"to provide for the protection, preservation, and enhancement of the drinking water and groundwater resources of the state"

Drinking Water and Groundwater Advisory Commission Meeting
January 22, 2024

NEW HAMPSHIRE DRINKING WATER
&GROUNDWATER TRUST FUND

Drinking Water and Groundwater Advisory Commission Meeting January 22, 2024

AGENDA ITEM	
OPENING REMARKS	
Welcome **Vote to accept meeting minutes** November 20, 2023 Advisory Commission meeting	
COMMISSION UPDATES	*Representative Bill Boyd, Chair*
PUBLIC COMMENT ON AGENDA ITEMS ONLY	*Public*
PROGRAM UPDATES	
Drinking Water Construction Project Assistance Program Evergreen Terrace, Lee; Special Project Application – **potential vote**	*Marco Philippon, Subcommittee chair*
Drinking Water and Groundwater Trust Fund balance and forecast- informational only	*Susan Carlson, NHDES Chief of Operations*
Overview of Water System Regionalization Studies in New Hampshire	*Mike Unger, NHDES DWGB Bureau*
CONCLUDE	

Public Comment on today's agenda items

NEW HAMPSHIRE DRINKING WATER &GROUNDWATER TRUST FUND

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SPECIAL PROJECT ASSISTANCE APPLICATION
EVERGREEN TERRACE GAP FUNDING

2020 Funding
TF Grant: $68,750
TF Loan: $206,250
2020 TF: $275,000
Original Applicant contribution: $166,472

2023 SPA Gap Funding
TF Grant: $67,500
TF Loan: $202,500
Applicant Contribution: $42,722

2023 TF Request: $270,000

- ✓ **Is there drinking water contamination?** *The project upgrades the current arsenic treatment system and removes recurrent bacterial issues by upgrading the well and the old wellhouse. Violations in the past.*
- ✓ **Is the project time critical?** *Yes, the project is already underway.*
- ✓ **Is there financial hardship?** *Do not have exact MHI, income survey in process, but it is a low-income community. Applicant has had to contribute funds and cannot afford the burden.*
- ✗ **Does the project support economic growth?** *No.*

SPECIAL PROJECT ASSISTANCE APPLICATION
EVERGREEN TERRACE GAP FUNDING

Project History and Need

- Arsenic and bacterial contamination
- Awarded DWGTF funds in 2020
- Budget has increased significantly due to unforeseen ledge
  - Project is currently under construction and additional funds are required to complete the project
  - Low-income community

Water System Stats

Median Income: $31,222 (income survey done December 2023 with 50% response rate)

Current User Rates: $1,083

Projected Rate: $1,683

Affordability Index: 3.4

Connections: 23

Population Served: 45

SPECIAL PROJECT ASSISTANCE APPLICATION
EVERGREEN TERRACE GAP FUNDING

Project Scope

- Installation of new watermain, service connections with curb stops, shut off valves, and hydrants.
- Remove original wellhouse
- Raised the interior well casing and built new well house.
- Electrical upgrades
- Booster pump replacement

Abandoned wellhouse to be removed

Ledge being hammered at project site

SPECIAL PROJECT ASSISTANCE APPLICATION

EVERGREEN TERRACE GAP FUNDING

Funding Package and Request

Funding Source	Amount
2021 DWGTF Grant	$68,750
2021 DWGTF Loan	$206,250
2021 Original Proposed Owner Contribution	$166,472
2021 Total Project Cost	**$441,472**
2023 DWGTF Grant Request	$67,500
2023 DWGTF Loan Request	$202,500
2023 Adjusted Owner Contribution	$42,722 (-123,750)
Total DWGTF Request	$270,000
2023 Total Project Cost	**$587,722**

2023 Budget Increase was due to significant ledge removal at $146,250

An additional **$123,750** is needed to offset the additional out-of-pocket expenses for the ledge encountered for the onsite wastewater system.

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CONCLUDE	

Balance of the Drinking Water and Groundwater Trust Fund January 1, 2024

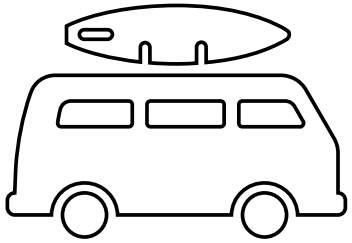
Chief of Operations at the Department of Environmental Services will present:

- The status of the DWGTF account, including:
  - Total obligations
  - Commitments
  - Balance of available funds
- A forecast analysis of the longevity of the Trust Fund based on investments and loan interest earnings will be provided

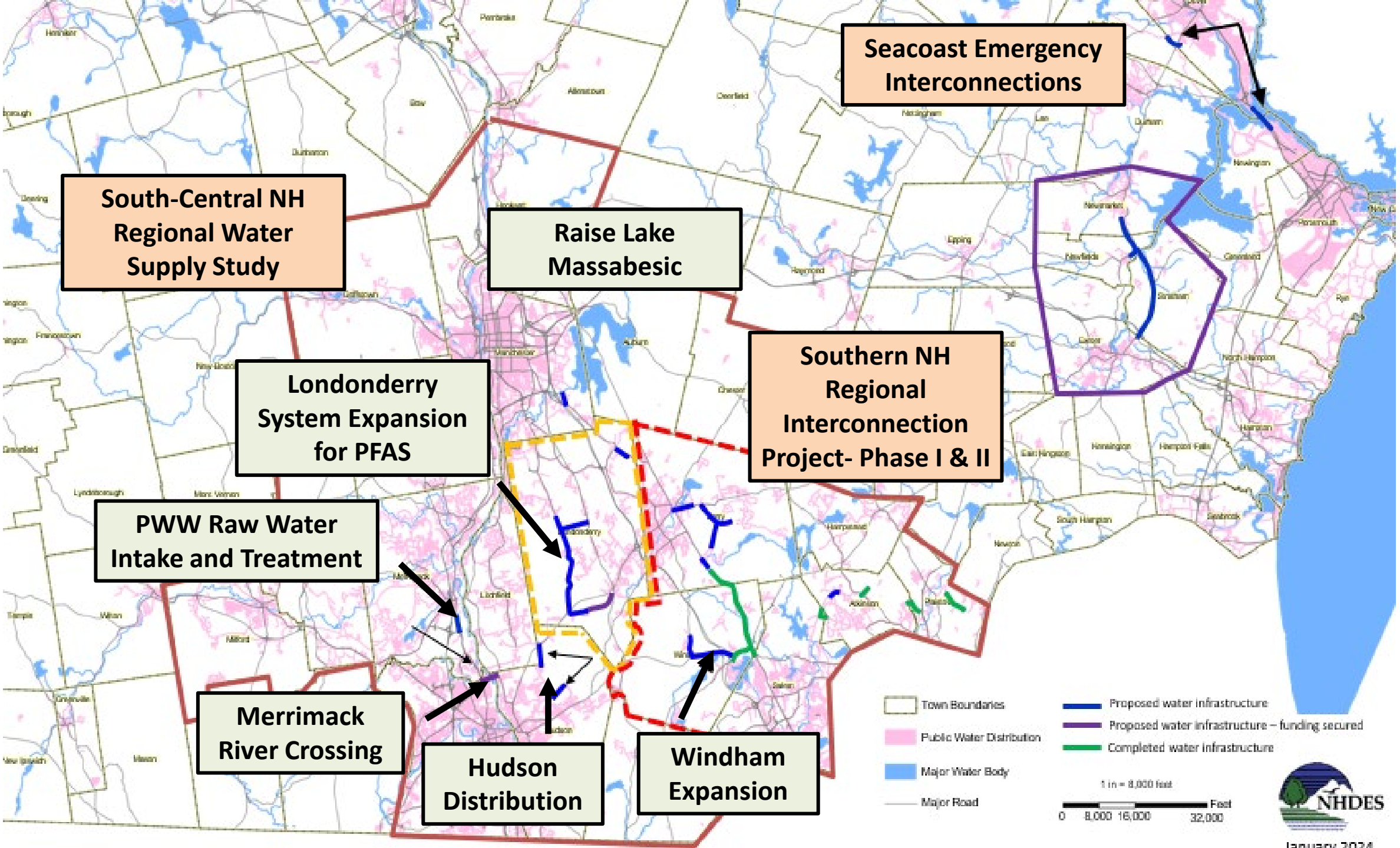
Regional Water Interconnections Status Update

Michael Unger, PE
NHDES Drinking Water Engineer

Itinerary

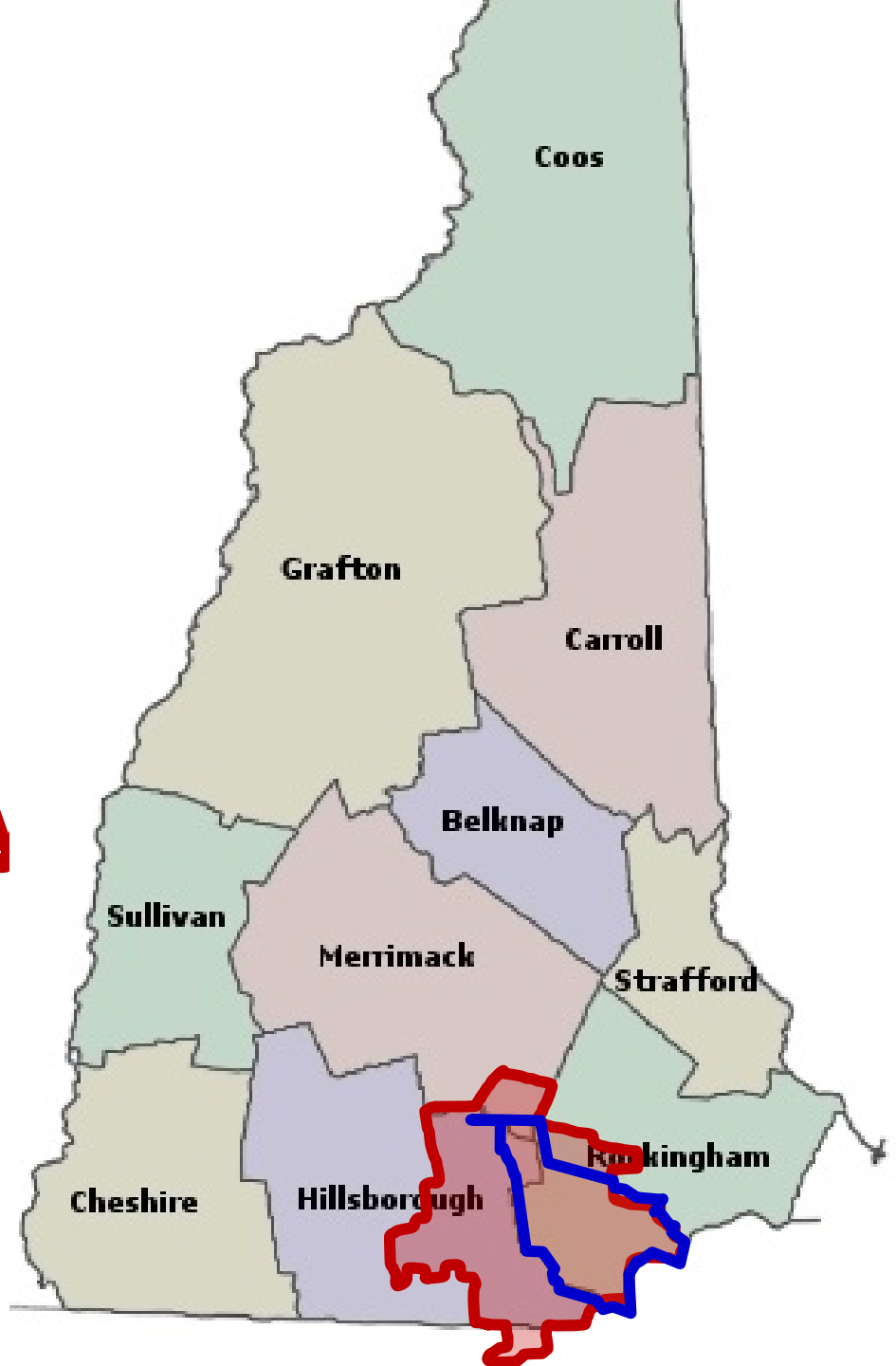


1. South/Central NH Regional Water Supply Study
2. Merrimack River Crossing
3. Lake Massabesic Water Level Study
4. Londonderry PFAS Response
5. Southern NH Regional Water Project Phase 2
6. Seacoast


Seacoast Emergency Interconnections
South-Central NH Regional Water Supply Study
Raise Lake Massabesic
Londonderry System Expansion for PFAS
Southern NH Regional Interconnection Project- Phase I & II
PWW Raw Water Intake and Treatment
Merrimack River Crossing
Hudson Distribution
Windham Expansion
Town Boundaries
Public Water Distribution
Major Water Body
Major Road
Proposed water infrastructure
Proposed water infrastructure – funding secured
Completed water infrastructure
1 in = 8,000 feet
0 8,000 16,000 32,000 Feet
NHDES
January 2024

Southern NH Regional Interconnection Project

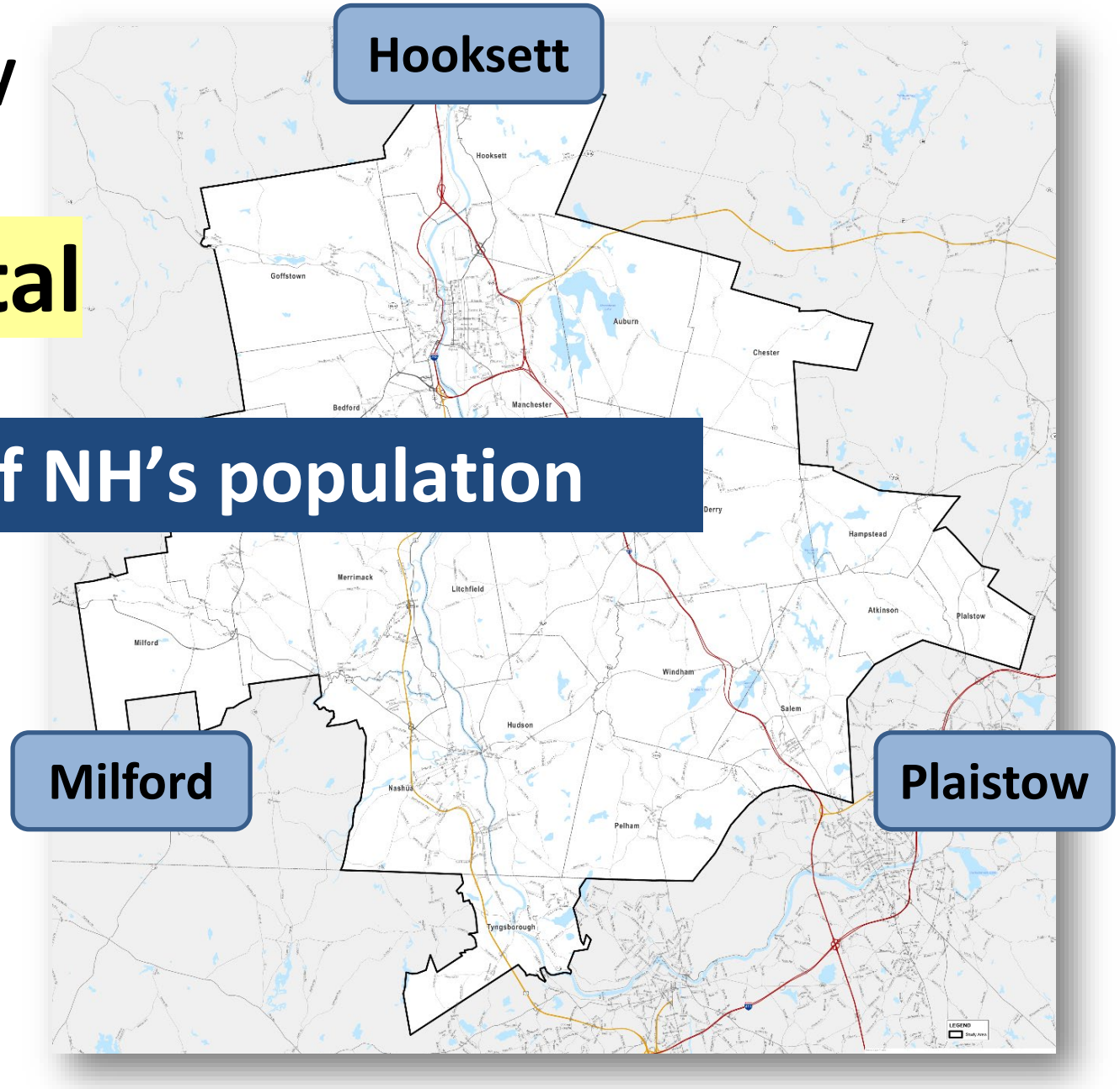
vs. South-Central Regional Water Supply Study



South- Central NH
Regional Water Supply Study

21 Communities Total

Approximately 40% of NH's population



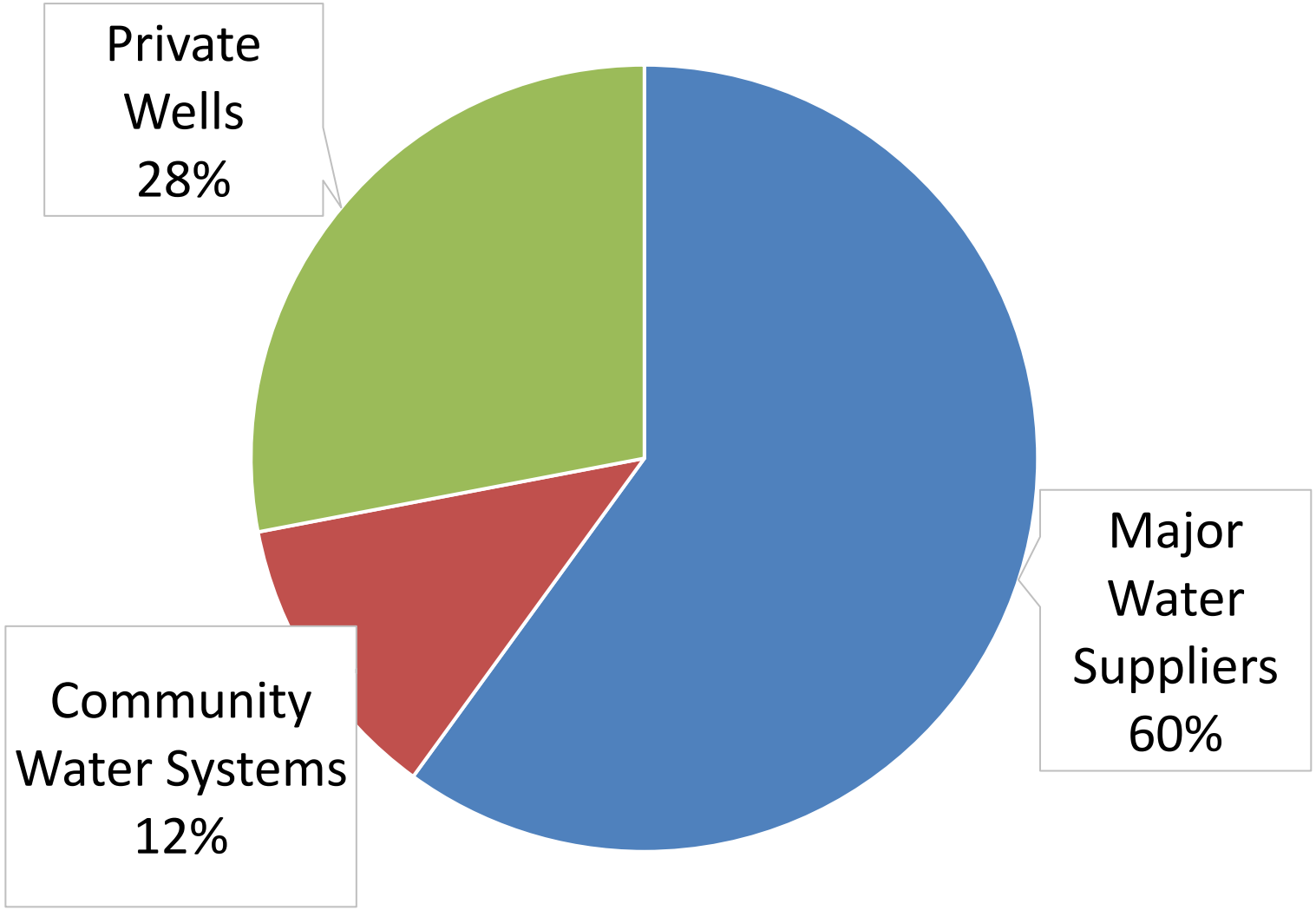
Southern NH Regional Connection Project- Phase 1 Complete

Focused on 8 Communities

South-Central NH
Regional Water Supply Study

Drinking Water Sources

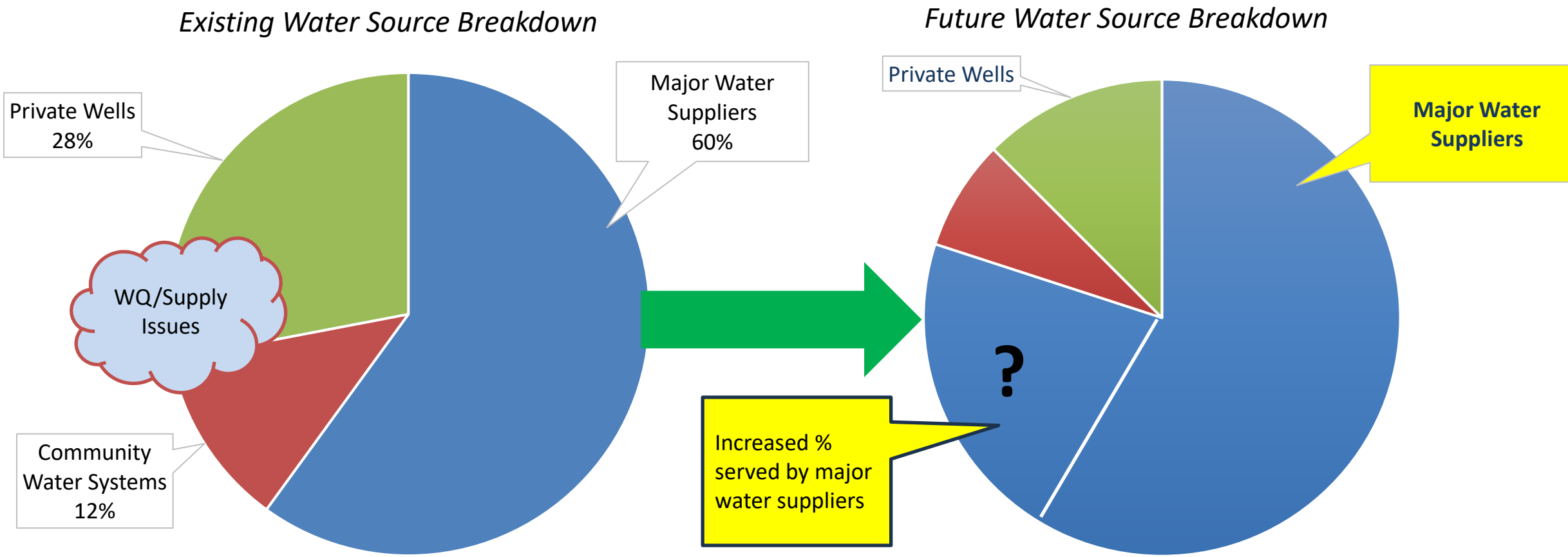
- 516,000 people
  ~40% of NH
- 21 communities
- 85 million gal/day
- 9 Lg. Water Suppliers
- +/- 200 CWS
- +/- 60k private wells



South-Central NH
Regional Water Supply Study

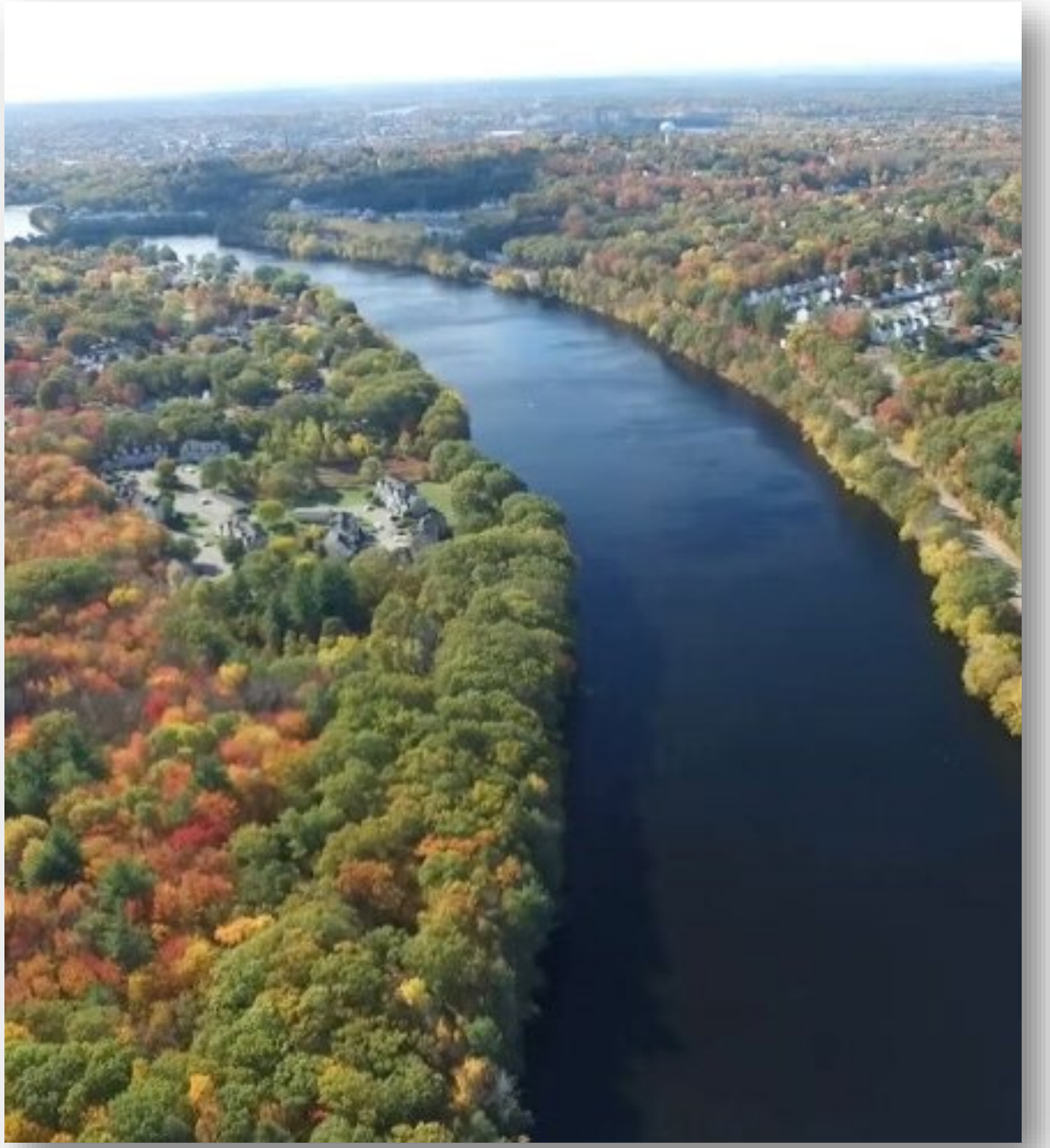
Drinking Water Sources

Balancing the Supply - Example



South-Central NH Regional Water Supply Study (1)

Merrimack River, NH



Water Supply Sources:

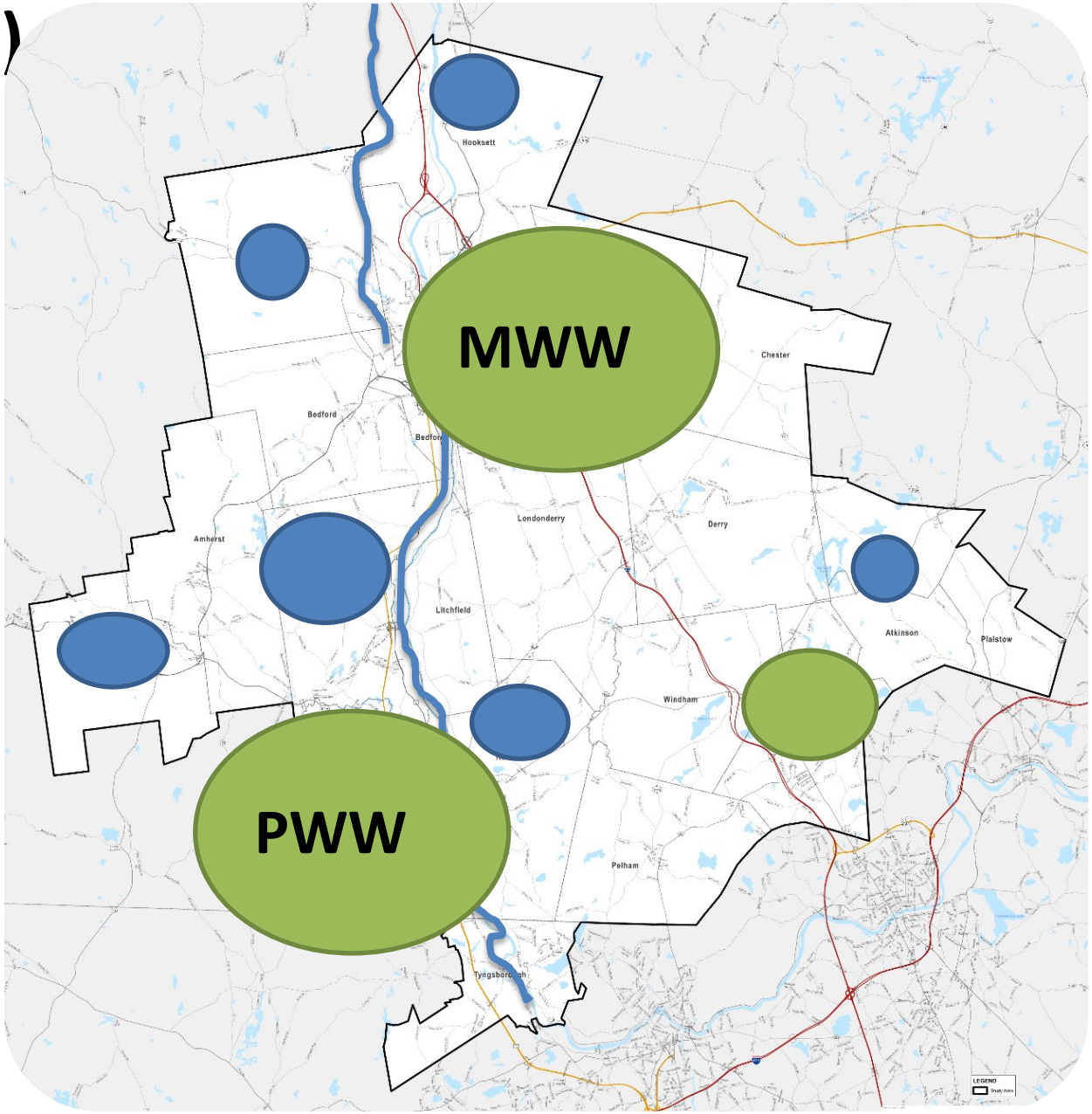
1. Surface Water Supplies
2. Groundwater Supplies
3. Water Supply Agreements

South-Central NH Regional Water Supply Study (2)

Current Supply Sources

- = Surface Water
- = Groundwater

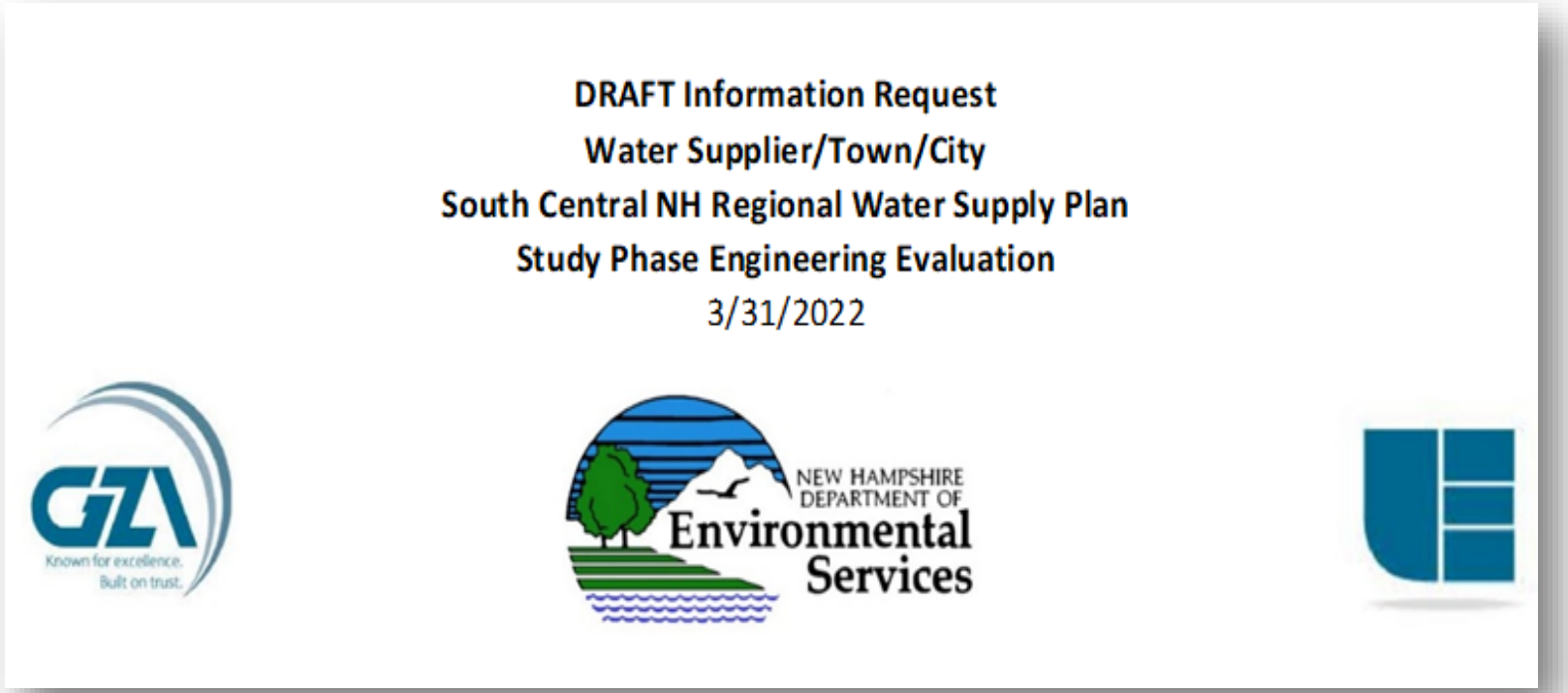
Conceptual representation of drinking water derived from three source types. Circle size represents order of magnitude.



South-Central NH
Regional Water Supply Study

Research Questions:

- Water Supply Needs?
- Water Quality Issues?
- Planned Growth?
- Consolidation of CWS?



South-Central NH Regional Water Supply Study

Projected Future Supply Capacity Surplus/Deficit – Max Daily Flow

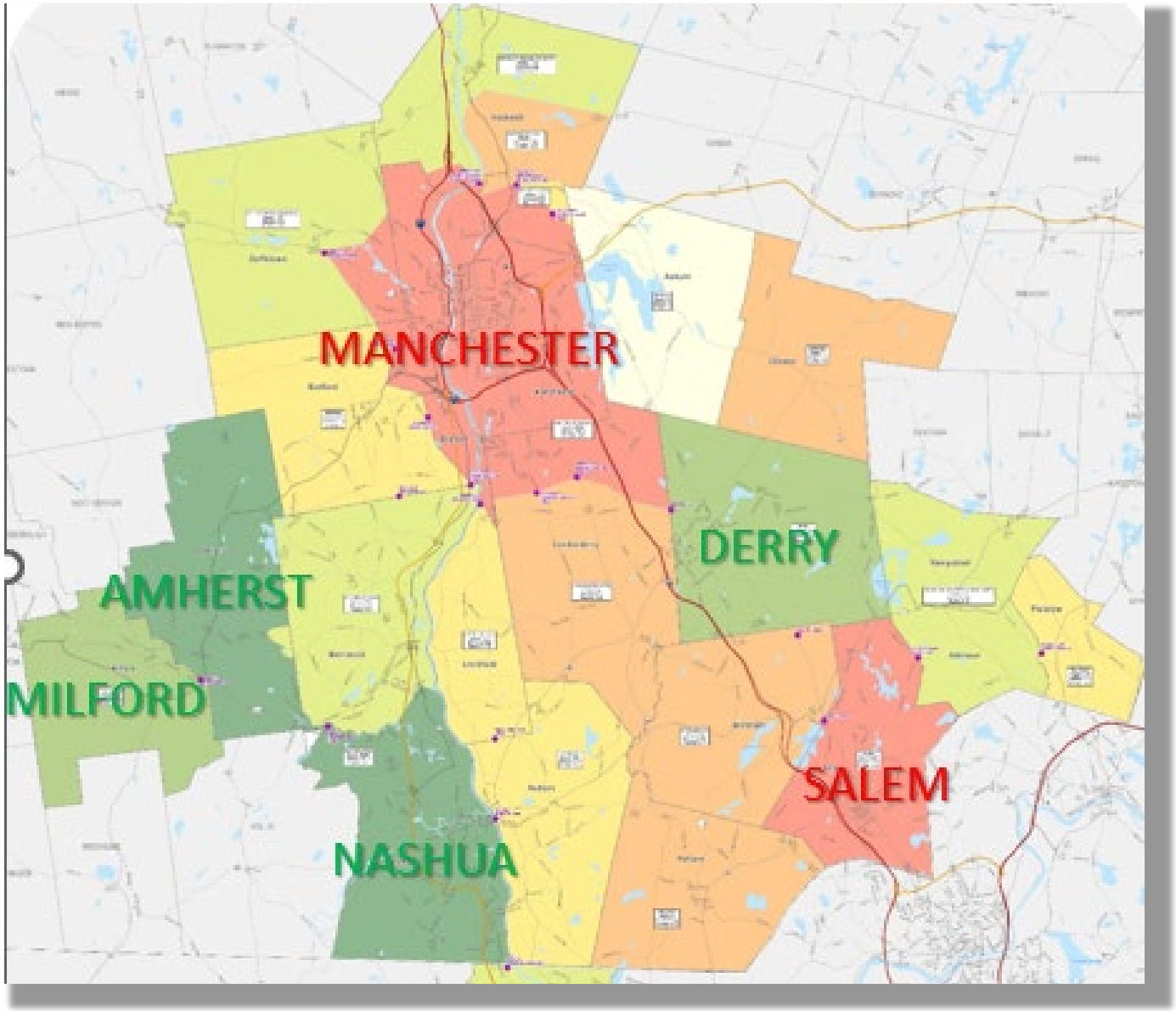
LEGEND

Water System Interconnections

Water Supply and Demand

Future MDF Difference (MGD)

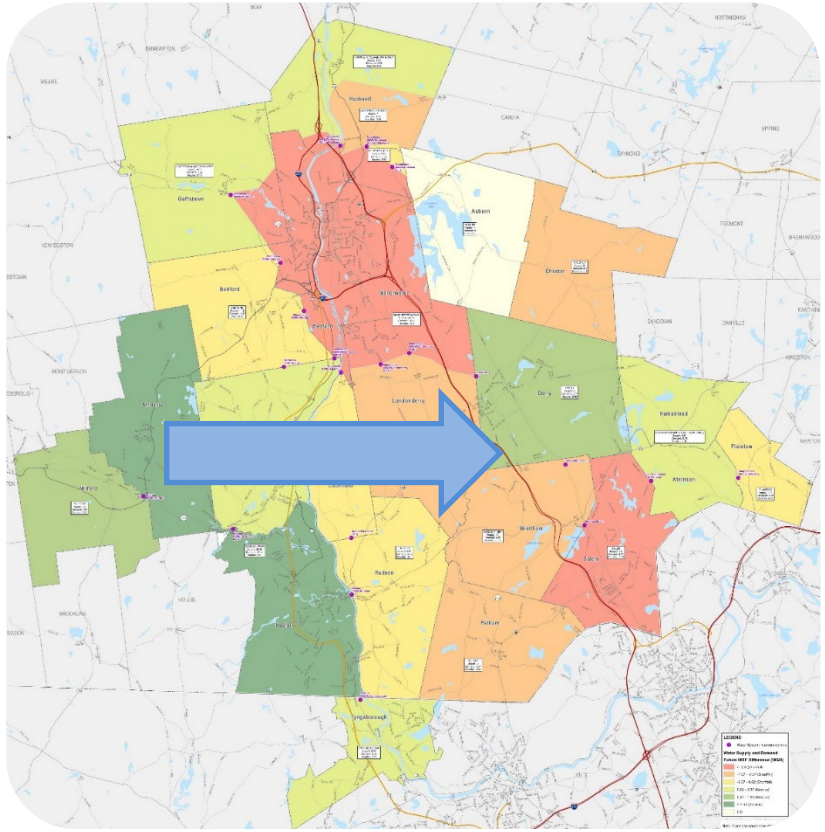
- > -2.3 (Shortfall)
- -2.07 - -0.37 (Shortfall)
- -0.37 - 0.02 (Shortfall)
- 0.02 - 0.37 (Surplus)
- 0.37 - 1.55 (Surplus)
- > 1.55 (Surplus)
- 0.0



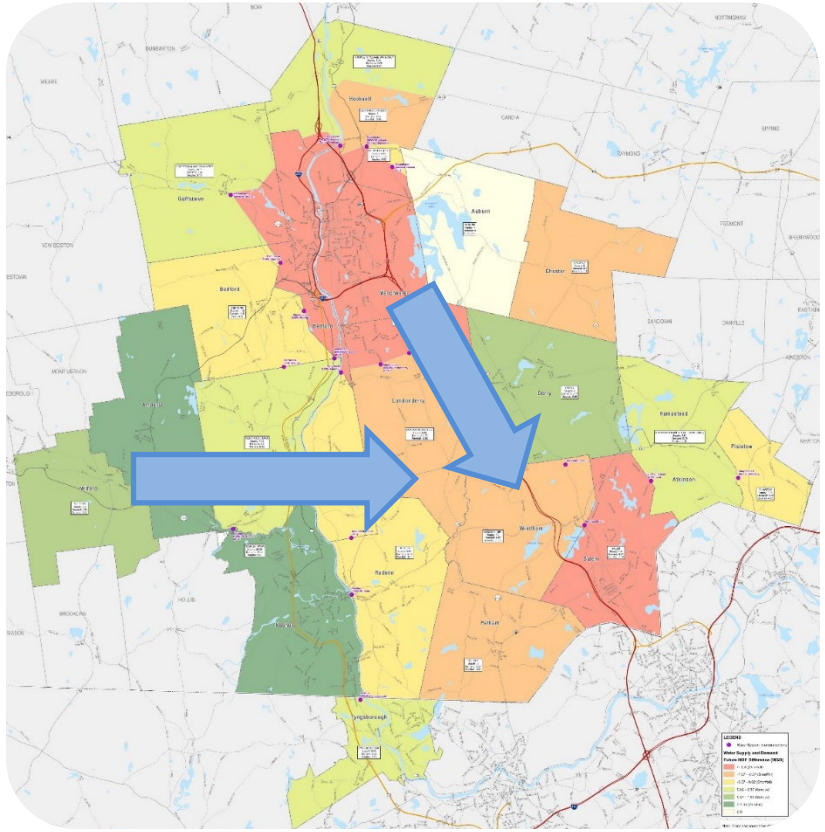
South-Central NH Regional Water Supply Study

Infrastructure Alternatives

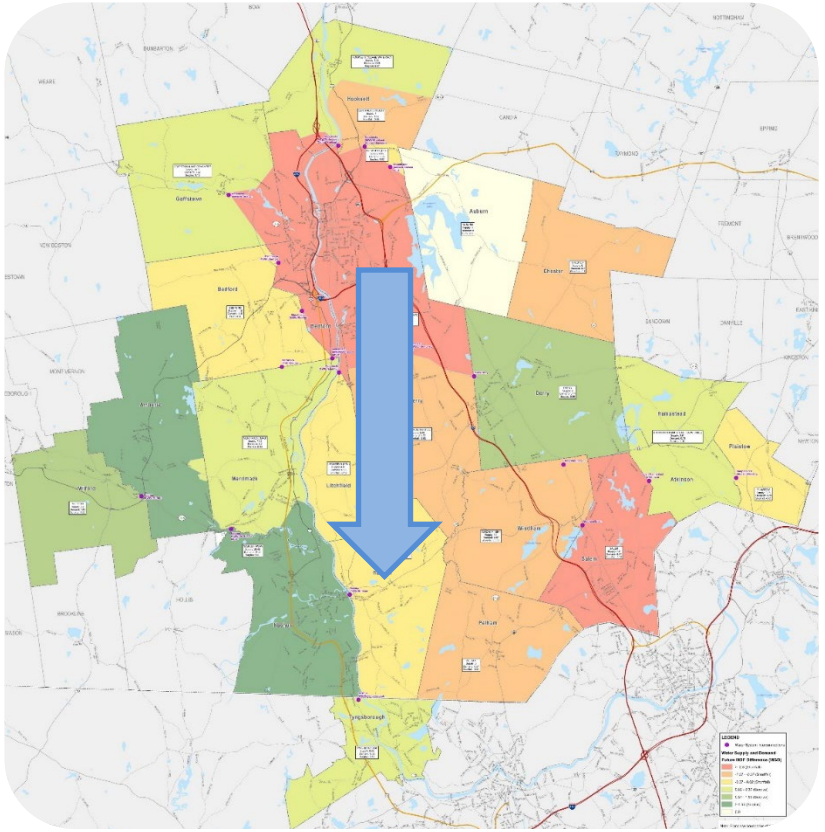
Alternative 1
West to East Supply



Alternative 2
Hybrid Supply



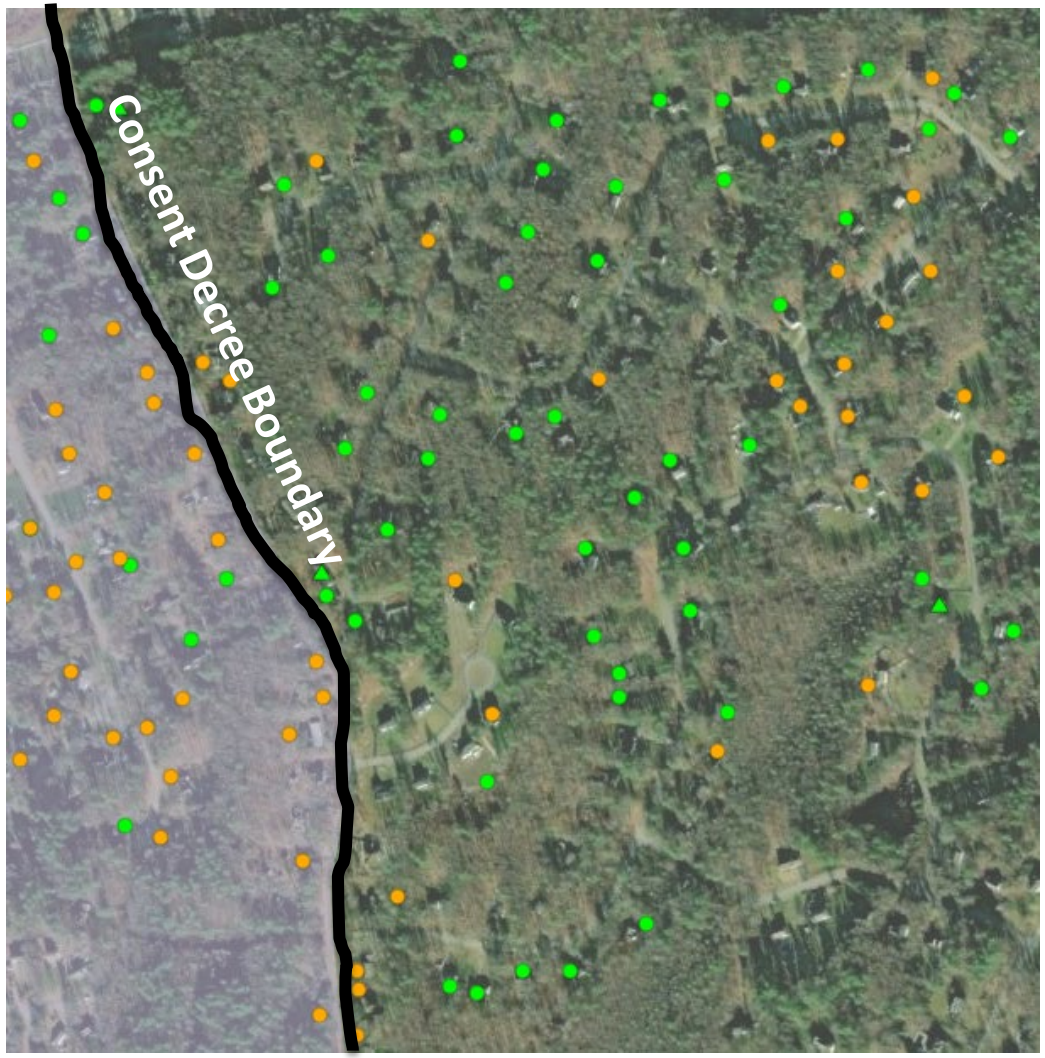
Alternative 3
North to South Supply



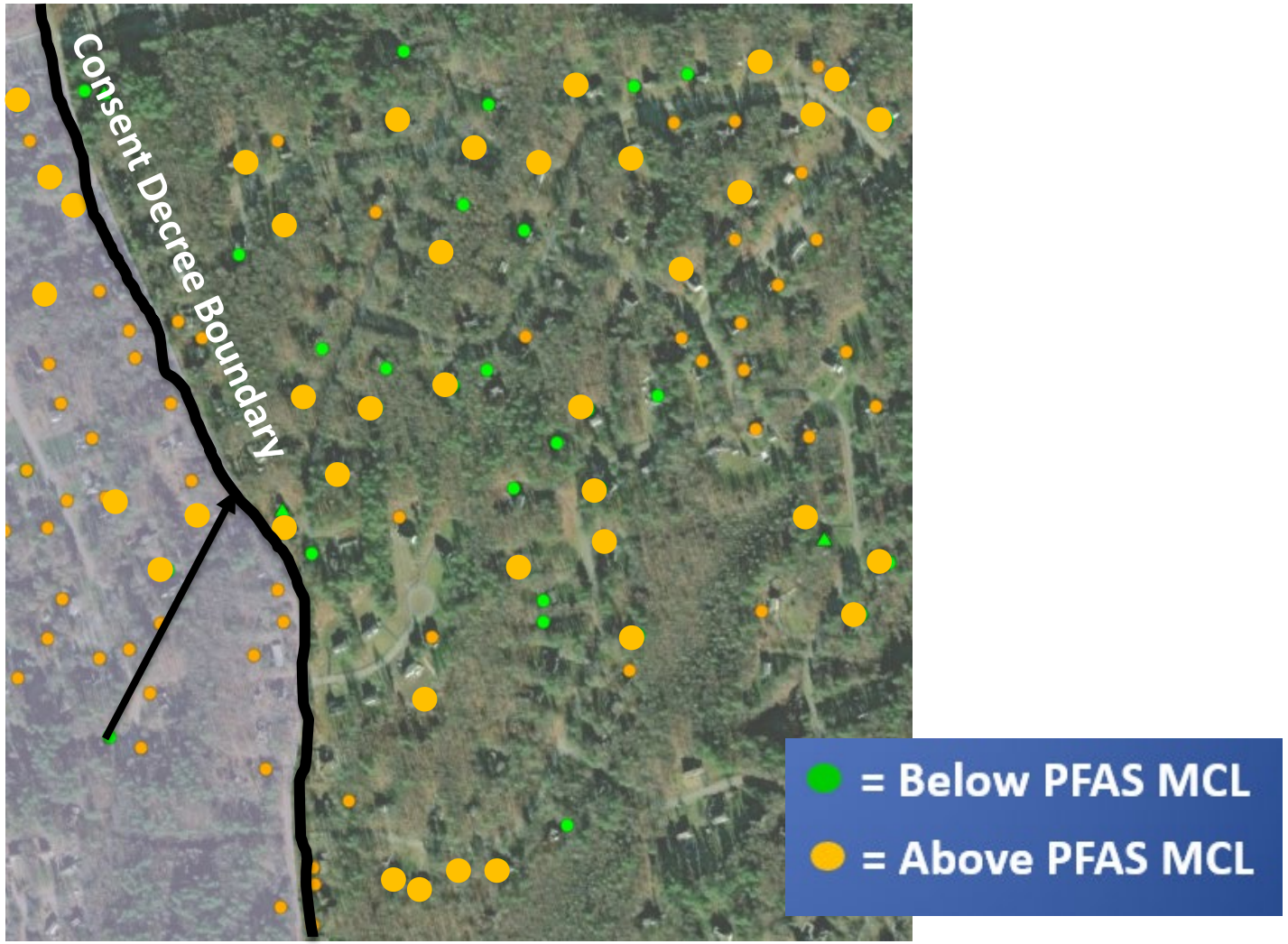
South-Central NH Regional Water Supply Study

Study Update - EPA Proposed PFAS MCLs

Current NH PFOA MCL = 12 ppt



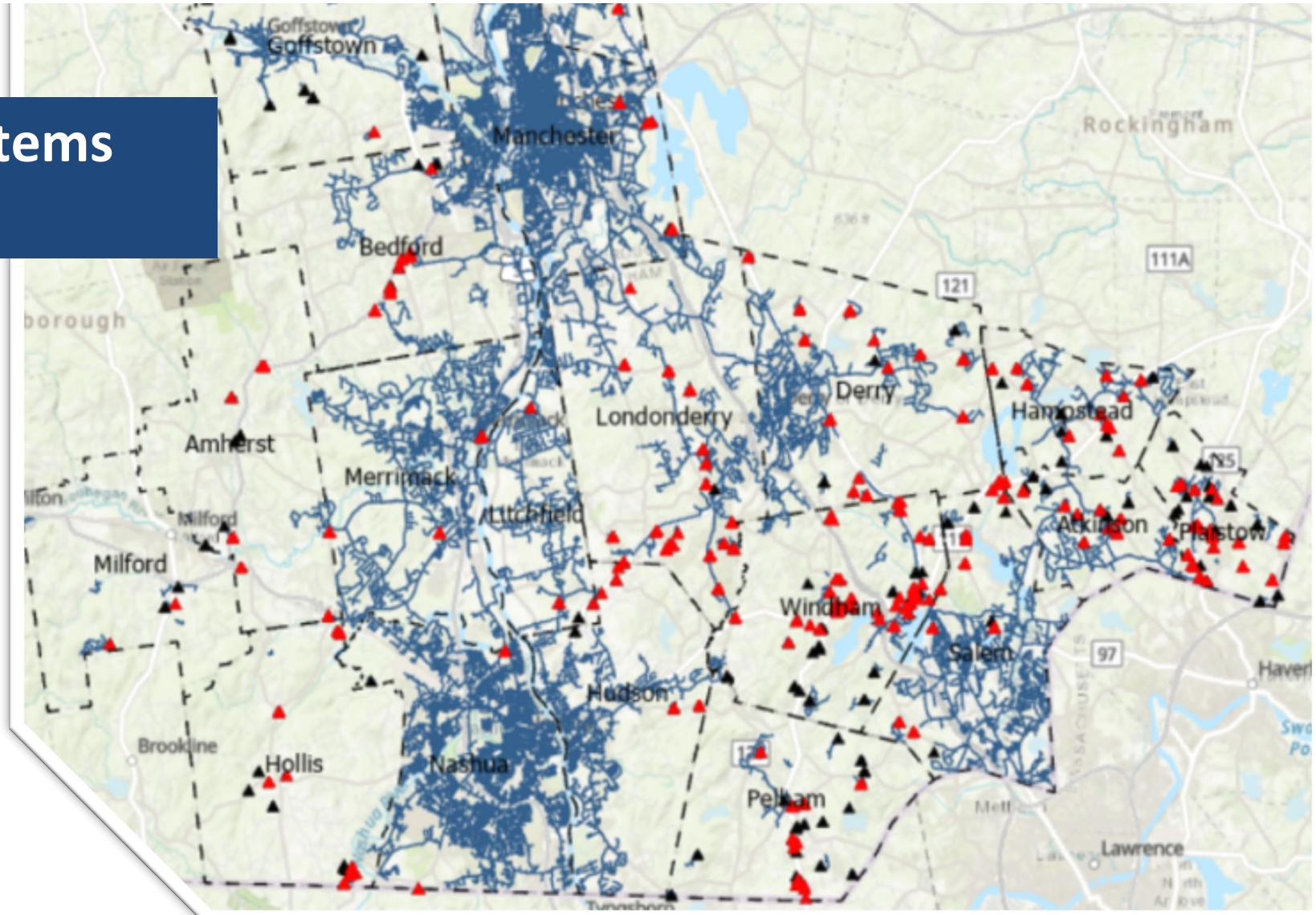
Proposed EPA PFOA MCL = 4 ppt



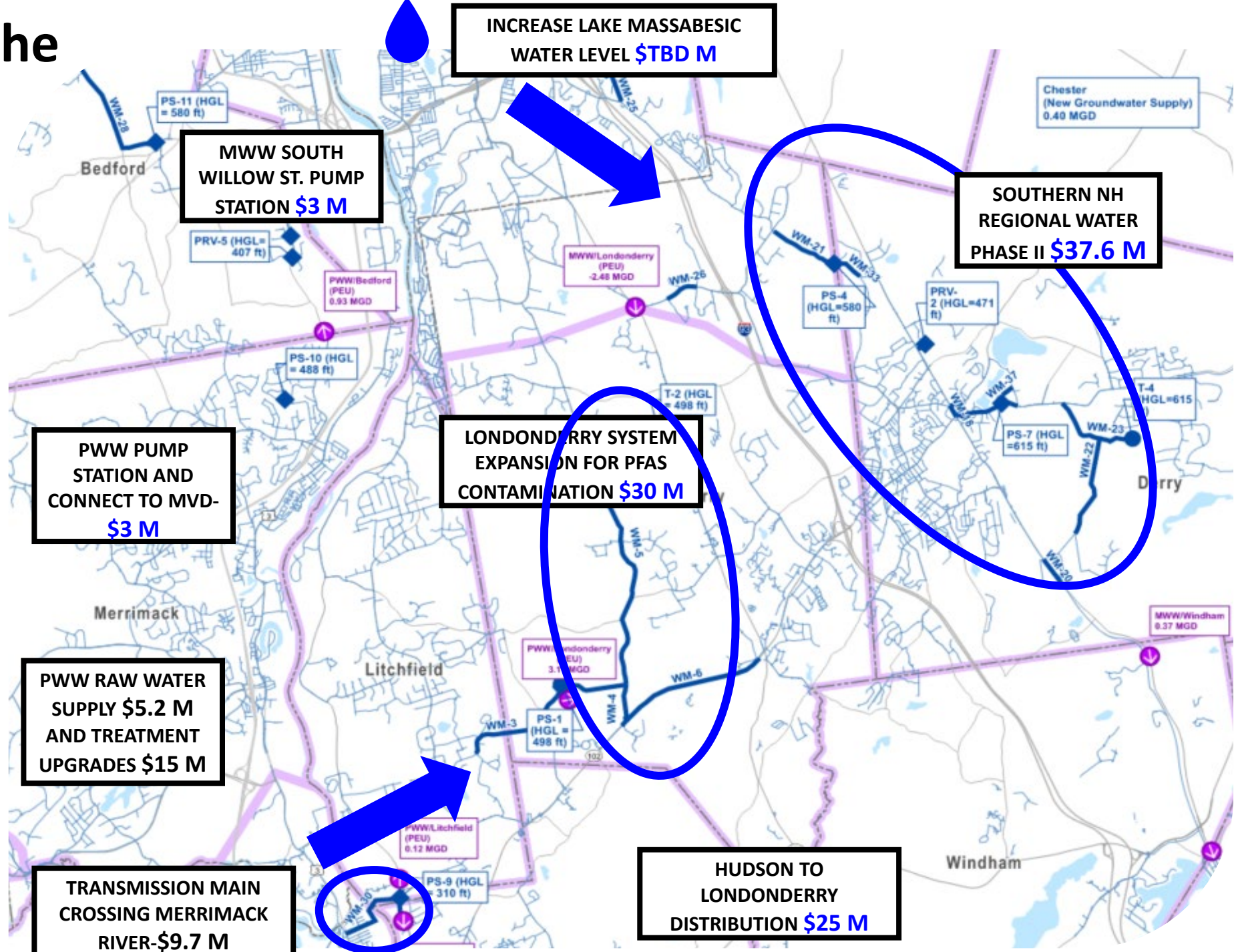
South- Central NH Regional Water Supply St

Study Update - EPA Proposed PFAS MCLs

Small Community Water Systems with wells PFOA>4 ppt

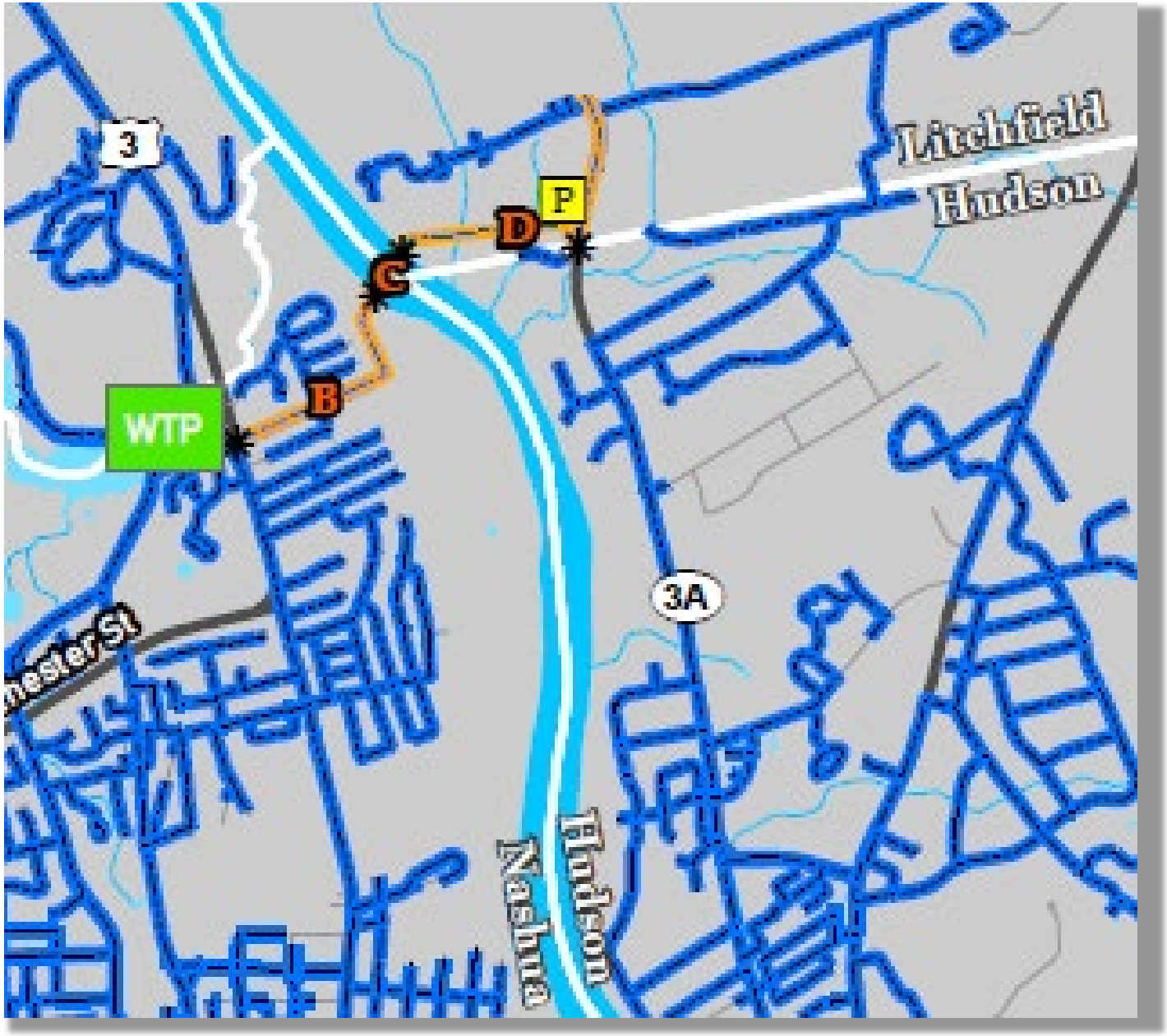


Connecting All the Pieces



Transmission Main Crossing the Merrimack River

- $9.7 M appropriated by Legislature FY24
- Concept: Hudson own and operate due to tax implications for PWW
- Sized to meet projected needs in Litchfield, Hudson, Londonderry, Pelham, Windham, and possibly Salem
- Hudson distribution improvements are needed to accept flow

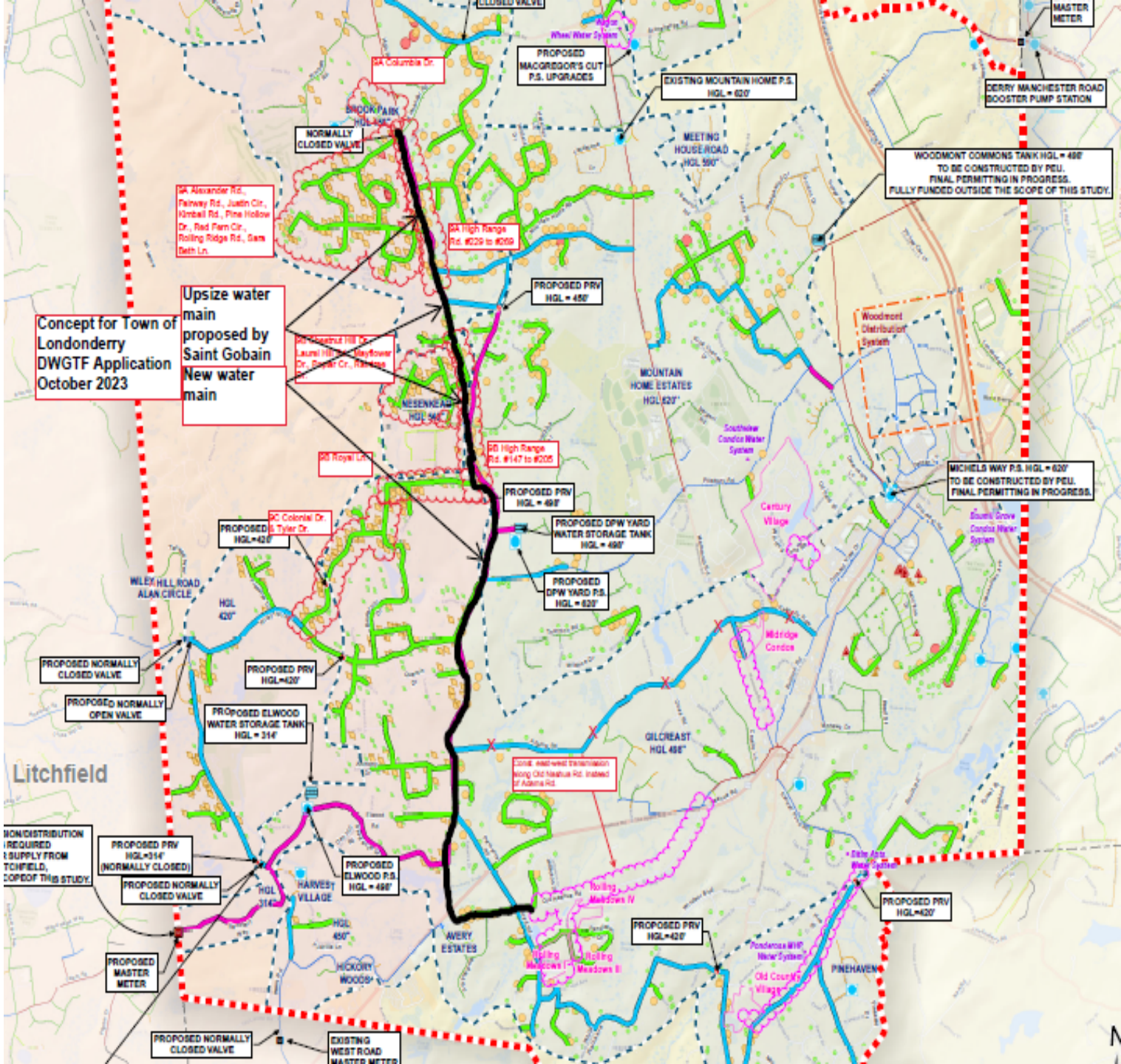


Increase Lake Massabesic Water Level

- Concept: raise level of Lake Massabesic Main Dam by 1 foot
- Adds 1 billion gallons of storage
- Feasibility study funded by DES DWGB is in progress
- Future work: permitting, design, construction

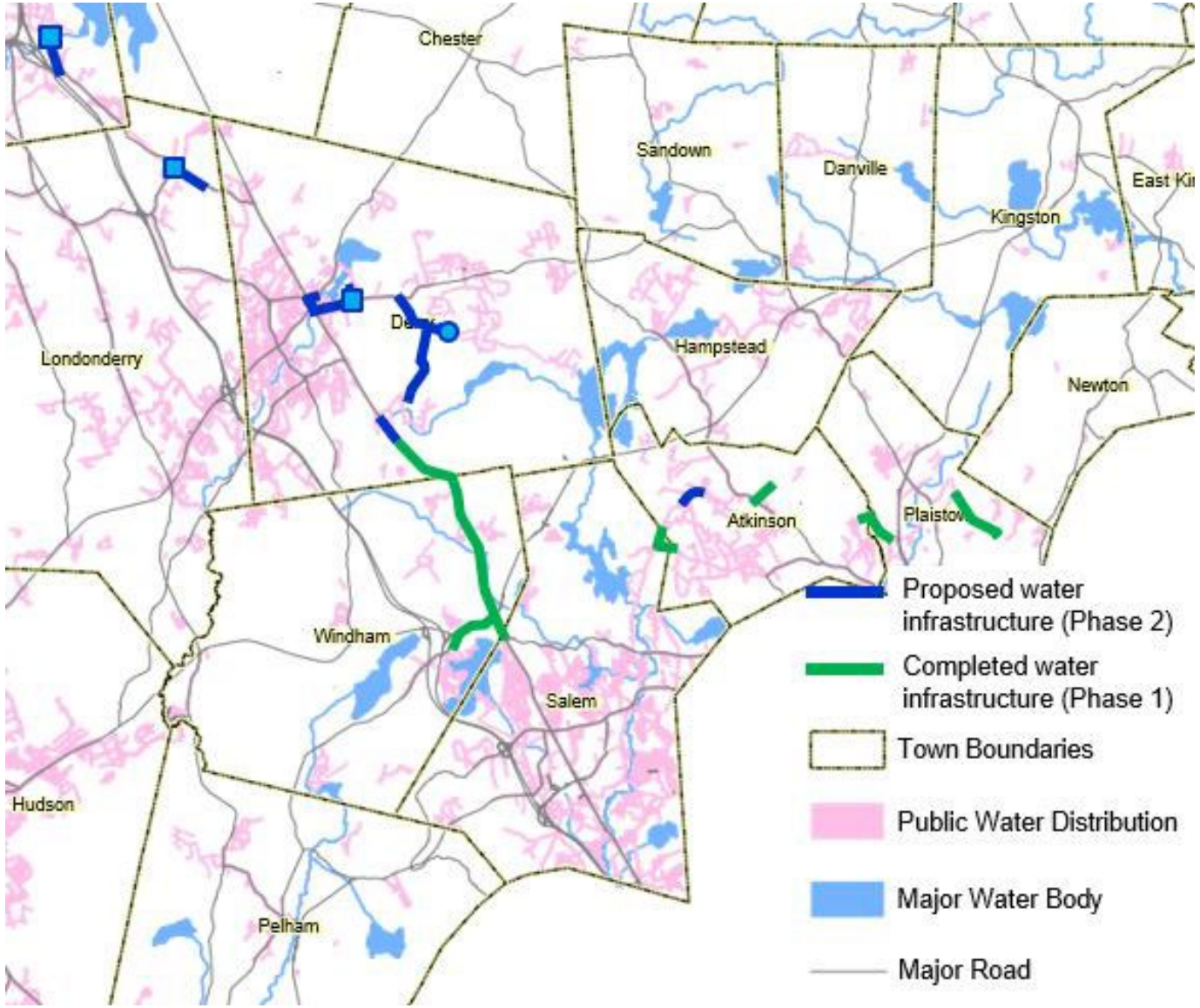
Londonderry System Expansion for PFAS

- Manchester Water Works & Pennichuck East Utility amended wholesale water agreement to increase supply capacity
- 6 small CWS approved for PFAS RLF and/or DWSRF for interconnections
- Upsize trunk line on High Range Road and extend to close loop
- Town of Londonderry contributing ARPA and applied for DWGTF grant- may return as Special Project



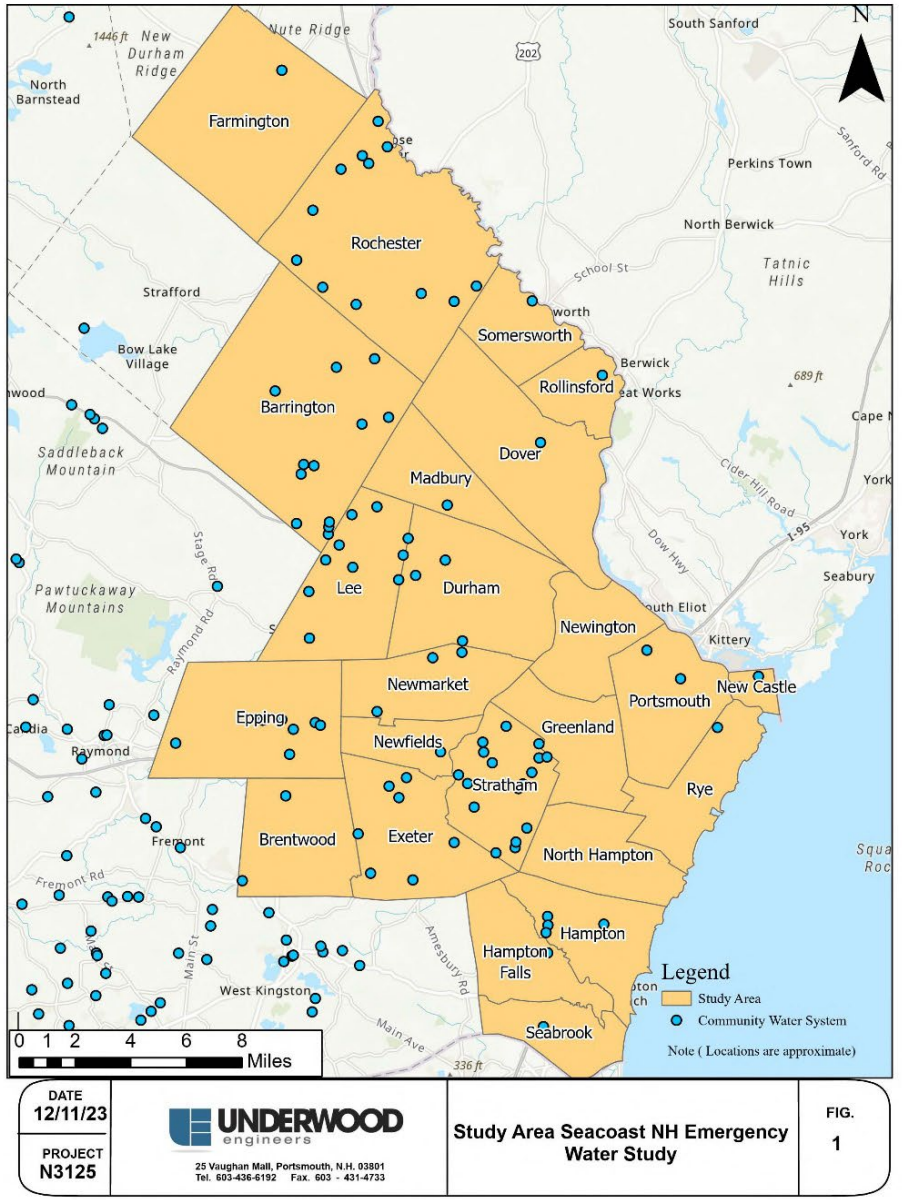
Southern NH Regional Water Project- Phase II

- Increase supply to Windham, Salem, Atkinson, Hampstead, and Plaistow
- Increase upstream pumping and remove bottlenecks
- **Estimated $37.6 million**
- Another $7.6 million required for Phase II Merrimack Source Development Charge
  - towns and water systems to pay back DWGTF



Seacoast Regional Interconnection Study

- NHDES hired consultant
- Emergency interconnections between all seacoast region water systems
- Water supply and demand projections
- Consolidation opportunities for small systems to address water quality and quantity issues
- Opportunity for water systems to explore regional water management



Seacoast Emergency Interconnections

- Emergency interconnection between Dover and Portsmouth
- Transmission main on proposed General Sullivan pedestrian bridge
- Design complete – funded by DWGTF
- Incorporated into NHDOT bridge design
  - Bids for bridge over budget, NHDOT considering options
- Redundant water main from Madbury Treatment Plant to Newington

Thank You

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