



2020 Water and Sewer Evaluation Update

A Project of
Ithaca Area Economic Development

TECHNICAL ASSISTANCE BY:



TOMPKINS COUNTY
DEPARTMENT OF PLANNING
AND SUSTAINABILITY

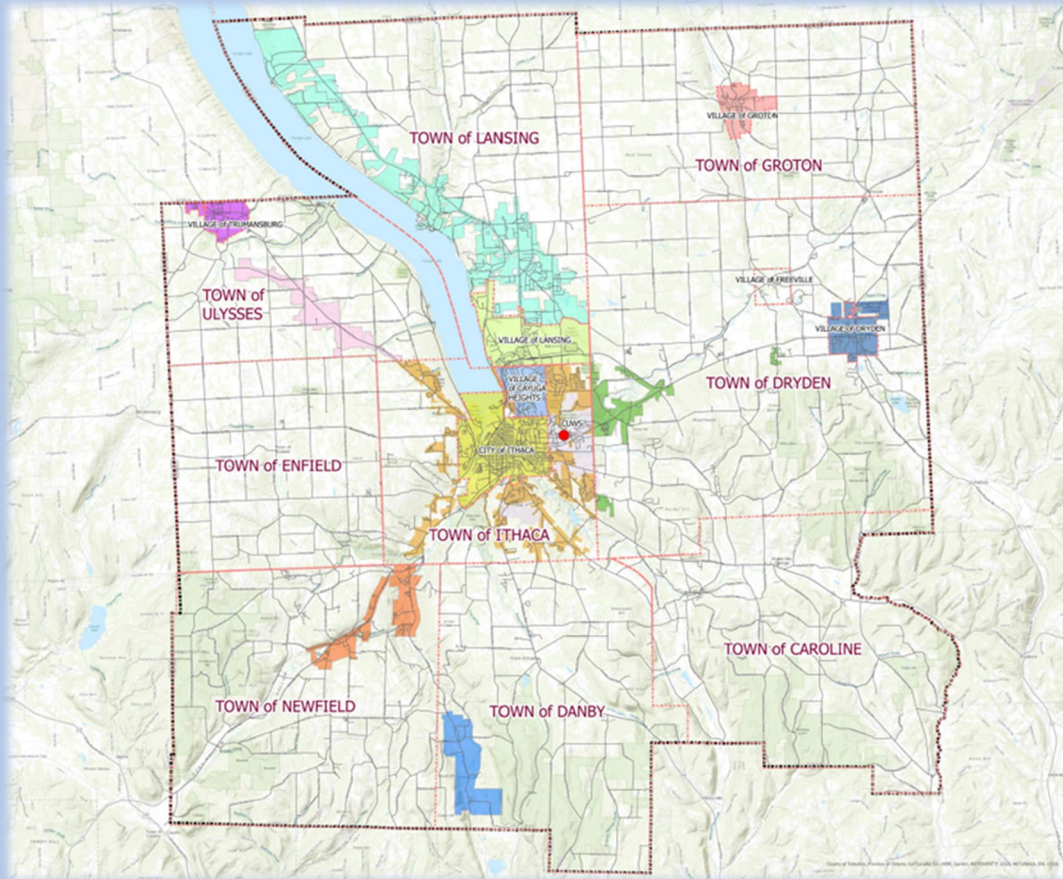
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PREPARED BY:

T.G. Miller, P.C.

Engineers & Surveyors

Study Overview



Update the 2010 Study

- Document progress in implementing improvements to prior challenges

Infrastructure capacity to support housing development

- Housing growth in the Development Focus Areas

Integration with the County's Resiliency and Recovery Plan

- Urban Center water purveyors

Suggest forward-looking priority objectives

- Build consensus for projects that enhance redundancy and resiliency

Study Approach

Updating water/sewer infrastructure

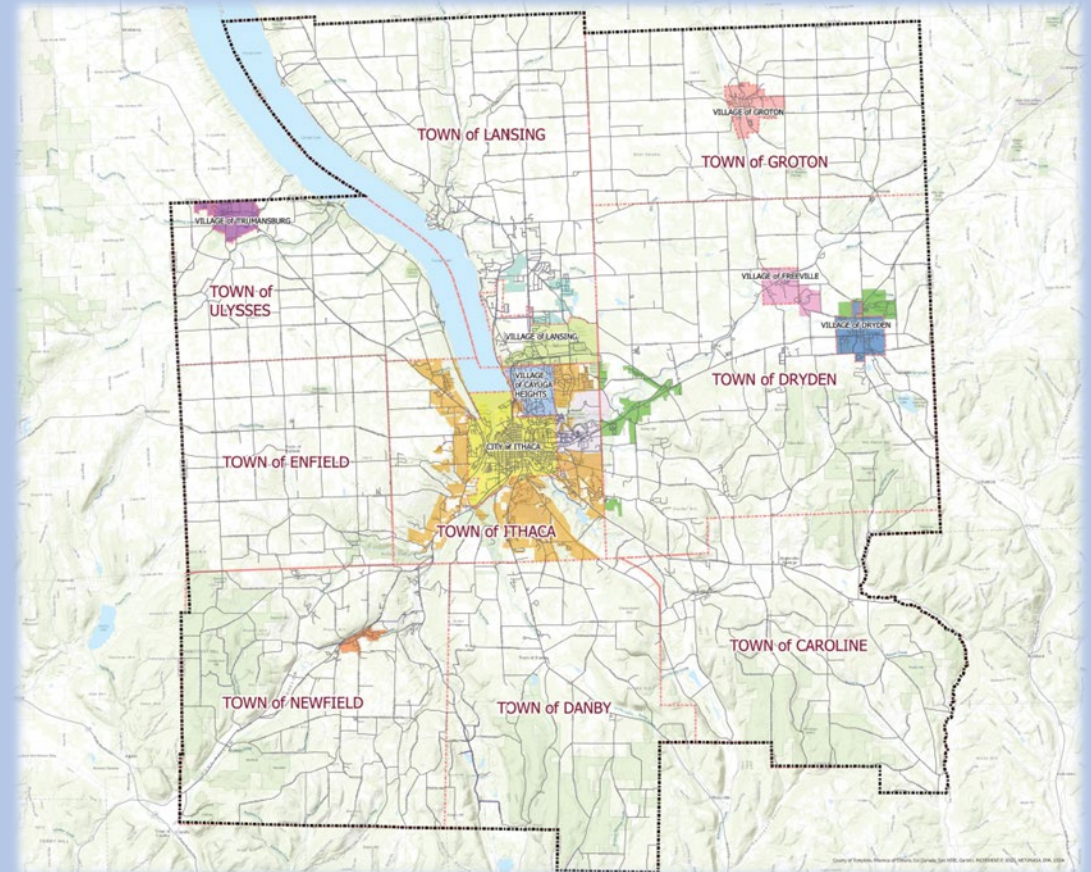
- Zoom interviews with municipal officials, staff and operators

Assessing historical housing growth relative to water/sewer access

- County 2020 Housing Snapshot data
- Estimating potential new housing units from system surplus capacities

Urban Core Water Purveyors

- Understanding the 2016 Drought
- Build redundancy + resiliency



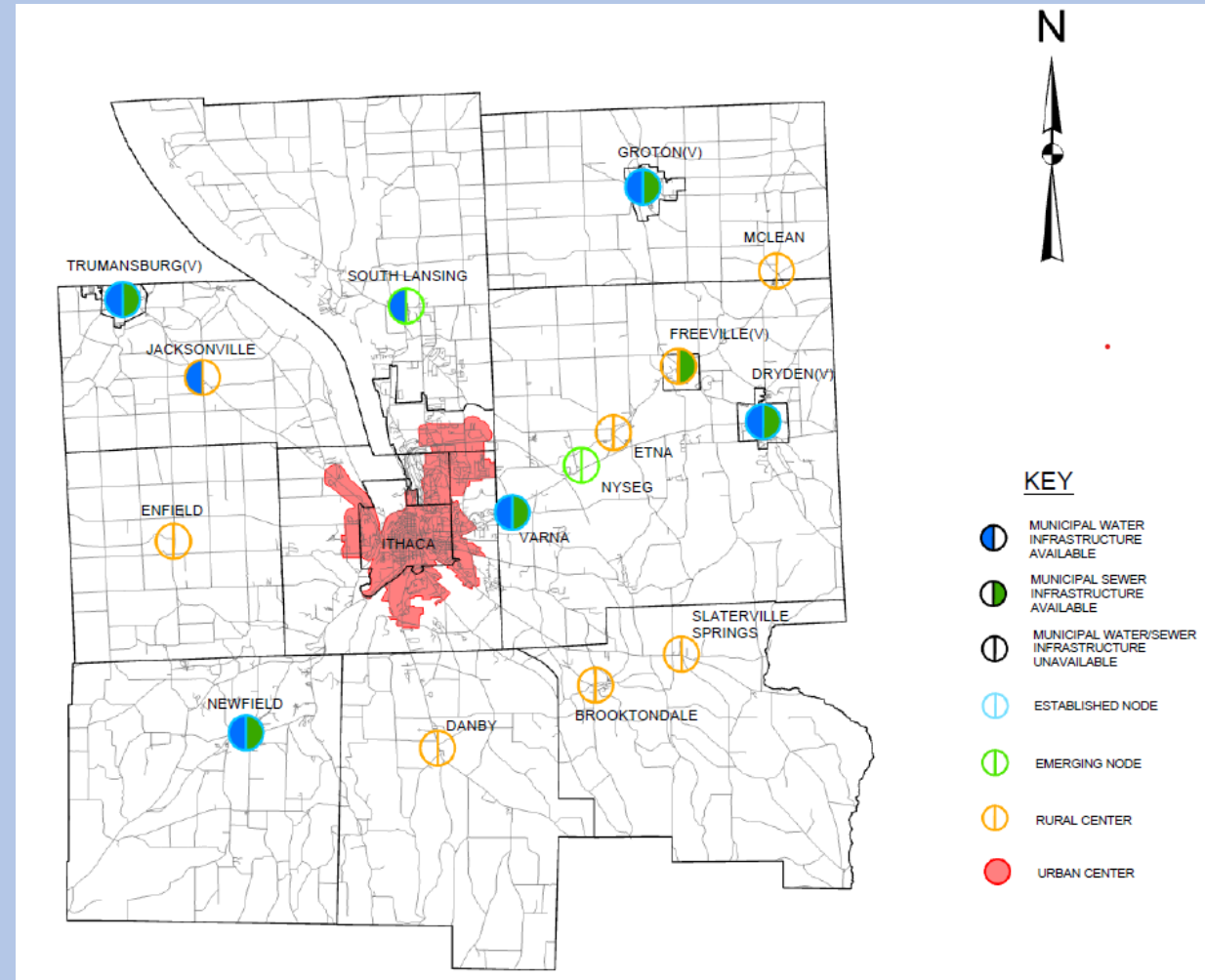
Development Focus Areas

2,465 units of housing built in the County between 2016-2020:

- 1,898 units (77%) built in a DFA with access to both water and sewer
 - 1,681 units built within the Urban Center
 - 121 units built within Established Nodes

Capacity in municipal water supply and wastewater treatment facilities:

- Water supply only - 13,400 housing units
- Wastewater treatment only - 17,950 housing units
- Combined – 11,750 housing units
 - The Urban Center will continue having the greatest potential for water and sewer access.



Integration with the Tompkins County Resiliency and Recovery Plan (RRP)

RRP initiated in 2019 and completed concurrently with the 2020 Update

- Interviews with facility operators conducted collaboratively with TCDPS
- An objective of the RRP and 2020 Update was to find common ground relative to water infrastructure that improves redundancy and drought resiliency between the County's three largest water purveyors (Bolton Point, City of Ithaca, and Cornell University)
 - RRP Technical Memorandum expands on interagency agreements and drought planning.
 - 2020 Update suggests infrastructure opportunities to enhance supply redundancy



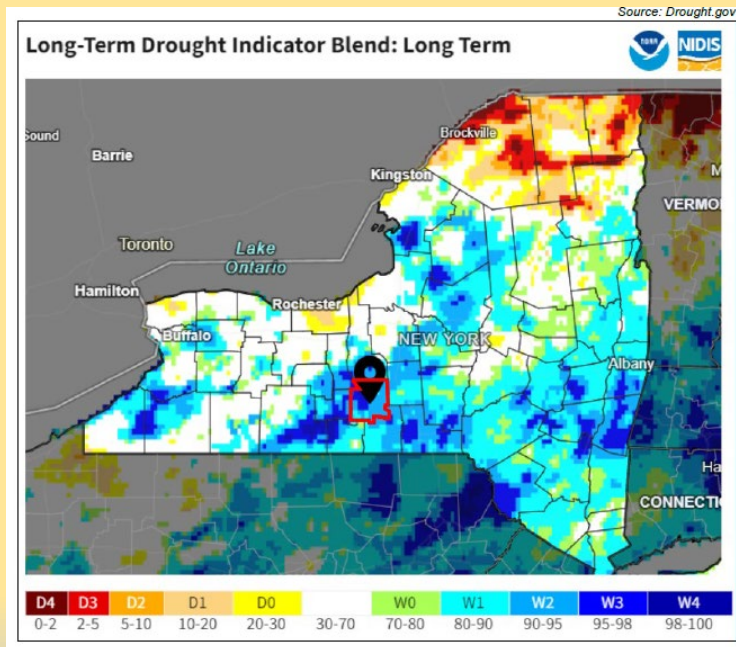
Tompkins County

Resiliency and Recovery Plan

Water Supply Drought Resilience Technical Memorandum



Intermunicipal and Interagency Planning



The 2016 Drought and the Urban Center Water Purveyors: Bolton Point-City of Ithaca-Cornell University

- Improving Interconnections
 - Provide Redundancy + Resiliency
 - Facilitate bi-directional flow
- Understanding impacts at the Bolton Point Treatment Plant
 - Production Hours and Filter Backwash Cycles
 - Plant Operators
 - HABs Potential
 - Transmission System Capacity
- Update interagency water sharing agreements to address longer-term emergency conditions

Pending Regulations and Climate Change Considerations

- EPA Lead and Copper Rule Revision
 - Lead service line inventory by October 2024.
 - Explore funding for replacement.
- NYSDEC Draft TMDL for Phosphorus in Cayuga Lake
 - Monitor DEC process to avoid WWTF impacts
- TCDPS developing an interactive map of critical infrastructure assets that could be at risk from flood events:
<https://tompkinscountyny.gov/planning/climate-adaptation>



Priority Facility Objectives – Water System Resiliency and Redundancy

- With respect to the County's Urban Center, the three largest water purveyors would be encouraged to continue planning of improvements that achieve the following objectives:
 - Add pumping facilities to back-feed Bolton Point's transmission system and East Hill Tank.
 - Understand the surplus capacity currently inherent in the transmission system and determine incremental increases in demand that trigger impacts on the pumping, piping, and storage facilities as well as treatment plant operations.
 - Identify engineering solutions for the management and disposal of filter back-wash water at Bolton Point during periods of continuous plant production.
 - Update interagency water sharing agreements to address longer-term emergency conditions.
- Several rural communities with groundwater supplies should consider development of backup wells.

Priority Facility Objectives – Wastewater Treatment Capacity and Redundancy

- There is a Countywide need to address inflow and infiltration (I&I) to recapture sewage treatment capacity
 - Nearly all municipalities with wastewater infrastructure have indicated I&I is prevalent in the collection systems and is negatively impacting facilities.
 - There is an opportunity to broaden the potential for housing growth in several of the Established Nodes if sewage treatment capacity is not a limiting factor.
- I&I investigations are either in process or being considered.
 - Encourage and support communities with wastewater facilities to utilize the NYSEFC Wastewater Infrastructure Engineering Planning Grant to help fund I&I investigations.

Questions?

Thank you for your time and interest!

Feel free to contact us with any comments:

Heather McDaniel, President

Ithaca Area Economic Development

heatherm@ithacaareaed.org

(607) 273-0005

David Herrick, P.E.

T.G. Miller, P.C.

dah@tgmillerpc.com

(607) 272-6477