NEW HAMPSHIRE

METHOD 2011

Method for Inventorying and Evaluating Freshwater Wetlands In New Hampshire

NH Method Workgroup

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Audiences

- Public officials & community volunteers
- Professionals who are not wetland specialists
- Professional wetland scientists

Purpose and Use

- Education
- Support local decision-making
- Scientifically defensible method
- Evaluate single or multiple wetlands
- Identify potential restoration sites

Limitations of the NH Method

- Not for Impact Analysis
- Not for detailed site specific studies
- Low scores do not justify elimination

What has changed?

1991 Edition	2011 Edition	What Changed?
Title: Method for the Comparative Evaluation of Nontidal Wetlands in	**Title:** Method for Inventorying and Evaluating Freshwater Wetlands in	The title change reflects a fundamental shift in the method. The 2011 revised edition allows both **comparative** and **single wetland** evaluation. The NH Method can be used to evaluate individual wetlands, as well as evaluating multiple wetlands in town or watershed (comparative evaluation). Note that the NH Method is not an impact assessment method.
14 Functions	12 Functions	The Historical Site Potential and Urban Quality of Life Functions have been dropped from the NH Method. Questions relating to historical/ archaeologic significance and urban wetlands have been included in the revised Noteworthiness function. All Functions have been updated with current information and data, and a number of questions have been revised for clarity.
Ecological Integrity	Ecological Integrity	This function has been modified somewhat so that Ecological Integrity is evaluated in the context of human-induced stressors to the wetland system. Each question for this function addresses a stressor that could be impacting the system. Wetlands that are the least impacted by stressors will have a higher score for Ecological Integrity
Wildlife Habitat	Wetland-Dependent Wildlife Habitat	This function has been modified to better reflect the suite of species that depend on wetlands for all or part of their life cycle.

1991 Edition	2011 Edition	What Changed?
Finfish Habitat	Fish & Aquatic Life Habitat	This function has been expanded to include aquatic life. In the original NH Method, fish were treated as a separate group of wildlife with strong affinities to wetlands, particularly those associated with perennial streams or lakes and ponds. However, the recognition of fish populations as a subset of wetland wildlife should also include recognition of all the habitat conditions & species that support their well-being, i.e. *aquatic life*.
Educational Potential	Educational Potential	Minor edits to criteria on data sheets
Visual/Aesthetic Quality	Scenic Quality	The title of this function has been simplified. Minor edits to the scoring criteria on the data sheets.
Water-based Recreation	Wetland-based Recreation	This function was revised to be more inclusive of a range of recreation activities in and around wetlands, such as birding and hiking, as well as canoeing and fishing.
Flood Control	Flood Storage	The original Flood Control Function has been deleted, and replaced with Flood Storage, a new evaluation method that is considered to provide a more accurate assessment of the ability of a wetland to store floodwaters.

1991 Edition	2011 Edition	What Changed?
Groundwater Use Potential	Groundwater Recharge	The questions in this function have been revised to focus on wetlands that function for groundwater recharge.
Sediment Trapping	Sediment Trapping	This function has been revised to delete all the "opportunity" questions that looked at the potential for the watershed to produce sediments. Instead, this function now looks directly at the characteristics of the wetland that make it effective for sediment trapping. A number of questions in this function have been revised/added.
Nutrient Attenuation	Nutrient Trapping/Retention/ Transformation	As with sediment trapping, this function has been revised to eliminate opportunity questions. Instead, this function now looks directly at the characteristics of the wetland that make it effective for nutrient trapping. A number of questions in this function have been revised/added.
Shoreline Anchoring	Shoreline Anchoring	Question 4 has been added to evaluated the roughness of the wetland substrate.
Noteworthiness	Noteworthiness	Several new questions have been added to this function.

1991 Edition	2011 Edition	What Changed?
Functional Value Index (FVI)	Average score	The terminology has been simplified to “Average Score” Each question receives a score, and an Average Score is computed for each Function. Note that the values of the scores for multiple choice questions have been changed from 1.0, 0.5 and 0.1 to 10, 5 and 1 for easier computation.
Wetland Value Units (WVUs)	No Wetland Value Units	The original NH Method weighted the FVI scores by acreage. In the 2011 edition, acreage is no longer used, but wetland size may be taken into consideration when analyzing evaluation results.
Wetland Base Map and Overlays	Wetland Maps	Since the NH Method was published in 1991, Geographic Information Systems (GIS) and other computer technologies have greatly advanced. With the variety of data layers available through GRANIT, the statewide GIS database, a greater range of information is available to help complete NH Method evaluations. Wetland Maps can now be generated using 1.Desktop software (e.g. ArcView/ArcGIS), which is primarily used by trained professionals and trained volunteers, or 2.The GRANIT Data Mapper web site, which is suitable for use by those who do not have professional expertise.

Scoring

1991	2011
a. 1.0	a. 10
0.75	7.5
b. 0.5	b. 5
0.25	2.5
c. 0.1 or 0	c. 1 or 0

Scoring

What is the Dominant Land Use in the Watershed?

Answers	Score
a. Woodland, wetland, or abandoned farmland	10
b. Active farmland or rural residential	5
c. Urban and heavily developed suburban areas	1

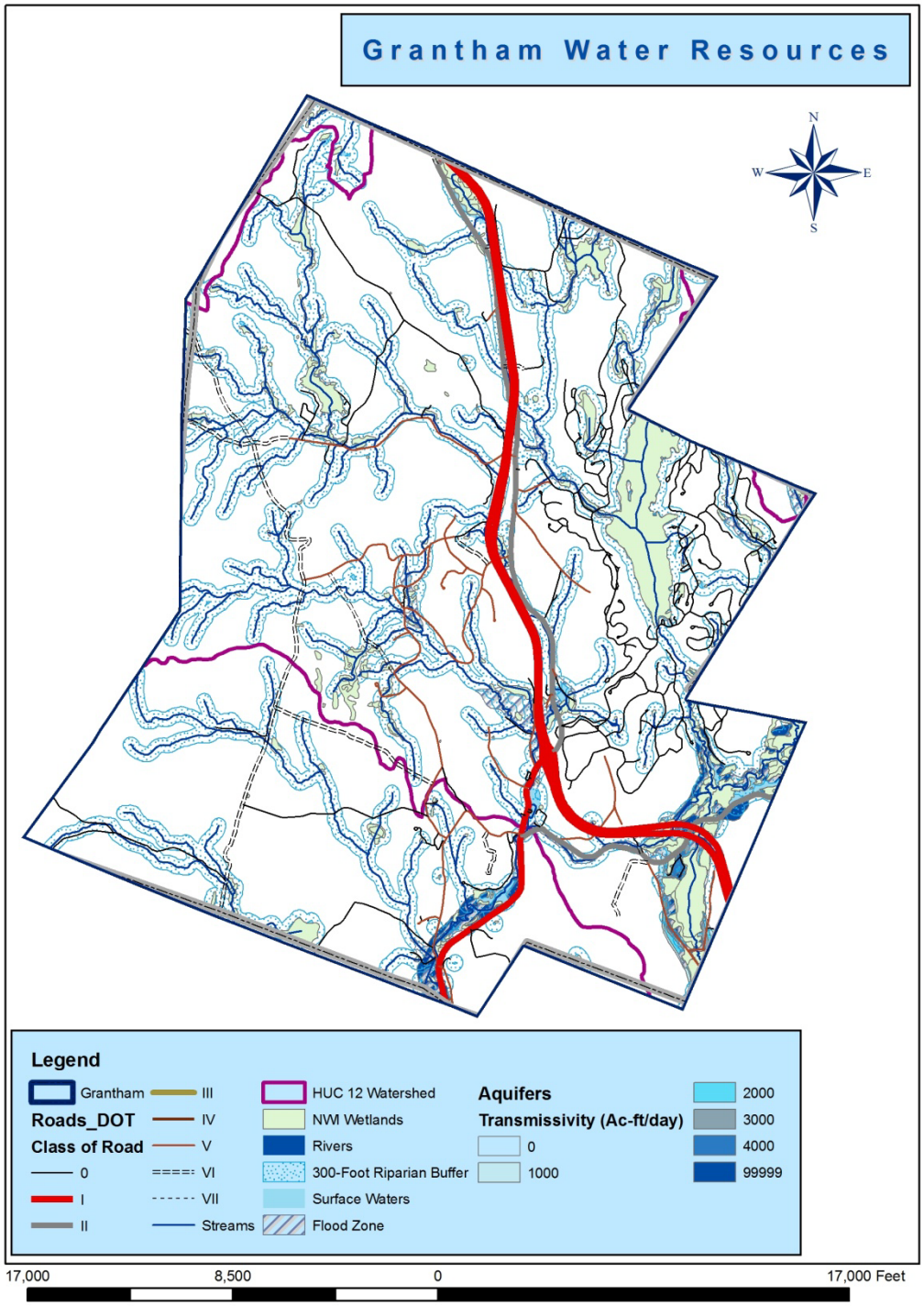
Scoring

Average scores for each of the 12 Functions of a wetland are not additive

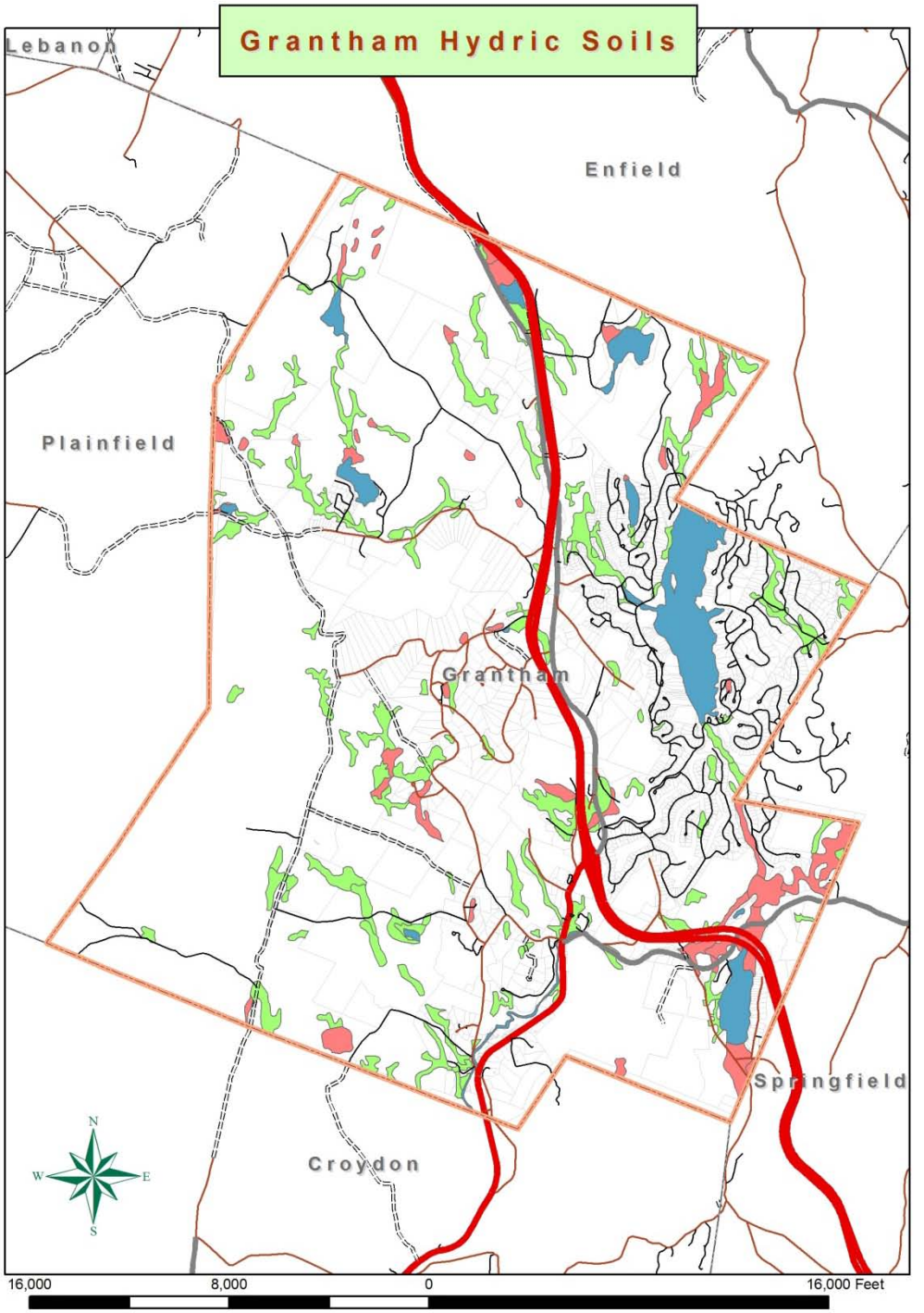
There is no single score for a wetland

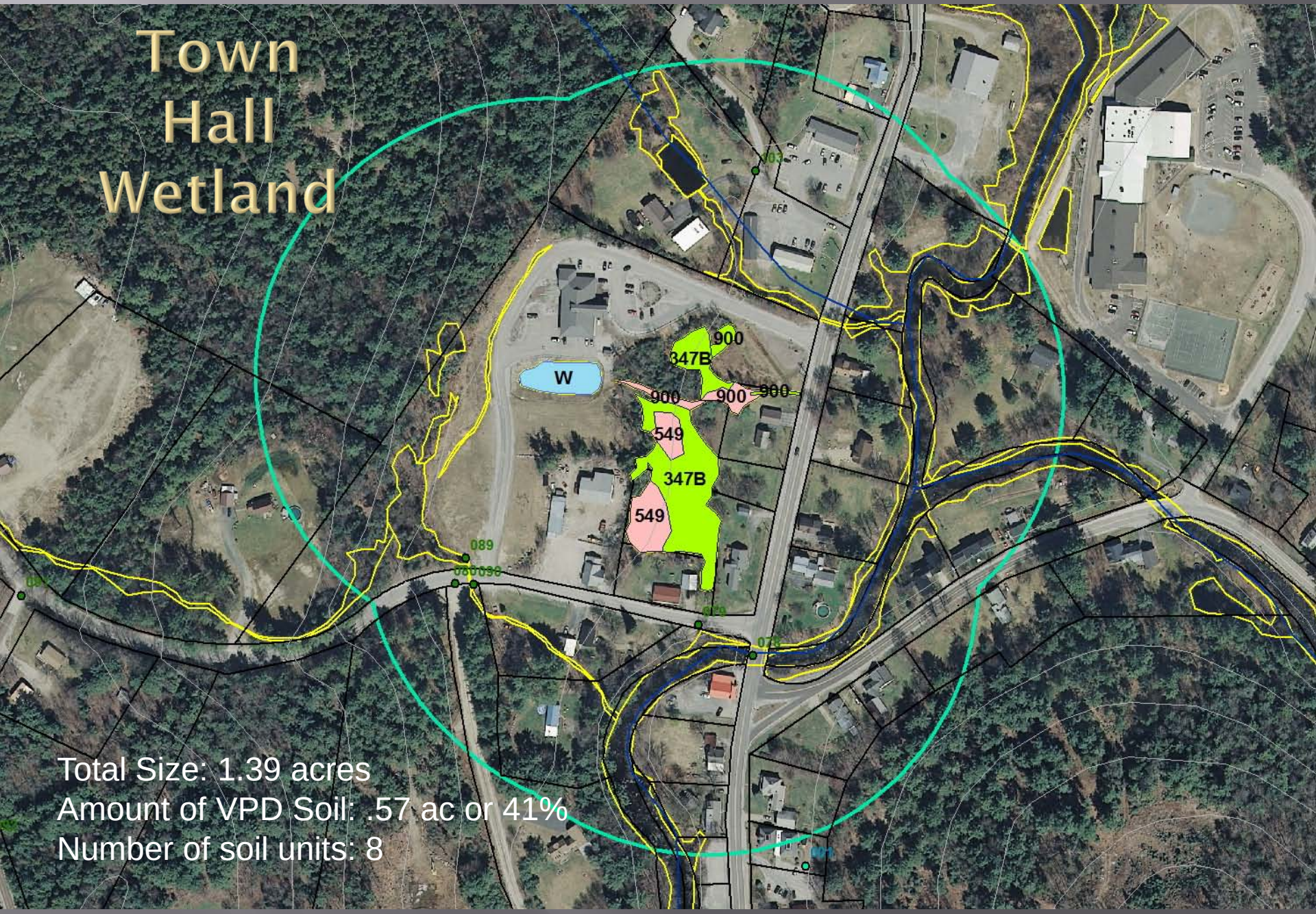

Sample Application of the New Hampshire Method
GRANTHAM, NH

Grantham Water Resources Base Map

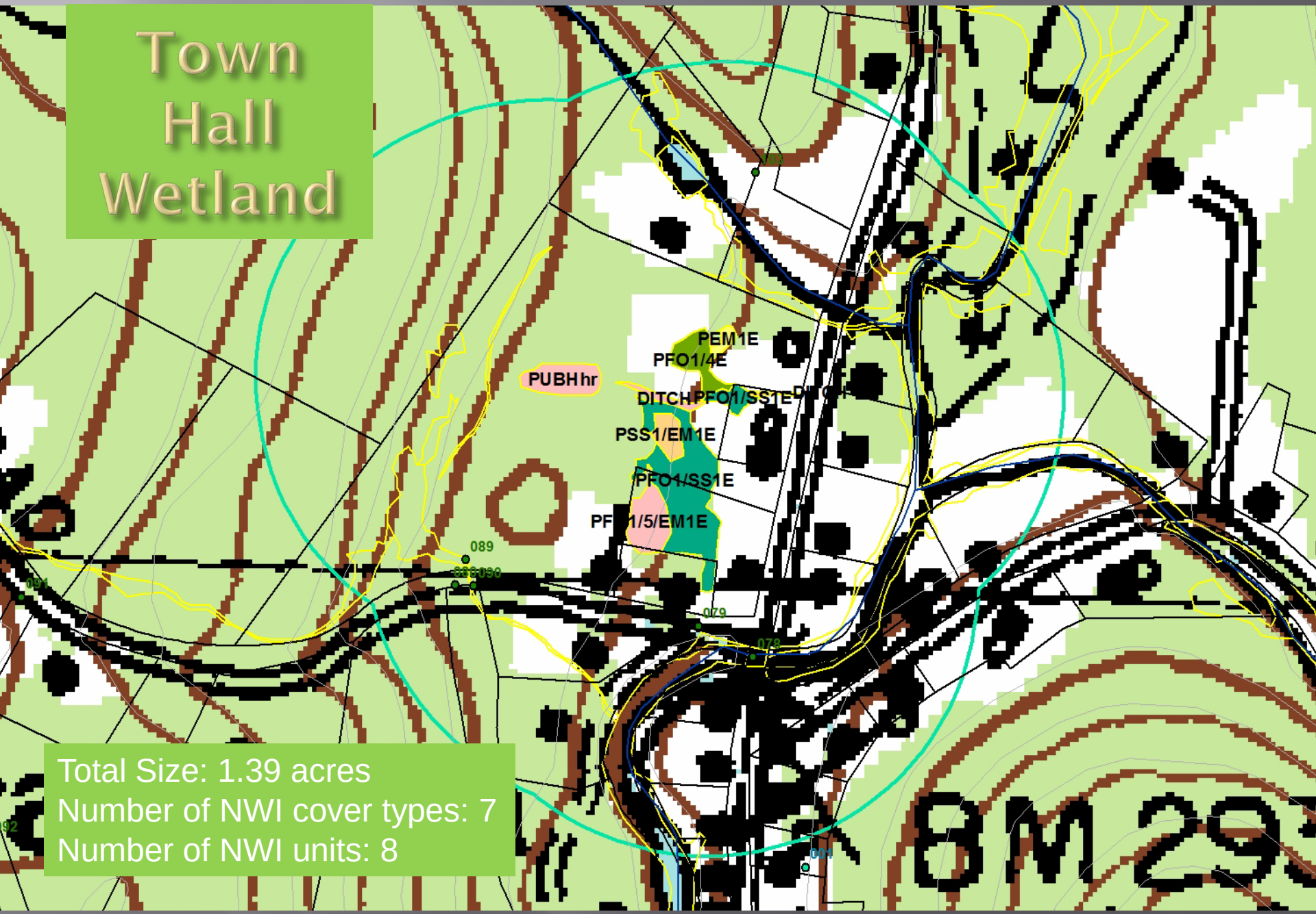


Grantham Hydric Soils Base Map



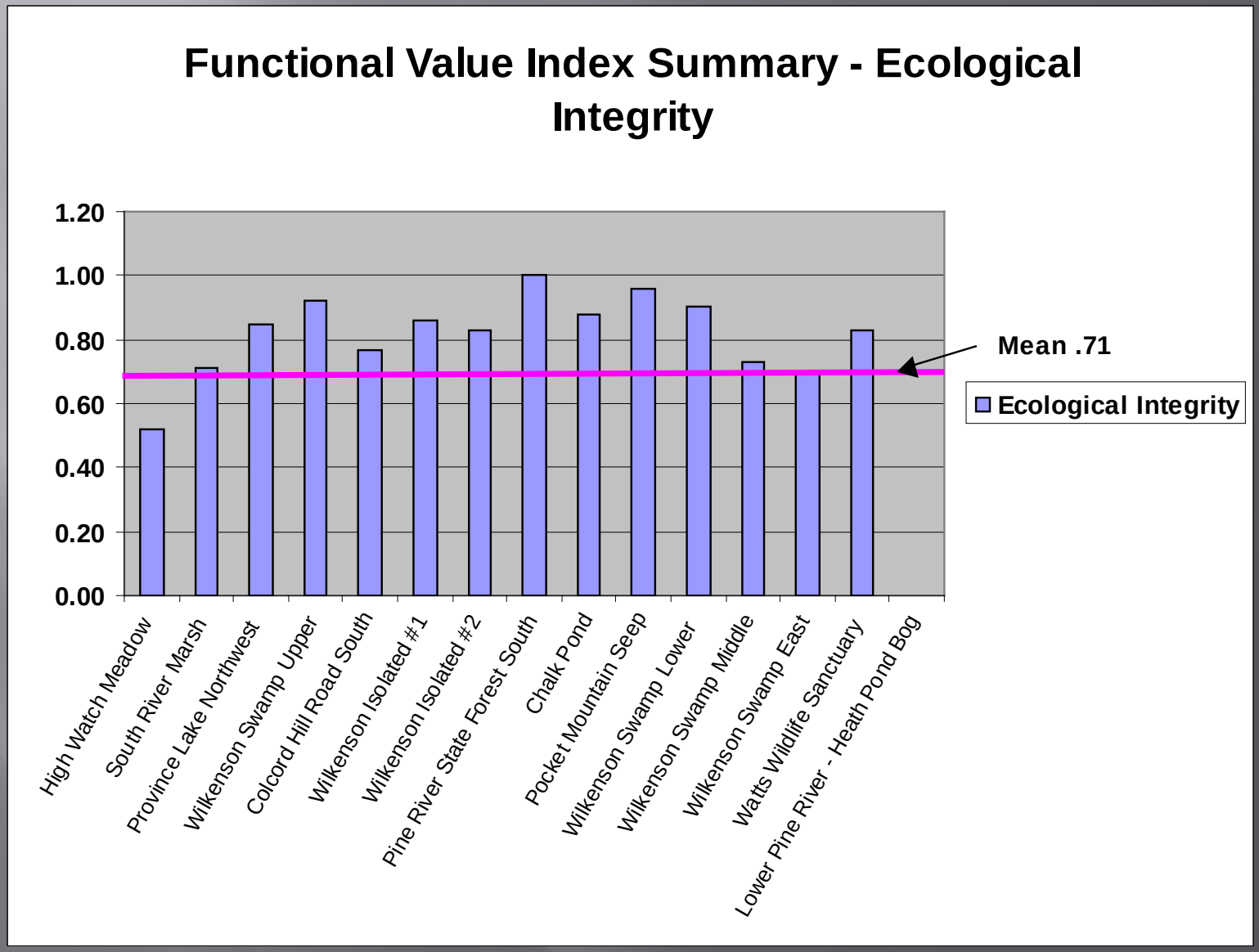

Town
Hall
Wetland
900
347B
W
900
900
900
549
347B
549
089
Total Size: 1.39 acres
Amount of VPD Soil: .57 ac or 41%
Number of soil units: 8

Town Hall Wetland



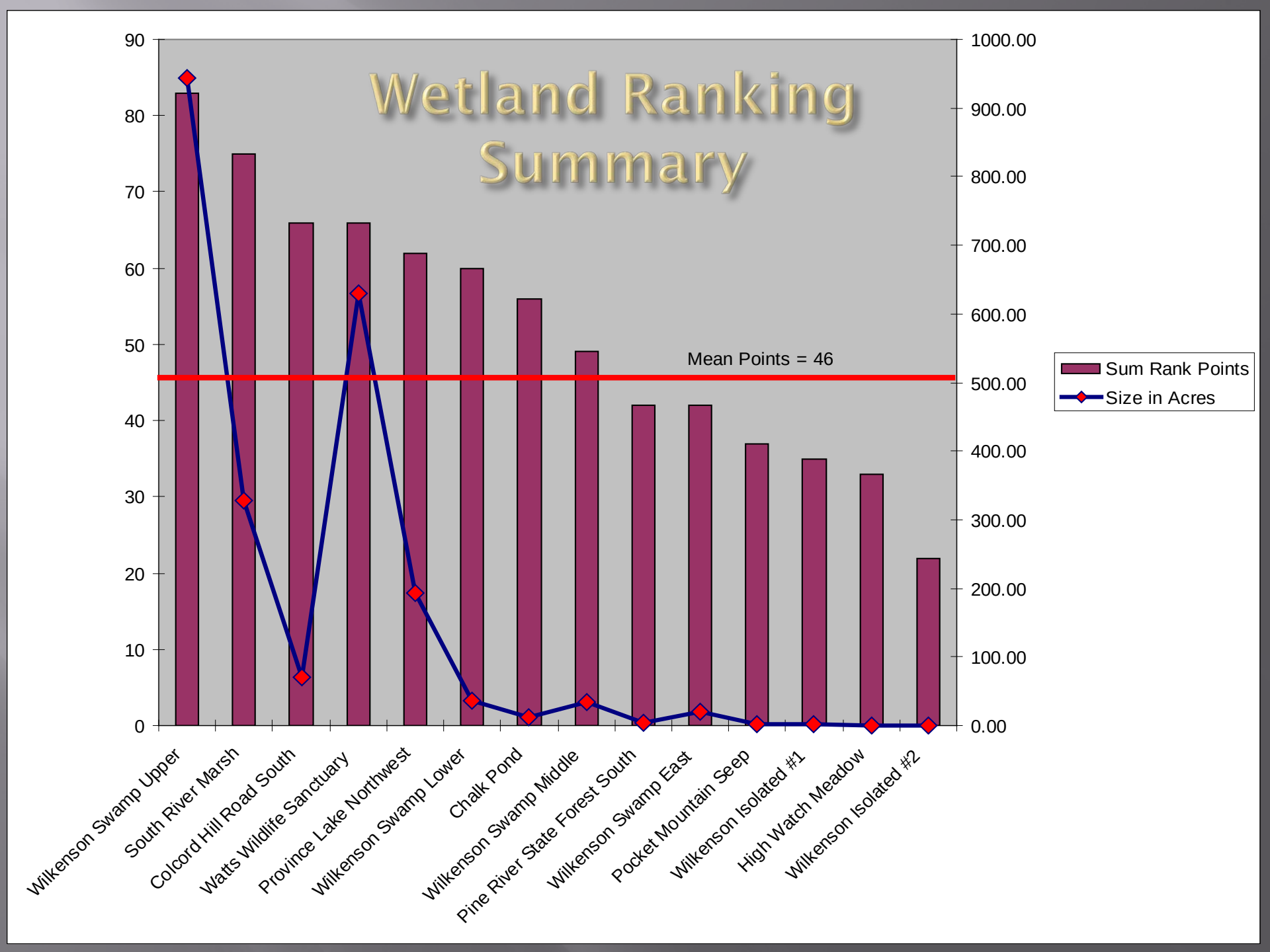
Total Size: 1.39 acres
Number of NWI cover types: 7
Number of NWI units: 8

Summarize the Wetland Assessment Data



Wetland Ranking Factors

- ✓ Functional Values Indices
- ✓ Wetland Value Units
- ✓ Size & Flood Control Potential
- ✓ Drinking Water Supply Potential
- ✓ Water Quality Mediation Potential
- ✓ Rare & Endangered Species and Exemplary Natural Communities


Wetland Ranking Summary
Mean Points = 46
Sum Rank Points
Size in Acres
90
80
70
60
50
40
30
20
10
0
1000.00
900.00
800.00
700.00
600.00
500.00
400.00
300.00
200.00
100.00
0.00
Wilkenson Swamp Upper
South River Marsh
Colcord Hill Road South
Watts Wildlife Sanctuary
Province Lake Northwest
Wilkenson Swamp Lower
Chalk Pond
Wilkenson Swamp Middle
Pine River State Forest South
Wilkenson Swamp East
Pocket Mountain Seep
Wilkenson Isolated #1
High Watch Meadow
Wilkenson Isolated #2

What is appropriate for local wetland protection options?

- Wetlands Conservation Ordinance
- Prime Wetlands Option
- Designated Wetland Setbacks
- Groundwater/Aquifer Ordinance
- Special Use Permits
- Gravel Extraction Ordinance
- Water Resource Management Plan

Final Analysis: Wetland Conservation Plan

- Prime wetlands designation & nomination (state)
- Amend existing wetland ordinance
- Support amendments to other setback (zoning) regulations
- Seek land conservation of highest value wetland complexes
- Identify further inventory & assessment work