of 100ft from waterbodies, wetland within watershed
- Increased oversight to ensure setback compliance
- Drills and procedural review for spills
- Annual or semi-annual Lake Sonde
- Late summer water chestnut cut-backs
- Strengthen adoption of voluntary agricultural BMPs to minimize animal, fertilizer and erosion impacts
- Preserve and protect land around reservoir with willing landowner support with emphasis on shuttered golf courses, mines and industrial sites)

Proposed Revision to the NYS Department of Health Watershed Rules and Regulations for the Watervliet Reservoir Watershed.

CITY OF WATERVLIET DRAFT

RULES AND REGULATIONS FOR PROTECTION FROM CONTAMINATION OF THE PUBLIC WATER SUPPLY OF THE WATERVLIET RESERVOIR ALBANY COUNTY

Promulgated by the New York State Commissioner of Health Under Section 1100 of the
Public Health Law

- **Adding Definitions**

1. **Agriculturally associated animal waste** shall mean manure obtained from agricultural industries.
2. **Agriculturally associated animal waste** area shall mean land used for the deposition of agriculturally associated animal waste on the surface of the ground for fertilization purposes.
3. **Chloride salt** shall mean any bulk quantities of chloride compounds and other deicing compounds intended for application to roads, including mixtures of sand and chloride compounds in any proportion where the chloride compounds constitute over eight percent of the mixture. A bulk quantity of chloride compounds means a quantity of one thousand pounds or more...

- **Addressing Septic Systems:**

“No portion of the seepage unit shall be constructed, placed or rebuilt within 50 feet linear distance of a lake, reservoir, impoundment, stream or their tributary watercourses.”

Ag Setbacks

- a. No concentration of animal wastes from an agricultural operation, including but not limited to: Manure piles, feedlots, barnyards and yarding areas, shall be located within a **100 feet linear distance** from any lake, reservoir, impoundment or watercourse. Areas utilized for the storage or stockpiling of manure and agriculturally associated animal waste shall be constructed and maintained such that seepage, leachate and runoff from storage or stockpiling of animal waste cannot adversely impact the quality of the groundwater or surface water.
- b.b. Barnyards, feedlots, yarding areas and manure piles shall be separated from streams and water bodies by ditches or surface grading to prevent their runoff from entering streams and water bodies.
- c.c. Drainage from barnyards, feedlots, yarding areas and manure piles shall not be discharged directly to a lake, reservoir, impoundment or watercourse. Such drainage shall be dispersed over the surface of the ground at a minimum distance of **250 feet linear distance** from any lake, reservoir, impoundment or watercourse.
- d.e. Manure shall not be spread on frozen ground if there is any likelihood that surface runoff will be carried into adjacent lakes, reservoirs, impoundments or watercourses. No manure shall be spread on land within 250 feet of a lake, impoundment or watercourse from November 1 through March 31.
- e.f. No structures of any kind for the purpose of sheltering or corralling animals shall be constructed within a **100-foot linear distance** of any reservoir or watercourse.

- No junkyard shall be located with a **500-foot linear distance** of any lake, impoundment, reservoir or watercourse.
- Storage of chloride salts is prohibited except in structures designed to minimize contact with precipitation, constructed on low permeability pads designed to control seepage and runoff, and at least **500 foot linear distance** from any reservoir of watercourse.
- Farm tillage practices shall be in conformance to the degree practicable with “Controlling Agricultural Nonpoint Source Water Pollution in New York State - A Guide to the Selection of Best Management Practices to Improve and Protect Water Quality”, dated 1991 and included as Appendix C of these Rules.
- All lands or tributary streams draining to public water supply reservoirs, lakes, or impoundments, shall be so identified on land use maps and in zoning regulations.
- Compliance: Require compliance with general water pollution control program and related environmental protection programs. The General Manager of the City of Watervliet or any persons charges with the maintenance or supervision of the public water supply system by its officers or their duly appointed representative, shall make regular and thorough inspections of the identified protection zones to ascertain compliance with the rules and regulations set forth in this section.

Next Steps

- **Additional outreach with Guilderland and Rotterdam**
- **Additional Outreach to NRCS**
- **Convene Stakeholder Group**
- **Complete Code Audits**
- **Finalize Maps and Potential Contaminants lists**
- **Draft Recommendations**

More Information

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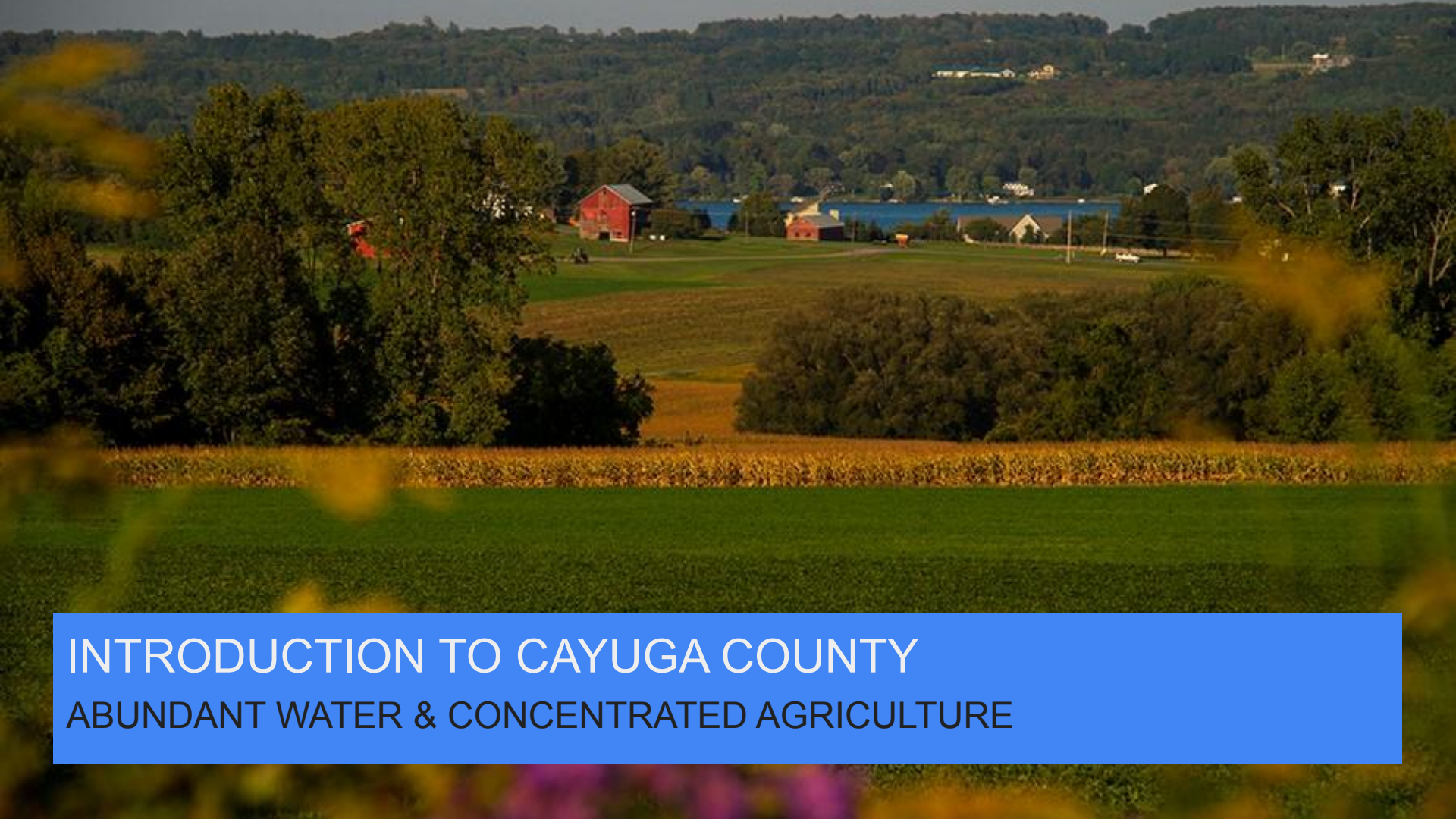
OWASCO LAKE WATERSHED RULES & REGULATIONS UPDATE PROJECT BACKGROUND & PROCESS

CAPITAL DISTRICT REGIONAL PLANNING COMMISSION
PRESENTATION JUNE 9, 2021

**DRINKING WATER SOURCE PROTECTION AND THE
ROLE OF WATERSHED RULES & REGULATION**

STEVE LYNCH, AICP, DIRECTOR
CAYUGA COUNTY DEPARTMENT OF PLANNING &
ECONOMIC DEVELOPMENT

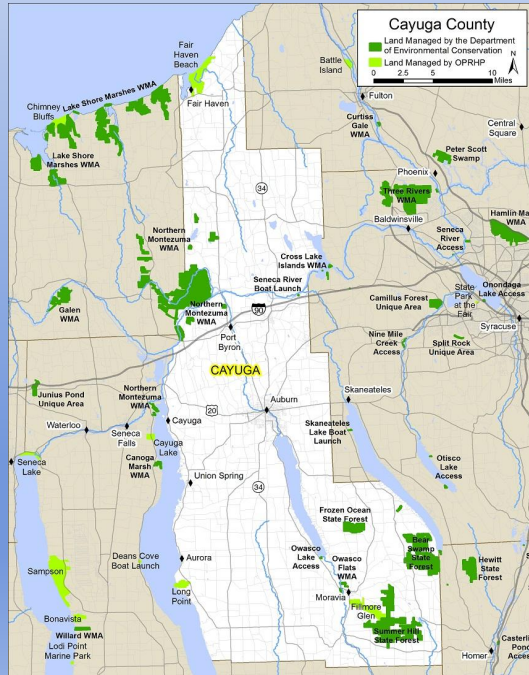




INTRODUCTION TO CAYUGA COUNTY

ABUNDANT WATER & CONCENTRATED AGRICULTURE

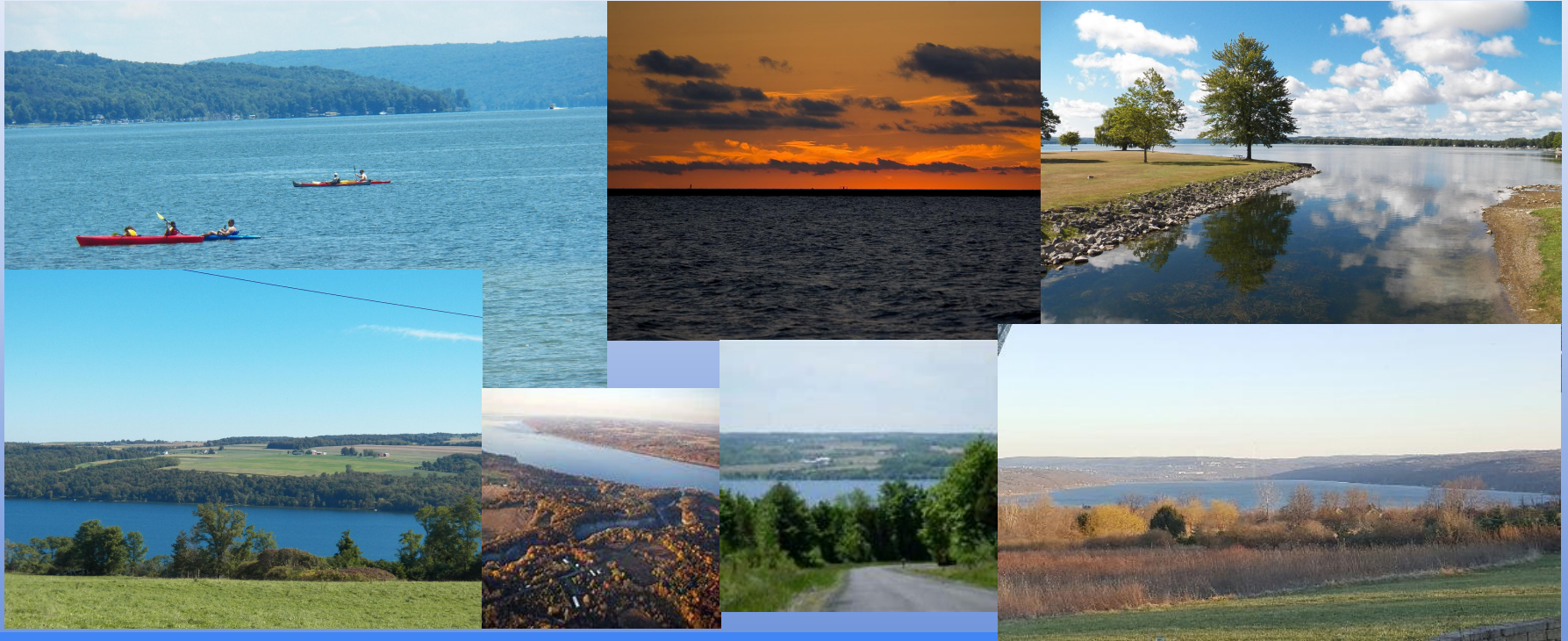
REGIONAL LOCATION AT A GLANCE





LAND USE AND CHARACTER ARE RURAL

AGRICULTURE IS A DOMINANT LAND USE

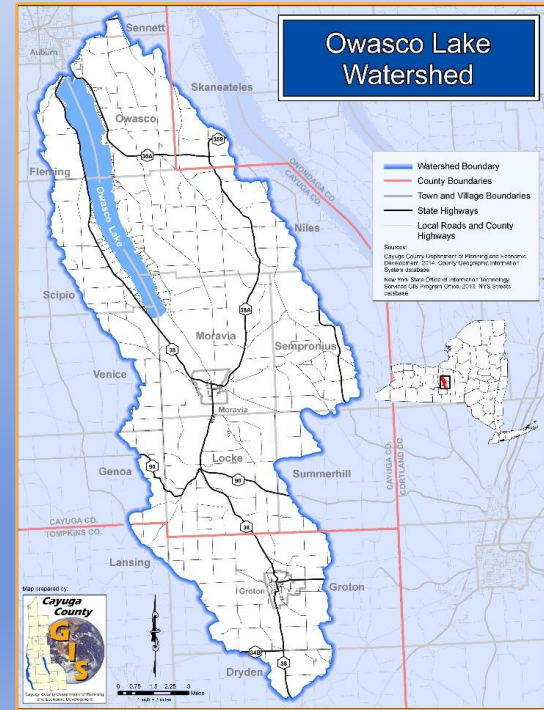


WATER IS ALSO A DOMINANT FEATURE

THERE IS A CRITICAL INTERSECTION OF AGRICULTURAL RESOURCES & FRESH WATER RESOURCES

OWASCO LAKE WATERSHED

- Watershed is over 205 Square Miles
- Extends to 3 Counties: Cayuga, Tompkins & Onondaga
- Primary Land Use is Agriculture: Dairy & Crop
- Primary Nutrient Inputs are Non-Point Source
- Primary Watercourse Input is Owasco Inlet
- Drinking Water Source for ~45 Thousand County Residents - more than half of the County.



SOURCE WATER PROTECTION DROVE THE PROJECT

UNPRECEDENTED WATER QUALITY ISSUES IN OWASCO LAKE AND ITS
WATERSHED



*Harmful Blue-Green Algal Blooms and
Microcystin Toxins Impacting our Primary Public Water
Source*

GENERAL STRENGTHS OF WATERSHED RULES & REGULATIONS

- Authority and ability for Watershed Inspectors to enter any property within a Watershed to make inspections;
- Provides protections not identified or regulated through other state and federal regulations – a greater degree of local control over impacts to water quality; and
- Provides protections against the deposit of human waste anywhere within the watershed – protections that would not be in place without local WSRR

WEAKNESSES OF 1984 WATERSHED RULES & REGULATIONS

- Maps identifying protected watercourses within the watershed were developed in the 1960's and needed to be reviewed and updated;
- Language in the 1984 WSRR's contained contradictory clauses that confused rather than clarified provisions and hindered enforcement efforts– this content needed to be reviewed and updated;
- Current regulations did not include protections against erosion and sediment runoff associated with construction sites under one-acre; and
- Current regulations did not require sufficient buffers alongside watershed tributaries and roadside ditches carrying sediment and pollutants into Owasco Lake.

FOCUS AREAS FOR UPDATED WATERSHED RULES AND REGULATIONS

- AGRICULTURE: FERTILIZER, PESTICIDES, MANURE MANAGEMENT & SOIL EROSION
- SEWAGE DISPOSAL AND SEPTIC SYSTEMS
- SOLID WASTE & HAZARDOUS MATERIALS
- FARM PLANNING AND NUTRIENT MANAGEMENT; AND
- VARIANCE PROCEDURES TO ADDRESS SITE SPECIFIC CONDITIONS

PROJECT AT A GLANCE

- **PART 1: Review and Revise the 1984 Watershed Rules & Regulations**
 - Public Education, Participation and Feedback
 - Draft Revised Regulations for Local Consideration by City of Auburn and Town of Owasco
- **PART 2: Submit Draft Regulations to NYS Health Dept. for Review**
 - State Department of Health Bureau of Public Water Supply Protection
 - *Review and Changes as needed – coordinated with local water suppliers: Auburn & Owasco*
 - *Circulation and Publication*
 - *Inter-Agency Review at State: Bureau of Management Services; Legal; Ag & Markets; NYSDEC*
 - *Publication in State Register*
 - *Approval of State Health Commissioner*
 - *Adoption by Local Suppliers of Water (Auburn & Owasco)*
 - *Local Publication & Filing*

PROCESS AT A GLANCE

1. CONFIRM THE MANDATE TO UPDATE THE WSRR
2. STRUCTURE A PROJECT RESEARCH AND WORKING GROUP
3. ESTABLISH A PUBLIC & STAKEHOLDER PARTICIPATION FRAMEWORK
4. PROJECT KICK-OFF: INTRODUCE PROJECT TO THE PUBLIC & STAKEHOLDERS
5. DRAFT REGULATIONS & PUBLIC FEEDBACK
6. REVISE AND FINALIZE WSRR - SECURE ADDITIONAL PUBLIC INPUT & FEEDBACK
7. PRESENT FINAL DRAFT TO PUBLIC WATER PURVEYORS & SECURE LOCAL ADOPTION
8. SUBMIT FINAL REGULATIONS TO NYSDOH BUREAU OF PUBLIC WATER PROTECTION
9. SECURE STATE APPROVAL & PROCEED THROUGH LOCAL ADOPTION
10. PUBLIC & STAKEHOLDER EDUCATION AND IMPLEMENTATION

CONFIRM DIRECTION & WORKING GROUP

- **1. CONFIRM THE MANDATE TO UPDATE THE WSRR**
 - Municipal Resolutions from Water Purveyors – Spring 2017
 - County Legislative Resolution: Support and Commit County Staff & Agency to Project
- **2. STRUCTURE A PROJECT RESEARCH AND WORKING GROUP**
 - County Planning Department: Planning | Environmental Engineer | GIS Specialists
 - County Health Department: Public Health Engineer | Septic Inspection Program Leaders
 - County Soil & Water Conservation District Staff: Ag- and Nutrient Planners | Storm Water Spec.
 - City of Auburn Director of Municipal Utilities – Engineer & Water Treatment Plant
 - Cornell Cooperative Extension: Ag-Educators
 - Owasco Lake Watershed Management Council: WS Inspectors & WS Resource Specialists
 - NYS DEC: Finger Lake Water HUB – Water Resource Researchers & Ag-Regulatory Specialists

PROJECT STEERING COMMITTEE

- **ENGAGE AND INVOLVE STAKEHOLDERS – PROJECT STEERING COMMITTEE – 2017**
- **NINE-MEMBERS REPRESENTING STAKEHOLDER INTERESTS:**
 - City of Auburn, Member of City Council
 - Town of Owasco, Town Supervisor
 - (2) County Legislature Representatives
 - Owasco Lake Watershed Management Council Representative
 - Owasco Watershed Lake Association Representative
 - Large Farm – Dairy Farmer Representative
 - Large Farm – Crop Farmer Representative
 - Cayuga County Board of Health Representative
- **OUTSIDE, NEUTRAL PROJECT FACILITATOR:**
 - Consensus Building Institute “CBI” – Cambridge MA (NYS HABs SUMMIT FACILITATOR)
 - Listen, Engage and Cultivate Consensus with Steering Committee on Draft Regulations
 - Facilitate Public Stakeholder Engagement and Public Roll-Out of Draft Regulations

PUBLIC KICK-OFF PROCESS: MAY-NOV 2017

- **CREATE PROJECT WEBSITE | LOCAL NEWS MEDIA: EDITORIAL BOARDS & RADIO**
- **PUBLIC KICK-OFF & PROJECT INFORMATION MEETINGS**
 - TWO PUBLIC MEETINGS IN JUNE 2017 – PROJECT GOALS, PROCESS AND INITIAL FEEDBACK
 - 150-200 PARTICIPANTS AT MEETINGS | SOLICIT STAKEHOLDER GROUP PARTICIPATION
 - FLYERS WITH PROJECT CONTACT INFO & WEBSITE
- **STAKEHOLDER MEETINGS – SEPTEMBER & OCTOBER 2017**
 - AGRICULTURE & FARMING STAKEHOLDERS – 15-Members; Small and Large Farms; Farmer Audience
 - LAKE ASSOCIATION AND LAKESHORE PROPERTY OWNERS – 15-Members
- **CONSULTATION WITH STATE AGENCIES**
 - Commissioner of NYS Ag & Markets and staff. Designates SWCD Staff as working liaison
 - Outreach to NYS DEC: Finger Lake Water HUB – Adds Water Resource & Ag-Regulatory Specialist to Project Working Group

DEVELOP & PRESENT DRAFT REGULATIONS 2018 - 2019

- **PROJECT WORKING GROUP COORDINATION WITH STEERING COMMITTEE**
 - WORKING GROUP RESEARCHES REGULATIONS, STAKEHOLDER INPUT AND PREPARES DRAFT REGS
 - REVIEW, CONSIDER DEBATE, REVISE, REPEAT...
- **AGREE ON FIRST DRAFT REGULATIONS FOR PUBLIC PRESENTATION & FEEDBACK**
 - Schedule Public & Stakeholder Meetings and Circulate Draft Regulations
 - Meet with Stakeholder Groups in advance of Public Meetings | Presentations
 - Update City of Auburn and Town of Owasco at Joint Public Meeting
 - **HELD TWO PUBLIC PRESENTATION MEETINGS IN 2019**
 - **CONSENSUS BUILDING INSTITUTE FACILITATOR W/ PROJECT TEAM**
- **MULTIPLE OPTIONS FOR PUBLIC AND STAKEHOLDER FEEDBACK**
 - **90-DAY PUBLIC COMMENT PERIOD**
 - **37 PAGES OF PUBLIC COMMENTS; STAFF REVIEW AND PREPARATION OF COMMENT/RESPONSE SUMMARY DOCUMENT**

DEVELOP FINAL REGULATIONS & STEERING COMMITTEE APPROVAL – 2019-2020

- DOCUMENT AND ORGANIZE HUNDREDS OF PUBLIC COMMENTS ON DRAFT REGULATIONS
- PREPARE WORKING GROUP RESPONSES AND PREPARE SUMMARY DOCUMENT
- REVISE DRAFT REGULATIONS IN COORDINATION WITH WORKING GROUP, STEERING COMMITTEE AND ELECTED OFFICIALS FROM CITY OF AUBURN AND TOWN OF OWASCO
- TWO FINAL MEETINGS WITH STEERING COMMITTEE AND WORKING GROUP
- MARCH 2020: STEERING COMMITTEE APPROVAL OF FINAL DRAFT REGULATIONS
- TRANSMITTAL TO CITY OF AUBURN & TOWN OF OWASCO & PUBLIC RELEASE

OVERVIEW OF FINAL REGULATIONS

Proactive & Preventative vs. Reactive

- Regulations focus on preventing adverse water quality impacts, not reacting to them with violations after the damage is done.
- Some regulations mirror and support federal or state regulations. Including these in our local WSRR allows better local oversight and enforcement.
- Includes Notification Triggers for certain watershed activities: Notification but not Approval...

Incorporates a Variance Mechanism

- New Regulations are More Restrictive but Provide Regulatory Flexibility to Adapt to Site Conditions
- WSRR Variance Process provides ability to adjust regulatory requirements to meet site-specific conditions in the Watershed while maintaining strict protections to water quality.
- Variances to the WSRR may only be granted if the regulation(s) for which the variance is being sought are not necessary to protect the water quality of Owasco Lake or its watercourses.

REGULATORY CATEGORIES

- **GENERAL PROVISIONS SECTION**

- Incorporates the Watershed Inspection Program Notification Systems and the “Golden Rule #1”
- *“No pollutant of any kind shall be discharged, deposited, or allowed to flow into Owasco Lake, a watercourse, or stormwater conveyance such as a roadside ditch.”*

- **WASTEWATER & SEPTIC SYSTEMS** – including New Lake Setbacks & Maximum Nutrient Loading Regs.

- **PESTICIDE USE**

- **STORAGE OF PETROLEUM, CHLORIDE SALTS AND COAL**

- **SEDIMENT GENERATION AND CONTROL** – including Riparian and Roadside Ditch Buffering Provisions

- **NUTRIENT MANAGEMENT** – including Requirement for Creation of Farm Plans

EACH SECTION ADDRESSES A WIDE RANGE OF LAND USES WITHIN THE WATERSHED – FROM RESIDENTIAL TO AG TO INDUSTRIAL

TRANSMIT & PRESENT FINAL REGULATIONS TO CITY OF AUBURN & TOWN OF OWASCO

- **TRANSMIT FINAL REGULATIONS TO AUBURN & OWASCO OFFICIALS**
 - **BACKGROUND; CURRENT & PROPOSED REGULATIONS; PUBLIC COMMENT/RESPONSE SUMMARY DOCUMENT**
- **JOINT PUBLIC MEETING WITH CITY & TOWN OFFICIALS – OCTOBER 2020**
 - **TELEVISED & ZOOM PUBLIC MEETING**
 - **OPEN PUBLIC INPUT SESSION – PUBLIC VOICES FOR & AGAINST**
 - **NYS Farm Bureau Opposition to Required Buffers, Farm Plans, additional regulations for Farms**
 - **Steering Committee Ag-Representative Opposition to Riparian and Roadside Ditch Buffers**
 - **Strong Support from Lake Associations, Environmental Groups and Lakeshore Property Owners**

AUBURN OWASCO APPROVALS TRANSMITTAL TO NEW YORK STATE HEALTH DEPT.

- **AUBURN & OWASCO OFFICIALS APPROVAL RESOLUTIONS**
 - **MAJORITY APPROVAL FROM BOTH MUNICIPALITIES (4:1 VOTES)**
 - **RESOLUTIONS CALL FOR TRANSMITTAL TO STATE & APPROVAL OF PROPOSED WSRR UPDATES**
- **TRANSMIT FINAL REGULATIONS TO NYS-DOH BUREAU OF PUBLIC WATER PROTECTION**
 - **DECEMBER 2021 SUBMITTAL FOR REVIEW**
 - **REVIEW REQUIRES ENGAGEMENT OF AFFILIATED STATE AGENCIES, INCLUDING AGRICULTURE & MARKETS, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DEPARTMENT OF STATE**
- **INITIATION OF ADVOCACY & SUPPORT CAMPAIGN WITH PARTNERS**
 - **OWASCO LAKE WATERSHED MANAGEMENT COUNCIL AND OWASCO WATERSHED LAKE ASSOC.**
 - **RIVERKEEPER**

LESSONS LEARNED

- SECURE MANDATE FOR REGULATIONS FROM WATER PURVEYORS
- CREATE A PUBLIC & STAKEHOLDER PARTICIPATION FRAMEWORK
- CREATE A CORE WORKING GROUP TO MANAGE THE PROCESS
- BRING STAKEHOLDER REPRESENTATIVES ONTO THE WORKING GROUP AND STEERING COMMITTEE
- MAINTAIN AN OPEN AND TRANSPARENT PROCESS - EXPAND COMMUNICATION VIA THE MEDIA
- SUSTAIN FOCUS ON THE GOAL OF PUBLIC WATER PROTECTION

LINKS TO PROJECT INFORMATION

- PROJECT WEBSITE:
- www.cayugacounty.us/776/Owasco-Watershed-Rules-and_Regulations
 - Overview of Project Background, Meetings, Public Participation
 - Final Draft of WSRR approved by Auburn and Owasco & Transmitted to NYS
 - Categorized Summary of Public Comments & Staff Working Group Responses
 - Copy of 1984 (current) WSRR
 - Letters and Resolutions Supporting the Updated WSRR
 - Steering Committee Meeting Minutes
 - Range of Helpful and Educational Documents