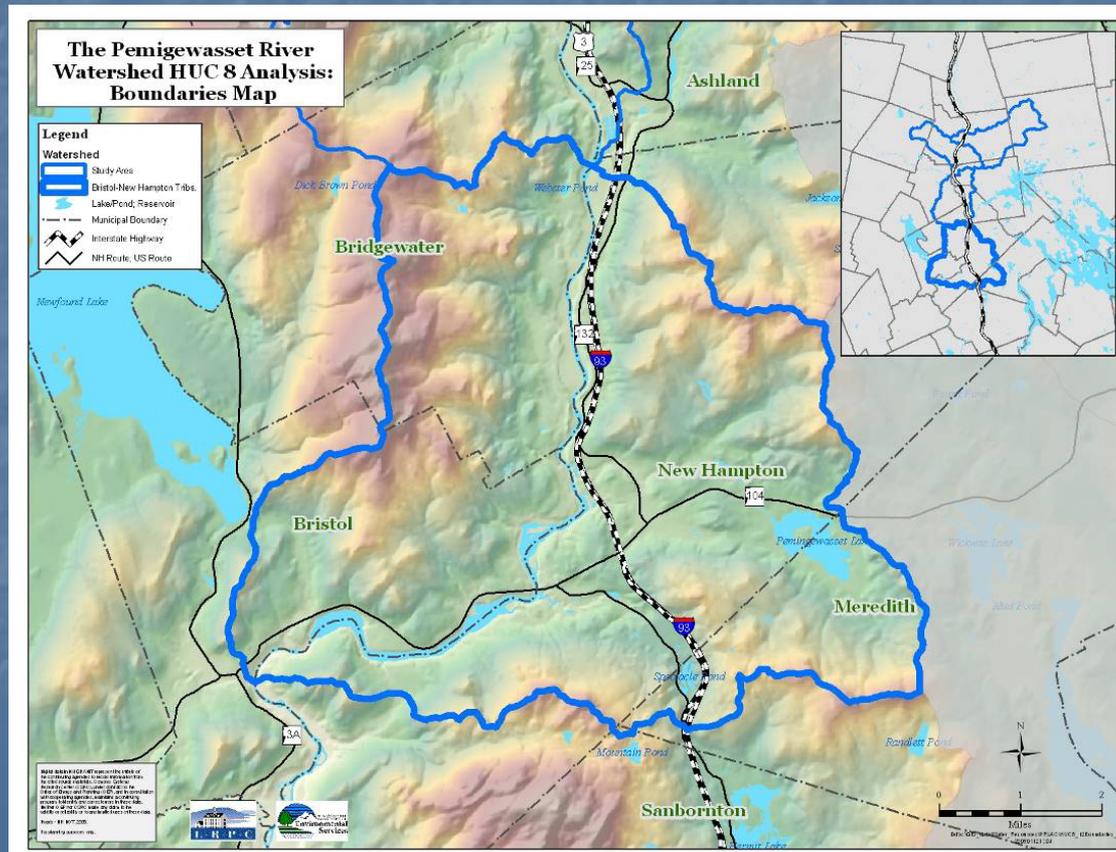


Bristol-New Hampton Tributaries (BNHT) Watershed Conservation Plan



Purpose

- To identify areas of high quality waters (surface and ground water), wetlands, and uplands for the BNHT watershed using a co-occurrence analysis.
- The plan provides site specific recommendations to assist informed land use planning decisions to preserve, conserve, or restore these identified areas.

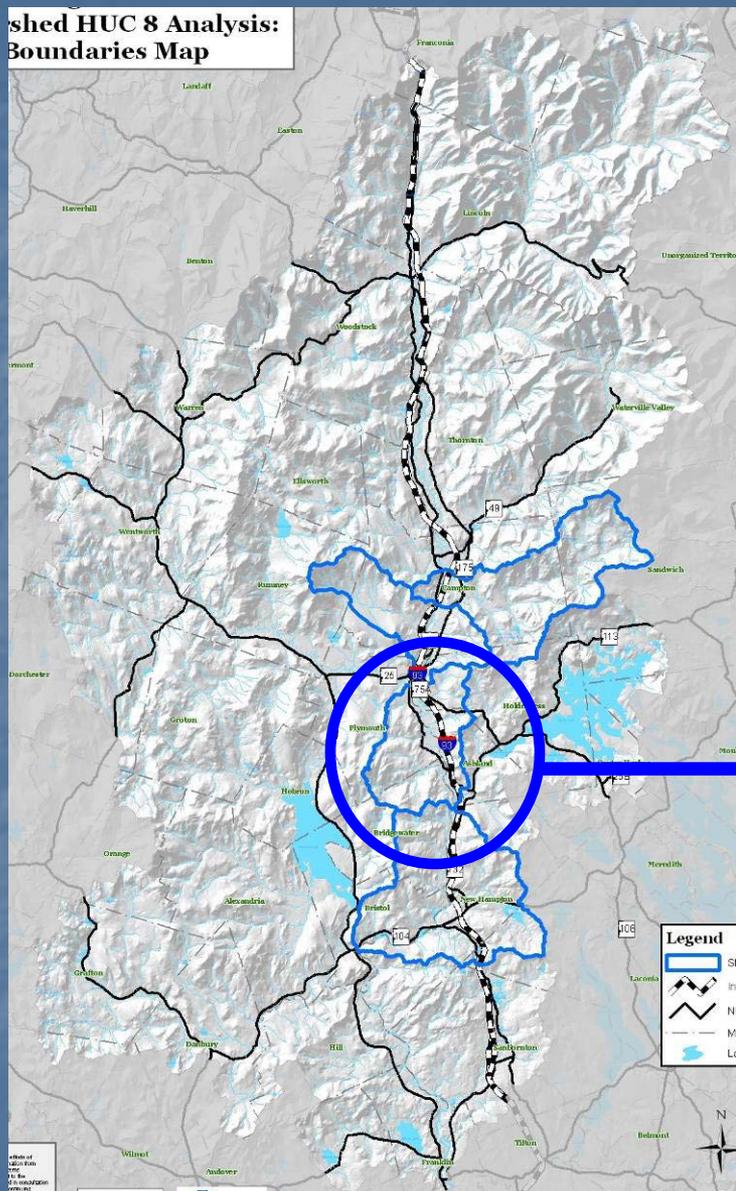
Plan Sections

- Summary Statement
- Introduction
- Watershed Overview
- Co-occurrence Analysis
- Conservation & Implementation Strategies
- BNHT Watershed Co-occurrence Maps

Definitions

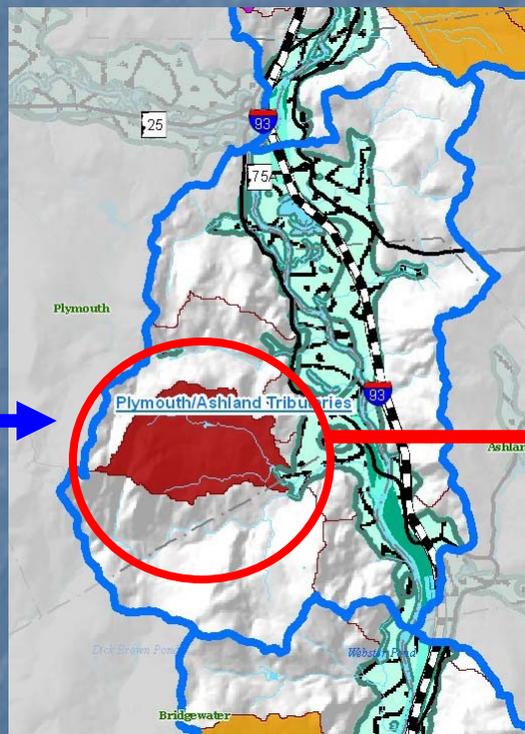
- **Watershed** – drainage system based on geographic area
- **Subwatershed** – drainage system based on tributary or river segment
- **Catchment** – drainage system for small surface stream or body of water

shed HUC 8 Analysis: Boundaries Map



HUC 8 Watershed

Watershed System



HUC 12
Subwatershed



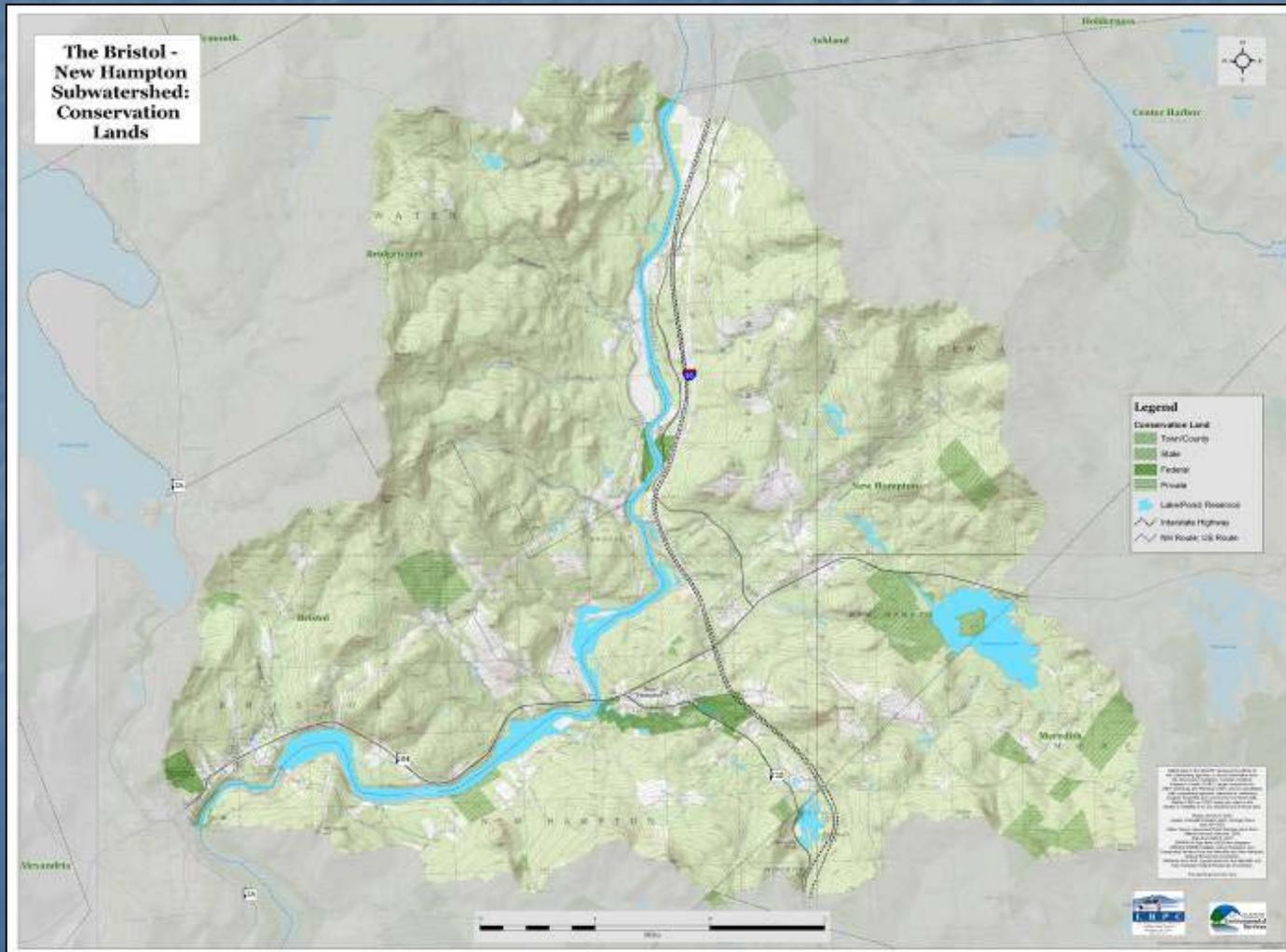
Catchment

Watershed Overview

- BNHT Watershed is 40.7 square miles in Bridgewater, Bristol, Meredith & New Hampton
- Surface Waters: Pemigewasset River, 10 named streams, Pemigewasset Lake, numerous ponds
- Sand & gravel aquifer

Status of Land Conservation

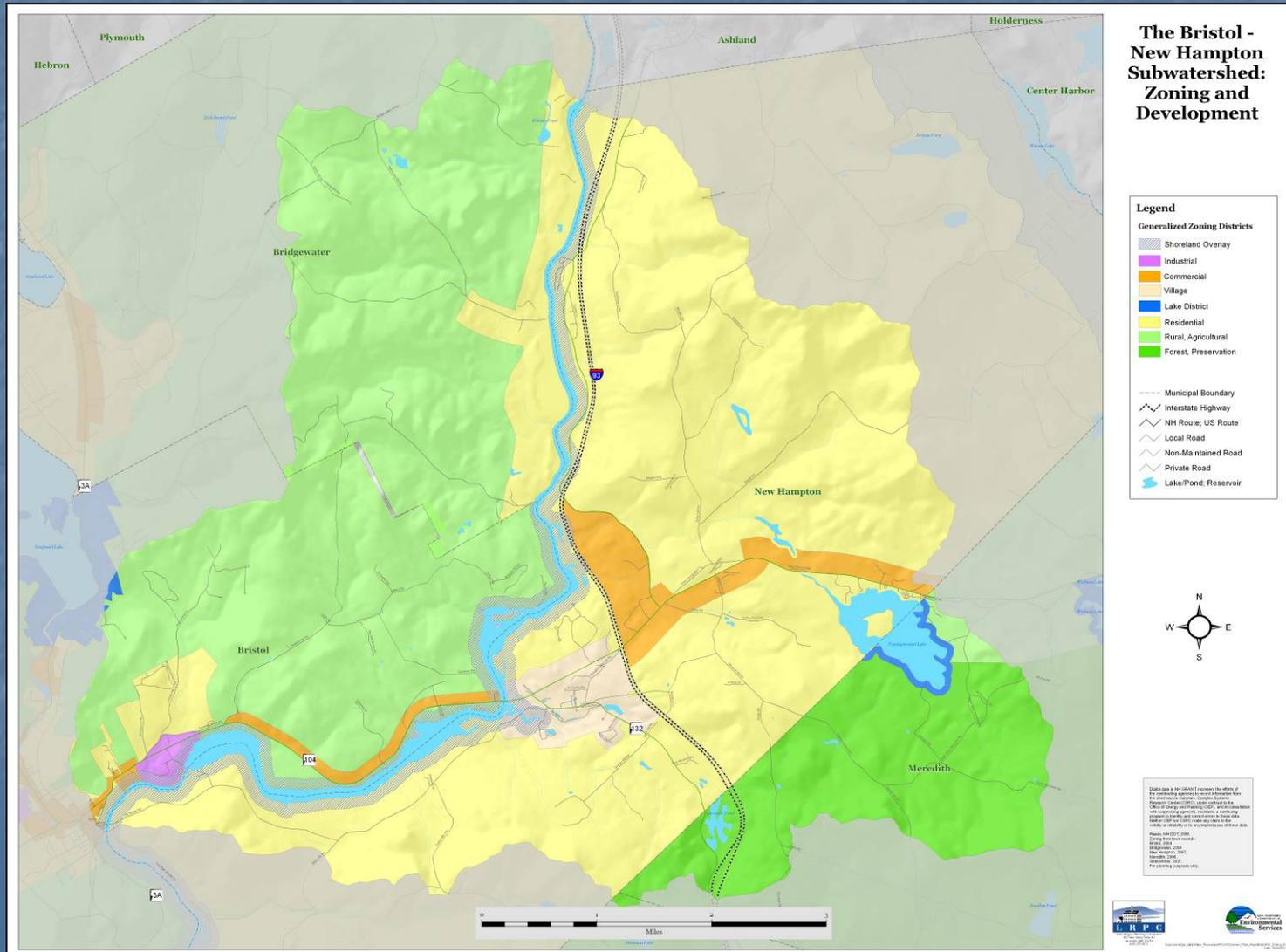
4.5% Conserved Lands



Development Trends

Town	2005 Population (NH OEP)	2015 projection (NH OEP)	Residential Housing Permits 2000- 2005	Commercial Permits 2000-2005
Bridgewater	1,030	1,110	65	0
Bristol	3,190	3,410	153	9
Meredith	6,350	7,360	434	10
New Hampton	2,130	2,440	147	25

Current Zoning



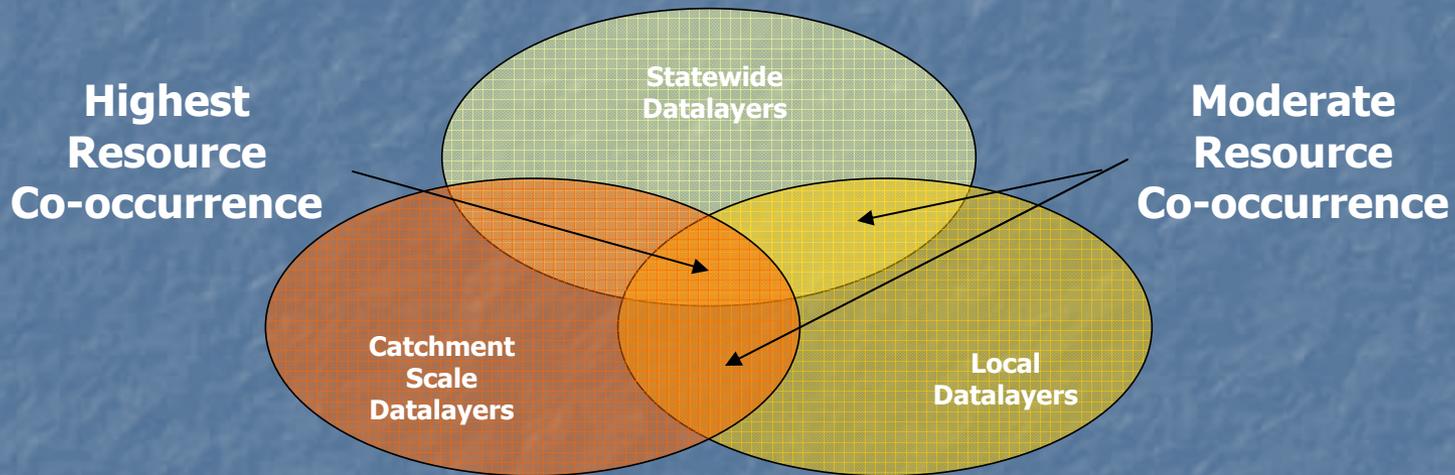
What is a Co-occurrence Map?

- A Co-occurrence map is created by layering a series of individual maps (i.e. datasets) on top of one another to create a graduated snapshot of the region.
- The end-product is a map that uses graduated colors to illustrate where the areas of highest quality waters, wetlands, and uplands are located within the watershed.

Why Make a Co-occurrence Map?

- Foundation of:
 - Conservation Planning
 - Watershed Management Planning
 - Pemigewasset River Corridor Planning
- Snapshot of current conditions

Co-occurrence Map Layers

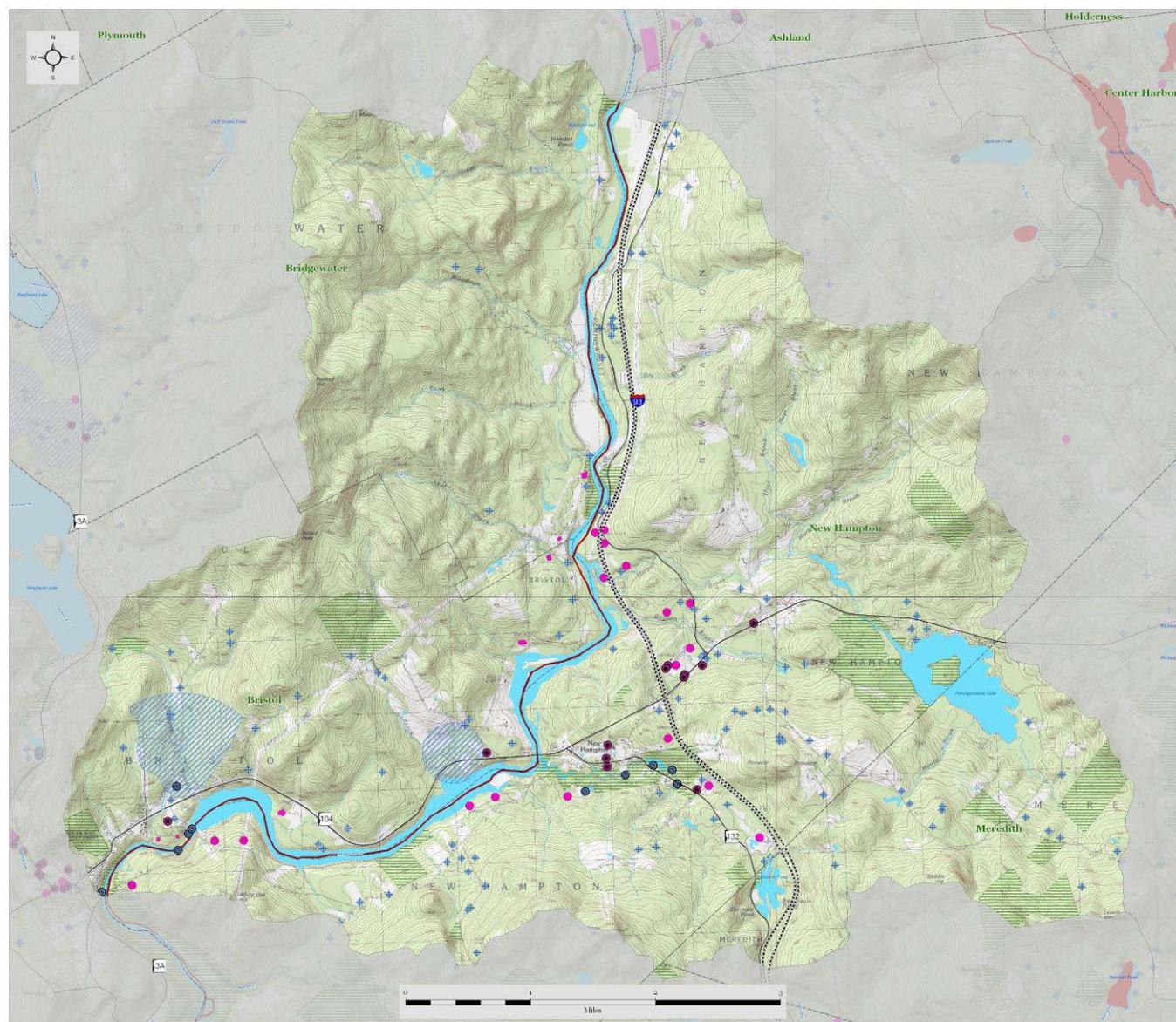


- The final map uses graduated colors to show where the highest quality waters, wetlands, and uplands are located.

Co-occurrence Map Layers

- Wildlife Habitat (NH Wildlife Action Plan)
- Water Quality
 - Aquifer (NH DES)
 - Flood Storage Lands (Natural Services Network)
 - 500-year Floodplains (NH WAP)
 - SPARROW Catchment Water Quality (USGS)
- Water Supply Lands (Natural Services Network)
- Wetlands (NWI)
- Farmland Soils (NRCS)
- Data from the Meredith and New Hampton Natural Resource Inventories
 - Stream buffers
 - Designated stream
 - Wetland buffer
 - Wetland wildlife habitat buffer
 - Designated prime wetland
 - Active farmland
- Stream and wetland buffers were delineated for Bristol and Bridgewater by LRPC based on the Meredith and New Hampton NRI methodologies.

Supplementary Composite



The Bristol - New Hampton Subwatershed: Supplementary Resources

Legend

- Registered Water Withdrawal
- ⊕ Water User
- Above Ground Storage Tank
- Underground Storage Tank
- Potential Pollution Source
- Impaired [Category 4]
- Impairment [Category 5 - TMDL required]
- ▨ Wellhead Protection Area
- ☪ Lake/Pond/Reservoir
- Municipal Boundary
- ⚡ Interstate Highway
- ⚡ NH Route/US Route

Digital data is not WQRFI compliant due to the following agencies' non-compliance:
 1. New Hampshire Department of Environmental Services
 2. New Hampshire Department of Transportation
 3. New Hampshire Department of Public Safety
 4. New Hampshire Department of Health and Human Services
 5. New Hampshire Department of Agriculture, Food and Forestry
 6. New Hampshire Department of Education
 7. New Hampshire Department of Economic and Community Development
 8. New Hampshire Department of Energy and Public Utilities
 9. New Hampshire Department of Finance
 10. New Hampshire Department of Health and Human Services
 11. New Hampshire Department of Justice
 12. New Hampshire Department of Labor and Employment
 13. New Hampshire Department of Public Safety
 14. New Hampshire Department of Transportation
 15. New Hampshire Department of University Services
 16. New Hampshire Department of Veterans Services
 17. New Hampshire Department of Workforce Development
 18. New Hampshire Department of Education
 19. New Hampshire Department of Health and Human Services
 20. New Hampshire Department of Justice
 21. New Hampshire Department of Labor and Employment
 22. New Hampshire Department of Public Safety
 23. New Hampshire Department of Transportation
 24. New Hampshire Department of University Services
 25. New Hampshire Department of Veterans Services
 26. New Hampshire Department of Workforce Development



BNHT Co-occurrence Map

- Point System = 1 (least) – 25 (most)
- Weighted in favor of water resources (17 of 25 points)

Conservation Planning Recommendations

- Areas to Conserve/Restore –
 - High co-occurrence areas
 - Improve connectivity between areas of co-occurrence and conserved land
 - Areas of co-occurrence proximate to development pressure

BNHT Recommendations

- Natural Resource Inventories should be developed for the towns of Bristol and Bridgewater
- Implement buffer setbacks around all surface waters
- Designate Prime wetlands for the towns of New Hampton, Bristol and Bridgewater.
- Implement Drinking water protection ordinances.
- Create or extend Well-head Protection Areas (WHPAs)
- Complete a potential contamination source (PCS) inventory
- Implement steep slope and ridgeline protection, stormwater, and LID ordinances

Lakes Region Planning Commission

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