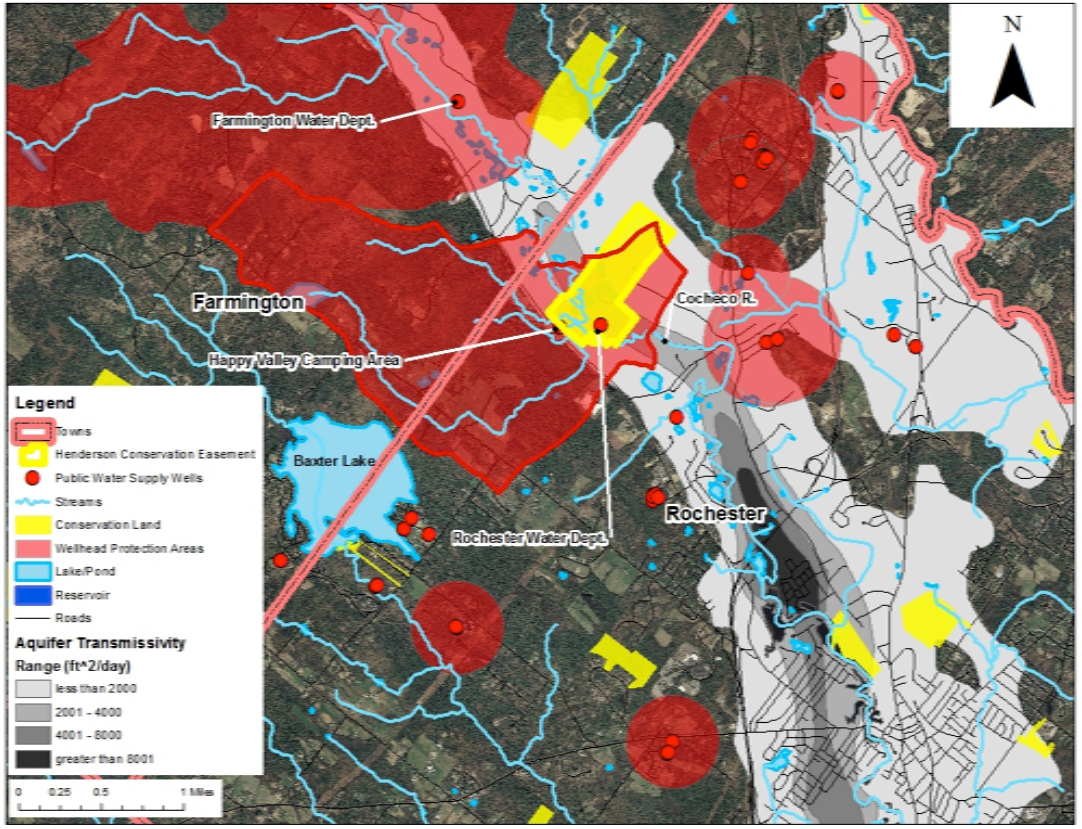
The ABCs of Protecting Water Resources Through Land Conservation in Your Community:

A Step-by-Step Guide and Real World Examples



New Hampshire Source Water Protection Conference – May 6, 2015

Truslow
RESOURCE CONSULTING LLC

Collaborating with organizations and professionals to evaluate and resolve land and water resource issues

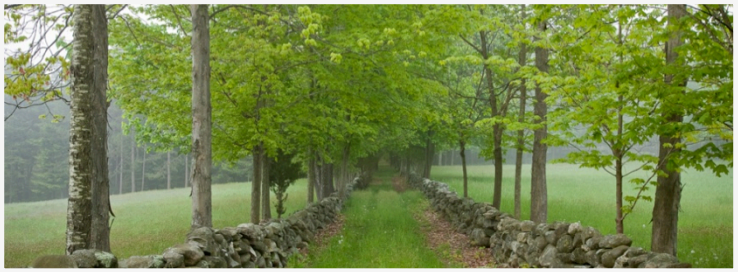
:: 454 Court Street :: Suite 304 :: Portsmouth, NH 03801 :: (603) 766-6670 :: www.truslowrc.com

Danna B. Truslow, Principal and Hydrologist
Anna H. Boudreau, Land Conservation Consultant

OUR WORK INVOLVES…

Hydrology, Geomorphology & Restoration

Source Water Protection



Land Conservation Planning & Project Management

Groundwater & Surface Water Quality Sampling

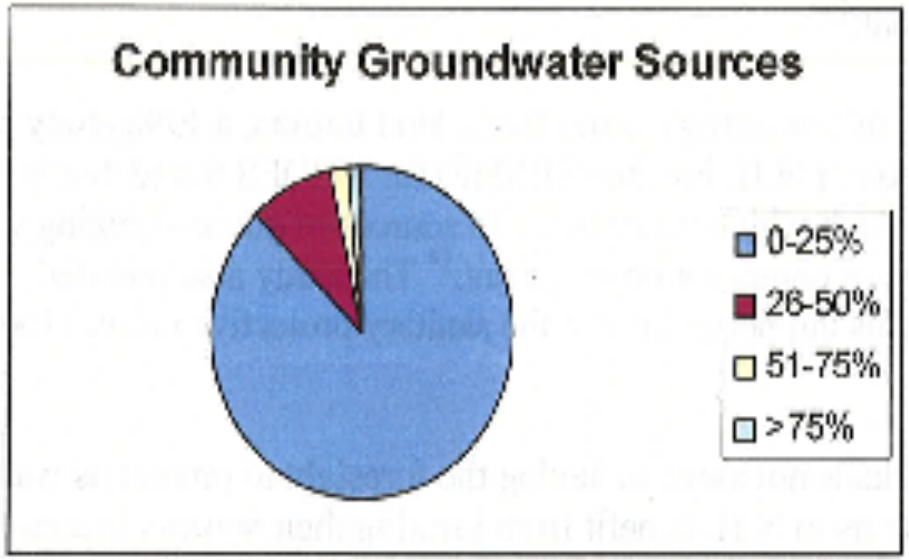
GIS Mapping & Analysis

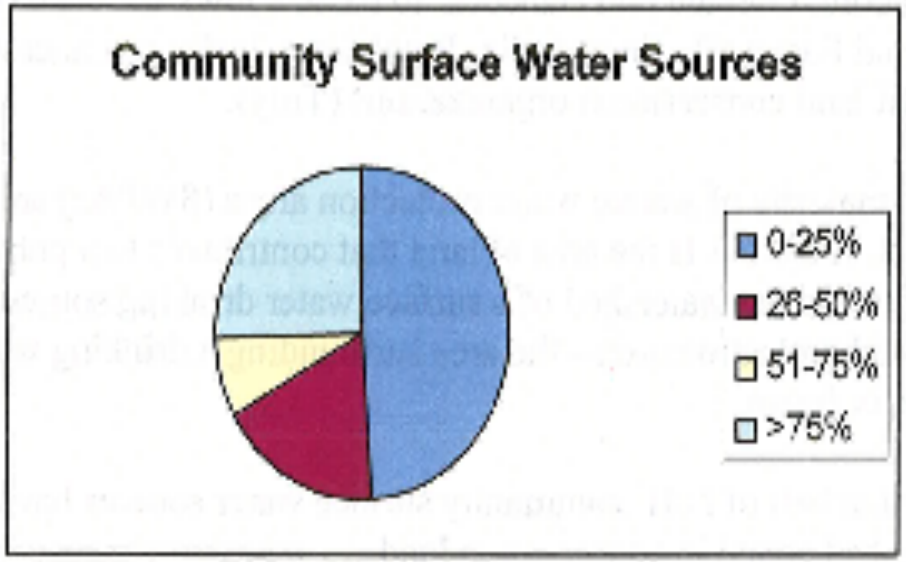
Resource Planning/ Management

How are you involved in water supply protection?

Sector
Water Districts/Water Companies
Municipal Board
Municipal Staff
Consultants
Landowners
Industry
Other

Percentage of land protected in source water protection areas at community water systems





In other words the large majority of ground water sources have less than 25% of their wellhead protection areas permanently protected.

About half of the registered community surface water sources have 25 % or more of their source water protection area land permanently protected.

from - Water Supply Land Protection Grant Program, NHDES, August 2014

Take Home Messages

- Why permanently protect source water areas?
- How to protect source water resources via permanent land conservation
- When and how to submit a grant application
- The importance of collaboration
- Who can help with the process?
- Recent examples

Why permanently protect your water supply protection areas or potential water sources?

Source Water Protection Methods Available

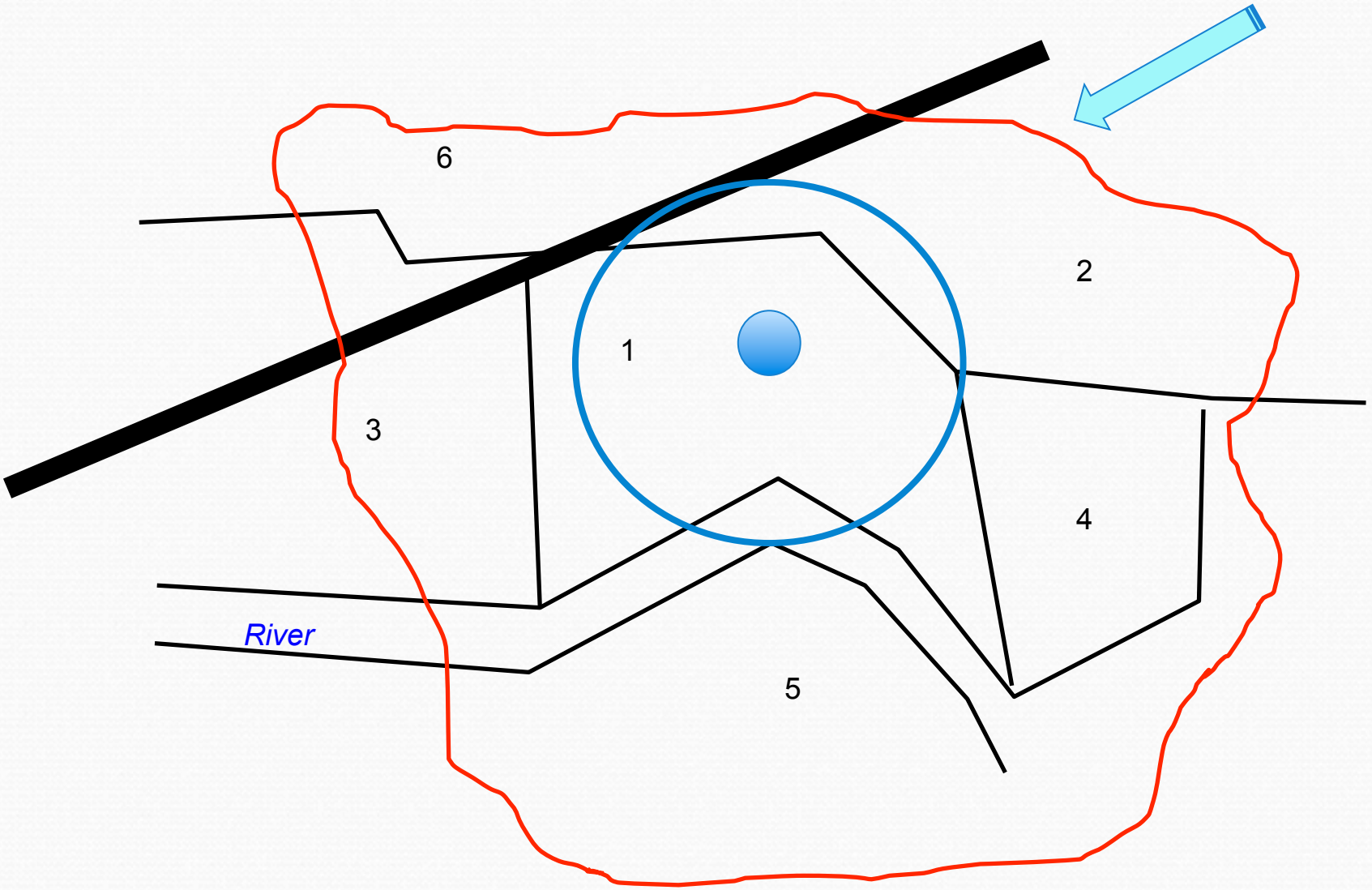
- Sanitary radius – required by DES, locally controlled, up to 400’
- WHPA /SWPA designation – required by DES, locally controlled
- Zoning/planning restrictions – locally designated and enforced
- Best management practices – locally controlled
- Groundwater re-classification – locally designated and enforced
- Permanent protection through purchase or conservation easement – Locally determined – monitored by qualified organization.

Advantages of Permanent Water Supply Land Protection

Permanent protection through purchase or conservation easement – Preliminary Steps

- Prioritize areas for protection – mapping and planning
- Determine who owns the land and if existing restrictions/easements?
- Pursue fee ownership, conservation easement or both?
- **What is the process and who should be involved?**
- **What are funding sources and what is that process?**

Pro-active planning for water resource protection



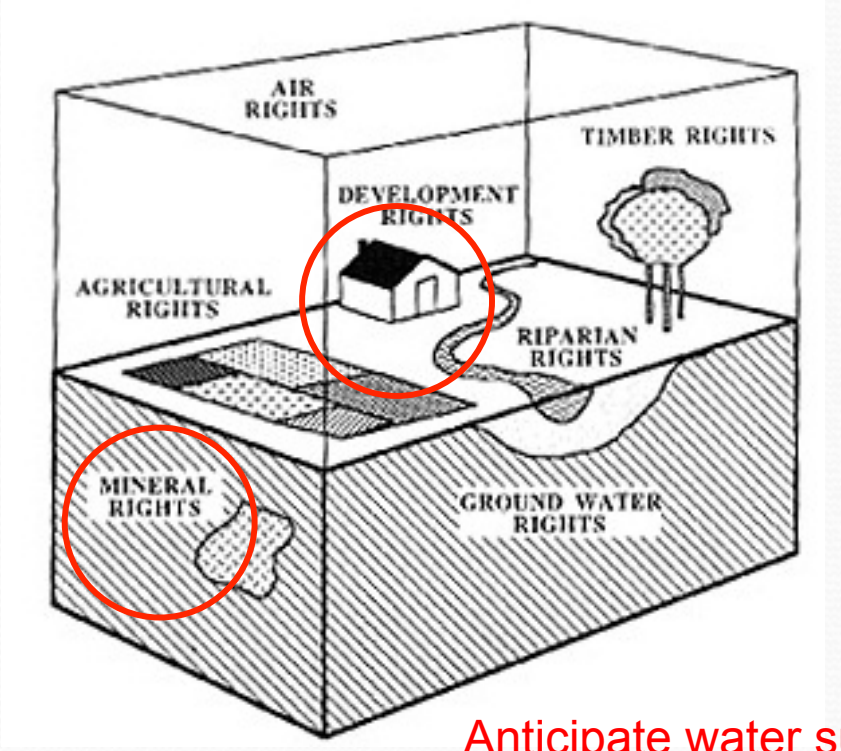
Definition of a Conservation Easement

A voluntary legal agreement between a landowner and a conservation organization (the easement holder) that permanently limits certain uses of the land, such as subdivision, development, or mining, in order to protect the water supply resources and other conservation values of the property in perpetuity.

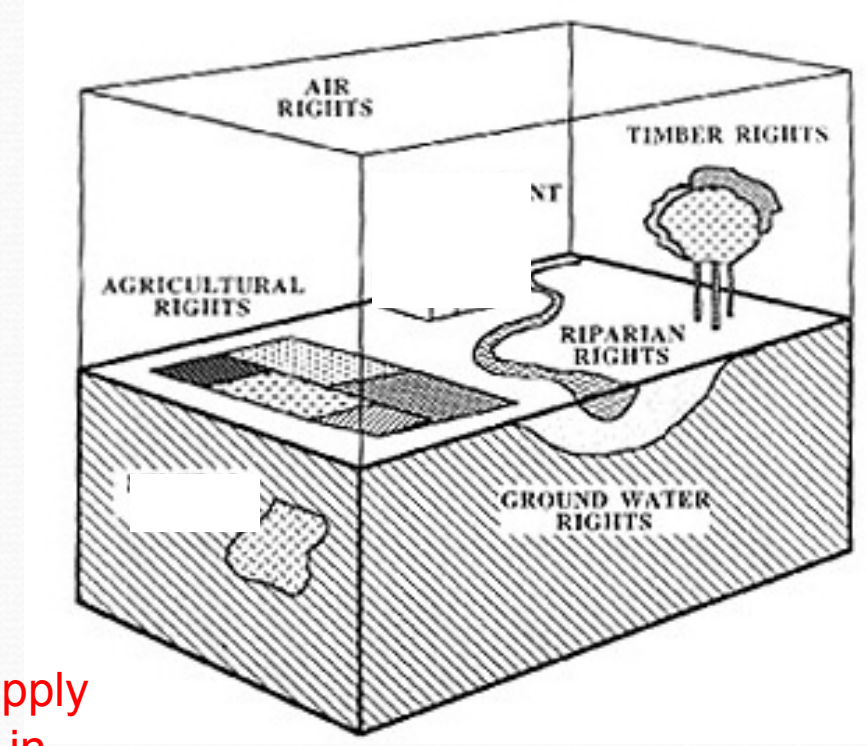
“Bundle of Rights” of Land Ownership

The "Bundle of Rights" of Land Ownership

Before CE



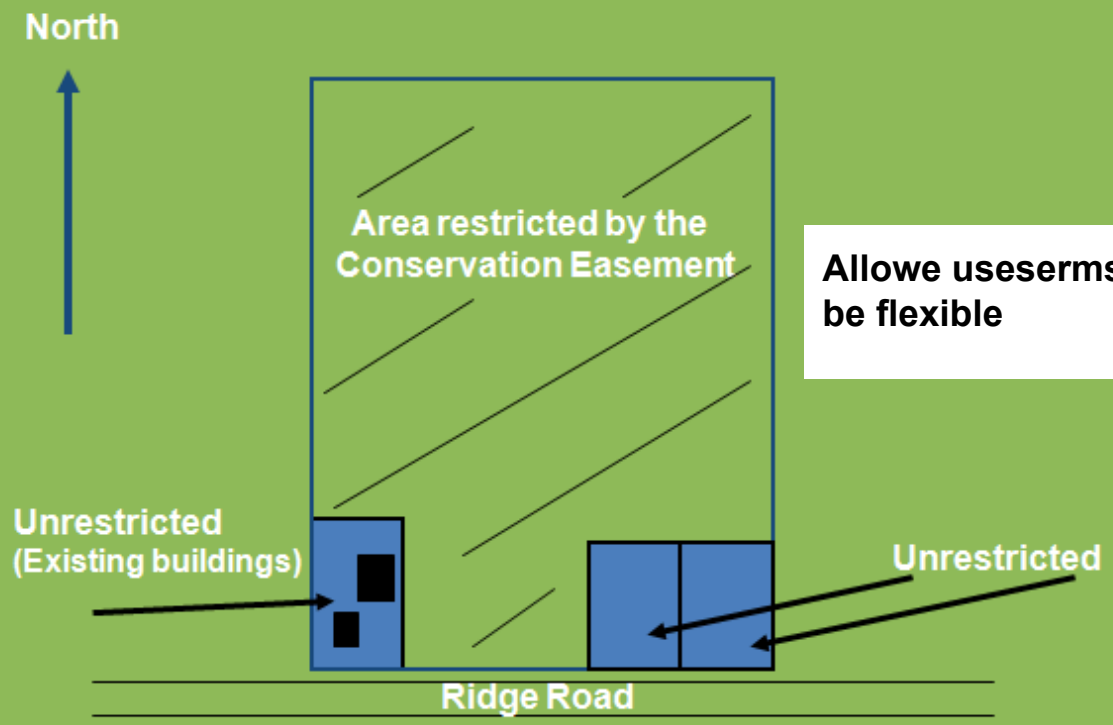
After CE



Anticipate water supply activities and allow in easement or protection language

Source: "Land Administration Lecture 3 Land Registration, Lisa Ting, UNMELB

CE's Do Not Have To Include The Entire Parcel



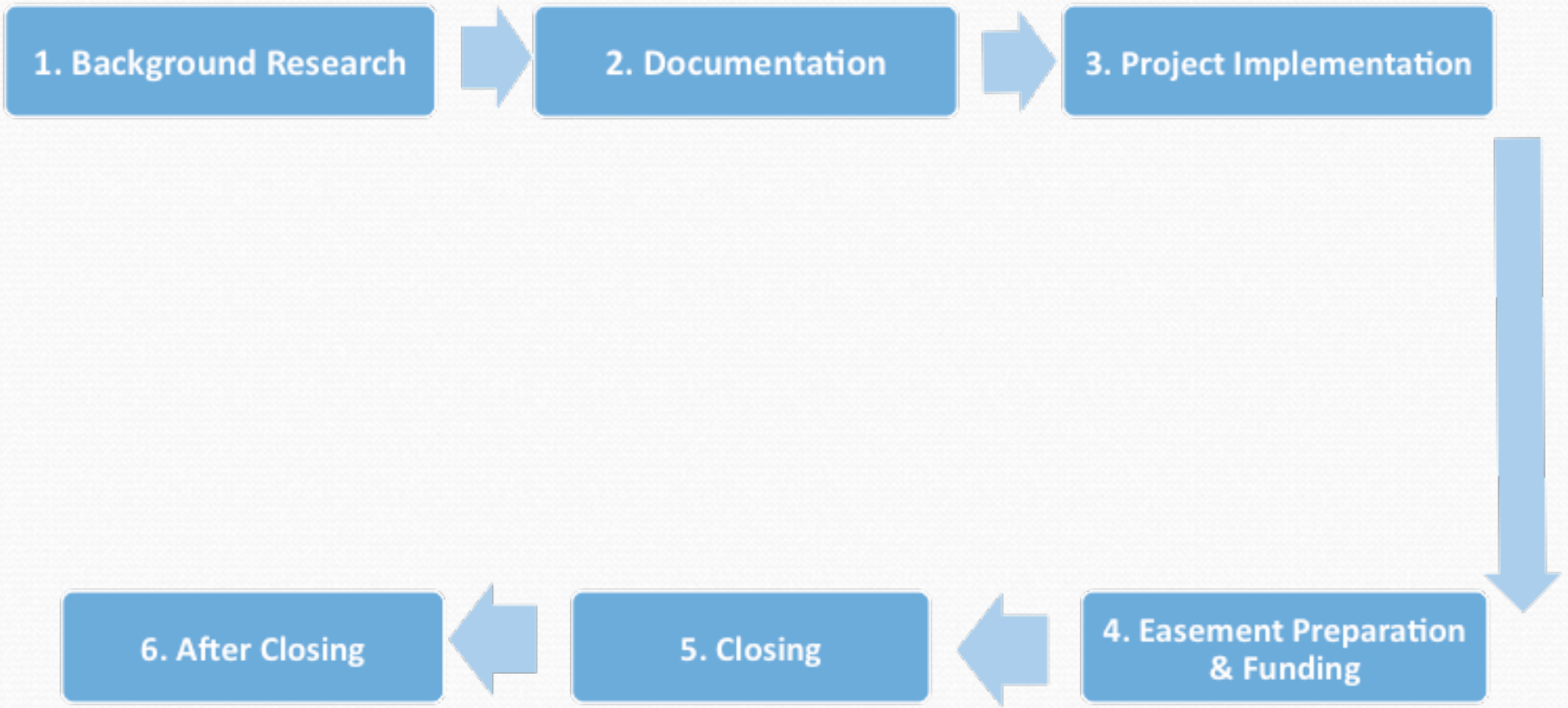
Allowe useserms can be flexible

Conservation Easement Characteristics

- **Voluntary**
- **Perpetual**
- **Public access optional**

- **Involves a holder of the conservation easement (a land trust, town, state or federal agency).**

The Land Conservation Process



1. Background Research

- Determine Landowner Needs and Goals (sell, grant easement?)
- Match Goals with Appropriate Conservation Easement Holder
- Determine easement boundaries
- Grant research, ID strong funding sources
- Collaboration begins

2. Documentation

- Gather Background Data/Mapping
  - Watershed Area, WHPA Area
  - Other significant natural resources
  - Existing deeds or boundary surveys
  - Phase I Environmental Site Assessment
  - Phase I Environmental Site Assessment
- Qualified Appraisal to determine Fair Market Value

3. Project Implementation

- Seek project approval from land trust/municipality
- Narrow Grants and other Funding sources
- Develop Budget
- Draft/sign Purchase & Sale Agreement
- Complete Title search
- Order boundary survey
- Prepare Legal description

4. Easement Preparation & Funding

- Prepare, submit and manage grant applications
- Draft the CE Deed
- Review of deed and survey plans by all parties
- Coordinate approval of funds from town conservation funds/bond issue
- Coordinate other fundraising

5. Closing

- Arrange and hold CE closing
- Record Conservation Easement & survey at Registry of Deeds

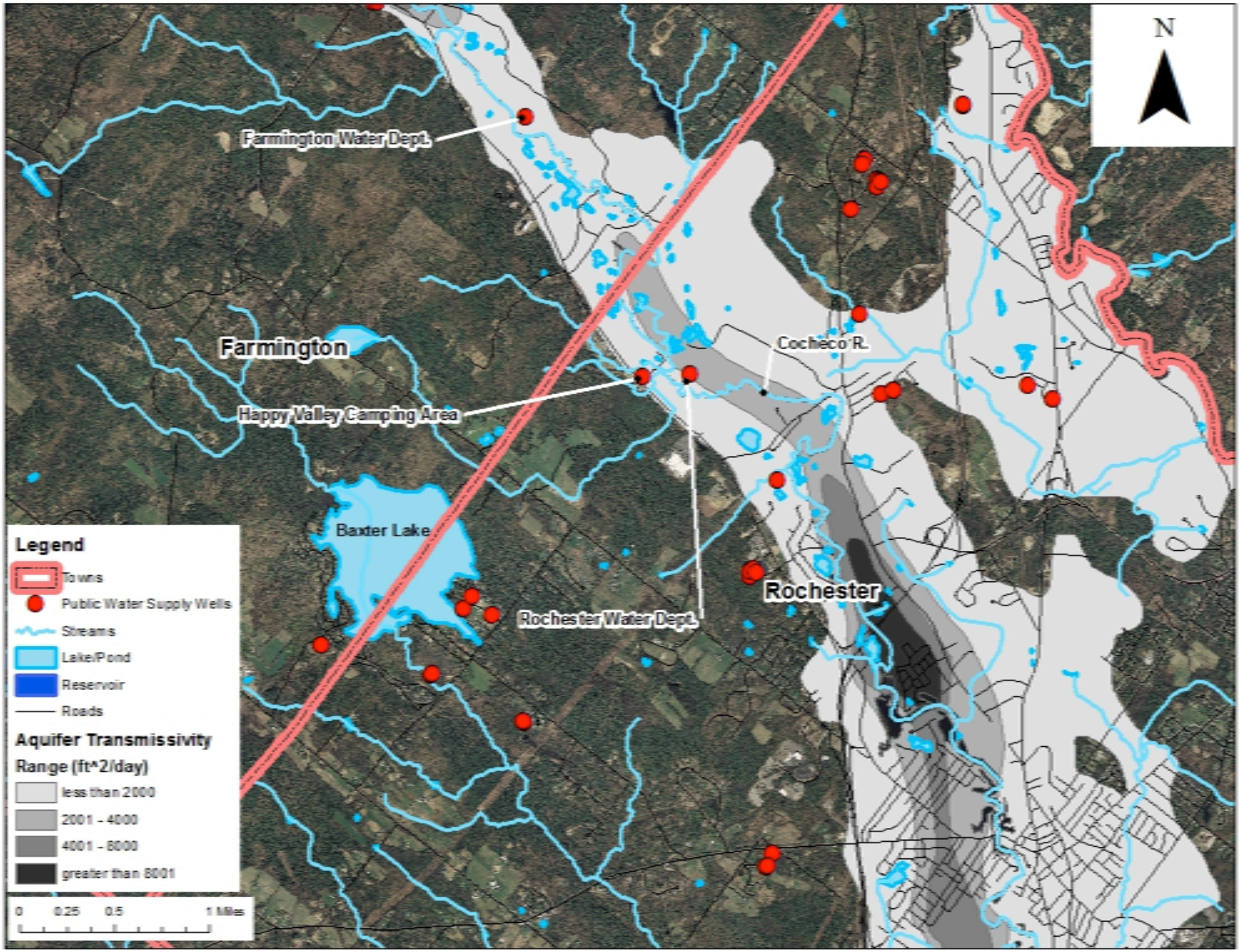
6. After Closing

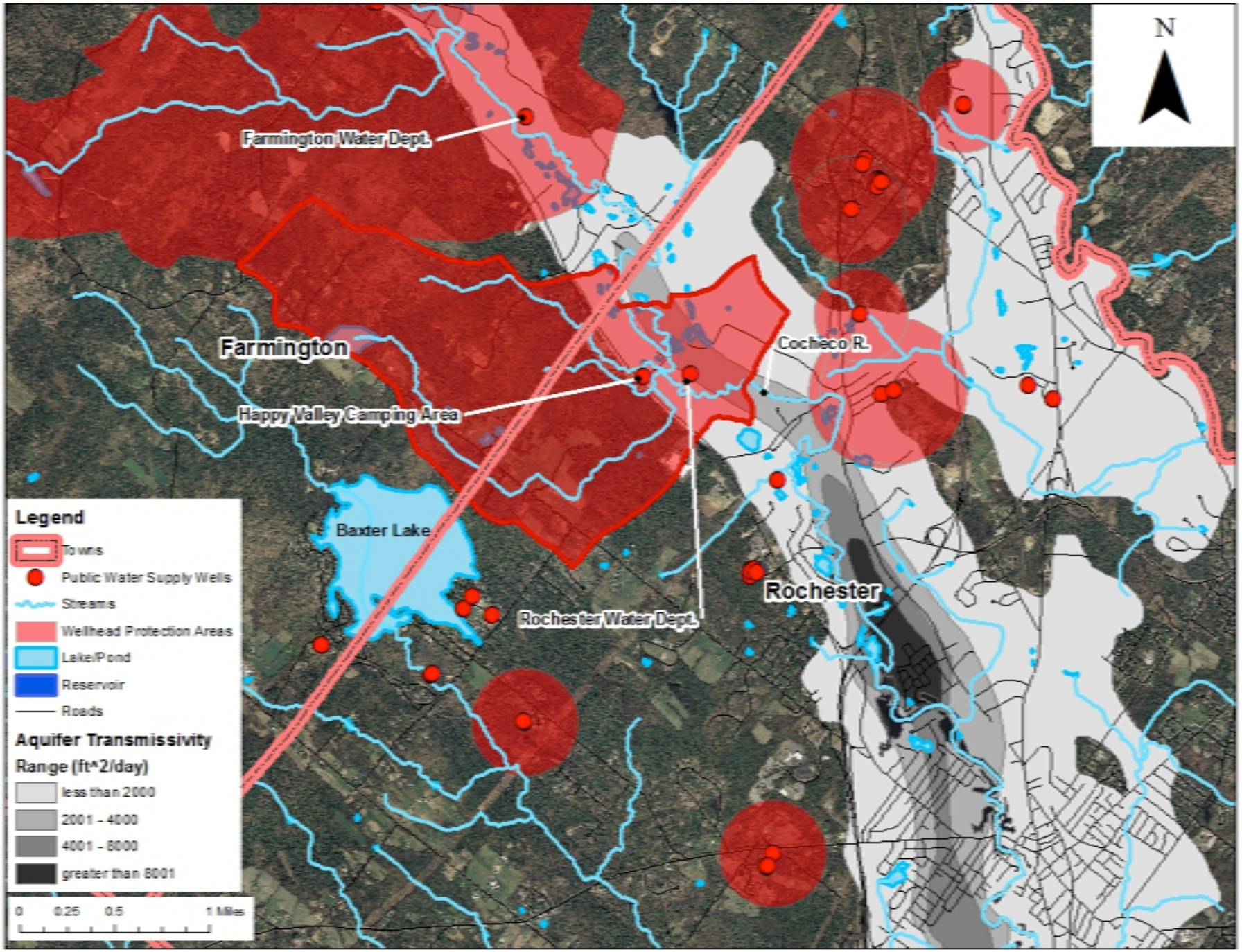
- Send real estate and tax forms to local, state and federal agencies
- Send out PR, announcements and thank you notes
- Submit final grant paperwork and reports
- ***Monitor and report annually to determine if allowed uses and restrictions are being upheld***

Be Patient with the Process!

A practical real world example

City of Rochester – Water Supply Well and a Water Supply Reservoir


N
Farmington Water Dept.
Farmington
Cochieco R.
Happy Valley Camping Area
Baxter Lake
Rochester
Rochester Water Dept.
Legend
Towns
Public Water Supply Wells
Streams
Lake/Pond
Reservoir
Roads
Aquifer Transmissivity
Range (ft^2/day)
less than 2000
2001 - 4000
4001 - 8000
greater than 8001
0
0.25
0.5
1 Miles


N
Farmington Water Dept.
Farmington
Happy Valley Camping Area
Cocheco R.
Baxter Lake
Rochester
Rochester Water Dept.
Legend
Towns
Public Water Supply Wells
Streams
Wellhead Protection Areas
Lake/Pond
Reservoir
Roads
Aquifer Transmissivity
Range (ft^2/day)
less than 2000
2001 - 4000
4001 - 8000
greater than 8001
0
0.25
0.5
1 Miles

CITY OF ROCHESTER – WELLHEAD PROTECTION PROJECT (Henderson)

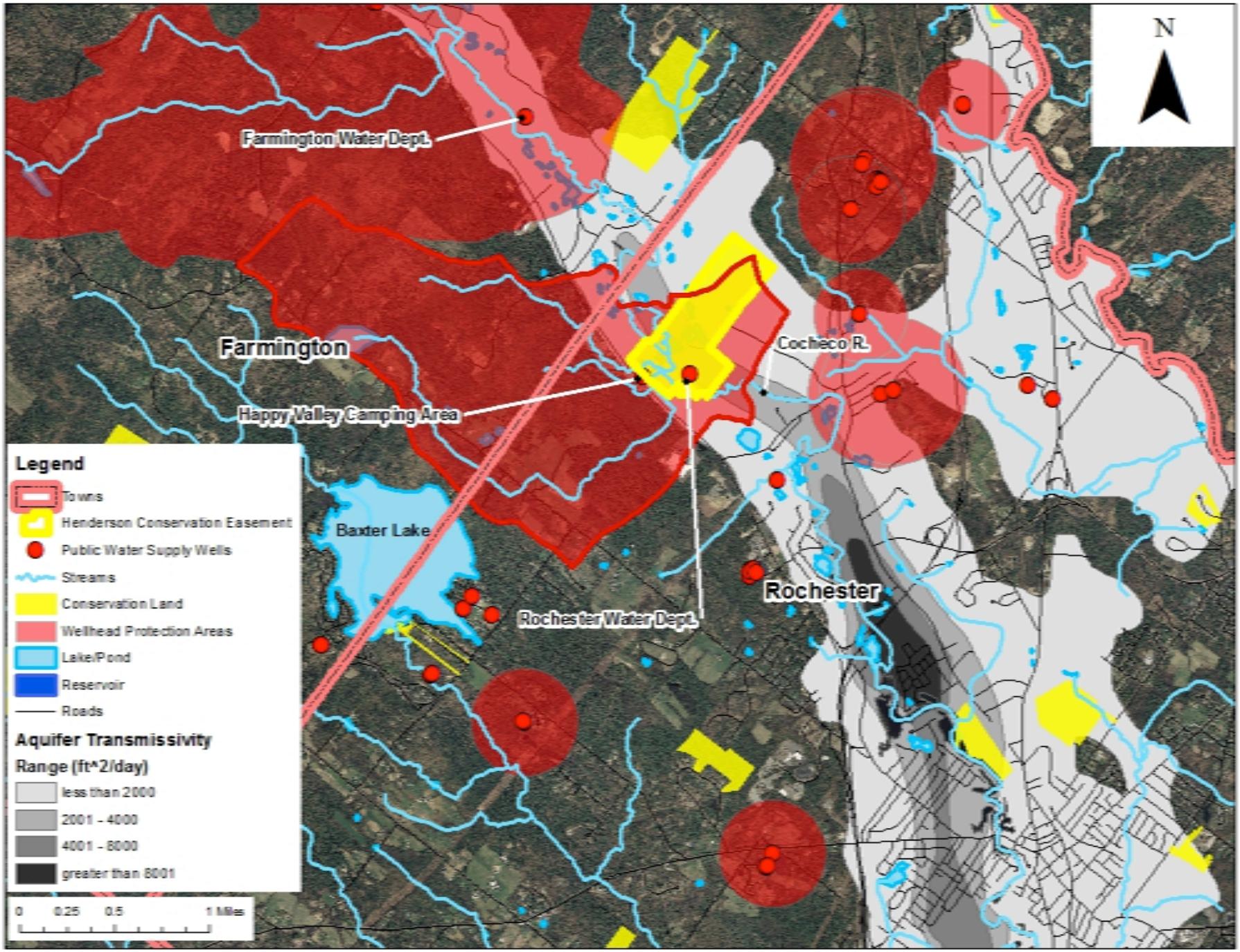
In 2005: the city of Rochester purchased a 165-acre former campground property with three main objectives:

- Protect an existing municipal water supply well
- Protect the Cochecho River and surrounding habitat
- Bank the remaining acreage for current & future mitigation projects.

Goal was to eventually conserve the entire parcel, with DES approval, in lieu of more costly fees and wetland mitigation.

2005: The first 18-acre easement granted along the Cochecho River to protect the river and municipal water supply well.

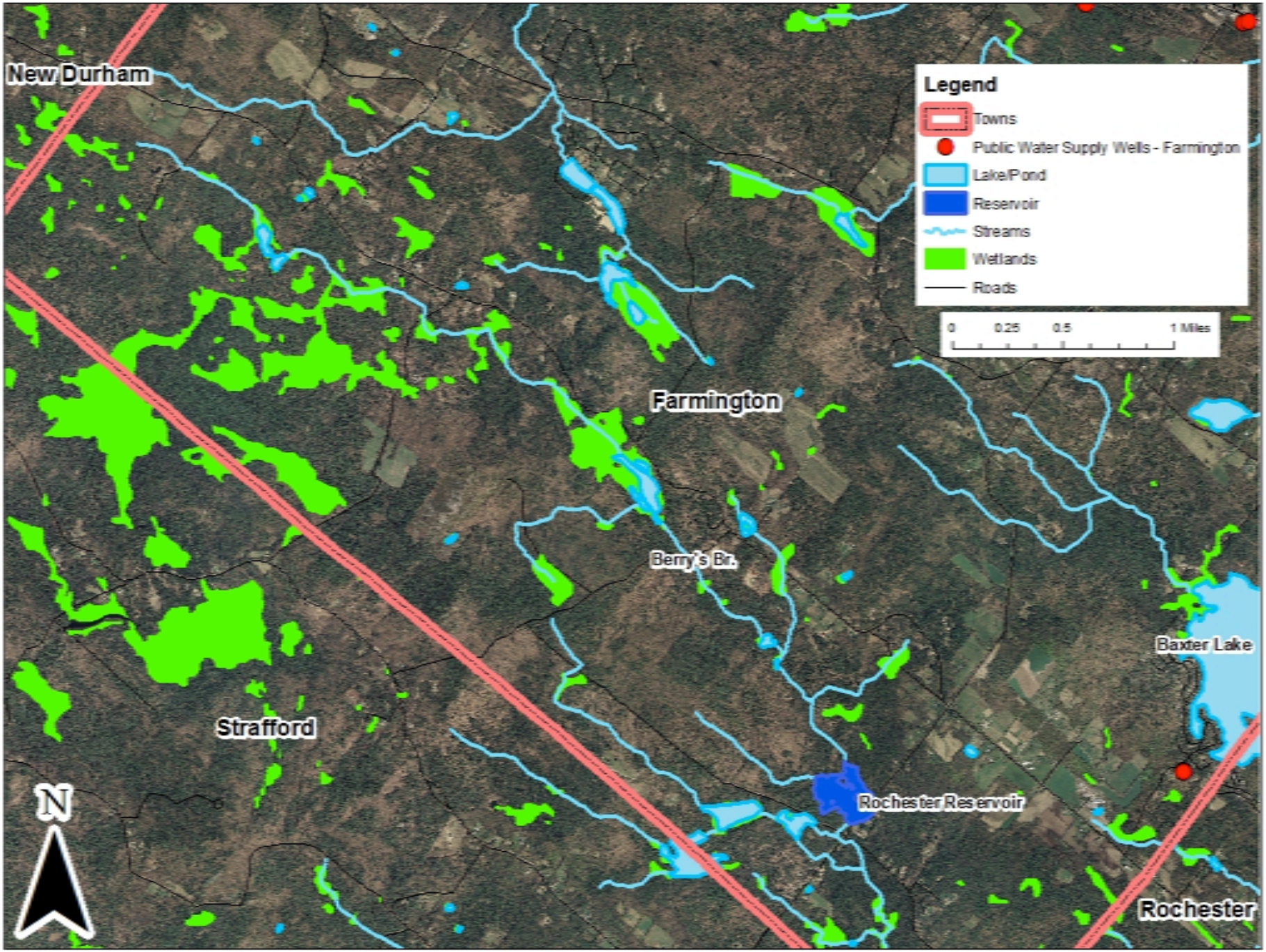
2012: Began work with NHDES to approve mitigation requirements for 3 other projects (remaining acreage); scheduled to close in 2015.

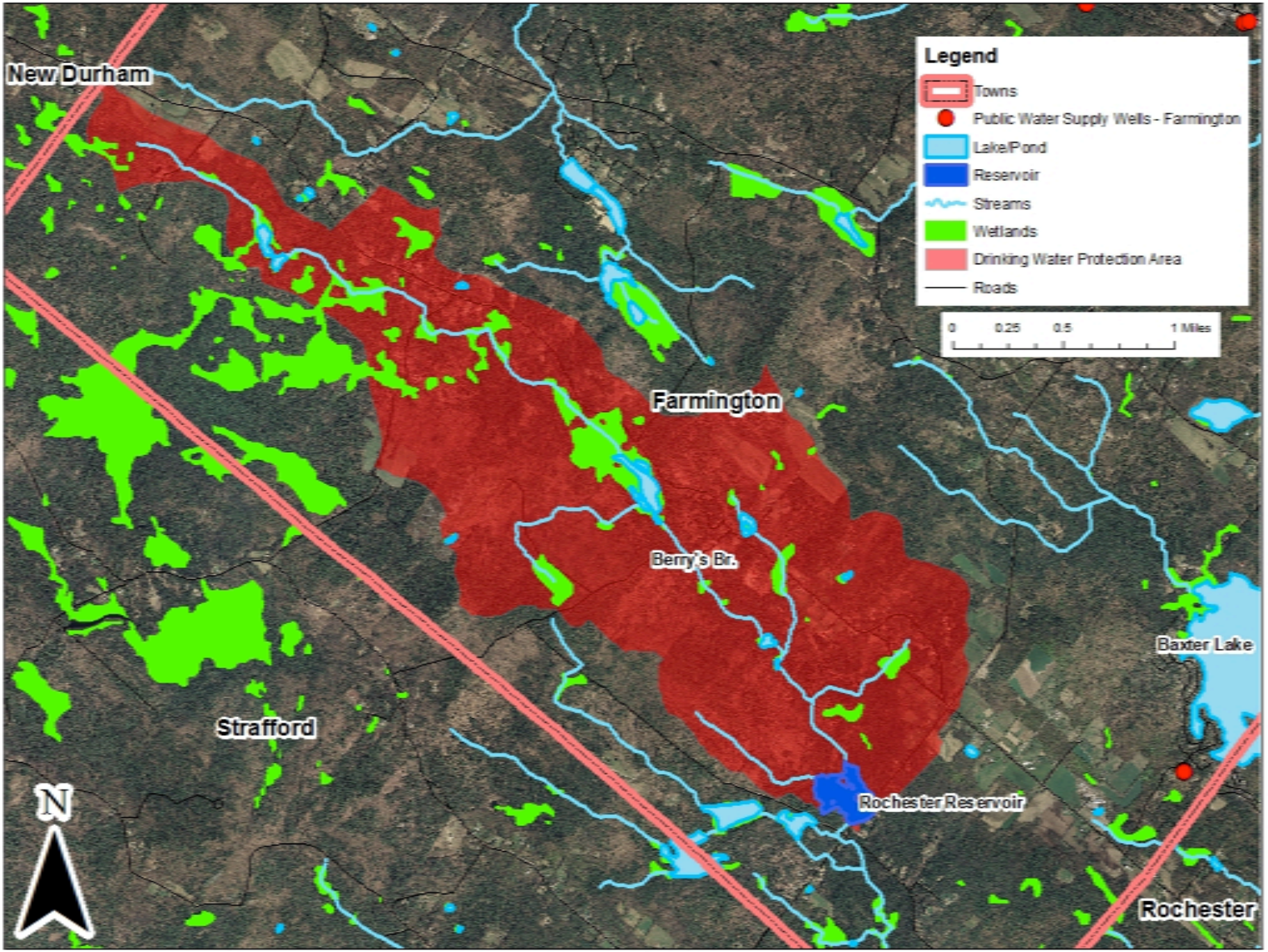

N
Farmington Water Dept.
Farmington
Happy Valley Camping Area
Cocheco R.
Baxter Lake
Rochester
Rochester Water Dept.
Legend
Towns
Henderson Conservation Easement
Public Water Supply Wells
Streams
Conservation Land
Wellhead Protection Areas
Lake/Pond
Reservoir
Roads
Aquifer Transmissivity
Range (ft^2/day)
less than 2000
2001 - 4000
4001 - 8000
greater than 8001
0 0.25 0.5 1 Miles

List of Collaborators for Henderson Project

- The City of Rochester (landowner)
- NH Department of Environmental Services
- NH Department of Transportation, Safran, City, Walmart (used for mitigation)
- The Army Corp. of Engineers
- Environmental Protection Agency
- Southeast Land Trust of NH/Strafford Rivers Conservancy (easement holder)

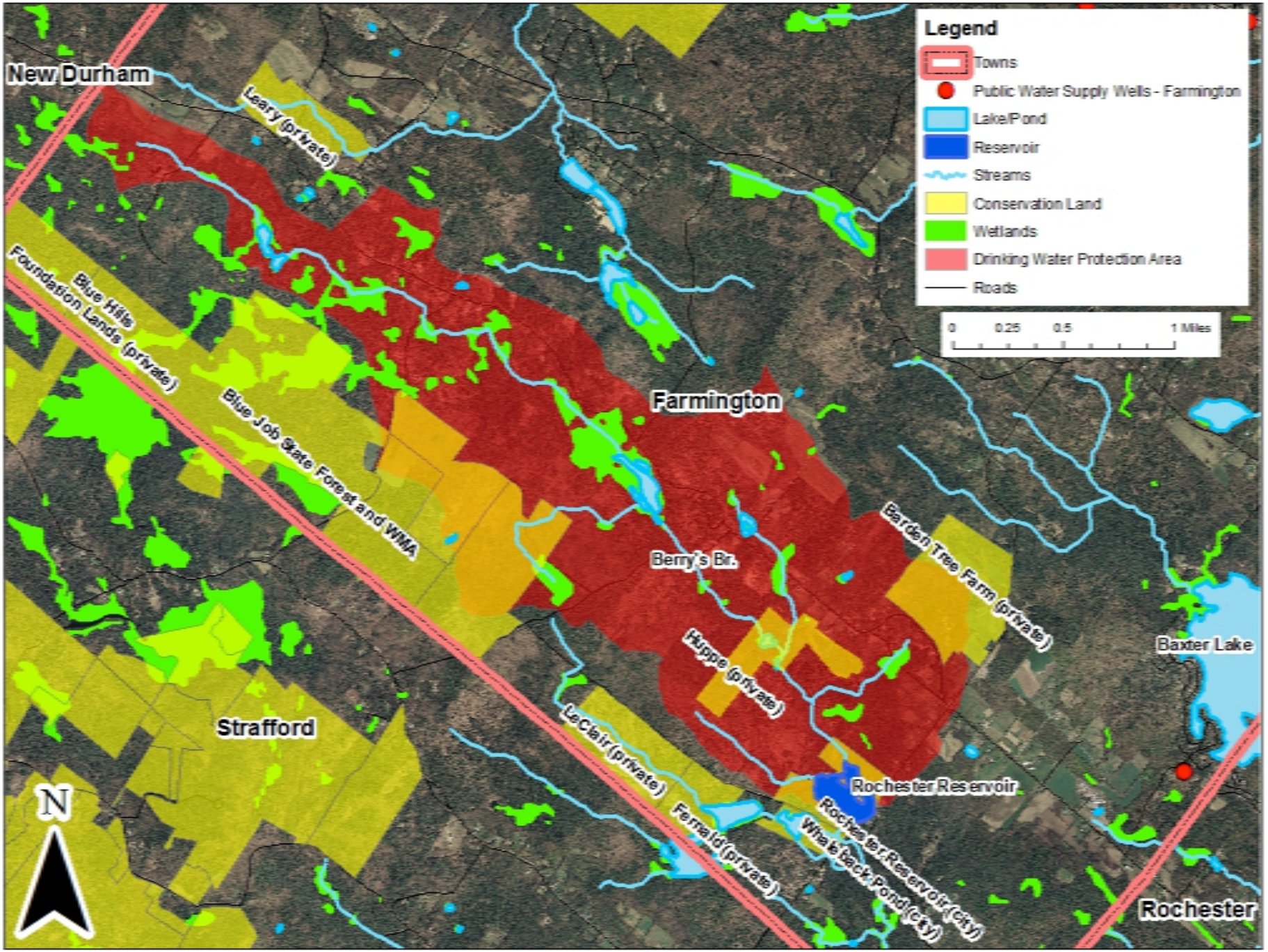

Wellhead Protection Easement - Rochester, NH


New Durham
Legend
Towns
Public Water Supply Wells - Farmington
Lake/Pond
Reservoir
Streams
Wetlands
Roads
0
0.25
0.5
1 Miles
Farmington
Berry's Br.
Baxter Lake
Strafford
Rochester Reservoir
Rochester
N


New Durham
Farmington
Berry's Br.
Strafford
Rochester Reservoir
Baxter Lake
Rochester
N
Legend
Towns
Public Water Supply Wells - Farmington
Lake/Pond
Reservoir
Streams
Wetlands
Drinking Water Protection Area
Roads
0
0.25
0.5
1 Miles

Rochester Reservoir Conservation Project Summary

- 2007: City of Rochester Public Works Dept. reached out to the Society for the Protection of NH Forests (SPNHF) for assistance with protecting surface water supply reservoirs via permanent land conservation.
- SPNHF reached out to surrounding landowners, did some excellent preliminary work (Step 1 in our flow chart), before referring the project to the local Land trust, Strafford Rivers Conservancy (SRC).
- The SRC (Anna) took over the project management (remainder of steps on flowchart) allowing the SPNHF to back off. Unique project in that it involved two municipalities, in addition to the usual variety of grant funding sources and project management requirements.

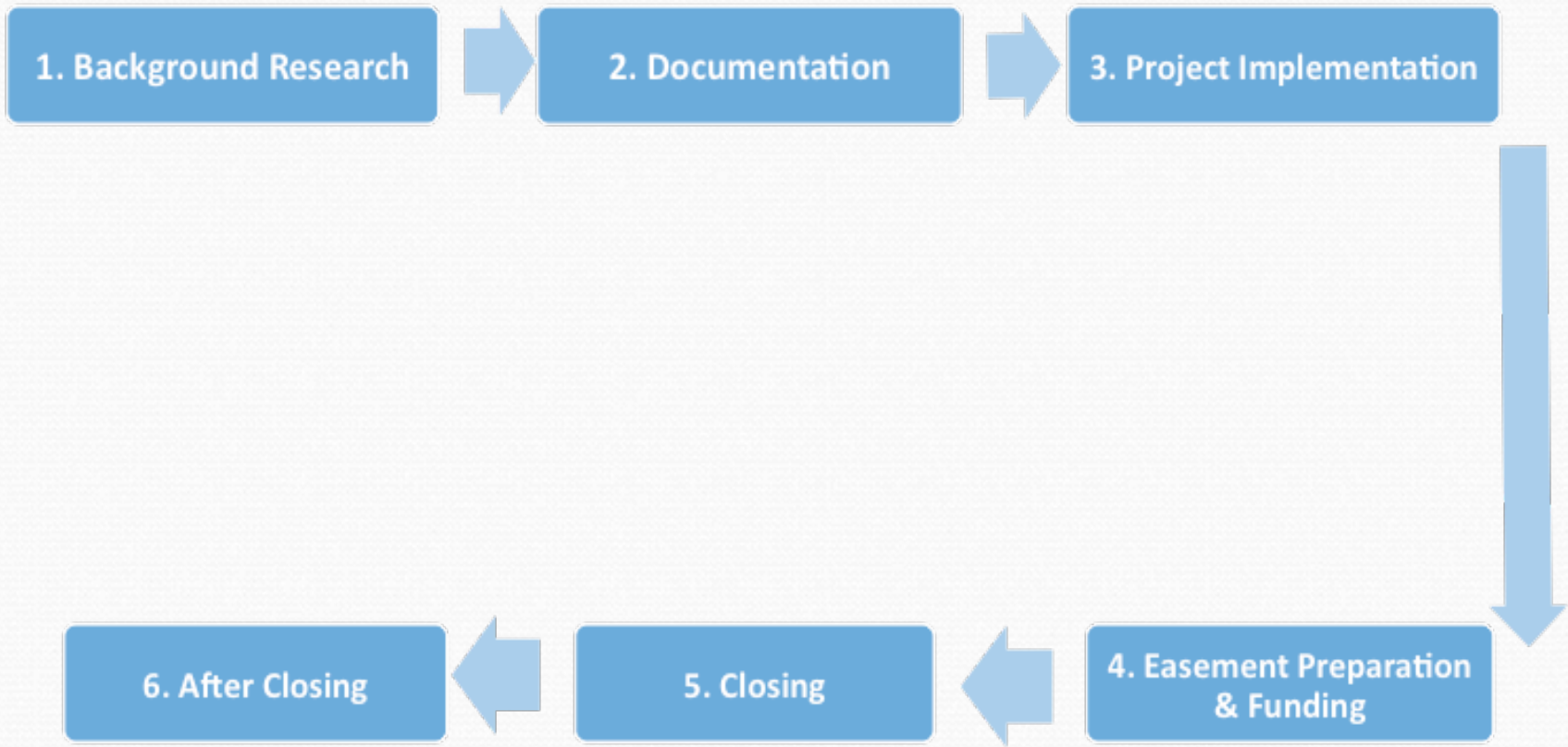

Legend
Towns
Public Water Supply Wells - Farmington
Lake/Pond
Reservoir
Streams
Conservation Land
Wetlands
Drinking Water Protection Area
Roads
0
0.25
0.5
1 Miles
New Durham
Leary (private)
Blue Hills Foundation Lands (private)
Blue Job State Forest and WMA
Farmington
Berry's Br.
Bardon Tree Farm (private)
Huppe (private)
Baxter Lake
Strafford
LeClair (private)
Ferrald (private)
Rochester Reservoir
Rochester Reservoir (city)
Whaleback Pond (city)
Rochester
N

Rochester Reservoir Protection Project

Projects EXPENSES	
• Easement Purchase Price (Landowner 1)	$118,000
• Easement Purchase Price (Landowner 2)	$110,000
• Appraisal Reports (for 2 parcels)	$ 10,000
• Boundary Survey (for 2 parcels)	$ 22,500
• Phase I Environmental Assessment	$ 2,000
• Project Management/Grantwriting Costs	$ 5,034
• Closing and related costs	$ 8,075
TOTAL PROJECT EXPENSES:	**$275,609**

Rochester Reservoir Project funding sources:	
• City of Rochester Public Works	$ 45,609
• Town of Farmington Conservation Fund	$ 30,000
• NH Fish & Game Department LIP Fund	$ 50,000
• NH Department of Environmental Services	$ 40,000
• Landowner 2 “Donation"	$110,000
TOTAL PROJECT INCOME:	**$275,609**

The Land Conservation Process



Collaborate! **Reach out to people who do this sort of work every day. You don't need to know how to carry out all steps, but you need to know that they are required to complete a successful and enforceable conservation easement that will stand the test of time.**

Funding source table [handouts available]

NH Dept. of Environmental Services:

- Water Supply Land Protection Grant
- Local Source Water Protection Grants
- Aquatic Resource Mitigation (ARM) Fund

MoosePlate.com

- NH State Conservation Committee (NH SCC)
- The Land and Community Heritage Investment Program (LCHIP)

Natural Resources Conservation Service (USDA)

- Agricultural Conservation Easement Program - Ag Land Easements (ACEP-ALE)
- Agricultural Conservation Easement Program - Wetland Reserve Easements (ACEP-WRE)

Other Key Sources (Match):

- Municipal Conservation Fund (LUCT)
- Municipal Bonds
- Municipal PW/Water Districts
- PREP(UNHCE)/GBRPP Land Transaction Grants

Take Home Messages

- Why permanently protect source water areas?
- How to protect source water resources via permanent land conservation
- When and how to submit a grant application (s)
- The importance of collaboration
- Who can help with the process?
- BE PATIENT WITH THE PROCESS!


Questions??