

Water Supply Planning in Windham, New Hampshire

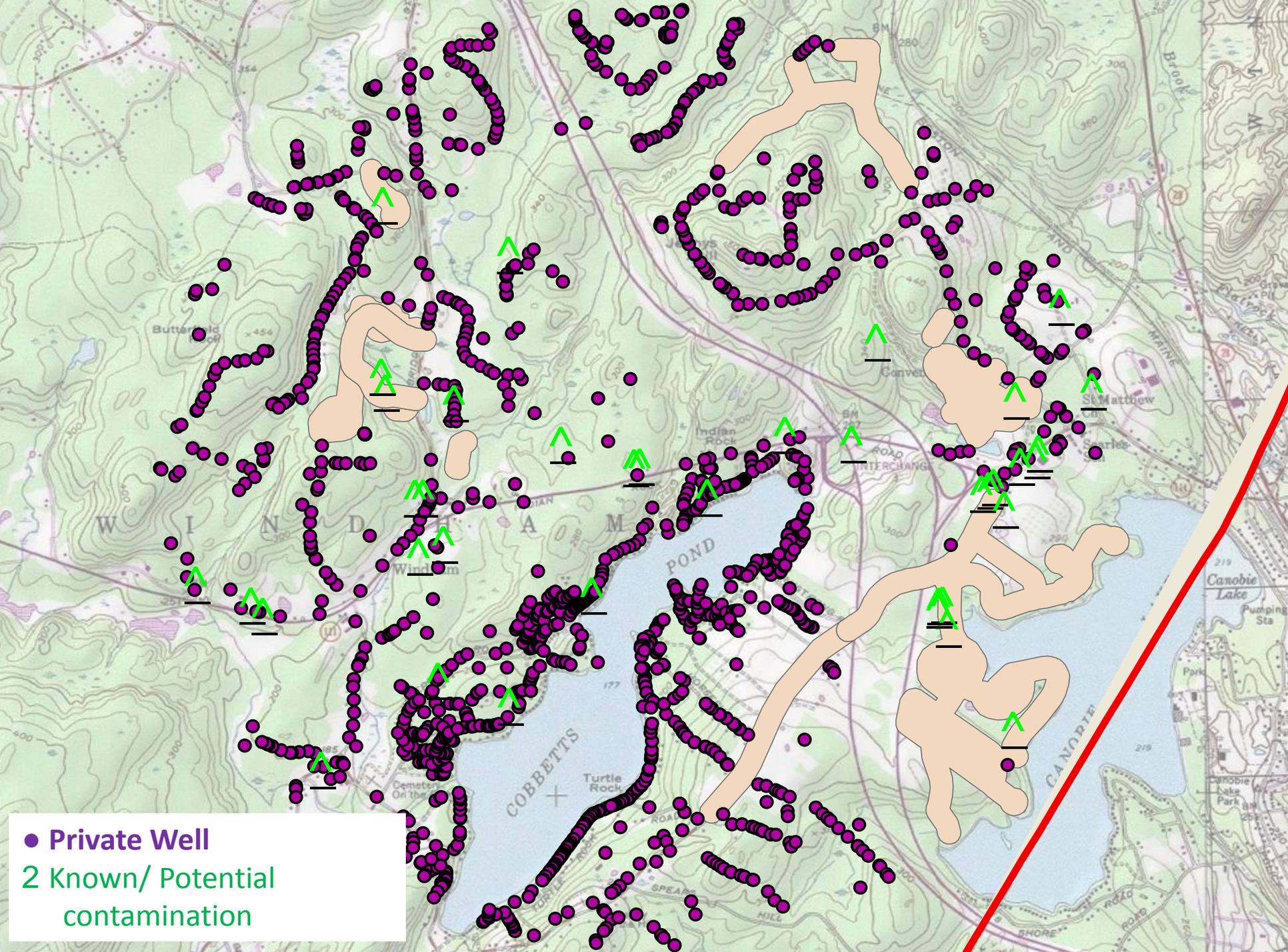
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Exit 3 Area

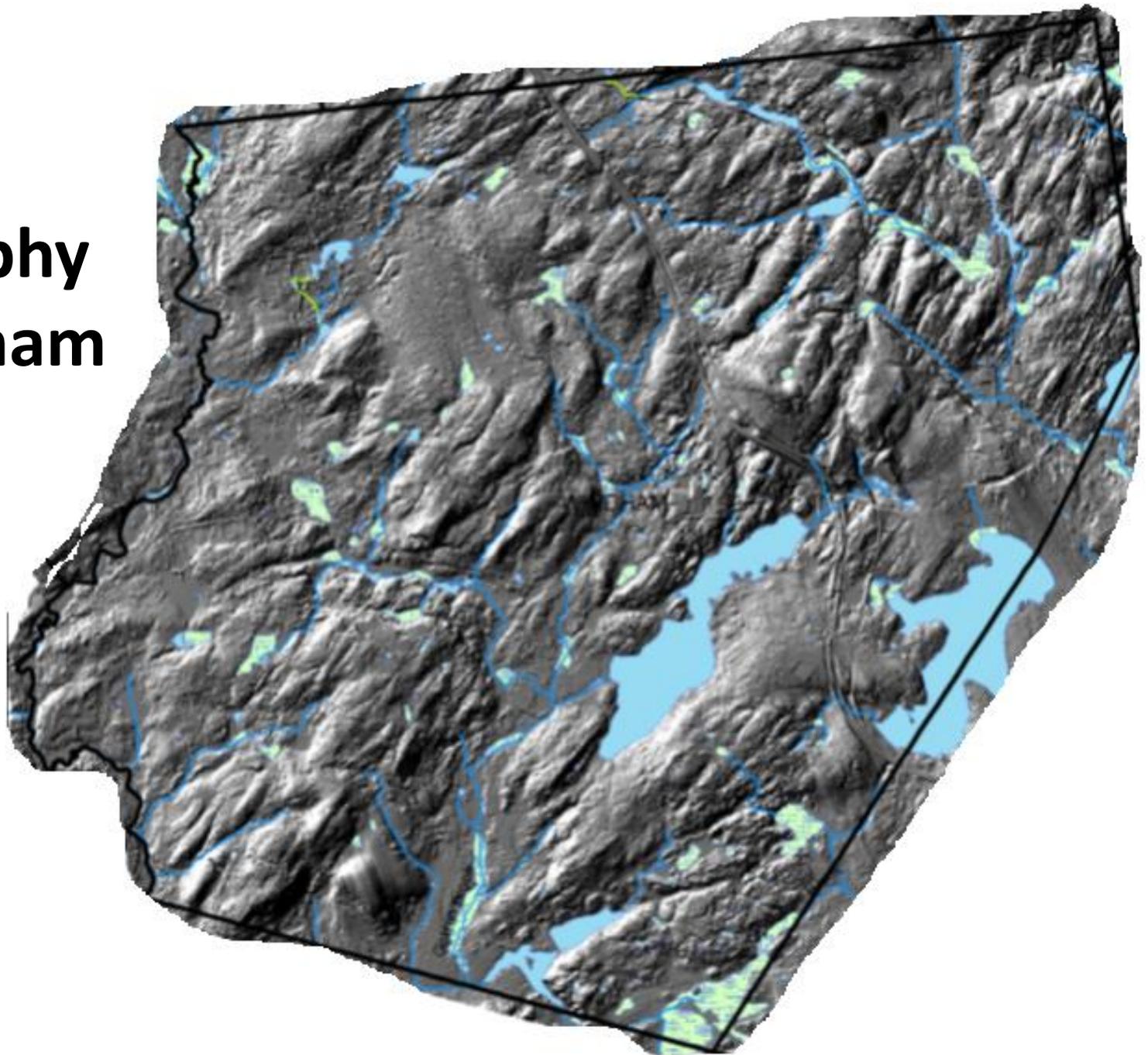
- **Approximately 1400 private wells, 6 community water systems
19 transient water systems & 9 non-transient water systems**
- **Numerous groundwater contamination sites**
 - **Rock Blasting**
 - **Road salt**
 - **Gasoline**
 - **Backwash from water softeners**
 - **Sporadic occurrence of other contaminants**
 - **Septic systems**
 - **Interstate 93/State Roads**
- **Utilizes septic systems**
- **Shallow bedrock – very susceptible to contamination**
 - **materials released to the surface rapidly impact
groundwater extracted from bedrock**
- **Concerns about level of Canobie Lake**
- **Water system serving 500 people has its main well located between I-93**
- **Natural contaminants**



● Private Well
2 Known/ Potential
contamination

	New Hampshire	Windham
Number of domestic wells constructed since 1984	119,106	2297
Average Depth	345 feet	477 feet
Median Depth	305 feet	405 feet
Average Depth to Bedrock	35 feet	18 feet
Average Depth to Water	27 feet	37 feet

Topography in Windham



Current Approach to Water Supply - Quantity

Land owners have a right to develop new on-site sources of water if there is no community water system nearby (It is a property right)

- Must comply with well location and septic system lot loading requirements
- Impacts to existing wells & water resources **are not rigorously** assessed/addressed/regulated unless very large quantities of water are used (>57,600 gallons/day)
- Water supply development continues in a piecemeal fashion
 - Long-term sustainability is not known
 - Existing viable sources of water may fail as water use increases around them or drought occurs

Current Approach to Water Supply - Quality

- State regulates quality for water systems serving more than 25 people (public water systems)
- Each private well owner and public water system addresses quality problems individually
 - Sampling costs
 - Hundreds of separate treatment systems
 - Costs
 - Proper use & maintenance
 - Backwashing salt to the aquifer
 - Many private well owners do not address water quality that exceeds health standards (costs and knowledge are issues)

Planning for Water Supply

- 1) Plan for quantity and quality issues in the context of addressing current conditions and future plans
- 2) Assess water supply options
- 3) Make recommendations on where future projects should obtain water supply from
- 4) Implement recommendations
 - Amend zoning, site plan review regulations, aquifer protection & subdivision regulations
 - Align water supply solutions to – be prepared for opportunities
 - Mitigate multiple problems: pollution, natural contamination, quantity concerns, environmental/water resource protection
 - Leverage support (general public, political, environmental stakeholders, business and industry)
 - Take advantage of the economies of scale/financial opportunities