Drinking Water Source Protection Program

Presentation to CWIO, October 25, 2023

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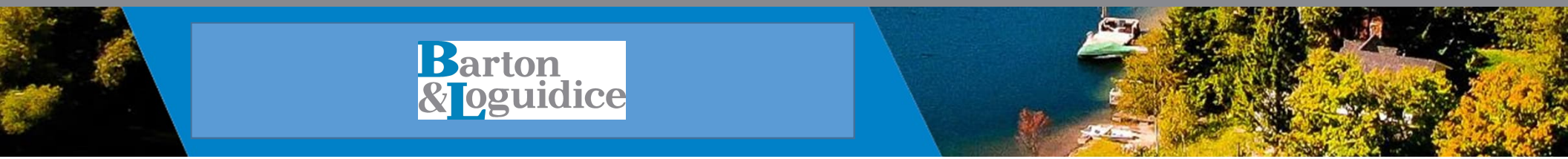
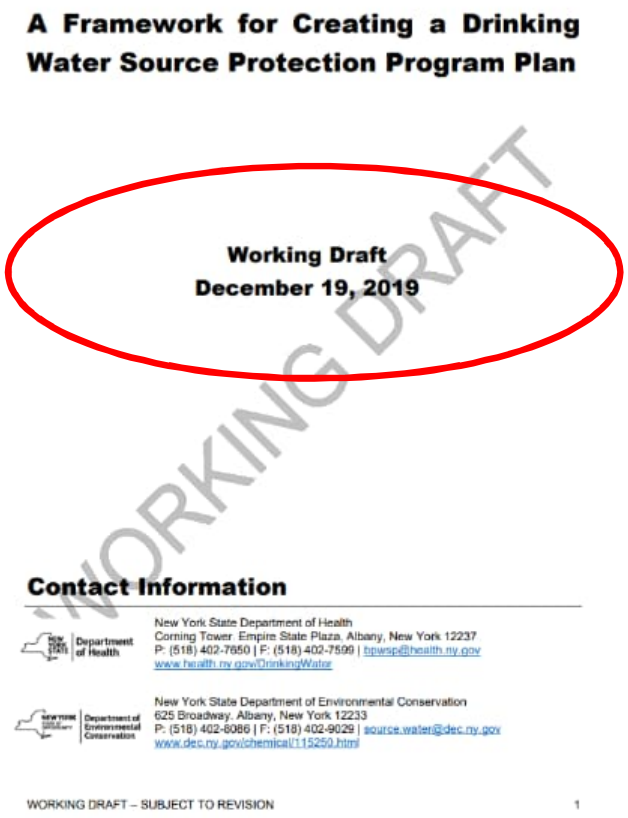


Drinking Water Source Protection Program (DWSP2)



A Framework for Creating a Drinking Water Source Protection Program Plan

Working Draft
December 19, 2019

WORKING DRAFT

Contact Information

New York State Department of Health
Corning Tower. Empire State Plaza, Albany, New York 12237
P: (518) 402-7650 | F: (518) 402-7599 | bpwsp@health.ny.gov
www.health.ny.gov/DrinkingWater

New York State Department of Environmental Conservation
625 Broadway. Albany, New York 12233
P: (518) 402-8086 | F: (518) 402-9029 | source.water@dec.ny.gov
www.dec.ny.gov/chemical/115250.html

WORKING DRAFT – SUBJECT TO REVISION 1

- Safe Drinking Water Act (1996)
  - required state to evaluate source water
  - SWAP reports by the NYSDOH
  - "Top down" statewide assessment of public water supplies did not lead to local protection
- DWSP2 Framework (2017)
  - "Bottom up" voluntary program with focus on local stakeholders
  - State funding for Technical Advisor to develop Plan
  - City of Ithaca awarded funds in 1st round

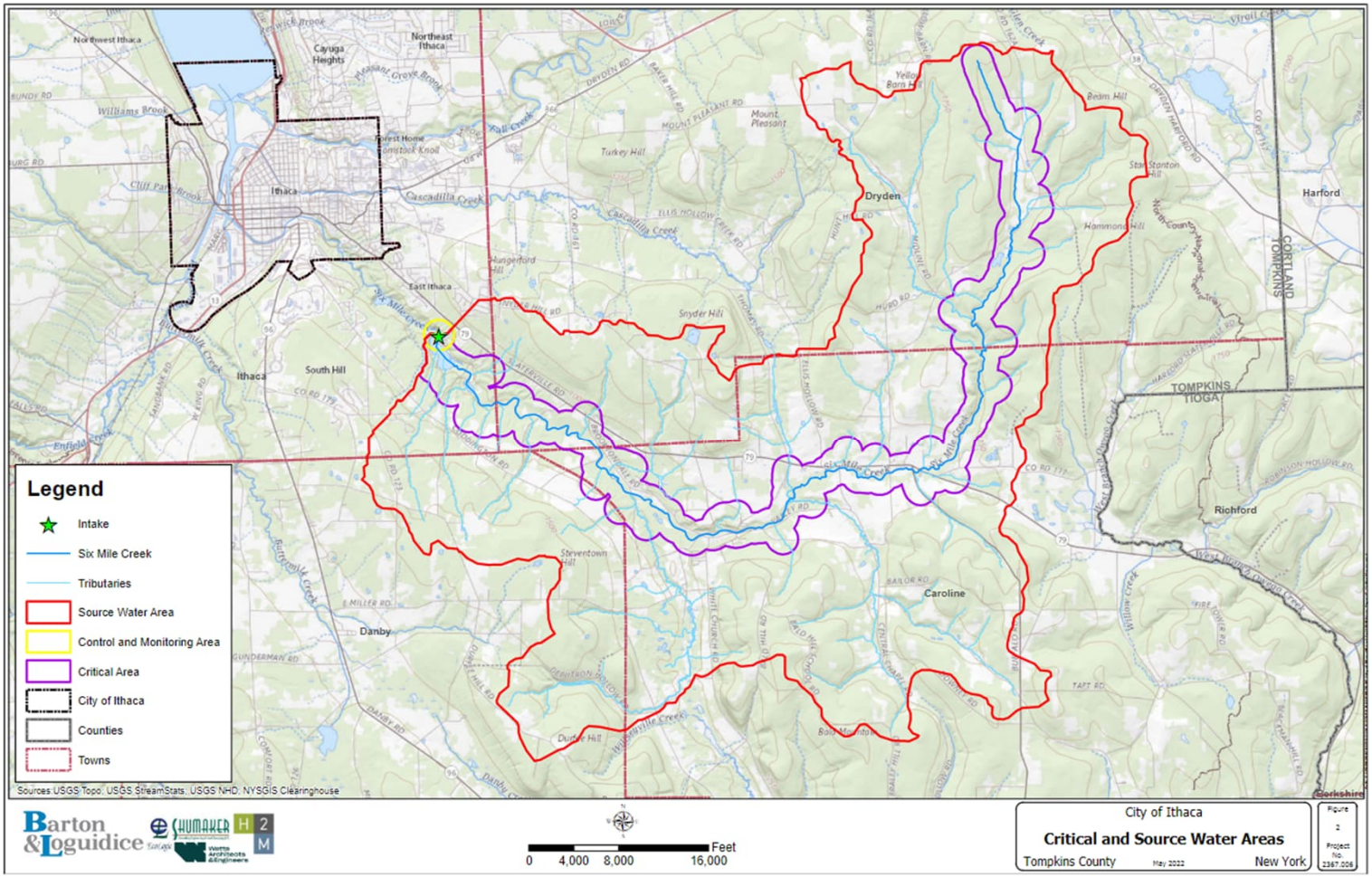
Who is DWSP2 for?

- Small, Medium, Large Public Water Supplies
- Rural and urban communities
- Public water supplies who **don’t have updated maps**
- Municipalities who have:
  - Groundwater, surface water, or both
  - **Limited staff capacity**
  - A source within or **outside of their administrative boundaries**
  - **Disadvantaged Communities**

DWSP2 Framework's Key Components

A. Prepare maps
B. Form stakeholder group
C. Formulate the vision and goals
D. Inventory potential contaminant sources
E. Complete maps
F. Identify protection strategies
G. Develop implementation timeline
H. Finalize plan

A. Source Water Area Map



B. Stakeholder Group

City of Ithaca DWSP2:

City of Ithaca (City Council, Planning, Water Treatment Plant, Department of Public Works)
Tompkins County Department of Health
Town of Caroline
Finger Lakes Land Trust
Tompkins County Soil and Water Conservation District
Town of Dryden
Agricultural Representatives
Tompkins County Planning

C. Vision and Goals

City of Ithaca DWSP2:

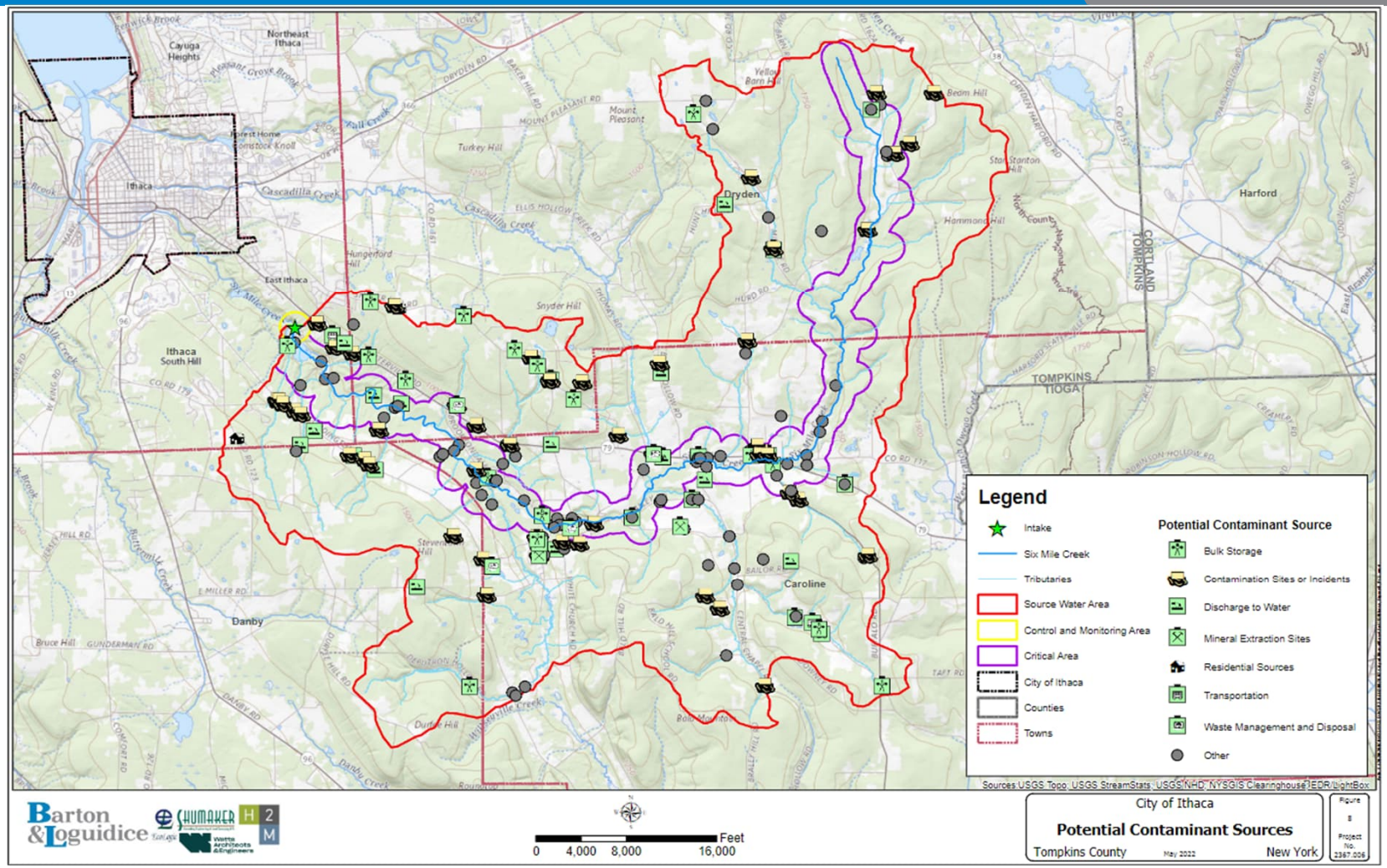
Goals

Goal #1	Protect public health
Goal #2	Address existing water quality issues, including taste
Goal #3	Evaluate current land use and prepare for future land use
Goal #4	Create long-lasting partnerships
Goal #5	Early detection and rapid response to invasive species
Goal #6	Avoid increased treatment costs or the need to find a new supply

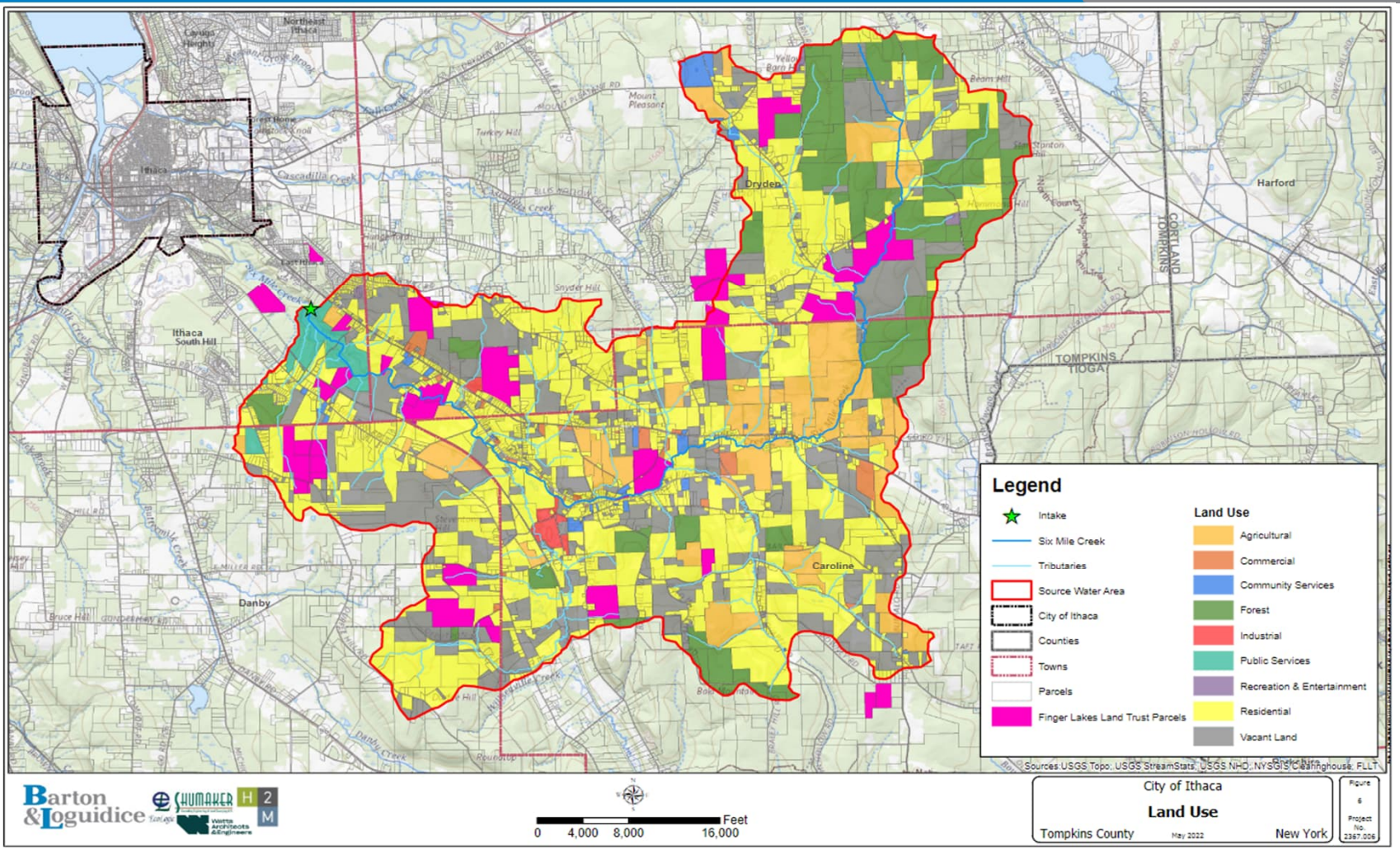
Vision

"In collaboration with neighboring municipalities and our broad range of community stakeholders, the City of Ithaca commits to implementing effective measures for protection and management of the Six Mile Creek watershed along with proactive measures for maintenance and surveillance of the drinking water reservoir. These collective actions are intended to maintain in City's public water supply as a reliable and cost-effective source of excellent quality potable water that meets the highest public health standards"

D. Inventory Contaminant Sources



E. Complete Mapping (e.g., Land Use)



F. Protection Strategies

1 Erosion and Sediment Control in the Critical Area

What is the Threat?

- Erosion and Sedimentation: Soil that washes into the drinking water containing contaminants affecting water quality and quantity.

What is the Goal?

- To reduce these impacts by stabilizing soils with vegetation and slowing down rainwater runoff.

2 New Development within the Source Water Area

What is the Threat?

- Impacts on the natural flow of rainwater runoff which leads to higher flows and an increase in pollutants the waler carries.

What is the Goal?

- Protect the drinking water source & areas surrounding through zoning & intermunicipal coordination.

3 Ditch Management and Transportation Related Runoff in the Critical Area

What is the Threat?

- Invasive species, pollutants, and erosion.
- Chemical, physical or biological contamination from spills.

What is the Goal?

- To reduce the likelihood of spills and deicing materials entering the waterbody.
- Hydrologic Resilience*

4 Nutrient Loading into the Creek/Reservoir within the Critical Area

What is the Threat?

- Overland flow brings excess nutrients into the waterbody which can cause harmful algal blooms.

What is the Goal?

- Reduce Overland flow through vegetative riparian buffers, reduce fertilizer application, and limit harmful algal bloom formation.

F. Protection Strategies (cont.)

5 Invasive Species

What is the Threat?

- Potential extinction of native plants and species.

What is the Goal?

- Mitigate Hemlock Wooly Adelgid, Japanese knotweed, water chestnuts and re-establish native vegetation.

6 Herbicides and Pesticides in the Critical Area

What is the Threat?

- Overland flow brings excess chemicals into the creek and reservoir which can contaminate soil, water, and non-target plants as well as be toxic to other organisms.

What is the Goal?

- Reduce the amount of herbicides and pesticides applied in the source water area to decrease the threat and help inhibit the formation of harmful algal blooms.

7 Management of Regulated Potential Contaminant Sources

What is the Threat?

- Chemical, biological or physical contaminants from spills, leaks or O&M activities entering the waterbody.

What is the Goal?

- Enhance communication with specific facilities and DEC staff to understand the risk and response efforts.

8 Vulnerability to Drought

What is the Threat?

- Increases the risk for erosion and affects water quality.

What is the Goal?

- Reduce the risk of erosion and sedimentation.
- Hydrologic Resilience*

9 Emerging Contaminants

What is the Threat?

- Contaminants entering the waterbody affecting water quality.

What is the Goal?

- Protect the drinking water source from new or increased sources of contaminants.

*** Hydrologic Resilience:** Absorb disturbance and maintain or quickly regain hydrologic function.

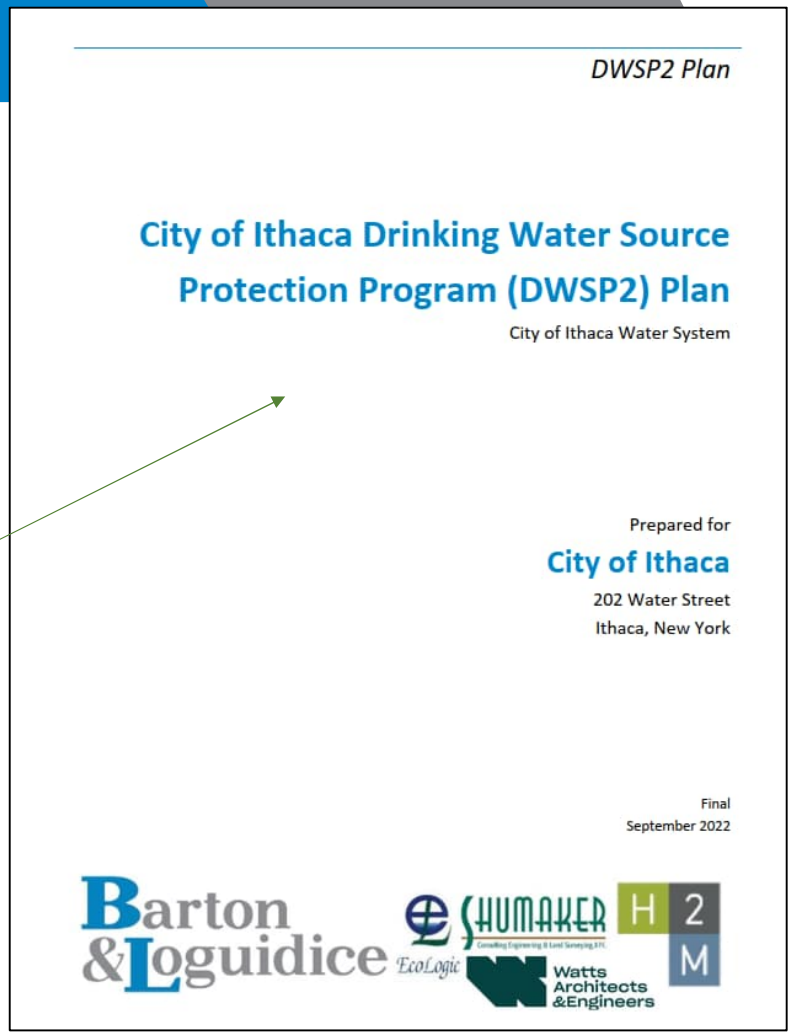
G. Develop Implementation Timeline

- Designate Plan Management Team (PMT) responsible for:
  - Implementation Timeline and Actions
  - Annual progress report to share with the community and DEC/DOH
  - Revise plan on a regular basis (5 years)

City of Ithaca DWSP2 Plan Management Team:	
City of Ithaca Common Council	Town of Caroline Representative
Chief Water Plant Operator	Town of Dryden Representative
Tompkins County Department of Health	Tompkins County Soil & Water Conservation District
Watershed Coordinator	Tompkins County Dept of Planning and Sustainability
Finger Lakes Land Trust	Water & Sewer Engineer

H. Adopt Final Plan

Reference projects in the plan for more competitive grant applications!

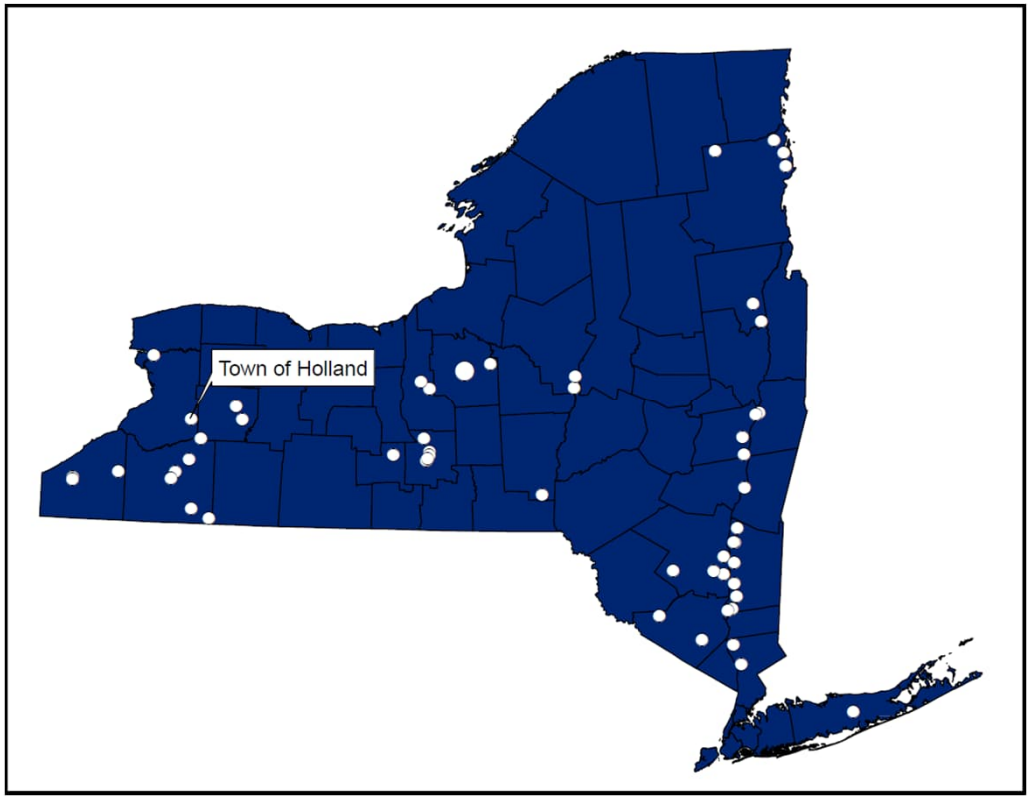


Implementation Phase

- State funding for Technical Advisor to progress implementation
- City of Ithaca Implementation:
  - Model solar law:
    - Draft clauses for stormwater protection
    - Meet with municipal representatives
    - Recommend options to fit within the context of existing local laws
  - Grant writing:
    - Stakeholder meetings to identify grants
    - Scope competitive project(s) to meet goals of the DWSP2
    - Grant writing, supplemental mapping and supporting documents

Implementation Example (Town of Holland)

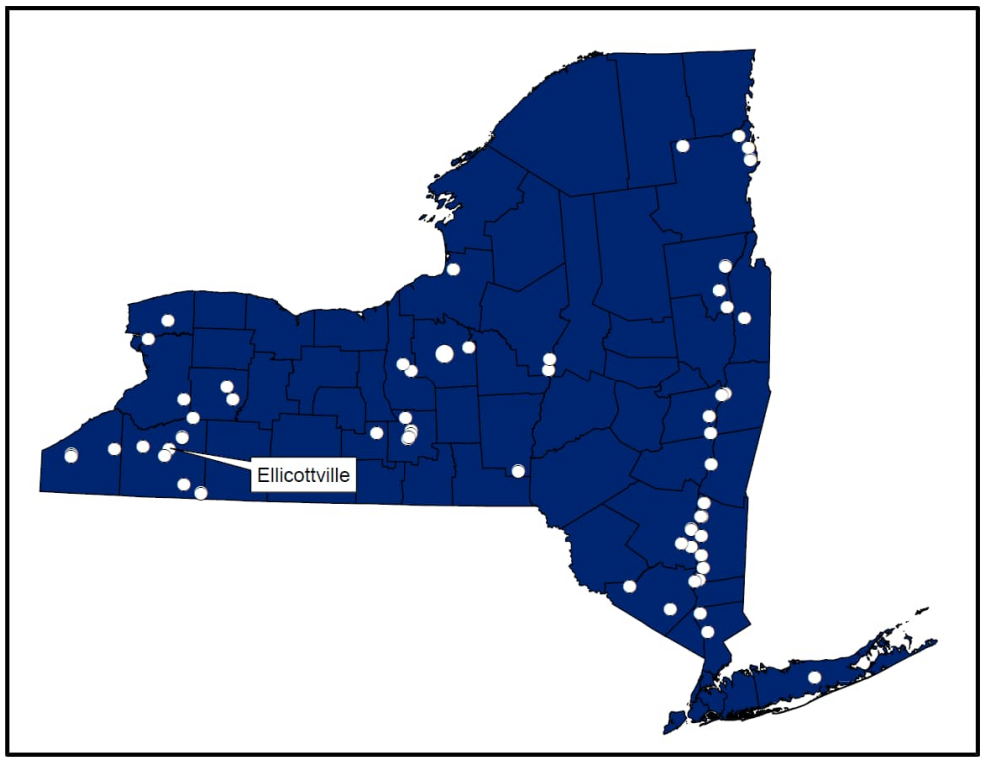
Non-regulatory Tool: Local Law Gap Analysis



Goal: Identify where key town legislation could be strengthened or created to protect the source water and surrounding area from potential contaminants.

Implementation Example (Town and Village of Ellicottville)

Outreach and Education: Webpage



Goal: An educational resource to raise awareness and serve as an engagement tool for the community.

Next Round of DWSP2

- To be eligible for DWSP2 applicants must have:
  - Active community water supply, as defined by NYS DOH.
  - Need for source water protection, not infrastructure improvements
  - Desire to protect community water supply
  - More than one municipality may apply together if they share source drinking water/area

- Deadline to apply: Tuesday, November 14 at 4p.m.
- Up to 30 new communities
- Anticipated start early 2024

DWSP2 Application Form

- Application Instructions: https://www.dec.ny.gov/docs/water_pdf/dwsp2.app.guide.pdf

- Access application form online (requires creation of NY.gov Account)

Questions?

Please reach out to Rebecca Minas at rminas@bartonandloguidice.com

Barton & Loguidice